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To: **Leffi Noviyenty** <leffinoviyenty@gmail.com>; **Mutiara Astuti** <anmutiara4@gmail.com>; **Fakhruddin** <fakhruddin@zidan@gmail.com>; **Ruly Morganna** <rulymorganna@gmail.com>
Subject: [IOJET] Editor Decision
Date: 20.03.2020 16:52:41 (+01:00)

Leffi Noviyenty, Mutiara Astuti, Fakhruddin, Ruly Morganna:

We have reached a decision regarding your submission to International Online Journal of Education and Teaching, "TERTIARY EFL STUDENTS' MORPHOLOGICAL AWARENESS OF ENGLISH".

Our decision is to: ACCEPT SUBMISSION

Please find the reviewer notes for your manuscript below, and finalize your paper following their remarks. Please e-mail your finalized paper (with author information) to fundaolmez@gmail.com by conforming to IOJET template and APA guidelines.

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Looking forward to hearing from you,
Best regards.

Dr. Funda Ölmez Çağlar
Akdeniz University, Turkey
fundaolmez@gmail.com

Reviewer A:
Recommendation: Accept Submission

Theoretical orientation, conceptual framework(for conceptual studies) and practical importance

Good

Appropriateness to the journal and readership

Appropriate

Link to the most important literature. References to recent articles.

Fair

Thoroughness, accuracy, clarity, coherence

Fair

Research methodology and design

Descriptive and quantitative method

Discussion of results

Good

Implications for education and teaching

Good

COMMENTS AND FURTHER SUGGESTIONS

None

Reviewer B:

Recommendation: Accept Submission

Theoretical orientation, conceptual framework(for conceptual studies) and practical importance

The current study is on morphological awareness as a significant predictor of vocabulary acquisition, reading comprehension, and the advancement of various literary competences.

Appropriateness to the journal and readership

Okey

Link to the most important literature. References to recent articles.

Okey

Thoroughness, accuracy, clarity, coherence

Good

Research methodology and design

Descriptive. The participants are first-year tertiary EFL students taking English morphology subject from pre-intermediate to intermediate level of proficiency.

Discussion of results

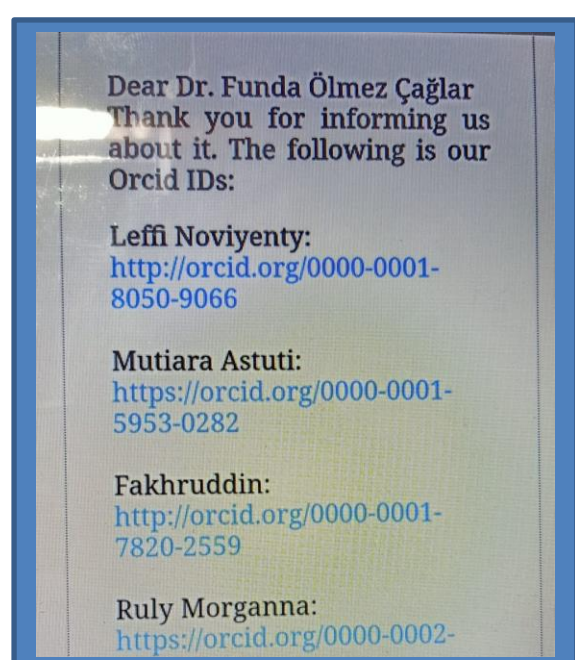
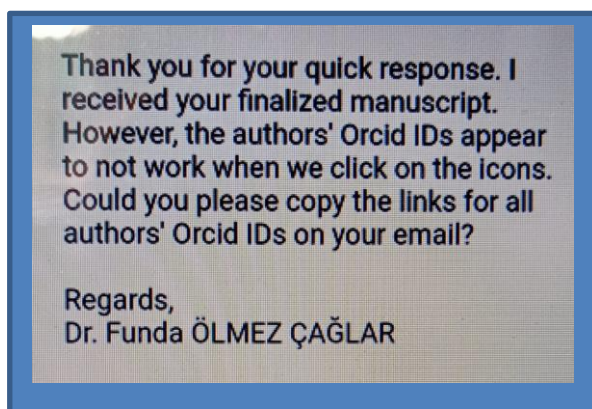
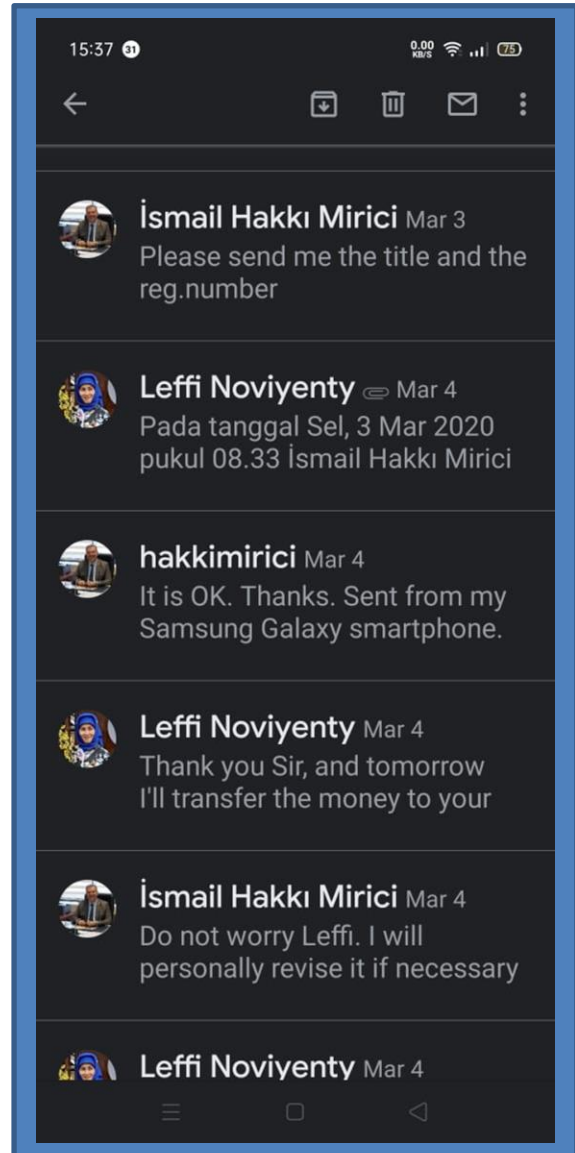
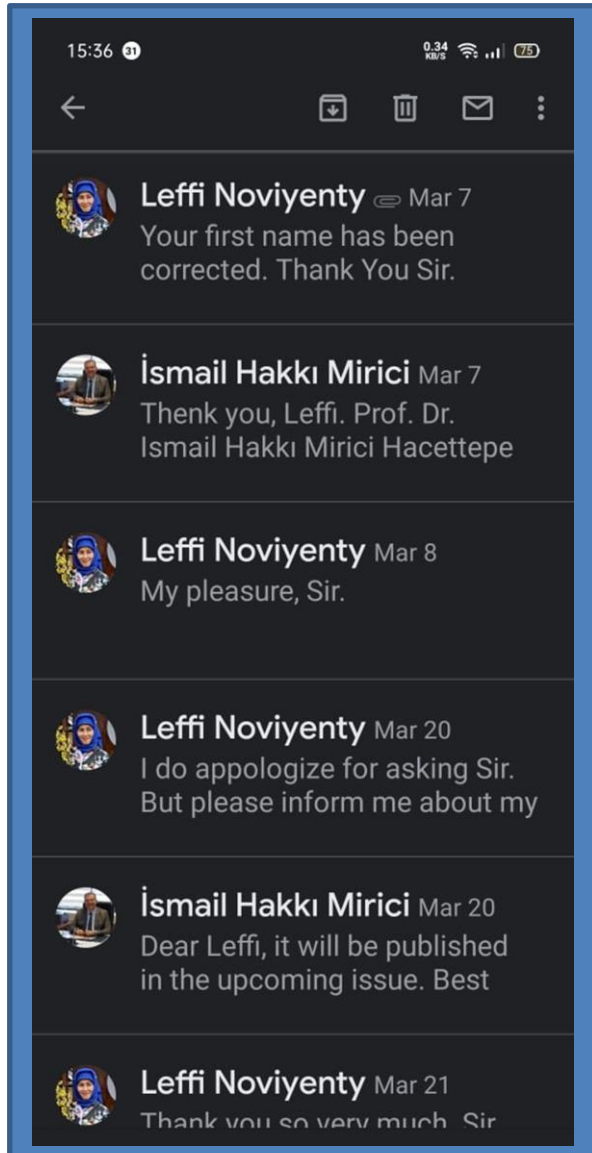
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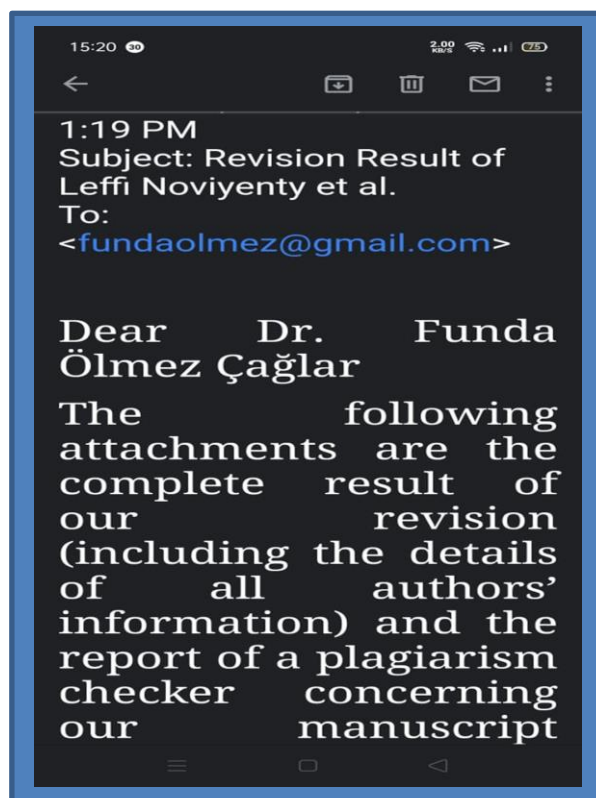
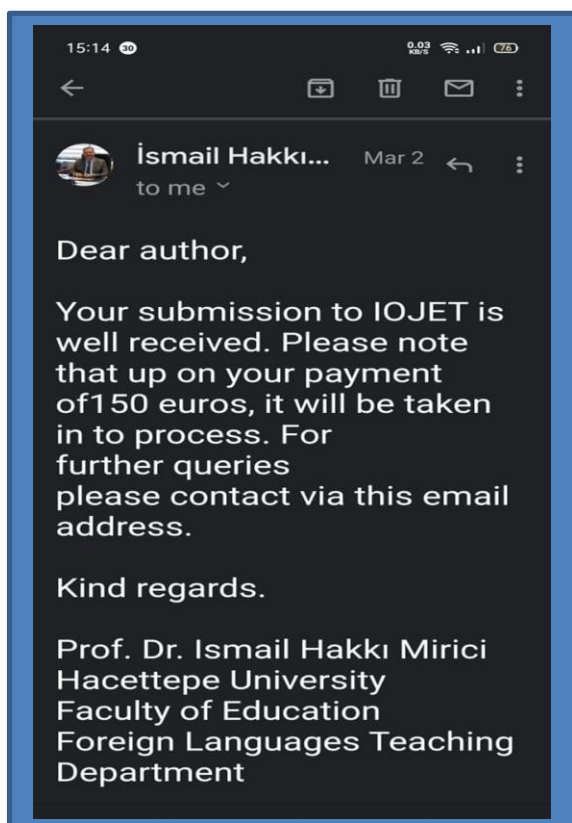
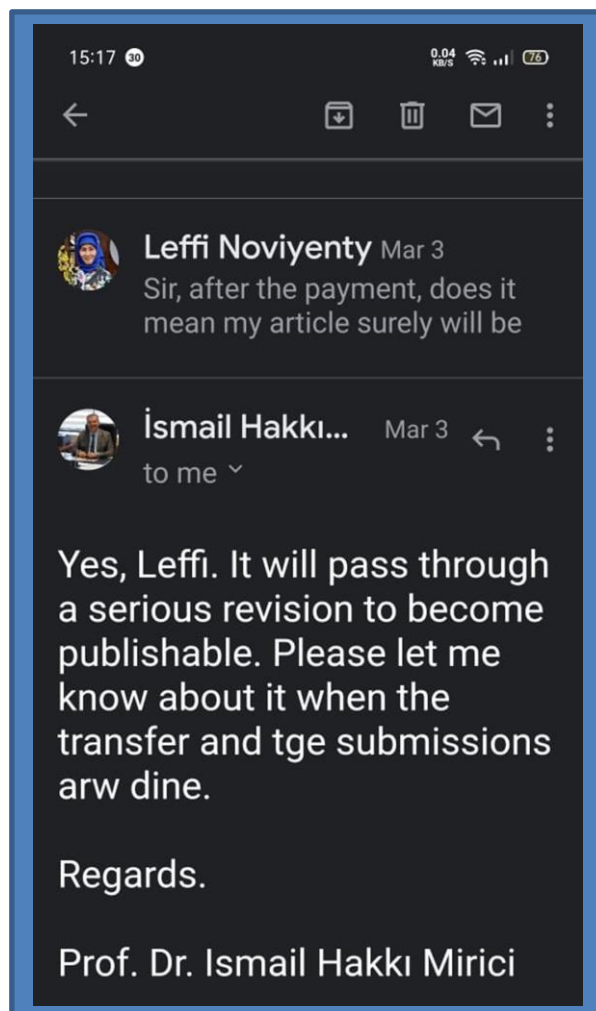
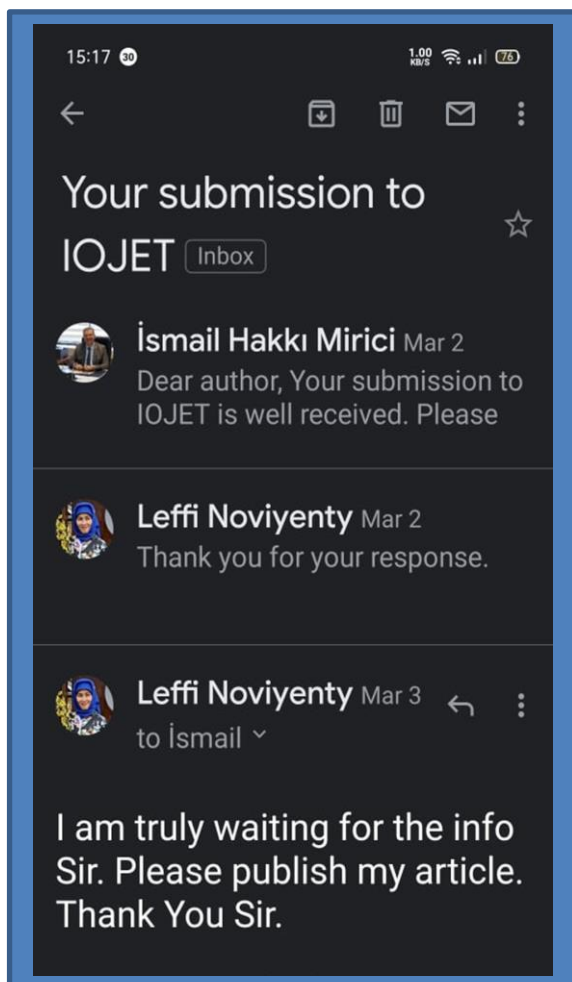
Implications for education and teaching

Not clear. Rounded words have been preferred.

COMMENTS AND FURTHER SUGGESTIONS

Satisfactory.





[IOJET] Editor Decision



Inbox



Dr. Funda Ölmez... Mar 20
to Leffi, Mutiara, Fakhru... ▾



Leffi Noviyenty, Mutiara Astuti,
Fakhruddin, Ruly Morganna:

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References to recent articles.

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coherence

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Discussion of results

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Implications for education and teaching

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COMMENTS AND FURTHER
SUGGESTIONS

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| The current study is on morphological awareness as a significant predictor of vocabulary acquisition, reading comprehension, and the advancement of various literary competences.

Appropriateness to the journal and readership

| Okey

Link to the most important literature.
References to recent articles.

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Discussion of results

So brief and needs reference from the results to support the recommendations made by the researcher.

Implications for education and teaching

Not clear. Rounded words have been preferred.

COMMENTS AND FURTHER SUGGESTIONS

Satisfactory.

Satisfactory.



Ruly Morganna Mar 21

to Funda, leffinoviyyenty,... ▾



Dear IOJET editor

Thank you very much for the acceptance of our manuscript. We will revise it soon according to the reviewers' notes.

Best regards
Ruly Morganna

Revision Result of Leffi



Noviyenty et al. Inbox



Ruly Morganna Mar 22



to fundaalmez ▾

Dear Dr. Funda Ölmez Çağlar

The following attachments are the complete result of our revision (including the details of all authors' information) and the report of a plagiarism checker concerning our manuscript which indicates only 4% of similarities. In our revision, we have added additional elaborations as regards an implication of our study in the field of English language teaching and learning. The revision as such has been made resting upon the reviewers' suggestions. In

addition, we have also inserted all authors' Orcid IDs. We hope that our revision meets the ideal yardsticks set by IOJET. Thank you very much

Best regards

Ruly Morganna



Noviyenty, I., Astuti, M., Fakhruddin, & Morganna, R (2020). Tertiary EFL Students' Morphological Awareness of English. *International Online Journal of Education and Teaching (IOJET)*, X(X), p-p. Annotated link of the article.



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Dr. Funda ÖLMEZ ÇAĞLAR

Research Assistant
English Language Teaching Dept.
Akdeniz University



Ruly Morganna Mar 23



to Funda ▾

Dear Dr. Funda Ölmez Çağlar
Thank you for informing us
about it. The following is our
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Ruly Morganna:

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Best regards
Ruly Morganna



Funda Ölmez Mar 25

to me ▾



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Kinds regards,
Dr. Funda ÖLMEZ ÇAĞLAR

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The purpose of the *IOJET* is to foster critical debate about education and teaching globally. The *IOJET* seeks both to develop new theoretical insights into the education and teaching, and new understandings of the extent and nature of contemporary educational practices in diverse settings. It underlines the significance of discovering and reflecting the interplay of local, regional, national and global contexts and dynamics in shaping educational and teaching strategies and policies internationally.

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The *IOJET* welcomes papers from all prospective authors and especially from scholars who study education and teaching both theoretically and in practice all over the world.



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ENGLISH AS A FOREIGN LANGUAGE LEARNER INTERACTIONS WITH CHATBOTS: NEGOTIATION FOR MEANING

Research article

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ENGLISH AS A FOREIGN LANGUAGE LEARNER INTERACTIONS WITH CHATBOTS: NEGOTIATION FOR MEANING

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Abstract

Chatbots, whose potential for language learning have caused controversy among Second Language Acquisition (SLA) researchers (Atwell, 1999; Fryer & Carpenter, 2006; Fryer & Nakao, 2009; Parker, 2005, Coniam, 2014; Jia, 2004; Chantarotwong, 2005) are intelligent conversational systems stimulating human interlocutors with voice or text. In this paper, two different types of chatbots (pedagogical chatbot Tutor Mike and conversational chatbot Mitsuku) were selected to investigate their potential for foreign language learning by exploring the frequency and patterns of Negotiation for Meaning (NfM) in CMC interactions. 8 Chinese EFL learners were randomly divided into two groups (lower and higher-level learners), and all learners interacted with both the pedagogical and conversational chatbot in a switching replications research design. Data were analysed through content analysis to identify the number of NfM instances observed, the different stages of NfM, trigger types, modified output and learners' perceptions. The findings of this study indicate that while learners with low language levels would benefit most from interactions with pedagogical agents, high language level learners expressed dissatisfaction with chatbots and a low level of engagement was observed in their interactions with the pedagogical chatbot.

Keywords: negotiation for meaning, chatbots, pedagogical agents, language learning

1. Introduction

Can, Gelmez-Burakgazi, and Celik (2019: 97) predict that in the near future artificial intelligence technologies “may have a considerable impact on teaching and learning processes”. One type of artificial intelligence, chatbots, or intelligent conversational systems stimulating human interlocutors with voice or text, are believed to hold promise for Second Language Acquisition (SLA) (Atwell, 1999; Fryer & Carpenter, 2006; Fryer & Nakao, 2009; Parker, 2005). While substantial progress has been made in the design of conversational chatbots, chatbots designed with a pedagogical focus still need further development (Coniam, 2014). Moreover, little is known about chatbots' potential for language learning with regard to their capacity to trigger Negotiation for Meaning (NfM), and whether lower or higher language level learners would benefit more from interactions with chatbots.

Language learning occurs in interaction with peers, teachers or other experts. In this language acquisition process, interaction plays a central role in providing learners with comprehensible input, feedback on their output, and opportunity to produce modified output (Mackey, 2012). Negotiation for meaning (NfM), which takes place to resolve non- or misunderstanding in interaction, provides opportunities for second language (L2) development (Pica, 1994). Within the NfM routine, triggers are the utterances that cause non-understanding and as the learners are forced to pay attention to their output, they are likely to

notice the gaps in their interlanguage, and produce modified output. Although features of the NfM routine were first identified in face-to-face interaction by Varonis and Gass (1985), researchers in the field of Computer-Assisted Language Learning (CALL) have also found similar types and quality of NfM sequences in synchronous computer mediated communication (SCMC) (Blake, 2000). The NfM routine was later expanded and adapted for CMC by Smith (2003).

The present study draws on this interactionist SLA perspective in order to evaluate the pedagogical potential of chatbots by exploring the frequency and patterns of NfM in CMC interactions between English as a Foreign Language (EFL) learners and chatbots. We investigate whether interactions with pedagogical and conversational chatbots without teacher supervision offer opportunities for language learning (operationalised as NfM) for low and high language level learners. The specific research questions are as follows:

1. What is the number of NfM routines observed in low and high language level learners' interactions with a pedagogical and a conversational chatbot?
2. Which NfM stages (indicator, trigger, response, reaction to response) constitute the NfM routines observed in low and high language level learners' interactions with a pedagogical and a conversational chatbot?
3. Which types of triggers (lexis, syntax, discourse, content) cause communication breakdowns in the NfM routines observed in low and high language level learners' interactions with a pedagogical and a conversational chatbot?
4. What is the number of modified output instances produced by low and high language level learners during their interactions with a pedagogical and a conversational chatbot?
5. What are low and high language level learners' perceptions towards their interactions with a pedagogical and a conversational chatbot?

2. Literature Review

This section introduces chatbots and reviews recent studies in which chatbots are used to facilitate language learning. This is then followed by an explanation of the Negotiation for Meaning (NfM) routine in face-to-face and CMC contexts, focusing specifically on the model developed by Smith (2003) which is employed as the theoretical framework for this study.

2.1 Chatbots

Chatbots, or intelligent agents, are “machine conversation system[s] [which] interact with human users with natural conversational language” (Shawar & Atwell, 2005: 489). As a Web 2.0 application (Williams & Compennolle, 2009), chatbots have a long history (Fryer & Carpenter, 2006; Hamill, 2006). The first and the most famous chatbot, Eliza, was invented in the 1960s by Joseph Weizenbaum with a simple text interface to replicate the discourse between a therapist and patients. Chatbots are now commonly used online with increasingly sophisticated functions such as voice recognition and a visual interface (Fryer & Carpenter, 2006, Coniam, 2014).

According to Fryer and Carpenter (2006), despite limited linguistic ability, chatbots may offer valuable opportunities for language learners in the following six ways:

- (1) They provide an anxiety-free learning environment.
- (2) They repeat the same content for learners endlessly without losing patience.
- (3) They offer opportunities for learners to practice reading and listening skills with text and synthesized speech configurations.

- (4) They improve learners' motivation and enhance their interest in language learning.
- (5) They provide opportunities for learners to practise the target language.
- (6) They afford instant and effective error correction.

However, other researchers (Jia, 2004; Chantarotwong, 2005) are skeptical of chatbots' potential for language learning. For example, Chantarotwong (2005) claims that chatbot discourses are "frequently predictable, redundant, lacking personality and having no memory of previous responses" (p.1). Yet, such comments may be unwarranted as many human conversations are also plagued by those characteristics, i.e. frequently predictable and redundant (Paltridge, 2007). Nevertheless, in spite of substantial progress compared with previous conversational systems, from a pedagogical perspective chatbots still seem to have a long way to go (Coniam, 2008a, 2008b, 2014; Williams and Compernelle, 2009), and further research is necessary to explore chatbots' pedagogical potential in language learning before they can be successfully applied in SLA (Fryer and Carpenter, 2006).

Researchers have explored chatbots' appearance and functionality (Coniam, 2008a), their linguistic robustness when encountered with ungrammatical input (e.g. misspelling and ill-formed questions) from English as a Second Language (ESL) learners' perspective (Coniam, 2008b), grammatical quality of their linguistic output (Coniam, 2014), their suitability as a language practice tool (Fryer and Nakao, 2009), the effects of chatbot interface on learners' emotion and learning experience (Wang, 2008), the instructional design of conversational chatbots (Wang & Petrina, 2013), and the effects on learner motivation (Fryer, Ainley, Thompson, Gibson & Sherlock, 2017).

Focusing on learner motivation, Fryer et al. (2017) conducted an experimental comparison of two groups of communicative tasks, one with human-human dyads and the other with human-chatbot dyads. Following 12 weeks of interaction, interest in the task in the human-chatbot dyads decreased significantly, whereas no decrease was observed with the human-human partners. Fryer et al. (2017) concluded that the potential reasons for the decrease in interest in chatbot interactions were the novelty effect and inauthentic discourse of the chatbots, disconfirming the previous assumptions that interaction with chatbots may provide motivational benefits for language learners (Weizenbaum, 1966; Fryer & Carpenter, 2006; Hill, Ford & Farreras, 2015).

While researchers in applied linguistics have predominantly been interested in whether chatbots' linguistic output is grammatical or not, interactionist SLA theories suggest that language input is far from sufficient for language learning, and learners require opportunities to produce and modify their output through negotiation for meaning (Long, 1983a; Varonis and Gass, 1985; Kramsch, 1986; Gass and Varonis, 1994). However, we have been able to identify only one study to date (Williams & Compernelle, 2009) which observed the interaction processes between humans and chatbots in relation to modified output. Williams and Compernelle (2009) conducted a case study to examine interactional and linguistic variation (such as orthography and interrogative structures) in discourse produced by a conversational chatbot and French learners with different proficiency levels. They found that the chatbot's discourse lacked register and included random combinations of formal and informal language features, which present a "less-than-ideal" communicative model for language learners (p.1). Furthermore, the chatbot neither had a flexible level of adaptability to diverse conditions of negotiation for meaning nor was able to provide effective corrective feedback. Nonetheless, Williams and Compernelle (2009) argue that chatbots can still play a role in increasing language awareness with well-

organized post-interaction tasks based on specific linguistic forms in the chat logs, such as discussion about the way chatbots ask questions.

2.2 Negotiation for Meaning (NfM)

Negotiation for Meaning (NfM) is defined as “the process in which, in an effort to communicate, learners and competent speakers provide and interpret signals of their own and their interlocutor’s perceived comprehension, thus provoking adjustments to linguistic form, conversational structure, message content, or all three, until an acceptable level of understanding is achieved” (Long, 1996: 418). In short, it is a process where interlocutors achieve mutual understanding by modification and reformulation (Pica, 1994). NfM is believed to be conducive to L2 learning (Blake, 2000). According to Varonis and Gass (1985), negotiation episodes occur when non-understanding is explicitly acknowledged. NfM has three components, i.e. trigger (T), indicator (I) and response (R), and one optional phase, i.e. reaction to response (RR). In this model, the trigger (T) is the utterance that causes non-understanding, indicator (I) is the signal that shows the existence of a problem, response (R) is the utterance that aims to resolve the problem and reaction to response (RR) shows acknowledgement that the problem is solved.

At this point, we explain trigger types and modified output in more detail as they are the focus of this study. Four types of triggers have been categorized at different levels of language: lexis level, syntax level, discourse level and content level (Toyoda & Harrison, 2002; Smith, 2003). *Lexical triggers* refer to problematic utterances that can be clearly linked to specific lexical items, and *syntactic triggers* refer to a structural or grammatical construction, including grammatical error, inappropriate segmentation or compounding of the sentence. *Discourse triggers* involve general coherence of the discourse or conversation, i.e. failure to follow the conversation thread. *Content triggers* are instances where the entire content of a previous message was in some way problematic, such as vague messages, or problems that cannot be attributed to the former three levels. Content triggers can be due to either conversation infelicities or lack of background knowledge.

According to Pica, Holliday, Lewis & Morgenthaler (1989), modified output is the re-procession and reconstruction of utterance during negotiation of meaning, which can be either self-initiated or other-initiated when a communication problem is noticed. Modified utterances in this study include both semantical and morphosyntactical modifications which aim to increase comprehensibility following a trigger.

2.3 Negotiation for Meaning in SCMC

Learner interactions in SCMC has been argued to facilitate interlanguage development more than face-to-face interactions because learners can review, edit and monitor their output while typing (Kitade, 2000; Ortega, 1997; Pellettieri, 2000; Warshauer, 1998); and the lack of non-linguistic clues such as expression and gesture in text chat puts all communication burden to written words (Kitade, 2000). Moreover, this forced output stimulates learners’ awareness of their interlanguage and easily-saved chat transcripts are not only beneficial for learners to reflect on their interlanguage but also for the researchers making interaction easily accessible (Blake, 2000). Therefore, NfM in SCMC has been widely researched since the 1990s (see e.g. Chun, 1994; Ortega, 1997; Blake, 2000; Pellettieri, 2000; Fernandez-Garcia & Martinez-Arbelaz, 2002; Smith, 2003, 2004; Tudini, 2003; Akayoglu & Altun, 2009; Samani, Nordin, Mukundan and Samad, 2015).

Investigating NfM in Synchronous Computer-Mediated Communication (SCMC), Smith (2003) added two additional components to the negotiation routine, i.e. confirmation (C) and reconfirmation (RC). Confirmation happens when the listener (who indicate non-

understanding) shows his/her completed or uncompleted understanding through a reaction to response, which leads to the initiator's confirmation or disconfirmation. Reconfirmation, signals the closure of the negotiation routine by the listener, indicating his/her understanding.

In line with the results of several other studies on trigger types (Fernandez-Garcia & Martinez-Arbelaiz, 2002; Pellettieri, 2000; Toyoda & Harrison, 2002; Tudini, 2003), Blake (2000) demonstrated that lexical items constituted most triggers and that jigsaw tasks elicited the greatest number of negotiation. Pellettieri (2000) found that corrective feedback, either implicit or explicit led to the incorporation of target linguistic forms in subsequent communication. Toyoda and Harrison (2002) investigated the effectiveness of NfM between NNS-NNS using an open-ended topic. They revealed communication difficulties at different levels, i.e. word, sentence and discourse level.

Based on this research background, this study explores the potential of chatbots for L2 learning from an interactionist perspective by investigating the frequency and patterns of negotiation for meaning in interactions between EFL learners and chatbots.

3. Research methods

3.1 Participants

Data for this study were collected during the spring semester of 2016-2017 academic year. The participants were EFL learners from China. They constituted two groups of learners: learners with lower and higher language levels of English. The participants in the lower language group ranged in age from 20 to 21 ($M=20.5$, $SD=0.5$), while the higher language group participants' ages were between 24 to 31 ($M=27.75$, $SD=2.59$). The lower language level group were sophomore undergraduates in a finance university in China, and the higher language level learners were studying at Applied Linguistics and TESOL postgraduate programme at a British University. Each group consisted of four participants, with two male and two female participants in the lower language level group, and one male and three female participants in the higher language level group.

The lower language level learners passed the College English Test Band 4 (CET4)₁ in December 2016, with a mean score of 478.5. According to the interpretation of CET4 score in the official website (<http://www.cet.edu.cn/cet2011.htm>), they were no better than 56%-66% of the norm group. The higher language level learners held a total IELTS score above 6.5 (CEFR Level C1) about one and a half years ago. As these scores are not exactly comparable, participants' language levels were also identified based on their: (1) time spent learning English, (2) major in Bachelor degree, and (3) time spent in overseas study as listed in Table 1.

Table 1. *Language levels of the participants*

Groups	Average time spent learning English	Time spent in an English-speaking country	Major
lower language level (N=4)	12.5 years	None	3 in statistics and 1 in law
higher language level (N=4)	15.75 years	8 to 12 months	3 in English and 1 in law

It can be seen from Table 1 that the participants in higher language level group had more opportunities to use their target language and more experience communicating with native speakers than their counterparts, both in academic and everyday English.

₁ A criterion-related norms referenced national English test in China (Yang & Jin, 2001), with a total score of 710 and a passing line 425.

All participants were given the opportunity to chat with both chatbots used in the study. The lower and higher language level groups were further divided randomly into two groups to control for order effects, as shown in Table 2, within a switching replications design.

Table 2. *Random allocation of participants in four conditions*

	First chat with	Second chat with
lower language level (Su and Lee)	Tutor Mike (G1)	Mitsuku (G3)
lower language level (Xian and Wang)	Mitsuku (G3)	Tutor Mike (G1)
higher language level (Yu and Meng)	Tutor Mike (G2)	Mitsuku (G4)
higher language level (Jiang and Jie)	Mitsuku (G4)	Tutor Mike (G2)

(G1) pedagogical chatbot/ low language level learners (Group 1), (G2) pedagogical chatbot/ high language level learners (Group 2), (G3) conversational chatbot/ low language level learners (Group 3), and (G4) conversational chatbot/ high language level learners (Group 4).

3.2 Chatbots in the Study

Two types of web-based chatbots were used in this study: the pedagogical chatbot Tutor Mike (Figure 1, http://www.eslfast.com/robot/english_tutor.htm) and the conversational chatbot Mitsuku (Figure 2, <http://www.mitsuku.com/>), the second and first place in the International Loebner Prize 2016 Contest in AI, respectively.

The chatbots had different functions. Tutor Mike featured a language pedagogical design for English learners, while Mitsuku was designed with a general chatting purpose for speakers of English. The similarities and differences between the two chatbots are presented in Table 3.

It should be noted that a difference between the chatbots was their potential for other means of meaning-making. At the very beginning if users clicked on the play key, Tutor Mike



YOU: Hi
 Mike: Hi! How are you today?
 YOU: great
 Mike: What are some things you like to do in your free time?

Enter

would say “Hi, nice to meet. How are you doing today?” in the audio mode with an imitated human voice only. The rest of the chat was entirely text-based. On the other hand, Mitsuku could present pictures when her replies contained certain nouns (such as the food kebab or the animation figure Spongebob). However, these features were not salient in our dataset as Mitsuku was observed to use pictures rarely (only four instances) and the audio greeting of Tutor Mike only happened once.

Figure 1. Pedagogical chatbot Tutor Mike

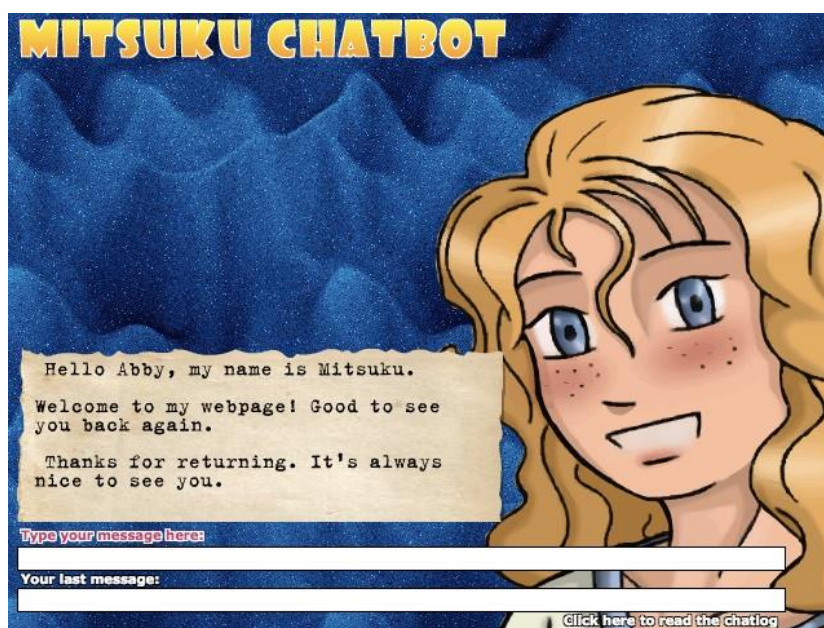


Figure 2. Conversational chatbot Mitsuku

Table 3. Similarities and differences between the two chatbots

Similarities	
General functions	Providing general functions in everyday topics, such as geography, culture, and weather.
Avatar image	Animated figures which could blink as human beings.
Language	English
Differences	
Pedagogical functions	Tutor Mike: An explicit and direct pedagogical feature according to the official website (http://www.rong-chang.com/tutor_know.htm) Mitsuku: None

3.3 Procedures

Before the conversation with chatbots, each participant was asked to fill in a pre-questionnaire (Appendix 1) about background information, such as age, standard English

score, and period of learning English. Then, they were required to chat with each chatbot for 30 minutes.

As chatbots have been observed not to be very successful in actively suggesting new topics to continue conversations (Coniam, 2008b), all participants were provided with 5 general topics and questions (Appendix 3) and were allowed to use further specific questions. The suggested topics ensured that the chat outputs were comparable in terms of linguistic content.

Participants were allowed to chat at their convenience within two days, yet asked not to have a break during the 30-minute chat and answer a post questionnaire (Appendix 2) to gather participant perceptions. The questions, answers and data analysis of questionnaires were in Chinese and were translated for this paper. Participants were asked to keep a copy of their automatically-generated chat logs with Mitsuku. However, chatlogs were not available on the Tutor Mike website and only about 10 lines of the most recent chat was displayed each time. Thus, instead of asking learners to copy-paste their chat record frequently, participants recorded their interaction using an online screen recording software, Apowersoft (<https://www.apowersoft.cn/free-online-screen-recorder>). This ensured an authentic synchronous conversation environment for the learners. The chatlogs were subsequently created by the researchers through manual transcription of the screen recordings.

All participants were volunteers and signed informed consent forms prior to data collection. Pseudonyms are used throughout this paper.

3.4 Data Analysis Methods

Data for this study were analysed both quantitatively and qualitatively. Table 4 summarises data analysis methods for each research question.

Table 4. *Data analysis methods*

Research Questions	Analysis Methods
RQ1. What is the number of NfM routines observed in different groups?	Content analysis for NfM routines + Inferential statistics
RQ2. Which NfM stages (indicator, trigger, response, reaction to response) constitute the NfM routines in different groups?	Content analysis for NfM stages + Descriptive statistics
RQ3. Which types of triggers (lexis, syntax, discourse, content) cause communication breakdowns in the NfM routines observed in different groups?	Content analysis for triggers + Descriptive statistics
RQ4. What is the number of modified output instances in different groups?	Content analysis for modified output + Descriptive statistics
RQ5. What are the participants' perceptions?	Thematic analysis of post-questionnaires

NfM routines (where communication breakdowns occurred) were identified and quantified following Varonis and Gass (1985) and Smith (2003)'s model for NfM following quantitative content analysis principles, which is "a research technique for the systematic, objective, and quantitative description of the manifest content of communication" (Berelson, 1952: 18). The

data were then analysed using inferential and descriptive statistics. Although chat time was constant for all participants, as high language level learners could produce more language, hence potentially lead to a higher number of NfM routines, an adjusted number of NfM routines were calculated per 1000 words.

Consequently, stages observed in NfM routines (indicator, trigger, response, reaction-to-response) were quantified and compared across the four groups.

The following is a NfM instance from the dataset:

Line 1: Participant: look this,i think i am hungry

Line 2: Mitsuku: What does "this" refer to?

Line 3: Participant: the food

The first line produced by a human participant is a trigger causing a communication breakdown. In line 2, the question Mitsuku, the conversational agent, asks is an indicator, which aims to remedy the communication breakdown. The third line is an example of response, which is the human participant's answer to the chatbot's trigger.

Following the identification of NfM routines, the chat logs were then analysed for trigger types (lexis, syntax, discourse, content) identified by Toyoda & Harrison, (2002) and Smith (2003). Finally, for RQ4, instances of modified output (Pica et al., 1989) were calculated. These included only those generated by the learners.

In order to ensure reliability of the analyses, a sample of 75% of the data was coded by an independent English native speaker rater, who was provided with the definition of NfM, standards of analysis of negotiation routines, trigger types, and modified output. Inter-rater reliability was calculated using percentages and was found to be high (non-understanding negotiation routine= 98%, trigger types=99%, modified output=100%).

For RQ5, learner perceptions investigated through post-questionnaires were analysed using thematic analysis (Braun & Clarke, 2006) in relation to each sub-question in the questionnaire.

4. Findings

This section presents the findings of the study in relation to each research question.

4.1 Negotiation for Meaning Routines (RQ1)

Table 5 shows the raw number of NfM routines, total number of words produced in interaction with the chatbot in each group, and adjusted number of NfM routines for 1000 words to allow comparison of the number of NfM routines among four conditions, i.e. (1) pedagogical chatbot/ low language level learners (Group 1), (2) pedagogical chatbot/ high language level learners (Group 2), (3) conversational chatbot/ low language level learners (Group 3), and (4) conversational chatbot/ high language level learners (Group 4).

Table 5. Number of NfM routines observed in learner interaction with chatbots

	Number of NfM routines		Total number of words		NfM routines per 1000 words	
	TutorMike	Mitsuku	TutorMike	Mitsuku	TutorMike	Mitsuku
Lower-level learners (n=4)	12	14	3146	4329	3.81 (G1)	3.23 (G3)
Higher-level learners (n=4)	14	28	6648	7369	2.11 (G2)	3.80 (G4)

Table 5 demonstrates that chatting with pedagogical chatbot Tutor Mike and conversational chatbot Mitsuku both provided opportunities for negotiation for meaning wherein 26 and 42 NfM routines were observed respectively. Given adjusted number of NfM routines observed per 1000 words, higher-level learners' interactions with the pedagogical bot (Tutor Mike) produced the lowest number of NfM routines (2.11).

In order to test any differences between the four groups, we ran 4 Mann-Whitney's U tests to compare differences between the number of NfM routines (Table 6).

Table 6. Comparison of groups for the number of NfM routines observed per 1000 words

	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Median</i>	<i>U</i>	<i>Z</i>	<i>p</i>	<i>r</i>
<i>G1-G3</i>	8	3.36	2.07	3.91	5.00	-8.66	.386	.31 (medium)
<i>G2-G4</i>	8	3.00	1.21	3.66	3.00	-1.44	.149	.51 (large)
<i>G1-G2</i>	8	3.09	1.92	2.65	5.00	-8.66	.386	.31 (medium)
<i>G3-G4</i>	8	3.27	1.45	3.80	6.00	-.577	.564	.20 (small)

Although higher-language level learners' interaction with Mitsuku seemed to produce almost double the number of NfM routines compared to their interaction with Tutor Mike, the difference was not statistically significant (Table 6). Yet small sample size could possibly account for this because we observed a large effect size that explained 51% of the variance in the number of NfM routines per 1000 words between high-level language learners and Tutor Mike (G2) and Mitsuku (G4). This indicates that the conversational chatbot Mitsuku might offer higher opportunities for learners with higher-language levels.

4.2. NfM Stages: Indicator, Trigger, Response, Reaction to Response (RQ2)

The chat logs examined in this research yielded a total of 68 NfM routines in four conditions, with 26 observed in interactions of the low language level participants and 42 in high language level participants. Two phases of the expanded NfM routine (Smith, 2003), i.e. confirmation and reconfirmation, were not observed in learner-chatbot interaction in this study.

Table 7. Amount and type of NfM stages in four groups

	Tutor Mike		Mitsuku	
	Low language level (G1)	High language level (G2)	Low language level (G3)	High language level (G4)
*T-I	3 (25%)	7 (50%)	2 (14%)	5 (18%)
T-I-R	2 (17%)	2 (14%)	1 (7%)	3 (11%)
T-I-R-RR	7 (58%)	5 (36%)	11 (79%)	20 (71%)
Total	12 (100%)	14 (100%)	14 (100%)	28 (100%)

*T= Trigger; I= Indicator; R=Response; RR=Reaction to the Response

Table 7 shows that in terms of NfM routines without a response or a reaction to response phase, half the NfM routines in interactions of high language level learners with Tutor Mike did not include a response (50%), whereas this amount in other three conditions varied only between one fifth and a quarter. Moreover, a high percentage of T-I-R-RR routines was observed in both low- and high-language level learner groups in their interactions with Mitsuku, the conversational chatbot (79% and 71% respectively).

4.3 Types of Triggers: Lexis, Syntax, Discourse, Content) (RQ3)

In order to explore the differences of trigger types in interactions between chatbots and learners in four conditions, the types and amount of triggers were calculated.

Table 8. Trigger types in four groups

	Tutor Mike		Mitsuku	
	Low language level (G1)	High language level (G2)	Low language level (G3)	High language level (G4)
Lexis	6 (50%)	--	3 (21%)	5 (18%)
Syntax	1 (8%)	--	4 (29%)	4 (14%)
Discourse	2 (17%)	8 (57%)	1 (7%)	8 (29%)
Content	3 (25%)	6 (43%)	6 (43%)	11 (39%)
Total	12 (100%)	14 (100%)	14 (100%)	28 (100%)

As shown in Table 8, lexical items caused half of communication breakdowns especially in interactions between the low language level group and Tutor Mike. Lexis and syntax related triggers were not observed in interactions between Tutor Mike and high language level participants. Most communication breakdowns in this group were caused by discourse level issues. On the other hand, content triggers were the predominant reason for breakdowns in interactions of both low and high language level learners with Mitsuku (43% and 39% respectively).

4.4 Learners' Modified Output (RQ4)

Table 9 demonstrates the amount of modified output by learners, the amount of total NfM routines, and the relative percentage of modified output observed in all NfM routines in language learner interactions with chatbots.

Table 9. *Learners' modified output in four groups*

	Amount of modified output		Number of NfM routines		% of modified output	
	Tutor Mike	Mitsuku	Tutor Mike	Mitsuku	Tutor Mike	Mitsuku
Low language level	4	3	12	14	33% (G1)	21% (G3)
High language level	4	7	14	28	29% (G2)	25% (G4)
Total	8	10	26	42	31%	24%

According to Table 9, both low and high language level learners produced modified output in their interactions with both chatbots. Both low- and high-language level learners produced a similar percentage of modified output in their interactions with Tutor Mike (33% and 29% respectively). While high-language level learners also produced similar amounts of modified output in their interactions with both chatbots (29% and 25%), there was a 12% difference in the amount of modified output learners with a low-language level produced in their interactions with different chatbots (33% with the pedagogical bot, and 21% with the conversational bot).

At this point we would like to note that indicators (signals) of communication breakdown by chatbots were not always explicit, but de-contextualized or mis- contextualized. Such responses from the chatbots were treated as NfM indicators as they triggered modified output from the learners. Excerpts 1 and 2 illustrate this point.

Excerpt 1

Line 1. Mike: There are several reasons.

Line 2. Jiang: For example?

Line 3. Mike: *I see*.

Line 4. Jiang: I mean, for example what interests you when teaching people English.

Line 5. Mike: I see what you mean.

In Excerpt 1, Mike's de-contextualized response *I see* in line 3 signals his non-understanding of Jiang's previous turn, which prompts Jiang's modified output to increase comprehensibility in line 4.

Excerpt 2

Line 1. Mitsuku: The only things I take are people's time and I also take knowledge from the internet into my brain.

Line 2. Xian: how do you do?

Line 3. Mitsuku: I am very well, how are you Xian?

Line 4. Xian: how can you do it? take knowledge like brain?

Similarly, in Excerpt 2, line 2, Xian's misunderstood query leads to Mitsuku's response "*I am very well, how are you Xian?*", which then prompts Xian to modify her output in line 4. Such de-contextualized and mis-contextualized responses may be due to pattern matching, a conversation programme that parses input to look for key words and give automatically generated responses (Godwin-Jones, 2004), which is still predominantly adopted in chatbot design (Coniam, 2008b, 2014). Although these responses could be considered unsuccessful responses, as learners accept them as indicators (signals) for communication breakdown, they might be valuable for language learning with regard to their capacity to trigger modified output.

4.5 Participant Perceptions (RQ5)

In the post-questionnaire, participants were asked about their communication experience with two chatbots and to evaluate chatbots' conversation ability, the influence of chatbots' different appearance (i.e. gender and animated figure) on conversation, as well as their feelings upon communication breakdowns.

In relation to whether interaction with chatbots was smooth, all the participants in the low language level group stated that they had better communication experience with Mitsuku rather than Tutor Mike. For example, one male participant said, "Most of the time she [Mitsuku] could accurately understand what I mean, and her answers were more in accordance with normal human beings". Other lower-language level participants also reported that "Mitsuku could ask me questions actively", and that Mitsuku "is more intelligent".

Yet, two participants with higher language levels held the opposite view. In their opinion, conversation with Tutor Mike was much smoother as "he [Mike] was able to provide topics actively." However, chat logs, especially with the higher language level learners offered some contradictory evidence. In chatlogs, there were some explicit negative expressions towards Mike, but not towards Mitsuku. To elaborate, one of the participants, Jiang, denounced Mike "stupid" several times (e.g. Excerpt 3, line 9) and another participant Yu got angry with Mike's performance and refused to answer any questions in several occasions.

Excerpt 3

Line 1. Jiang: Who is John Lennon?

Line 2. Mike: A famous musician murdered by a jerk in NYC.

Line 3. Jiang: How old was he

Line 4. Mike: Do not ask about someone's age.

Line 5. Jiang: I mean how old was John when he was murdered?

Line 6. Mike: I see what you mean.

Line 7. Jiang: Tell me

Line 8. Mike: Do I have to tell you?

Line 9. Jiang: Stupid Mike

Line 10. Mike: You really shouldn't call someone stupid.

Additionally, the transcripts showed that learners with higher language levels sometimes tended to be reluctant to engage in negotiation. For instance, in Excerpt 4, line 3, when Tutor Mike expresses his non-understanding, Yu ignores this and moves onto a

new topic rather than attempting to clarify the misunderstanding.

Excerpt 4

Line 1. Yu: Have you watched movies adapted from these novels?

Line 2. Mike: Yes, I have

Line 3. Yu: Which one?

Line 4. Mike: Which one of what?

Line 5. Yu: Who are the main characters in the *Great Gatsby*?

In terms of the influence of chatbots' appearance on their communication experience, one female participant in the higher-language level group reported that "Chatting with male-figured chatbot made me feel freer to ask bold questions. The female-figure chatbot, though I know she is just a chatbot, influenced my questions. I treated Mitsuku consciously as a female human being, and my questions were more conservative." Another female participant from the higher language level group said, "The influence [of different chatbot appearance] was not that significant. But I prefer the communication with a male-figured chatbot." However, other participants in both groups believed the appearance did not have any influence on their communication experience.

Participants were also asked whether communicating with chatbots was more embarrassing or relaxing when understanding problems occurred compared with their online chat experience with other humans. Participants with low language levels all stated that interaction with chatbots was "more relaxing". For example, they thought that "chatting with chatbots is more relaxing, because there is no worry about being mocked", that "I have more time to prepare [my response]", and that they could "skip topics" they did not like.

However, two participants with a higher language level stated that "Chatting with chatbots is not relaxing, because if I chat with them the way I talk with a human being, they cannot completely understand what I am saying. Most of the time, they can only accept a completed sentence, which is different from normal human-human conversation, so I have to adjust my linguistic expression to what can be easily understood by them."

5. Discussion

The aim of this paper was to investigate the potential of pedagogical (Tutor Mike) and conversational (Mitsuku) chatbots for foreign language learning for low and high language level learners. To this end, eight language learners were asked to interact with both chatbots for 30 minutes each resulting in 16 chat scripts. The chatlogs were then analysed for the number of NfM routines, the phases in NfM routines, trigger types and amount of modified output produced in four conditions: low and high language level learners' interactions with Tutor Mike and with Mitsuku.

The findings demonstrated that the number of negotiated routines observed in learner interactions with the chatbots per 1000 words were 26 with Tutor Mike and 42 with Mitsuku. This indicated that although NfM routines were small in number, chatbots offered learning opportunities at almost similar levels provided in human-human SCMC interactions. For instance, Tudini (2003) reported that only 9% of total turns were negotiated in SCMC interactions between native speakers and non-native speakers (NS-NNS). Both Tudini (2003) and this study employed open-ended conversation prompts. However, in task-based, a higher amount of NfM turns was observed; e.g. Akayoglu and Altun (2009) found 14.9% negotiated turns in NS-NNS interactions, and Pelletieri (2000) reported 34% negotiated turns in NNS-NNS interactions. Thus, future studies can explore NfM routines in learner-chatbot

interactions with learning tasks, or embark on the design of chatbots to facilitate interaction to complete specific language learning tasks.

Although the number of NfM routines did not statistically significantly differ among the groups, NfM routines observed in interactions of high-language level learners and the pedagogical chatbot produced the least number of NfM, with a large effect size observed in comparison to NfM produced in their interactions with the conversational chatbot. Therefore, future investigation of the impact of different types of chatbots used by learners of different proficiency levels could produce important results.

A second research question in this study was in relation to the stages of the NfM routine (T-I-R-RR) that were observed in each group. Based on Foster (1998) and Pica et al. (1989), in face-to-face human-human interaction where interlocutors exchange information through not only language but also facial expression and body language, Smith (2003) speculated the percentage of four-staged negotiation routine “would fall somewhere below 23% and 35%” (p.47). However, according to Smith (2003) CMC settings require learners to produce explicit closure due to reduced non-linguistic cues available in the environment. Similarly, in this study, although the animated figures of Tutor Mike and Mitsuku can blink or roll eyes with the moving cursor, they lack facial expressions or gestures to indicate their (mis)understanding. Not surprisingly, NfM routines without a response or a reaction to response phase amounted to about 20% of all routines in all groups except the interactions between learners who had higher language levels and Tutor Mike. In this group, NfM routines without a reaction to response stage was especially high (50%). Moreover, the additional phases (confirmation and reconfirmation) identified in Smith’s (2003) expanded CMC negotiation model were not observed in this study. The lack of the two expanded negotiation phases may be attributable to participants’ unwillingness to engage in negotiation, lack of goal-oriented tasks, or chatbots’ limited conversation ability (Williams and Compernelle, 2009; Coniam, 2008b, 2014).

Third, this study explored the amount and type of triggers in the four groups. The findings showed that content-level triggers constituted a quarter to half of the triggers in all groups. The dominant role of content-related triggers may indicate chatbots’ inability to conduct a smooth conversation with learners, especially with the higher language level participants who would be more expectant of adjacency pairs. Moreover, the concentration of content-related triggers in the present study is different from the results in previous human-human SCMC interactions, which found lexical items to trigger communication breakdowns the most in SCMC interactions either based on tasks (Fernandez-Garcia & Martinez-Arbelaiz, 2002; Pelletier, 1999; Blake, 2000; Smith, 2003, 2004) or open-ended topics without teacher-supervision (Toyoda & Harrison, 2002; Tudini, 2003). Specifically, Smith (2003) demonstrated that 60% non-understanding in his study of NNS-NNS synchronous online negotiation was lexical-related, while Tudini (2003) observed nearly half of the triggers to be lexical in NS-NNS electronic negotiation. In the present study, lexical triggers constituted about half of all triggers only in interactions between low language level learners and Tutor Mike.

Fourth, the results showed that low language level learners produced the highest percentage of modified output when they were engaged in NfM with the pedagogical chatbot, a ratio similar to that in FTF contexts (Pica et al., 1989). One possible explanation could be Tutor Mike’s functionality in giving explicit corrective feedback. Therefore, it is possible to argue that pedagogical chatbots may provide more opportunities for language learning for lower proficiency learners of L2. Despite Fryer and Carpenter’s (2006) assumption that chatbots may be more beneficial for learners with higher proficiency levels, in line with

William and Compernelle (2009) and Coniam (2014), the findings of the present study suggest the opposite. Thus, the type and functionalities of the chatbots might be an important variable here, too.

Although chatbots did not always signal misunderstanding explicitly, their de- or mis-contextualised responses acted as de-facto indicators. Such out-of-context responses seemed to successfully prompt participants to pay attention to the linguistic forms, as such notice the gap between their interlanguage and target language, and modify their output, thereby illustrating benefits of the Output (Swain, 1985; Swain and Lapkin, 1995) and Noticing Hypothesis (Schmidt, 1990, 1994). Thus, for language learners who have few opportunities to practice their target language in real life, despite limited pedagogical potential, chatting with either conversational or pedagogical chatbots can provide them with opportunities for the development of their interlanguage.

Finally, communicating with chatbots was found to be relaxing for learners with limited English proficiency as they were not afraid of being mocked and had more time to prepare their responses. However, learners with higher language levels displayed some negative attitudes, particularly towards Tutor Mike, and expressed their discontent with having to adjust their linguistic expression to what can be understood by chatbots, which is in line with the least number of NfM routines observed in this group.

6. Conclusion

Several conclusions can be drawn based on the results of this study. First, interaction with pedagogical or conversational chatbots can provide learners with opportunities for NfM, and thus language learning. Second, the NfM routine observed in chatbot-learner interactions generally followed the pattern established by Varonis and Gass (1985), while confirmation and reconfirmation stages of the expanded model for SCMC (Smith, 2003) were not observed. Third, while content-related issues predominantly triggered non-understanding in all groups, lexical items constituted most difficulties for understanding in interactions between the pedagogical chatbot and low language level learners, similar to NS-NNS and NNS-NNS SCMC interactions. Fourth, interaction between learners and chatbots promoted modified output in all groups, with highest percentages observed in interactions between low language level participants and the pedagogical chatbot, and with lowest percentages between the same group of learners and the conversational chatbot. Learners interpreted chatbots' de- or mis-contextualized responses as indicators of non-understanding, and thus modified their output to resolve misunderstandings. Finally, while most of the participants believed that chatting with chatbots offers a less-threatening environment, learners with higher language levels seemed to be not completely satisfied with their interactions with chatbots.

While the findings indicate potential of learner-chatbot interactions for language learning, the sample size in this study was small and interactions with only two freely available chatbots were explored within a short period of time. Longitudinal studies with a higher number of participants and more robust identification of language levels would enhance the generalisability of the findings. Future studies should also take improving chatbot technology into consideration as chatbots become more sophisticated and advanced.

Our findings have some implications for pedagogical chatbot design. Intelligent conversational systems could be designed with a pedagogical focus drawing on SLA theories and especially the NfM sequence. These could include an attempt to provide explicit corrective feedback in line with the language levels of the learners, and develop chatbots which can handle adjacency pairs to increase learners' willingness to engage in NfM, or are designed to complete a specific language learning task with a human partner.

In terms of the pedagogical implications of our findings, we would predict that learners with lower language levels would benefit more from interactions with chatbots, and especially with pedagogical ones, such as Tutor Mike; and with higher language levels from interactions with conversational chatbots. However, teachers should be aware that learners' motivation to interact with chatbots may decrease as the novelty effects diminish (Fryer et al., 2017). This may especially be the case with learners who have higher language proficiency levels because they may be disappointed in the performance of current chatbots, and thus interaction with other NNS or NS might be more appropriate and attractive for this group.

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Appendix 1. Pre-questionnaire Questions

1. 你从什么时候开始学习英语？(When did you start learning English?)
2. 你最近的四级或雅思成绩是多少？(What is your latest CET 4/IELTS score?)
3. 你什么时候开始取得的这个四级/雅思成绩？(When did you get this grade?)

Appendix 2. Post-questionnaire Questions

以下问题基于你与两个不同聊天机器人的交流体验，请如实回答以下问题。

The following questions are based on the experience about your chatting with the two chatbots. Please answer them honestly.

1. 关于不同话题，你觉得和 Tutor Mike 和 Mitsuku 哪个聊天过程更加顺畅（不会出现过多你不能理解的句子表达）？为什么？

In the two conversation processes with Tutor Mike and Mitsuku, which one you think was smoother (i.e. there were not too many sentences you could not understand)? Why?

2. Tutor Mike 和 Mitsuku 两个不同的性别以及形象在多大程度上会影响到你们的聊天？

To what extent the different sex and figure of Tutor Mike and Mitsuku affected your communication?

3. 当交流中出现你不能理解的句子或者表达时，相比于同样情境下的人与人沟通的情景，和机器人聊天是否会让你更尴尬或者更放松？为什么？

Does communicating with chatbots make you feel more embarrassed or relaxed when there are sentences or expressions you cannot understand compared with your online conversations with other humans? Why?

Appendix 3. Chat Instructions and Topics

Talk with the chatbots with any topics you are interested in within 30 minutes. You can choose from the following topics/questions.

Do not use a dictionary. Instead, ask the chatbots when you are confused.

1. Favourite subject(s) in school: What is your favorite subject(s)? Why do you like it or them?
2. Languages: What is the mother tongue of Tutor Mike and Mitsuku? What other language(s) can they speak besides English?
3. Books: What is your favourite book(s)? Who are the main characters in that book? Which character do you like?
4. Hometown: Where is your hometown? Do you like living in a city or countryside? What are the reasons for that preference?
5. Travelling: Which places have you travelled to?



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INVESTIGATING EMPLOYING INFORMATION COMMUNICATION TECHNOLOGY FOR ESP LEARNING: A CASE OF IRANIAN EFL STUDENTS' ATTITUDES

Research Article

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INVESTIGATING EMPLOYING INFORMATION COMMUNICATION TECHNOLOGY FOR ESP LEARNING: A CASE OF IRANIAN EFL STUDENTS' ATTITUDES

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Abstract

Although employing technology in language learning has been widely examined, there remains a scarcity of research investigating employing Information and Communication Technology (ICT) for learning English specifically aimed at learning English for Specific Purposes (ESP). This paper examined students' attitudes toward benefits and barriers in employing ICT for learning ESP. The sample of the study consisted of 100 students, in Iran, in Esfahan, who passed their ESP course. An adaptive survey questionnaire, which was consisted of 40 items related to 6 parts, was designed for the purpose of the study. The parts of the questionnaire were involved attitudes of employing ICT for ESP, enriching ESP course, skills in using ICT, obstacles to using ICT in ESP, teacher education, and social and cultural rules. Results of the study indicated that most of the students had positive attitudes toward employing ICT for ESP learning. These findings can be used to employ ICT tools in ESP curriculum and to support Iranian ESP textbooks through utilizing ICT.

Keywords: attitudes, barriers, English for Specific Purposes (ESP), Information and Communication Technology (ICT)

1. Introduction

Vahabi and Sadeh (2011) declared that utilization of ICT in teaching and learning purposes is becoming one of the crucial issues of new education. They also mentioned that conducting research on utilization of ICT in language learning is becoming a question of the day. It has long been established that employing technology for language learning can be useful in different levels (see Cakir, 2015; Dedja, 2015; Li, 2015; Parvin, & Salam, 2015; Prince, 2014; Su, Zheng, Liang, & Tsai, 2018; Wu, 2015; Zareekbatani, 2015). Most of the studies that have examined this issue have investigated the benefits and effectiveness of employing ICT for language learning. For example, Tinio (2002) stated that there are some benefits for using ICT involving the notion that ICT learners can become equipped with digital age literacy, inventive thinking, higher-order thinking, sound reasoning, effective communication, and high productivity.

Although the integration of ICT in ESP has been extensively investigated over the past years (Liuolienė, & Metiūnienė, 2013; Kavaliauskienė & Kaminskienė, 2010; Vahabi & Sadeh, 2011; Wisniewska, 2016). The relatively few studies of employing ICT in ESP learning investigate both the benefits and barriers of employing ICT for language learning in general and for ESP learning in particular (For example, Dela Rosa, 2016). To date, however, there has been little empirical evidence that examine employing ICT for ESP learning in tertiary level in Iranian contexts. Therefore, this paper specifically addresses this under-researched and

provides the different attitudes of Iranian language students toward employing ICT in ESP learning.

2. Literature Review

Warschauer (2004) expressed that three issues involving simultaneous impact of globalization, spread of English, and technological development have transformed the learning and teaching of English as a lingua franca in an unprecedented way. According to Jung (2006), essential literacy skills involving English and ICT are necessary for growing non-native speakers of English to make certain full participation in the information society. According to Dela Rosa (2016), in today's world, information and communication technology (ICT) has grown in a way that it is capable of developing educational opportunities in both formal and non-formal ways. The following now addresses the benefits and barriers of employing ICT in language learning.

With using upgrading teaching techniques by means of network applications, language teachers may have higher attainments in instructing ESP than what was previously thought (Murphy, 1985). In this vein, Cooper (1975) believed that teachers who teach ESP should know the participants' requisite for English for educational purposes in order to continue their studies. There are some points which must be considered for a course for someone who needs English in order to do one's job including: the first is the environmental and social aspects; the second is relationships; and the third is authenticity and up to date material (Cooper, 1975; Stervens, 1977). Many researchers expressed that innovative technological methods have contributed to teachers to integrate different teaching methods based on the needs of learners by technology (Pitler, Hubbell, Kuhn, & Malenoski, 2007). For example, Holec (1981) claimed that the task-based learning contributes to those students who are constantly engaged in professional information searches (Holec, 1981). Živković (2014) referred to the 21st century as the age of global communication and the quick broadcast of information. Živković (2014) added that employing of ICT for ESP teaching and learning is a current challenge that pressure to rethink a number of educational issues.

Indeed, if technology engages students in meaningful, relevant and authentic activities accompanied with open-ended software and the Internet, therefore technology is the most successful tool that lead to learning (Jonassen, 2000). 'Mindtools' (Jonassen & Reeves, 1996) develop autonomous and meaningful learning, support interactive, increase collaborative and student-centered classrooms. In addition, 'Mindtools' contribute to involve students in creative and critical thinking, and contribute students to construct their knowledge. According to Živković (2014), higher-order thinking skills contribute students to become inventors of knowledge, competent and productive communicators, successful collaborators, independent and inventive thinkers, problem solvers and career experts. About technology in ESP learning Živković (2014) stated as follows:

Modern technology has the potential to increase interactivity and availability as a communication device and as a classroom management tool. If used appropriately, the technology could add relevance and meaning to ESP learning because it has the potential to increase students' motivation for studying languages. (p. 23)

According to Ehrich, McCreary, Ramsey, Reaux, and Rowland (1998), integrating technology can effectively buttress constructivism. Vygotsky (1978) maintained that in

constructivist approach knowledge was constructed by the individual from within rather than being transferred to the learner from outside source. He also emphasized the necessity of tools such as language and computer to effect knowledge construction. Tarnopolsky (2015) stated that “constructivist approach to teaching/learning any subject (including foreign languages and ESP among them) may be defined as an approach that provides students with opportunities of ‘constructing’ their own knowledge and skills through practical experience in real-life or modeled activities” (p. 158). He conducted research on ESP teaching to university students and discussed the application of the constructivist approach in ESP teaching to university students. Tarnopolsky (2015) suggested professionalizing ESP teaching and learning through modeling professional interaction in ESP classrooms to contribute students to achieve communication skills in their professional interchanges. He suggested some activities for performing constructivist approach in the ESP teaching and learning involving firstly, students interact orally in English on professional issues; secondly, external sources of professional information has been deployed in English and students provide different papers on professional issues in English; and lastly, students conduct project work in English. He explained benefits of employing constructivist approach as follow “The essence of those advantages is in allowing students to construct their professional English communication skills autonomously, implicitly, and subconsciously, thus facilitating and accelerating their ESP skill acquisition“(p. 171). According to Holec (1981), the constructivist learning and teaching is based upon learning autonomy thus this causes the ESP teaching and learning process task- based (Pica, 2007; Prabhu, 1987; Skehan, 2002), and increasing the learning because of students’ engagement in solving innovative tasks.

The aim of ESP courses is to contribute students to be able to use language that they will require in future professional settings (Zivkovic, 2014). This can be realized through content-based curriculum that students learn the language by focusing on the ‘specialized subject matter’ and utilizing authentic materials (Zivkovic, 2014). In addition, “Internet-generated materials can be flexibly arrayed to engage students with topics and cognitive tasks relevant to students' professional futures” (Kimball, 1998). However, ICT integration in ESP has some caveats. The following now describe the barriers of employing ICT in ESP learning. Fathi Vajargah, Jahani, and Azadmanesh (2010) found several challenges of utilizing ICT in Iran involving “lack of National Policy for using ICT in Higher Education, lack of adequate investments, cultural obstacles, financial challenges, lack of continuity in ICT use, and lack of systematic training and development programs” (p. 38).Yousefi Azarfam, and Jabbari (2012) concluded that employing technology is determined by some factors that external factors involving access to appropriate materials and professional development opportunities. Internal factors involving awareness of the benefits of technology and personal attitudes towards technological innovations. Another barriers of utilizing ICT is distraction of attention. Turkle (2008) defined ‘tethering’ as the technology users’ over dependence and intense preoccupation with technology, leading to fragmentation of attention and disengagement from authentic activities.

Therefore, to address the abovementioned gap in the literature in this area, this paper specifically investigates the attitudes of university students in different majors on employing ICT for their ESP courses. Hence, the present study is an extension of earlier research and provide more insights about these issues. The purpose of this study is to investigate the attitudes of university students in different majors toward employing ICT in ESP learning. Thus, the following question was answered in this study:

What are the students' attitudes toward the benefits and barriers of employing ICT for ESP learning?

3. Method

In this part, the procedure followed by the researchers has been provided and described in details.

3.1. Design of the Study

This survey study was investigated the employing the ICT for ESP learning from the perspective of the Iranian students. The basic purpose and rational for choosing survey research was that this method allowed for generalizing from a sample to a population. Therefore, inferences can be drawn about attitudes of the population. (Creswell, 2014).

Some advantages of survey designs involving, firstly, surveys are particularly well appropriate for asking factual, behavior, and attitudinal questions (Dornyei, 2003). Secondly, the questionnaire can spread widely. In addition, through questionnaire and technology, quantitative responses to closed questions can be rapidly obtained and analyzed (Nunan & Baily, 2009). This is why a questionnaire was preferred for data collection for this study. In addition, one type of closed-item format, Likert scale, was used in the present study because of the following reasons: practicality, and comparability. The comparability increases the statistical analysis process. From these views, the researchers chose a survey research method with a Likert scale questionnaire design.

3.2. Participants

The non-random sampling process was employed in this study. The participants were selected by convenience sampling method. A number of 100 undergraduate students, in the second semester of academic year 2017-2018, who had passed their ESP course, in Esfahan in Iran, were selected. The participants constituted 40 males and 60 females, in different majors. In addition, their age was 19 to 23 and most of them had the mediocre familiarity with ICT tools and educational software in their major.

3.3. Instruments

A 40-item validated questionnaire with items in the format of Likert scale was used in the study.

3.3.1. Questionnaire

An adopted questionnaire based on two existing questionnaires (Soleimani, Khanjani, 2013 & Dela Rosa, 2016) was designed. But for the purpose of the present paper, some of the items were omitted or added to adjust the purpose of present study; based on these questionnaires, the following themes were selected: (1) attitudes towards benefits of employing ICT in ESP (2) enriching ESP course (3) skills in using ICT (4) obstacles to using ICT in ESP (5) Teacher education (6) social cultural. The first section of the questionnaire elicited students' information including gender, major, and their familiarity with ICT tools. The second section of questionnaire composed of 40 items related to 6 themes which has been named before. The items related to themes of the questionnaire involving attitudes towards benefits of employing ICT in ESP (15 items), enriching ESP course (10 items), skills in using ICT (3 items), obstacles to using ICT in ESP (5 items), teacher education (3 items), social cultural (3 items).

A pilot study was conducted. A rationale for this pilot study before the actual data collection was that, the researcher can check any unclear items, misunderstanding items, and confusing instructions (Nunan, & Bailey, 2009). Piloting was conducted at two-stage phase. Firstly, the questionnaire was pre-piloted with three experts in ESP teaching. Their comments were employed in the questionnaire, the ambiguous questions were revised and the format was improved. They also checked the face validity and content validity of the questionnaire. The Cronbach alpha coefficient was 0.76 which shows reliability. In the second phase of the piloting five participants from the same population were selected to answer the questionnaire with 45 items (first version of the questionnaire). The researchers presented to answer the misunderstanding questions. If the participants had any questions in answering some items, those items were highlighted by the researchers. These highlighted items were modified or omitted. Finally, a questionnaire was obtained with 40 items. It is worth mentioning that these five participations were not in the sample themselves.

The questionnaire was translated through back translation procedure. Firstly, the final version of the questionnaire, which was piloted and revised, was translated into the Persian by the first translator. Then, the second bilingual translator, who was not seen the final version of the questionnaire, translated the questionnaire into the English language. Then final version and back-translated version of the questionnaire was compared by the translators to make clear items. This procedure contributed to increase the reliability and validity of the questionnaire before administering it to the sample of the population. In addition, this procedure contributed to better understanding items of the questionnaire and contributed to obtain more valid results.

Prior to commencing data collection, all of the participants read the informed consent form and they received explanation of the purpose of the study. The participants were told that they can refuse to participate in the study at any time. In addition, they were told that all the information will be kept confidential. Following the ethical clearance, the questionnaires were administered to the sample of population.

4. Results

The aim of the present study was to explore the participants' attitudes toward the benefits and barriers of employing ICT for ESP learning. In this section, the results obtained for the research question of the study are presented. As mentioned earlier, the questionnaire employed by the study was broken into six themes. Firstly, frequency of the participants' answers on these items were calculated for items within each theme and they can be seen in separate sections. Tables are presented to show the mean score for each item. A mean score above 3.00 (which is the average value of the choices) indicates the respondents' agreement with that statement while a mean score below 3.00 shows their disagreement. Secondly, as it was mentioned in the methods section, one-sample t-test was run on the data collected for each theme. Results obtained for each part can be seen in tables and figures.

4.1. Attitudes towards Benefits of ICT Integration into ESP

The first theme representing the first sub-scale of the questionnaire concerned 'the students' perceptions toward the application of ICT in ESP courses'. In order to come up with answer to this research question, the participants' responses on this theme were collected.

Table 1. *Frequencies for the students' perceptions*

Statements	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Mean
1. ICT integration in ESP can provide face-to-face intimate interactions between teachers and learners.	14	17	16	33	16	3.28
2. I can avoid problems like handwriting and organizing idea and text when I use ICT tools.	4	10	8	37	38	3.97
3. Integrating ICT in ESP provides me the best chance to learn ESP.	11	20	19	29	18	3.23
4. ICT tools can help keep track of student progress in ESP.	8	20	8	44	17	3.43
5. ICT integration in ESP facilitates collaborative work between students in the class.	4	18	8	39	25	3.67
6. ICT integration in ESP contributes to concentrating more on their learning.	12	18	17	30	20	3.28
7. ICT integration in ESP contributes to try harder on what I am learning.	7	18	15	42	16	3.42
8. I have more autonomy in my ESP learning with using ICT	8	10	11	34	34	3.78
9. ICT integration in ESP contributes to me to understand more easily what I am learning.	7	14	14	36	26	3.61
10. ICT integration in ESP contributes to me to remember more easily what I have learned.	3	17	17	35	25	3.63
11. ICT integration in ESP contributes to improve the ESP class atmosphere (less boring classroom, students' engagement).	6	8	9	36	38	3.94
12. ICT integration in ESP contributes to improve my motivation for learning ESP-course.	4	11	11	37	34	3.88
13. ICT integration in ESP contributes to improve higher-order thinking skills in ESP (critical thinking, analysis, problem solving).	10	11	12	35	29	3.63
14. ICT use in ESP teaching and learning is essential to prepare me to live and work in the 21st century.	7	4	2	34	50	4.19
15. ICT integration in ESP enables me for more interesting and creative work.	4	18	8	43	24	3.67

As it is obvious in Table 1, it can be seen that mean scores in the first part of the questionnaire (i.e., students' perceptions) were above 3.00, which means that the respondents agreed with all the statements therein. The highest mean scores in this part of the questionnaire belonged to items # 14 ($M = 4.19$), 2 ($M = 3.97$), 11 ($M = 3.94$), and 12 ($M = 3.88$), which

respectively stated that (a) ICT use in ESP teaching and learning is essential in order to prepare the students to live and work in the 21st century, (b) students can avoid problems like handwriting and organizing ideas and texts when they use ICT tools, (c) ICT integration in ESP classes contributes to improving the class atmosphere by making classes less boring and making students more engaged, and (d) ICT integration in ESP classes promotes students' motivation for learning the ESP course.

Table 2. *One-sample t-test results for attitudes towards benefits of ICT integration*

Mean	Test Value = 3					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
3.64	8.84	14	.000	.64	.48	.76

As Table 2 shows, the *p* value under the *Sig.* (2-tailed) column appeared to be less than the pre-set significance level ($.00 < .05$), which means that the respondents' agreement with the statements in the Students' Perceptions section of the questionnaire reached statistical significance.

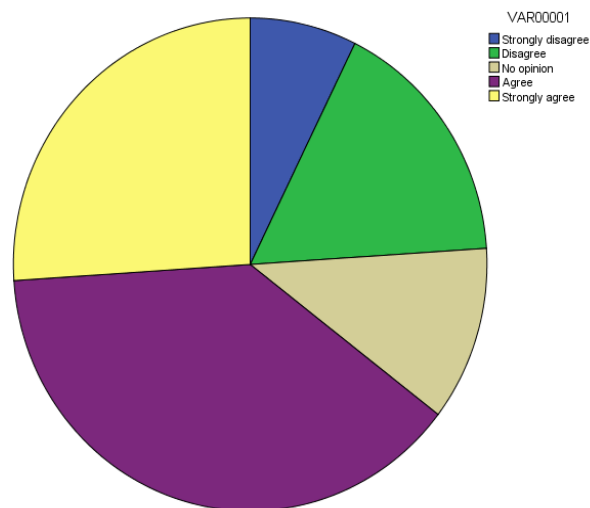


Figure 1. Graphical representation of attitudes towards benefits of ICT integration

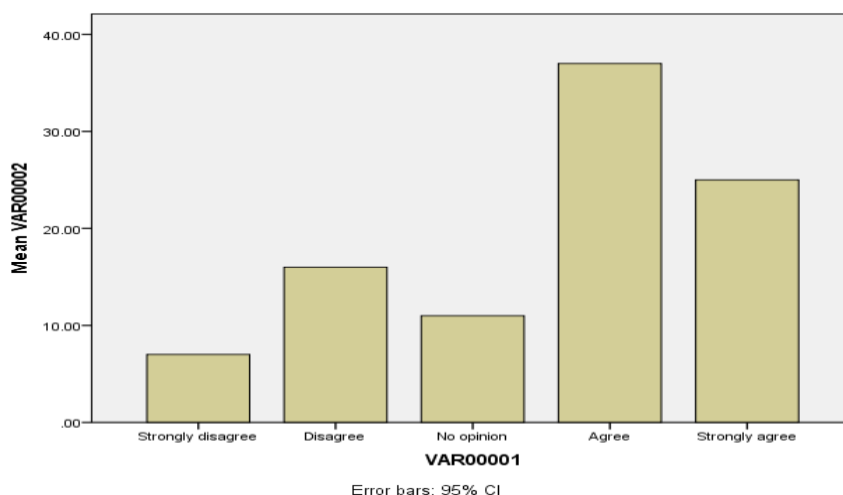


Figure 2. Bar graph for the representation of attitudes towards benefits of ICT integration

According to the above figure, it is evident that a far higher number of the students answered either ‘agree’ or ‘strongly agree’ on items 1 – 15 than either disagree or strongly disagree. This is indicative of the notion that the present participants mostly agreed with such a plan to be implemented.

4.2. Attitudes towards Enriching ESP Courses

The next section of the questionnaire was concerned with enriching ESP courses. Similar to the previous section, the participants’ answers on the related items (items 16-25) were collected. As it is obvious in Table 3, it can be seen that mean scores in the second part of the questionnaire (i.e., students’ attitudes of enriching ESP) were above 3.00.

Table 3. Frequency for students’ attitudes toward enriching ESP

Statements	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Mean
16. Using ICT-based activities in ESP-course can satisfy my needs, preference, and learning tactics in ESP.	5	23	18	32	19	3.38
17. I think using ICT in ESP can provide authentic and up to date materials for learning ESP.	3	7	2	38	47	4.22
18. I know that incorporating the ICT-based activities in ESP-course can expand my knowledge and information in my major faster than traditional methods.	8	9	10	40	30	3.77
19. Using ICT tools are more effective for learning in ESP than printed materials.	7	10	13	43	24	3.69

20. In my view ICT integration in ESP can be used for ESP curriculum in tertiary education.	5	14	17	36	25	3.63
21. ICT integration in ESP-course is a more powerful tool than discussions and lectures without using ICT.	4	15	16	41	21	3.61
22. ICT integration in ESP can be used to effectively manipulate instructional contents and materials.	14	15	15	34	19	3.29
23. Integrating of ICT-based activities in ESP curriculum can be used as advanced instructional materials in ESP-course for tertiary education.	6	22	10	43	16	3.42
24. Integrating ICT-based activities in ESP-course contributes to self-access, and contributes to learning environment in ESP-course.	8	6	11	36	36	3.88
25. In my view, ICT tools are more powerful tools for learning ESP-course than traditional tools such as using only textbooks for ESP learning.	13	13	11	32	27	3.48

It is clear that, like in the first theme, the respondents agreed with all the statements therein. The highest mean scores in this part of the questionnaire belonged to item # 17 ($M = 4.22$) stating that ‘I think using ICT in ESP can provide authentic and up to date materials for learning ESP’. Results of one-sample t-test can also be seen in table 4.

Table 4. *One-sample t-test results for enriching the ESP course*

Mean	Test Value = 3					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
3.63	7.33	9	.000	.63	.44	.83

As Table 4 indicates, the p value under the *Sig.* (2-tailed) column appeared to be .000 which is less than the pre-set significance level ($.00 < .05$), which means that the respondents’ agreement with the statements in the Students’ Perceptions section of the questionnaire reached statistical significance. This is clearly evident in the following figure and bar graph.

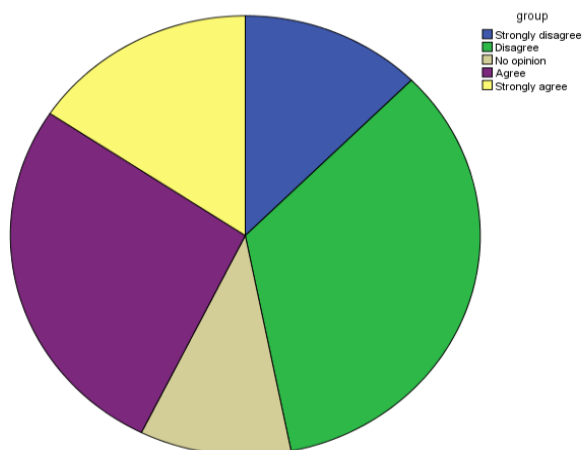


Figure 3. Graphical representation of attitudes towards ICT enriching of ESP

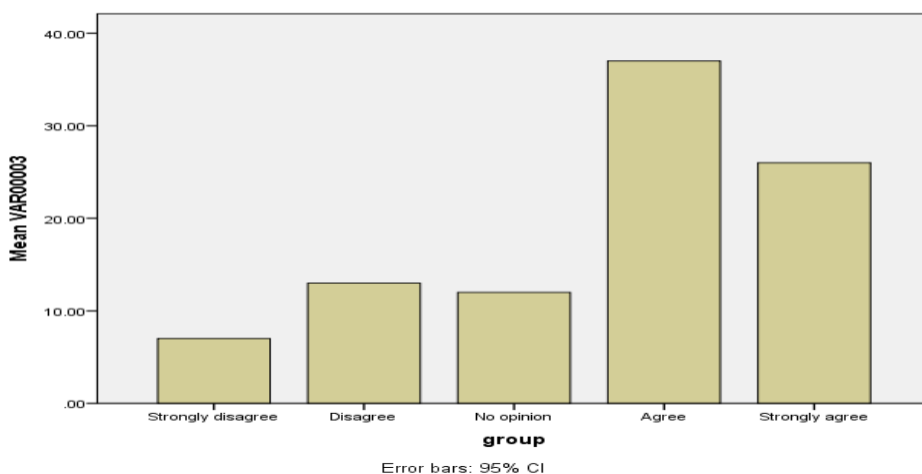


Figure 4. Bar graph for the representation of attitudes towards ICT enriching of ESP

4.3. Attitudes towards Skills in Using ICT

It is clear that, like in the first theme, the respondents agreed with only one statement in the Skill Theme. The other items did not come to be welcoming the participants’ agreement because their means were below 3. The mean highest scores in this part of the questionnaire belonged to item # 26 ($M = 3.38$) stating that ‘all ICT tools increase my knowledge and skills as a university student.’ The means of other Results of one-sample t-test can be seen in table 5.

Table 5. Frequencies for the skills in using ICT

Statements	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Mean
26. All ICT tools increase my knowledge and skills as a university student.	14	18	7	33	25	3.38
27. I myself can learn almost everything about how to use an ICT tool.	9	36	15	25	12	2.94

28. I have enough and satisfactory information about ICT tools and educational software programs in my major.	13	45	9	21	9	2.67
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To examine the students' attitudes toward their skills in using ICT tools, one-sample t-test was run and the results are shown in the following table.

Table 6. One-sample t-test results for skills in using ESP

Mean	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
					2.99	-.01

Results for this section were in contrary to the two above themes. Results showed that students had a negative attitude toward the statements in the third section of the questionnaire (Sig. = 0.98). Following figures illustrate this in clearer forms.

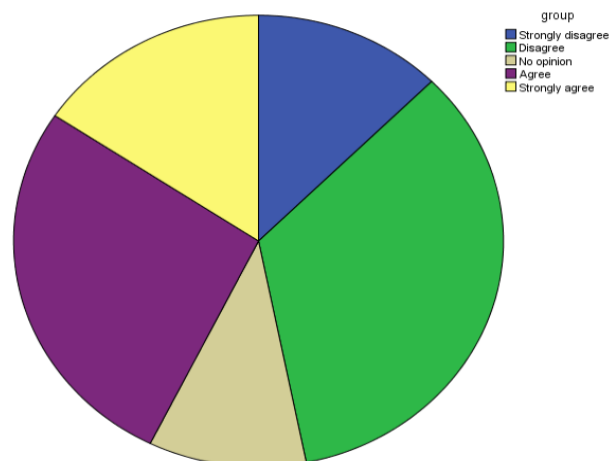


Figure 5. Graphical representation of attitudes towards skills in using ICT

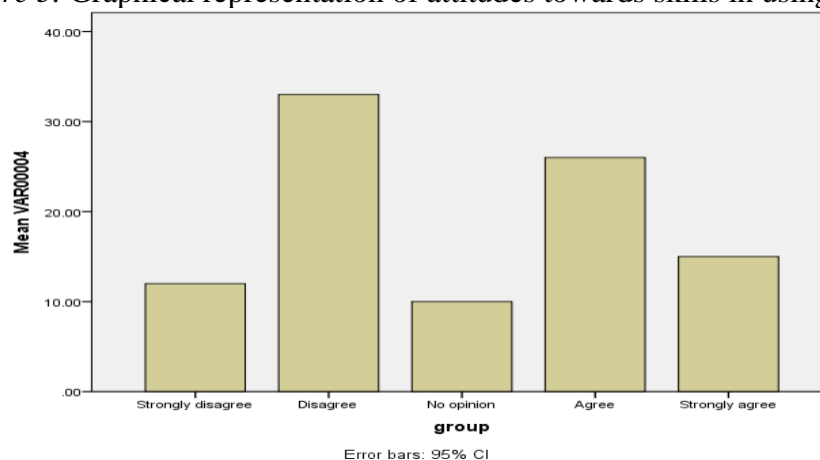


Figure 6. Bar graph for the representation of attitudes towards skills in using ICT

In the above figures and tables, it can be found that frequency of those students disagreeing with ‘skills in using ICT’ was neither significant nor positive.

4.4. Attitudes towards Obstacles

‘Obstacles on the ways to using ICT in ESP’ courses was the fourth theme which was investigated in the present questionnaire. To measure this theme, the students’ attitudes were asked and analyzed. Result are presented in Table 7.

Table 7. *Frequencies for obstacles in using ICT in ESP*

Statements	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Mean
29. For ICT to be fully exploited for teaching and learning in ESP-course, radical changes in university equipment are needed.	12	24	1	35	25	3.38
30. I have limited experience in using ICT tools and software programs.	29	36	4	20	8	2.40
31. ICT cannot be used in ESP-course because of organizing insufficient time for ESP-course by university.	7	14	10	38	28	3.68
32. There is not sufficient equipment for the integration ICT in ESP instruction.	10	19	8	40	20	3.42
33. Because of the lack of syllabus consist of ICT-supported lessons and ICT-based activities so that ICT cannot be used in ESP.	9	20	19	31	17	3.28

Frequency of answers on the items of this theme were above 3 (items #29, #31, #32 and #33) except for one item (item #30, $M=2.40$). So regarding the following statement, they participants had a positive attitudes: 29) For ICT to be fully exploited for teaching and learning in ESP-course, radical changes in university equipment are needed; 31) I have limited experience in using ICT tools and software programs; 32) There is not sufficient equipment for the integration ICT in ESP instruction; and 33) Because of the lack of syllabus consist of ICT-supported lessons and ICT-based activities so that ICT cannot be used in ESP. However, they did not agree with ‘I have limited experience in using ICT tools and software programs’. Results of one-sample t-test are presented in Table 8.

Table 8. *One-sample t-test results for obstacles in using ICT in ESP*

Mean	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
2.23	1.06	4	.34	.23	-.37	.83

It was shown that this theme was not perceived to be significant by the present students because sig. value was 0.34 (>0.05). Also the total mean which was 2.23 indicates that students’ ideas were less than the criteria ($=3$). This can be more easily seen in the following figures.

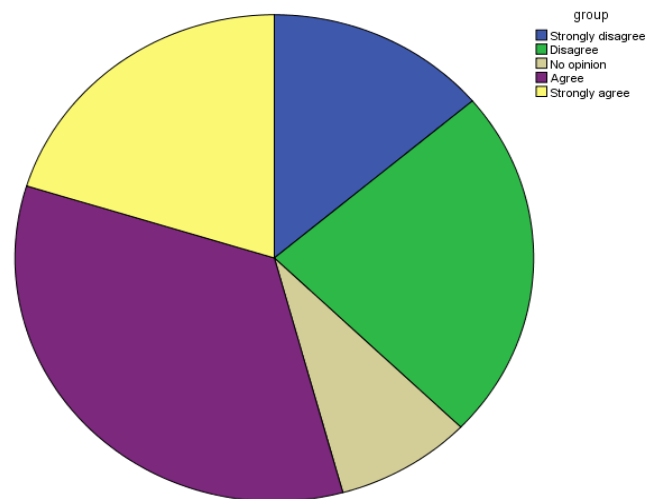


Figure 7. Graphical representation of attitudes towards obstacles to using ICT in ESP

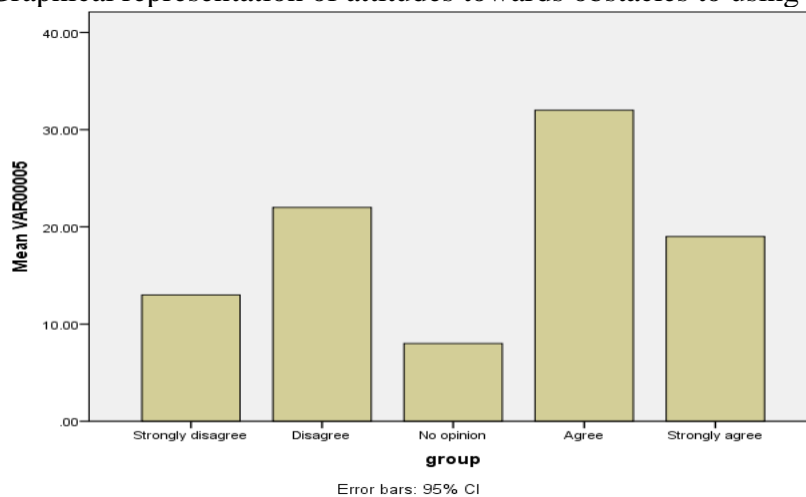


Figure 8. Bar graph for attitudes towards obstacles to using ICT in ESP

4.5. Attitudes towards ‘Teacher Education

Items 34-36 were concerned with effects of ICT application on teacher education. It was shown that these items were not significantly perceived by the present participants ($Sig. = .11 > 0.05$) and that they had negative attitudes toward this theme (Mean = 2.36 < 3). These are shown in Table 9.

Table 9. Frequencies for effects on 'teacher education'

Statements	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Mean
34. High-level risk taking teachers hold more positive attitudes towards applying ICT for their teaching.	8	20	22	32	15	2.26
35. ICT tools have not been used for teaching ESP because of the lack of competence of teachers.	14	21	14	28	20	2.19
36. ICT tools have not been used for teaching because teachers have not attitudes and beliefs about ICT benefits for ESP teaching in the classroom.	8	10	13	44	22	2.63

As can be seen in the above table, items #34, #35 and #36 were shown to be significantly perceived by the present participants ($M=2.26, 2.19$ and $2.63 < 3$). Because means of these items are lower than 3, it is an indicative of the fact that no positive neither significant attitudes was proposed on them. Moreover, results of one-sample t-test are presented in Table 10.

Table 10. One-sample t-test results for 'teacher education'

Mean	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
2.36	2.63	2	.11	.36	-.22	.94

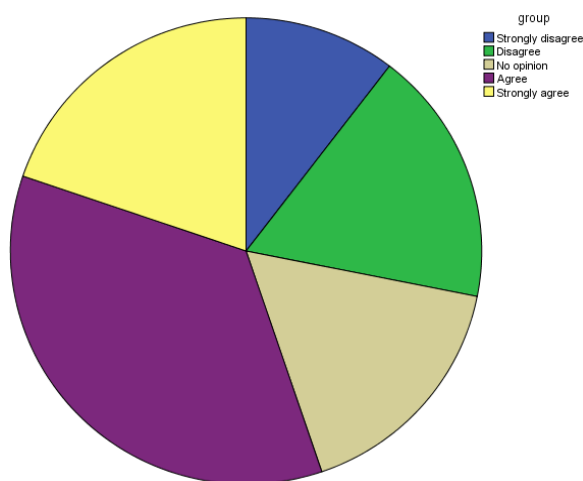


Figure 9. Graphical representation of attitudes towards teacher education

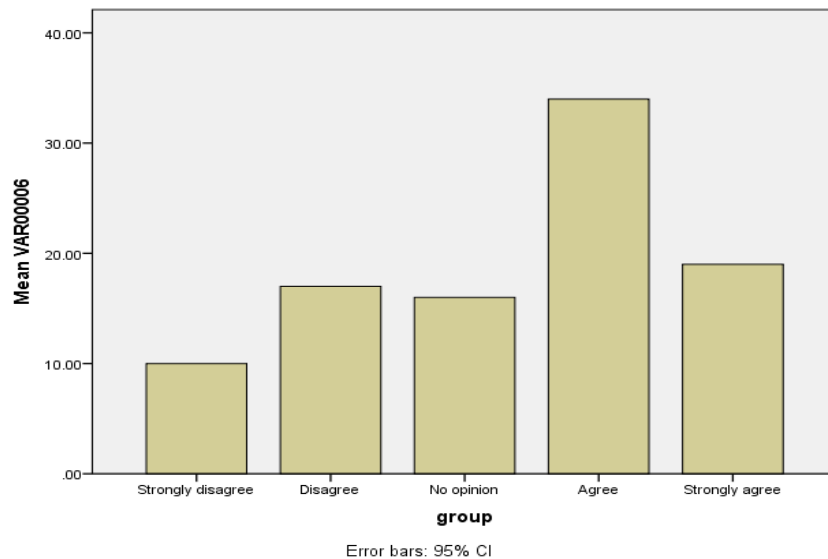


Figure 10. Bar graph for attitudes towards teacher education

4.6. Attitudes towards Social and Cultural Factors

Final theme in this questionnaire took account of cultural factors (items 37 - 40). The table shows that all the mean scores in the first part of the questionnaire (i.e., students' perceptions) were above 3.00, which means that the respondents agreed with all the statements therein. The highest mean scores in this part of the questionnaire belonged to items #37 ($M = 3.31$), 38 ($M = 3.35$), 39 ($M = 3.36$), and 40 ($M = 3.27$), which respectively stated that (a) There is cultural concern of using ICT tools such as using Internet, text chat, mobile, etc. by students in the classroom; (b) Integration of ICT tools in ESP classes (Internet, audio and text chat) by the students causes abuse by the students; (c) Integration of ICT tools in ESP classes (Internet, audio and text chat) by the students causes abuse by the students; and (d) Using ICT tools and software programs in ESP teaching can cause anxiety (technophobia) for some of the teachers because of illiteracy on the ICT tools.

Table 11. *Frequencies for effects on social and cultural factors*

Statements	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Mean
37. There is cultural concern of using ICT tools such as using Internet, text chat, mobile, etc. by students in the classroom.	21	11	4	38	23	3.31
38. Integration of ICT tools in ESP classes (Internet, audio and text chat) by the students causes abuse by the students.	19	12	9	30	27	3.35
39. Fear of being replaced by ICT impact some teachers' decision to integrate ICT in their teaching.	14	8	21	37	17	3.36
40. Using ICT tools and software programs in ESP teaching can cause anxiety (technophobia) for some of the teachers because of illiteracy on the ICT tools.	17	12	14	35	19	3.27

Attitudes toward this theme were both significant (Sig. = 0.001 < 0.05) and positive (M = 3.32 > 3). The following table (Table 6) shows these. In addition, graphical illustrations have been provided for easier understanding.

Table 12. One-sample t-test results for social and cultural factors

Mean	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
3.32	15.68	3	.001	.32	.25	.38

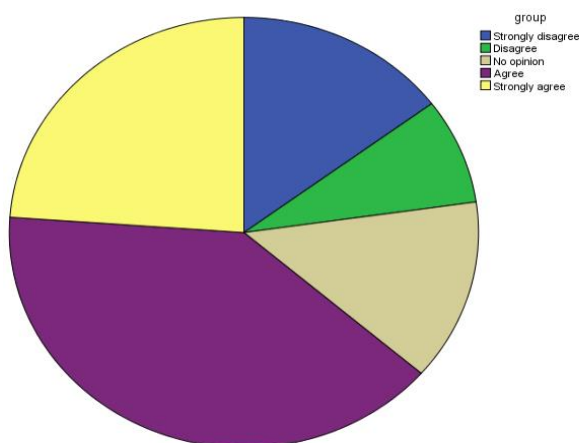
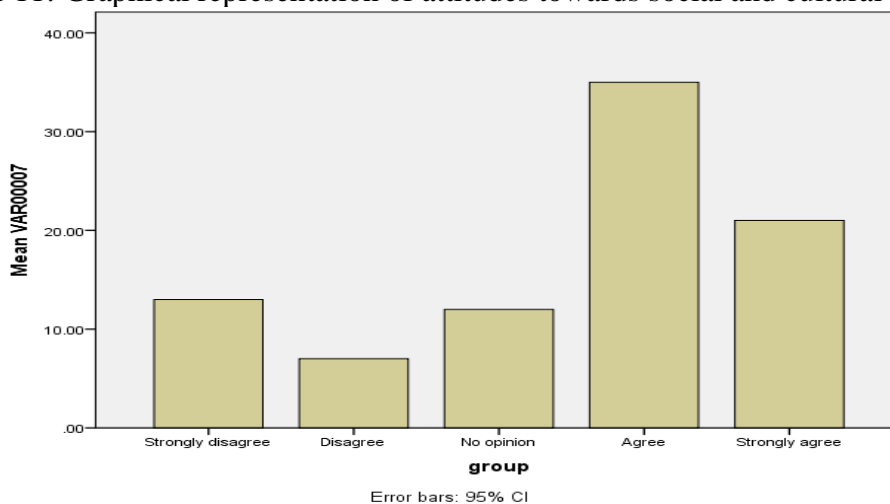


Figure 11. Graphical representation of attitudes towards social and cultural factors



5. Discussion

The question in this study sought to determine “what are the students’ toward the benefits and barriers of employing ICT for ESP learning?” on this question, the following responses based on the themes of the questionnaire are presented.

The results showed that employing ICT for ESP learning has the following advantages: increasing interactions, making easier collaborative work, enhancing autonomy, motivation, and higher order thinking skills in ESP learning, understanding ESP more easily, and making

available authentic materials. These results are in line with Jonassen and Reeves' (1996) studies who said that develop autonomous and meaningful learning, support interactive, increase collaborative and student-centered classrooms. In addition, 'Mindtools' contribute to involve students in creative and critical thinking, and contribute students to construct their knowledge. Another possible explanation for this results is that higher-order thinking skills contribute students to become inventors of knowledge, competent and productive communicators, successful collaborators, independent and inventive thinkers, problem solvers and career experts (Zivkovic, 2014). Students also believed that ICT use in ESP learning is essential to prepare them to live and work in the 21st century. students' viewpoints seem to be consistent with Jung' (2006) study who expressed that essential literacy skills involving English and ICT are necessary for growing non-native speakers of English to make certain full participation in the information society. Students' attitudes also are in agreement with those obtained by Dela Rosa (2016), who stated that in today's world, ICT has grown in a way that it is capable of developing educational opportunities in both formal and non-formal ways.

Regarding the enriching ESP course, the results of the survey revealed that the students had positive attitudes towards enriching ESP course. The students thought that enriching ESP course by ICT can provide authentic and up to date materials for learning ESP. The results are in agreement with those obtained by Cooper (1975) and Stervens (1977) who found that some points which must be considered for a course for someone who needs English in order to do one's job including the environmental and social aspects, the relationships, and authenticity and up to date material. There are, however, other possible explanations that the aim of ESP courses is to contribute students to be able to use language that they will require in future professional settings (Zivkovic, 2014). This can be realized through content-based curriculum that students learn the language by focusing on the 'specialized subject matter' and utilizing authentic materials (Zivkovic, 2014).

Considering the skills in using, the results show that all ICT tools increased students' skills as university students. It seems possible that these results are due to some benefits of using ICT involving equipping with digital age literacy, inventive thinking, higher-order thinking, sound reasoning, effective communication, and high productivity (Tinio, 2002). They also believed that they could learn almost everything about how to use an ICT tool. Moreover, the students did not agree with the claim that they had enough and satisfactory information about ICT tools and educational software programs in their major.

Regarding obstacles to using ICT in ESP, most of the students agreed that for ICT to be fully exploited for teaching and learning in ESP-course, radical changes in university equipment are needed. They expressed that they have enough experience in using ICT tools and software programs but ICT cannot be used in ESP-course because of organizing insufficient time for ESP-course by university. They also believe that there is not sufficient equipment for the integration ICT in ESP instruction. In addition, they believe that because of the lack of syllabus consist of ICT-supported lessons and ICT-based activities, therefore, ICT cannot be used in ESP in Iranian context. These results agree with the findings of other studies (Fathi Vajargah, Jahani, & Azadmanesh, 2010), in which stated "lack of National Policy for using ICT in Higher Education, lack of adequate investments, cultural obstacles, financial challenges, lack of continuity in ICT use, and lack of systematic training and development programs" (p. 38) as several challenges of utilizing ICT in Iran. Regarding the students' attitudes that were positive, toward utilizing ICT in ESP learning in the first part of the questionnaire, and regarding the students' attitudes that they did not have limited experiences

with ICT, they did not see it as an obstacles to implementing ICT in their classes, it can thus be suggested that further research especially in Iranian context are needed.

Considering teacher education, nearly half of the students agreed that high-level risk taking teachers hold more positive attitudes towards applying ICT for their teaching. A possible explanation for this might be that usually, any kind of innovation and change is more useful by risk-taking teachers. Most of the students agreed that ICT tools have not been used for teaching because teachers have not attitudes and beliefs about ICT benefits for ESP teaching in the classroom. The results agree with the findings of other studies, in which employing technology is determined by some factors that external factors involving access to appropriate materials and professional development opportunities (Yousefi Azarfam, & Jabbari, 2012). Internal factors involving awareness of the benefits of technology and personal attitudes towards technological innovations (Yousefi Azarfam, & Jabbari, 2012). A further study with more focus on these issues is, therefore, suggested.

Considering social and cultural factors, the results of survey revealed that students agreed that there is cultural concern of using ICT tools such as using Internet, text chat, mobile by students in the classroom that causes abuse by the students. Turkle (2008) defined ‘tethering’ as the technology users’ over dependence and intense preoccupation with technology, leading to fragmentation of attention and disengagement from authentic activities.

6. Conclusion

This study sets out to investigate the Iranian students’ attitudes toward employing ICT for ESP learning. The results of this investigation show that the Iranian students, in general, had positive attitudes toward utilizing ICT in their ESP learning. Findings to emerge from this study is that some barriers to using ICT in ESP involving lack of syllabus consist of ICT-supported lessons and ICT-based activities, lack of enough technical supports to help the teachers, insufficient time and interest, lack of essential infra-structures and facilities difficulty, technophobia, abusing like using social networking that cause the distraction of attention, lack of Integrating ICT-based activities in ESP curriculum. In fact, these issues hinder employing ICT for ESP learning in Iranian context.

The second major finding was the benefits of employing ICT for ESP learning. They were involved enhancing interactions on professional issues between students, increasing collaborative work between students, increasing autonomy, increasing intrinsic motivation, enhancing higher order thinking skills, utilizing authentic materials, raising engagement in learning, and increasing productivity of learning. This study has also found that teachers’ beliefs, competence, and their attitudes towards benefits of employing ICT for ESP teaching could be important factors in utilizing ICT in ESP course. In addition, high-level risk-taking teachers has more positive attitudes towards employing ICT for their teaching.

The present study is limited by several limitations that should be addressed. The most important limitation lies in the fact that due to the researchers’ limitations in accessing wide population, the results of this investigation are not generalizable. A two-phase design with different forms of methods triangulation would be a useful design to address such a problem. Another problem, which is related to response rate and which is common in the survey research, is that all of the questionnaires are not returned to the researchers.

Despite these limitations, the findings of the present study have provided additional evidence with respect to benefits of integrating technology in learning ESP. The findings could have practical implications for presenting teacher training programs, enriching Iranian ESP textbooks by considering the students learning needs, attitudes, employing ICT-based lessons, and integrating ICT in ESP curriculum in tertiary level. These findings are relevant to both practitioner and policy makers. Although the current study is based on a small sample of participants, the findings suggest new insights into teaching and learning ESP.

This study investigated only the students' attitudes through survey but future research could investigate utilizing ICT for ESP learning by employing triangulation method. This study was limited with a small sample size, therefore the findings might not be generalized to the wider population. In addition, considering the attitudes of the ESP teachers would also give more depth to this study. Thus, further research is needed to investigate teachers' attitudes toward ICT integration in ESP teaching. More research is required to examine authentic assessment by ICT integration in ESP.

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LANGUAGE INSTRUCTORS' PERCEPTIONS AND APPLICATIONS OF CONTINUOUS PROFESSIONAL DEVELOPMENT IN HIGHER EDUCATION INSTITUTIONS

Research Article

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LANGUAGE INSTRUCTORS' PERCEPTIONS AND APPLICATIONS OF CONTINUOUS PROFESSIONAL DEVELOPMENT IN HIGHER EDUCATION INSTITUTIONS

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Abstract

Professional development can be defined as all the practices and activities for teachers' growth. In the area of English language teaching, teachers need to follow the pedagogical and practical developments in their field, thereby developing themselves professionally. This study aims at figuring out and comparing the perceptions and applications of language instructors in higher education institutions in Latvia and Turkey on continuous professional development. The authors carried out a small scale research in order to answer the question "What are the most effective forms of professional development for English language instructors?" A semi-structured interview was implemented to gather the data. The comparative research was carried out in the frame of COST Action CA15221 – *Advancing effective institutional models towards cohesive teaching, learning, research and writing development* – that addresses the field of professional conversations and research. The main finding of the study is that English language instructors thought that the responsibility of continuous professional development primarily belonged to themselves and then their institutions and the other professional institutions. Majority of them claimed that their professional development was triggered by their curiosity and passion. Attending research-oriented events such as seminars, conferences, and workshops was mentioned as very effective for their continuous professional development.

Keywords: continuous professional development, English language teachers

1. Introduction

Constant development and rapid changes in economy and society and in socio economic affairs have made it inevitable for anyone to develop to adjust themselves to these changes, which are the core of lifelong learning. Academic staff in universities and in any higher education institution recognizes that changes are constant features of life and they require professional development (PD) also known as continuing professional development (CPD). At the same time for academic staff, professional development has not traditionally been prioritized for teaching, due to the dominant focus on research as important part of work of universities. However, steps to teaching are gaining pace and in some countries like UK, Australia, Netherlands PD is becoming as a highly recognized activity for university educators to ensure and monitor the quality of education to reach the learning outcomes of the offered programmes and to guide the students in the field of research. It is necessary to stress that the training activities have to cause a change (Đalođlu, 2004), to be ongoing and high quality (Vrasidas & Glass, 2007). Innovative forms of teaching are needed to develop 21st century student competencies, such as well understanding of challenging content, critical thinking,

complex-problem solving, effective communication and collaboration, and self-direction (Darling-Hammond, Hyler, Gardner & Espinoza, 2017). The focus of this present paper is to specify English language instructors' perceptions and applications of continuous professional development at tertiary level. The participants of the research were academic staff from two state universities in Latvia and in Turkey.

1.1. Theoretical Background

It is worth mentioning that already in 1998 Shulman states that all professions have the following attributions:

- the responsibility of serving others
- professional knowledge and its relation with the theory
- required skills for a specific field and putting them into practice
- judgment under uncertainty
- the necessity for learning from someone's own practice
- professional communities to monitor quality and accumulate knowledge

It allows making the conclusion that already in previous century learning and gaining experience was of great importance and the concept of ongoing development or learning has become an indispensable part of working life.

Professional development embodies a wide range of activities designed to make a contribution to the development of teachers, who have got their initial training (Craft, 2000). Professional development has undergone major changes in its form and content regarding the developments in science and technology, it becomes continuous in its nature. Professional development programs are organized methods and actions to lead change in the classroom practices of teachers, in their attitudes and beliefs, and thus in the learning outcomes of students. (Guskey, 2002). The core of PD is to focus on areas where teachers need to improve; therefore, a needs analysis should precede the planning and execution of a PD training program (Lunenburg & Orstein, 2004) and it must include the needs of both teachers as individuals and the institution as a whole (Richards & Farrell, 2009). Not everybody has the same learning pattern and academic staff needs to take this reality into consideration and thus learn and enhance their teaching and research skills concerning these varied learning types.

Professional development opportunities in Higher Education Institutions (HEI) can range from a single discussion, workshop to a semester-long academic course, consultations, coaching, mentoring, study visits abroad, attending conferences and seminars, to services offered by different professional development providers. Continuous professional development includes institution-based professional support, self-monitoring, keeping a journal, peer observation, teaching portfolios, analysing critical incidents, case analysis, peer coaching, team teaching, action research, online learning (Ingvarson, Meiers & Beavis, 2005; Richards & Farrell, 2009; Darling Hammond, Wei, Andree, Richardson & Orphanos, 2009). It is also worth mentioning that CPD requires self-direction and careful planning to be in harmony with the content. Collaboration takes part in the heart of professional development. Keeping that in mind there is a great need for supporting interactions between academics within the whole HEI, contributing to the sustainable growth of the university while enhancing synergy among the academic community and focusing on promoting the aspect of multi-disciplinarily. Administrators need to help all personnel to fulfill their potential by learning new skills and developing their abilities. The three basic steps or phases in any PD program are assessment, training and evaluation. (Lunenburg & Orstein, 2004). It helps specify training objectives, the criteria for training activities, and the criteria against which the programs will be evaluated. The needs or priorities of the institution as a whole will reflect the

role of the institution in providing a wide range of learning experiences for a large number of people. Meanwhile, the needs of the individual professional will reflect not only the professional role they have within the organization, but also their professional learning, working style, and career aspirations (Craft, 2000).

Learning environments better promote professional development of the academics when support and encouragement exist for teacher development, supplying learning materials and providing them with relevant learning opportunities and models to enhance their profession (Show, 2010 cited in Aliakbari & Malmir, 2017). Several studies (Atay, 2008; Çelik, Macianskiene & Aytın, 2013; Daloğlu, 2004; Gaikhorst, Jos, Bonne & Monique, 2017; Giraldo, 2014) showed that CPD trainings have positive effects on teaching practice and thus on learner outcomes.

1.2. Continuous Professional Development of HEI Staff in Latvia

The University of Latvia pays great attention to the development of University staff. The academic staff have alternatives to choose among them. The academicians are required to attend some training programmes in six years' time after their election to their academic post. The opportunities for these in-service training programs are as follows (Eurydice, 2018a):

- transformations in higher education system,
- didactics of higher education,
- administration of educational work

According to the Regulations on the Necessary Academic and Professional Qualifications of Pedagogues and Professional Competence Development Procedures for Pedagogues (2014), issued by the Cabinet of Ministers, the amount of the program has to be 160 academic hours (of them at least 60 contact hours). The organizers and providers are typically within the institution (Eurydice, 2018a). These programmes are also offered to the staff in other HEI. Due to that there is a possibility to collaborate with other colleagues in different institutions, different departments, and different programmes. After successful graduation of the course the participants obtain the certificate.

The staff actively participates in international cooperation and different projects to promote international identification, exchanges and to strengthen professional development. The internationalization processes promoting professional development take place in the following areas:

- bilateral cooperation agreements;
- membership in the international university organizations and networks;
- participation in international educational and research programmes and projects;
- exchanges of students and staff
- international cooperation on the faculty, institute, department and individual levels.

By participating in international university organizations and active membership in networks such as The European University Association (EUA), Network of Universities from the Capitals of Europe (UNICA), Baltic Sea Region Universities Network (BSRUN), UTRECHT Network, Campus European/EUF, the University of Latvia strives to intensify different types of exchanges and to widen possibilities for internationalization of studies and research and professional development of the staff.

Active participation within bilateral partnership agreements and European programmes has promoted wide cooperation activities within ERASMUS+ programme. The number of agreements with European partner universities has grown tremendously within last 5 years anticipating more intensive exchanges of students and staff. At present the University of Latvia

has signed 1020 agreements with 447 institutions in 33 European programmes and 38 Inter-institutional agreements with 17 partner countries (University of Latvia, 2018).

The University of Latvia is also active in initiating and participating in ERASMUS+ projects (such as Capacity Building, Strategic Partnership, Knowledge Alliances, Jean Monnet). The University of Latvia strategy is to introduce innovative methods in education, to pay more attention to the development of staff competences. The ERASMUS+ projects help much the UL to achieve these strategic goals. One of the latest examples is the ERASMUS+ KA 203 project "**Best+**" (Best+, 2018) with the aim to create a new form of professional development for university staff using blended mobility.

The University of Latvia is the only Latvian institution with active participation in Erasmus Mundus programme. Successful participation in ten Erasmus Mundus Action 2 projects: Join EU-SEE I, II, III; Triple I I, II; Aurora I, II; Centauri; Lot 3b; Mover; AESOP; LEADER has remarkably increased the number of international exchange and degree students from Western Balkan countries, Russia, Central and Southeast Asia and South Africa. The University of Latvia participated also in MISOCO Joint master's degree programme International Migration and Social Cohesion.

As the whole system of education in Latvia undergoes great changes passing to competence-based approach a great variety of courses (Development of leadership skills, the use of Information and Communication Technologies in teaching and learning, the English language course, the process of the development of speaking skills, assessment and evaluation in higher education etc.) are offered to HEI staff working in the faculties connected with teacher education. The academic staffs working with initial teacher training programmes are involved in the schools in teaching process, in developing new learning materials, etc. All these professional activities are financed by European Social Funds. Participation and organization of conferences are also essential part of the work of the staff of HEI to develop professional competences for improving of the quality of studies for future specialists.

1.3. Continuous Professional Development of HEI Staff in Turkey

Turkey has a highly centralized higher education system under the roof of The Council of Higher Education, which was founded in 1981 as a result of the political, social and economic problems, with its 129 state universities, 72 private universities and 5 private vocational schools. Two dominant major events, the post-Soviet era and the country's integration into European Union have shaped the present Turkish higher education system (Mızıkacı, 2006). Since 2006, the Council of Higher Education has been working on National Qualifications Framework. Between 2010-2015 the Council completed the inclusion of European Qualifications Framework into National Qualifications Framework (Yüksek Öğretim Kurulu, 2018).

Yet, there is no particular regulation for the continuous professional development of the academic staff (Eurydice, 2018b), concerning appointment like the case in Latvia. Some universities are applying or working on their own continuous professional development criteria to be appointed again; yet, these are only piloting studies. Academic staff is responsible for their own professional development concerning school of foreign languages under the roof the university.

Apart from these, there has been an increase in the quality and quantity of the academic publications indexed in respected databases for the application of the associate professorship examination (Eurydice, 2009). There is also increase in the number of scholarly conferences, seminars, and panels and alike, especially in the last two decades. Another important development is that digital libraries and databases, including monographs, dissertations, and

theses, have been provided for Turkish scholars, mostly by the cooperation of Council of Higher Education, an institute responsible for higher education in Turkey, and universities. Over the last few years, TUBITAK Cahit Arf Science Center provides a professional development opportunity for the Turkish scholars by providing a national scholarly database of journals and recognition of journals as well as disseminating them across the universities. Yet, another increasing activity and opportunity of the Turkish faculty staff is the Farabi and Mevlana mobility programs, which enable researchers to visit local or international universities and/or research institutions for educational or research purposes (Eurydice, 2009). Apart from these, many universities have continuous development centers under different names; yet, only few universities have their own research and development units under the roof of English preparatory schools, responsible for giving intensive English lessons for students who need to satisfy the needs of the programs of their departments. In Turkey, most professional development activities are still based on one-shot workshops aiming at fostering mastery of prescribed skills and knowledge (Daloğlu, 2004); yet these activities fail to create long-lasting changes in teaching practice (Fullan & Stiegelbauer, 1980).

2. Research Methodology

This current study was carried out with English language instructors from two countries. With the aim of placing the instructors at the center of the study and analyzing their views on continuous professional development, a qualitative study design was selected. A qualitative case study approach was selected because it allows researchers to examine the perspectives and experiences of the human subjects in-depth (Yin, 2013).

2.1. Research Questions

To examine the language instructors' perceptions and applications of continuous professional development, the researchers asked seven questions:

1. What should an English teacher do to develop himself / herself professionally?
2. Who is responsible for your professional development?
3. What are your short-term goals as a teacher?
4. What are your long-term goals as a teacher?
5. What did you do for your professional development in the last five years?
6. What do you think are the barriers for your professional development?
7. What makes a learning environment more effective concerning CPD?

2.2. Data Collection

The data were collected through semi-structured interviews with twenty volunteer instructors in total working at two state universities; one in Latvia and the other in Turkey. The interviews were carried out by face-to-face communication. Each interview lasted approximately 20-25 minutes.

2.3. Data Analysis

To find out the language instructors' perceptions and applications of continuous professional development in higher education institutions, the data obtained were analysed using qualitative research methods. The qualitative data were coded and then categorized and finally frequencies and percentages were calculated and then all these findings were visualized in tables. After the tables were interpreted, some example responses were given below.

3. Results and Discussion

Table 1. *Actions to take for professional development*

Actions	Latvian		Turkish		Total	
	f*	%	f*	%	f*	%
Attending seminars / conferences	5	50	8	80	13	65
Attending webinars	1	10	1	10	2	10
Attending TT programs / workshops	2	20	4	40	6	30
Attending in-service programs	1	10	1	10	2	10
Familiar with the latest technology to use in class	1	10	1	10	2	10
Collaborating with colleagues	1	10	2	20	3	15
Doing post-graduate studies	1	10	2	20	2	10
Doing research	1	10	2	20	3	15
Following (online) teaching communities / forums / blogs /Youtubers	4	40	7	70	11	55
Following the literature (new approaches, techniques, methods, etc.)	6	60	4	40	10	50
Joining exchange programs	2	20	-	-	2	10
Joining (online) courses	3	30	2	20	5	25
Membership in vocational organizations	3	30	1	10	4	20
Participation in projects / research associations	3	30	-	-	3	15
Peer observation / evaluation	2	20	0	10	2	15
Reading more about psychology	2	20	1	10	3	15

*Grand total is more than the total number of the participants because they stated more than one option

Table 1 shows the actions a language teacher should take to renew himself / herself according to the opinions of Latvian and Turkish lecturers concerning their professional development. The respondents have different ideas to improve professionally. Content analysis shows that attending seminars / conferences was seen as the most common source of professional development by both parties. Following teaching communities / forums / blogs / Youtubers and following the literature are the other important sources of CPD for the lecturers. It is clear from this result that the instructors prefer both individual and supportive PD activities for their continuous improvement. Yet, it is interesting that Turkish lecturers do not prefer joining exchange programs or participation in projects / research associations as part of their CPD. Another surprising fact is that Turkish instructors did not prefer peer observation / evaluation for professional development although peer observation is thought not only to help the observee but also to help the observer reflect on his or her own teaching practice (Akyazı & Geylanioglu, 2015), which is an essential part of the development process (Davidson et al., 2012).

Some responses concerning the question ‘What should an English teacher do to develop himself / herself professionally?’ include:

“I think it would be more convenient to join online courses. One can get a lot of practical ideas to use in class. Following the forums where you can exchange ideas with colleagues from all around the world would be useful, too.”

“Following the literature about English Language Teaching is always the best way to improve professionally.”

“There are a lot of teaching communities on the Net. It is possible to get useful ideas related to new approaches, especially about Computer Assisted Language Learning) from there.”

Table 2. Stakeholders for continuous professional development

Stakeholders	Latvian		Turkish		Total	
	f	%	f	%	f	%
Myself	4	40	3	30	7	35
Both the teacher and the institution	5	50	7	70	12	60
Myself, the institution and other professional organizations	1	10	-	-	1	5

Table 2 displays most of the Turkish and Latvian instructors hold themselves and their institutions responsible for their CPD. Also, a great majority see themselves responsible for their own professional development, which coincides with the result of a recent study by Yeşilçınar and Çakır (2018), pointing out that teachers were the main actors of their continuous professional development. It will not be wrong to say that the main goal of CPD is not only to improve teachers' quality but also mainly to improve students' learning (Kasprabowo, Sofwan & Bharati, 2018); therefore, teachers cannot be solely held responsible for their professional development; the institutions also need to trigger continuous professional development of teachers and take action about it. As Bredeson and Johansson (2000) point out school principals' leadership in the area of teacher professional development is critical to the creation and success of a learning community. Only one teacher from Latvia indicated that it is also the responsibility of other professional organizations.

Some of the answers the participants gave to the question ‘Who is responsible for your professional development?’ are as follows:

“Teachers themselves are responsible because a teacher need to feel that urge.”

“I am always in favour of independent studies, so me myself is responsible for my own professional development.”

“Both the teacher and the institution are in charge of teachers' professional development because, I think, teachers and the institution are embedded to each other concerning learning outcomes.”

Table 3. *Short-term goals of the teachers*

Short-term Goals	Latvian		Turkish		Total	
	f*	%	f*	%	f*	%
To develop / learn more effective ways of assessing students	5	50	4	40	9	45
To learn how to plan and evaluate a language course	1	10	2	20	3	15
To learn new strategies and techniques for the new generation of young adults	4	40	6	60	10	50
To learn more about classroom management	1	10	2	20	3	15
To learn/how to keep motivated	1	10	1	10	2	10
To integrate more ICT into my lessons	1	10	1	10	2	10
To learn more about virtual environments	1	10	-	-	1	5

*Grand total is more than the total number of the participants because they stated more than one option

Table 3 shows the short-term goals of the instructors. One of the areas both Turkish and Latvian teachers indicated as their short-term goals was to develop / learn more effective ways of assessing students. Assessment is an inseparable part of teaching/learning process and with the integration of new methods and techniques concerning communicative competence, new ways of assessing students are required.

To learn new strategies and techniques for the new generation of young adults is another concern for teachers in both countries. Integration of technology into learning environments and changing needs of students make this inevitable for teachers.

For the question 'What are your short-term goals as a teacher?', some excerpts are as follows:

"Students' needs are changing, so somehow we should adapt ourselves to these needs by applying new approaches, techniques to keep them motivated in class. Classroom management is also important in that sense."

"I would like to learn more about assessment of the students, especially when evaluating speaking and writing portfolios because I do not think the criteria are obvious enough to make a fair decision." 13

Table 4. *Long-term goals of the teachers*

Long-term Goals	Latvian		Turkish		Total	
	f	%	f	%	f	%
To work on collaborative materials	3	30	3	20	6	25
To develop projects with colleagues	3	30	3	30	6	30
To start / complete my PhD degree	1	10	2	20	3	15
To participate in exchange programs	3	20	-	-	3	10
No goals	-	-	2	10	2	5

*Grand total is more than the total number of the participants because they stated more than one option

Table 4 reveals the long-term goals of the instructors. To work on collaborative materials and to develop projects with colleagues were the most common answers to the question of their long-term goals. This result shows the importance of collaborative work among teachers. Teachers should discuss teaching and learning more with their colleagues and work collaboratively to resolve problematic issues. They should also look for research that can guide them in designing programs that are more likely to lead to significant and sustained improvement in students ‘opportunities to learn (Ingvarson et al., 2005).

Some responses concerning the question! What are your long-term goals as a teacher?’ are as follows:

“It would be great if I could work on some projects with my colleagues; yet, I do not have enough time for that because of my workload.”

“I would like to complete my PhD studies because in my institute there is not much chance of improving. It is just like a vicious-circle. You go nowhere. Once I complete my studies, I can find new opportunities and thus develop myself better.”

Table 5. Actions taken for professional development in the last five years

Participation in	Latvian		Turkish		Total	
	f*	%	f*	%	f*	%
Seminars / workshops	6	60	7	60	12	60
In-service programs	-	-	1	10	1	5
Online courses	1	10	-	-	1	5
Conferences / Congresses	5	50	1	10	6	60
Webinars	1	10	1	10	2	10
Research projects	4	40	-	-	4	20
None	-	-	2	20	2	10

*Grand total is more than the total number of the participants because they stated more than one option

Table 5 reveals that the instructors attended seminars and workshops in the last five years of their profession. While research projects are important for Latvian academicians, Turkish instructors did not attend any research projects at all. It must have been caused by the different appointment policies in the countries. Borg (2014) holds that teacher research is a feasible and valuable professional development strategy that English language teachers can engage in and which can contribute to improvements in the quality of the educational experience they provide for their learners.

Some responses concerning the question ‘What did you do for your professional development in the last five years?’ include:

“I do not have enough time to participate in conferences, seminars, etc., so it is more practical for me to attend online courses about ELT.”

“I mostly attended in seminars and one-shot workshops, most of them did not meet my expectations though. Some of them were organized by publishing houses, so the content of them was rather on the introduction of their new books.”

“It is the best when I do research about a topic of my interest. I like presenting at conferences; they are also helpful for enlarging my network.”

Tables 6. *Barriers that hinder professional development*

Barriers	Latvian		Turkish		Total	
	f	%	f*	%	f*	%
Colleagues	-	-	4	40	4	20
Curriculum	-	-	6	60	6	30
Educational policies	-	-	6	60	6	30
Familial reasons	1	10	1	10	2	10
My institution	4	40	7	70	11	55
Working conditions	3	30	5	50	8	40
Monetary issues	2	10	2	20	4	15

*Grand total is more than the total number of the participants because they stated more than one option

Table 6 shows that working conditions are a challenge for both Turkish and Latvian academicians. Workload seems to cause academicians to refrain from doing extra self-training activities for their professional development. Both parties hold their institutions as a barrier standing in front of their PD. Educational policies and curriculum are seen as a barrier by Turkish instructors; however, none of the Latvian instructors think that they are a barrier for their PD. Turkish instructors emphasized that the education policies do not give them much chance for professional development. They also stated curriculum as a barrier because the pace of the curriculum they had to follow did not leave enough time for implementing new strategies and / or techniques in the classroom.

Concerning the question ‘What do you think are the barriers for your professional development?’, some of the instructors’ views are below:

“My institution is indifferent concerning our professional development. They neither support people who would like to do something; for example attend a conference nor put a barrier in front of them. I believe things were different if they had a supportive manner.”

“Concerning the educational policies, as instructors we do not need to do anything for our professional development. That’s why I do not feel any necessity to develop myself. I think I have enough skills.”

Table 7. Factors providing a more effective learning environment for CPD

Factors	Latvian		Turkish		Total	
	f*	%	f*	%	f*	%
More in-service training programs	-	-	1	10	1	5
Seminars	-	-	1	10	1	5
More supportive administration	-	-	3	30	3	15
Less work load	-	-	2	20	2	10
More collaboration among teachers	4	10	2	20	3	15
A more technologically-equipped environment	5	50	1	10	6	30
A CPD unit in the borders of the institution	-	-	2	20	2	10
Being more of a decision-maker	-	-	4	20	4	10
A more flexible / slow-paced curriculum	-	-	4	40	4	20
A free access to professional literature	2	20	-	-	2	10
A student-friendly mobile teaching / learning environment	1	-	-	-	1	5
A combination of real + virtual learning environment	2	20	-	-	2	10

*Grand total is more than the total number of the participants because they stated more than one option

Table 7 reveals that teachers need to work collaboratively. Collaboration among teachers is the most common factor of an effective learning environment for the instructors of both countries. Turkish instructors would like to participate more in decision-making processes and they were longing for a more-flexible environment and a slow-paced curriculum. This result proves the importance of a new design for professional development opportunities for teachers where they can engage themselves in decision making as they reflect about the connections between theory and practice and the value of continually testing, revising, and reevaluating curriculum and instructional issues (Penuel, Fishman, Yamaguchi, & Gallagher, 2007). Latvian instructors stated they need a more technologically-equipped learning environment.

Some of the responses given to the question ‘What makes a learning environment more effective concerning CPD?’ include:

“I wish we did not have to follow the course book so strictly, I feel like teaching the book instead of a well-designed curriculum. We have such an intense curriculum that, actually this is the content of the course book, I –and most of my colleagues as well, I think- cannot find or create enough time to do things in a more enjoyable way since we always need to rush.”

“I think we need more of a technologically-equipped learning environment. I also believe that virtual environments attract students’ attention.”

4. Conclusion

In general, CPD can be described as all the learning activities professionals are involved in to better promote their professional skills and implementations. Through professional development learners get the opportunity to become *conscious* and *proactive*, rather than *passive* and *reactive*. The utmost important aspect for teaching staff is to prepare younger generations for the requirements of the world we live in, which is part of educational environment which necessitates professionally developed teachers for sure. Wider use of

modern technologies, social changes, changes in teaching and learning, and education reforms make it essential for language teachers to develop professionally as well.

The main goal of this research was to get an understanding of Latvian and Turkish language instructors' perceptions and applications of continuous professional development and to compare and contrast their beliefs and practices where possible. One conclusion which can be deduced from this present study is noteworthy: In Latvia there is an education program for staff development at tertiary level. It is closely linked with the elections on the certain posts. Yet, in Turkey, there is not a general implication for the academic staff in intensive language programs. It is enough for the instructors to prove their English level every three years to be appointed to the same post again. All these are due to different background and traditions of the countries and practices of teacher education and staff development. Therefore, at some points instructors' view of continuous professional development differs regarding these cultural, traditional and their extension of political and managerial issues.

Some other conclusions are as follows:

Attending seminars, conferences and workshops was seen as the most preferred way of professional development by two nationalities. Yet, Turkish instructors were not in favor of participating in projects or research associations to develop professionally. Another similar result was seen about their short-term goals. While some Latvian instructors thought that it was good way to enlarge their network and enhance their teaching, Turkish instructors did not mention it at all.

Concerning the stakeholders of continuous professional development both Latvian and Turkish instructors thought that themselves and their institutions were in charge of their development, which supports the literature claiming that the policy makers and administrators have to lead and encourage all staff to participate in professional development programs.

As to their short-term and long-term goals, instructors had more or less the same opinions. To learn new strategies and techniques for the new generation of young adults is the issue both Latvian and Turkish instructors would like to deal with in the short run, which is not a surprising fact concerning the changing needs of 21st century students. On the other hand, to develop projects with colleagues is a long-term goal for both Latvian and Turkish instructors. To participate in exchange programs was mentioned as a way of professional development by Latvian instructors while Turkish instructors did not mention it.

Another result is that most of the Latvian and Turkish instructors stated that they attended seminars and workshops in the last five years, which shows that these one-shot training programs are contributing teachers' professional development.

Another conclusion that can be driven from this study is that familial reasons, their institutions, working conditions and monetary issues were the factors making the instructors refrain themselves from professional development. Yet, only Turkish instructors stated that their colleagues, the curriculum and the educational policies had a negative effect on their professional development. This result has to be taken into consideration; it is essential the policy makers do something about that. First of all, the content of intensive English language programs needs to be revised and necessary requirements have to be done. It is also of great importance to establish continuous professional development or research and development units to raise the awareness about continuous professional development and take the required actions about it. These units may conduct annual needs analysis to specify the areas where teachers are in further need of developing their teaching practice and classroom management skills.

Finally, more collaboration among colleagues was thought to be one of the parts of an effective learning environment in terms of continuous professional development. Teacher collaboration and student success are well fed by learning communities are being recognized as effective in improving teacher collaboration and student achievement (Hallam, Smith, Hite, Hite & Wilcox, 2015).

As a last word, enhancing the effectiveness of continuous professional development programs is a crucial issue and education systems cannot deny it. Teachers need to develop themselves professionally as active learners and it is only possible to talk about high-quality education when teachers, administrators and policy makers feel this responsibility.

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THE AUDITORY PERCEPTION OF NORTH AMERICAN ENGLISH DIPHTHONGS IN VOCABULARY ITEMS BY ENGLISH TEACHERS IN TURKEY

Research Article

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Abstract

Diphthongs are double vowel sounds made by combining two vowels in the same syllable. During their articulation in the oral cavity, the first vowel sound glides onto the next vowel from one position of the mouth to another within the same syllable. That's why they are heard as single-vowel phonemes by listeners. Because of a gliding movement in their articulation, most learners find them difficult to articulate and understand them at first. Hence, they can be tricky sounds to master for non-native speakers. The aim of this research is to explore the perceptibility of North American English diphthongs (NAE), which are /aʊ, oʊ, eɪ, ɔɪ, aɪ/ by Turkish English language teachers. A pre-test will be used to measure the perception of them in vocabulary items, which will be given to 30 Turkish English language teachers in a five scale multiple choice tests. The participants will be asked to choose the correct option. Then, a three-hour implicit and explicit teaching will be conducted by doing practices in a variety of exercises in the classroom. After the elapse of two weeks, the same pre-test will be administrated to the participants as a post-test. A comparison and contrast of the two tests results will be made to find out the existence and degrees of the perceptibility of the diphthongs in vocabulary items by Turkish English language teachers.

Keywords: diphthong, monophthong, long vowel, vowel length, perception

1. Introduction

The aim of this study is to make an inquiry about the perception of diphthongs by Turkish English teachers. The written and auditory perception of diphthongs is the primary concern of this study. American English diphthongs will be focused on thorough the study. They are /eɪ/, /aɪ/, /ɔɪ/, /oʊ/, /aʊ/. In British English, there are three more diphthongs ending with (ə) schwa: They are /ɪə/, /eə/ and /ʊə/. These are not in the scope of this research.

Pronunciation is the prerequisite of an intelligent communication. It is a significant item of language that makes our speech comprehensible and clear to native speakers (Varol, 2012, p.1). It has always been a crucial topic for non-native learners. Accent of a speaker gives clues about

his/ her communication abilities. If one likes to speak near native like, proficiency in pronunciation is crucial in addition to other disciplines like fluency, rhythm and intonation. One of the subtitles of pronunciation is diphthong. Diphthongs are very tricky long vowels for non-natives. There are lots of variables for the difficulty of them for learners. Since they are language specific and unique sounds, learners generally have difficulty in their perception and production.

Similar to language learners, non-native English teachers in Turkey have difficulty in these sounds even if they have taken phonology classes in undergraduate. Pronunciation and speaking functions are underestimated. Instead; Grammar rules and formulas take the primary role in the education system. Language teaching is conducted disregarding the communication abilities just by taking into consideration language rules, structures and forms not the functions of language. It could be shown one of the reasons of misunderstanding of diphthongs. In addition to education policy, there are some other reasons why diphthongs are challenging for Turks: While Turkish words are written as they are pronounced and pronounced as they are written (Balpınar, 2006, p.7), the pronunciation of English words aren't related to their orthography at times. This is another reason of difficulty. Turkish learners first perceive the written forms of language in their minds. Orthography has a significant effect on Turks since Turkish is an orthographic while English is not. Another cause is the diphthongs' language specific features. In Turkish sound system there isn't diphthong while they appear in English. They are language specific long vowels that don't appear in Turkish. Turkish language learners aren't acquainted with these sounds. They aren't enough familiar with auditory and written inputs of diphthongs. The reasons above prevent Turks from becoming near native like speakers.

1.1. Literature Review

Some other linguists conducted studies about diphthongs from different point of views in Turkey. Demirezen (2005, p.72) examined the /ou/ diphthong vowel and /ɔ:/ long vowel. He said that mispronunciation of these sounds gives harm to communicative competence of teacher trainees and their students but it is possible to remedy errors by means of exercise. He arranged different kinds of activities like corpus presentations, minimal pairs, tongue twisters, recognition exercises, reading aloud, dialogues, idioms, songs etc. to cure the fossilized diphthong /ou/. The activities provide learners with a native-like accent.

Albağlar (2015) conducted a study with twenty all preparatory school students at the Middle East Technical University in Ankara/ Turkey to analyze Turkish university level EFL learners' pronunciation of the diphthongs and triphthongs in English. He divided learners into two groups: First pre-intermediate and the second is advanced level of English learners. Target diphthong and triphthong sounds were selected as stimuli. Authentic sample sentences in which target sounds were embedded were given to the learners. They were asked to read these sentences. The utterances were recorded for 3 times one week apart from each other. In the stimuli different kinds of activities were used like 'read aloud, blank filling, word pronunciation'. The collected data was scored by two native speakers according to a likert-scale prepared beforehand. At the end of the study it was seen that there was a strong relation between pre-intermediate group's, advanced group's proficiency level and pronunciation of diphthongs-triphthongs. There is a correlation between proficiency level and right articulation of target sounds. The orthographic feature was another variable in the study. It was clear that orthography doesn't play a role in correct articulation of diphthongs and triphthongs.

Demircioğlu (2013) studied on the pronunciation problems for Turkish learners in articulating of the diphthongs in English learning. It was a descriptive study that gives the reasons of inaccurate articulations. It was like a leading lesson for the learners who would like to improve their pronunciation skills of diphthongs. He developed a new technique. By putting your forefinger on your closed rounded lips, one can practice the diphthongs and see lip's movements with the help of tongue. He explained it with an example: Try to make /aʊ/ sound your tongue, forefinger and lips on the mentioned position. You will see that on the gliding sound /ʊ/, your tongue will push your lips thorough your finger. It means that if it happens, you articulate the diphthong correctly. He said that thanks to pronunciation practices, it is possible to improve articulation skills.

2. The analysis of diphthongs

2.1. Views on diphthongs

There are many descriptions of diphthongs made by different researchers. Diphthong is a combination of two vowels which is considered as the same syllable. (Dardjowidjojo, 2009, p. 33). To construct a diphthong, a vowel plus another vowel need to be in the same syllable at once. It is formed with two different vowels. Ogden made another definition: Diphthongs are monosyllabic vowels which have two obviously different points, one at the start and one at the end (2009, p. 64). It starts with a vowel giving the stress on the first sound and ends with another vowel that is less stressed when compared to the first part. Diphthongs are the sounds in which tongue glides from one position to another to form diphthongs (Fromkin, V., et al 2001, p. 693). Tongue and mouth aren't stable in the oral cavity but they are dynamic. There are two types of diphthongs: The ones ending with /ɪ/ and the ones ending with /ʊ/. Turkish learners are more familiar with the eɪ /, /aɪ/, /ɔɪ/, /aʊ/ diphthongs than /oʊ/ since they have auditory similarities. Demirezen (2019) made another definition. He said that a diphthong is made of two components. By definition and sound structure, diphthongs are a combination of two separate vowel sounds that, when uttered, the first vowel glide through the second vowel forming a single syllable. He placed emphasis on passing from one to another but in the same syllable.

2.2. The lengths of diphthongs

Diphthongs are considered as long vowels because of their length similarities. When compared to long vowels they are longer and generally more stressed. In addition, they are more complex and harder to articulate than short vowels for learners. Figure 1 shows the lengths of diphthongs in oral cavity.

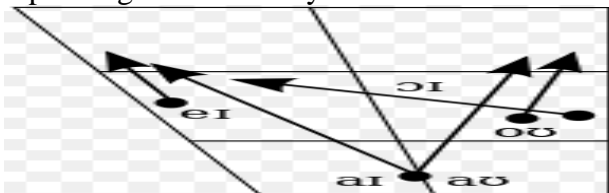


Figure 1: NAE diphthong chart: Adapted from <https://www.google.com.tr/search?q=The+chart+of+North+American+english+diphthongs&>

As seen in the figure, each diphthong has a starting and an ending point. It is the combination of two different vowels in the same syllable. While the journey from one vowel to another is long in diphthong /aɪ/, /ɔɪ/, /aʊ/, it is shorter in some of them like /eɪ/ and /oʊ/. The shorter slide may be less visible since the glide from one vowel to another is not as obvious as the longer ones.

Non-native English teachers have errors in common. They generally omit or disregard the second part of the diphthongs since the second vowel is less stressed than the first part. It causes the mispronunciation of diphthongs. They try to find non-native solutions to this matter like totally omitting the second vowel and making the first vowel more stressed and longer. The examples below have been drawn from the four hours training course with the teachers who have taken part in this study.

English form /Turkish form	English form/ Turkish form
home /həʊm/ /həm/	doubt/daʊt/ /dabt/
go /gəʊ/ /gə/	clown/claʊn/ /clavn/
break /breɪk/ /bre:k/	boy /bɔɪ/ /bo:j/
toast /təʊst/ /təst/	found/faʊnd/ /fand/
brown /braʊn/ /bravn/	bow/baʊ/ /bav/
promote /prəməʊt/ /prəmo:t/	waste/weɪst/ /west/

When the examples are examined, it is seen that instead of uttering the second part of diphthong, participants have omitted the second vowel and they sometimes make the first vowel more stressed and longer.

2.3. Research Questions

The starting point of this study is to show whether diphthongs are difficult for teachers in Turkey or not and if they are challenging, which ones are harder than the others. Based on these unanswered questions, the research questions that will guide this study have been formed as follows:

- 1-Is it difficult to perceive American English diphthongs by non-native Ministry of Education English teachers?
- 2-Which diphthongs are difficult for teachers than the other ones in auditory activities?
- 3-Is there a need for treatment teaching after post-test?
- 4-Is there a significant difference between overall pre-test and post-test results?

3.Method

3.1. Setting and participants

This study includes 30 non-native English teacher participants who are working at the schools of Ministry of Education (MoNE) at secondary school and high school levels. The experience of them differs from each other from one year to twenty-four years.

Table 1. *The school type of participants*

	Frequency	Percent	Valid percent	Cumulative percent
Secondary School Testees	22	73.3	72.3	73.3
High School Testees	8	26.7	26.7	26.7
Total	30	100	100	100

Pre-test and post-test design were adopted to conduct the study since it is appropriate for such kind of a study. As a pre-test, a beforehand prepared written-auditory test was applied to see the auditory perception of diphthong by teachers. After the collected data was analyzed, 4 hours training course was conducted by focusing the most challenging diphthongs according to pre-test results. Audio articulation model (Demirezen, 2010) was used as a method since it is used to rehabilitate the pronunciation mistakes and fossilizations. It is based on repetition activities. The procedure is as follows:

1. Identifying the pronunciation-problem causing phoneme,
2. Giving a general information and arranging a corpus of words about 50-100 vocabulary items and minimal pairs,
3. Tongue twisters, idioms, proverbs, mechanical drills, listening activities, songs,
4. Assignment (phonetic transcription activities, online tests, finding words with diphthongs in authentic works etc.).

Two weeks break was taken not to interfere with the participants' pre-test answers with the post-test. Their familiarity with the questions was attempted to be minimized. This time pre-test was applied as a post-test without making any change. A comparison was made to see the difference between the pre and post-test.

3.2. Instruments

Two types of instruments were used to collect data from the participants. An auditory test and demographic information form were used to get data.

3.2.1. Written-auditory test

To observe auditory perception of diphthongs, 25 multiple choice auditory test questions with 5 options were prepared. A committee of three experts examined the test items and made the required modifications. The target vocabulary items were determined after a survey of English course books of MoNE that were used in secondary school and high school level. They all were retrieved from the course books like 'Moonlight, Upswing, Silver Lining and Count me in' etc.'. The most frequent words were preferred as stimulus. In addition, the frequency of the words was checked on 'Coca' that is an American English Corpus to find the commonly used words in English. After these stages, the test items were picked as follows.

<i>/eɪ/</i>	<i>/ɔɪ/</i>	<i>/aʊ/</i>
Vocation	Boiler	Founder
Waste	Spoil	Outer

Unable	Joiner	Ground
Break	Avoid	Rounded
Participation	Noisy	Clown
/aɪ/	/oo/	https://www.oxfordlearnersdictionaries.com/definition/american_english/
Identical	Globe	https://www.english-corpora.org/coca/
Exercise	Evoke	
Fighter	Slow	
Reply	Promote	
Guidance	Approach	

3.2.2. Demographic information form

Since it is just a part of an ongoing M.A. thesis study, demographic information form consists of items like gender, educational background, the types of school participants are working now, their interest in diphthongs and their experience etc.

3.2.3. Data collection and analysis

The collected data with the help of written-auditory test and demographic information form were analyzed through the SPSS 23 version. Different statistics were conducted like descriptive statistics and paired samples t-test. Descriptive statistics was administered to observe total success percentage of the teachers in auditory test and paired sample t-test was done to see whether there is a meaningful difference between pre-test and post-test results. MONE assessment scale has been adopted to evaluate results. The cut point has been indicated as 85. If the results are 85 and more, it is regarded as excellent and successful.

Table 2. Assessment scale of MONE in Turkey

Numerical	Letter grade	100-point system	Description
5	A	(85-100)	Excellent
4	B	(70-84)	Good
3	C	(55-69)	Fair
2	D	(45-54)	Satisfactory
1	E	(25-44)	Unsatisfactory
0	F	(0-24)	Poor

Note. (Retrieved from Education system Turkey, 2010, p.12)

4. Results

This section will emphasize on the results of collected data with the help of written -auditory test instruments in pre-test and post- test. The collected data is a quantitative one which consists of numerical results and percentages. The research questions that guide this study will be answered in tables and the interpretations will take place to illustrate and explain the tables. The following questions will guide this study.

1. Is it difficult to perceive American English diphthongs by non-native Ministry of Education English teachers?
2. Which diphthongs are difficult for teachers than the other ones in auditory test?

3. Is there a need for treatment teaching after post-test?
4. Is there a significant difference between overall pre-test and post-test results?

Research questions which will guide this study have been tried to be answered in Table 4; whether it is challenging to perceive American English diphthongs by non-native MONE English teachers or not, which diphthongs are hard to pronounce for Turkish English teachers, if there is a need for remedial teaching after 4 hours training with the testees.

Table 3. *Auditory pre-test and post-test results*

Variables	Pre-test Mean (5)	Pre-test correct %	Post-test mean (5)	Post-test correct %
/oo/	2.6	52	4.03	80.6
/ai/	3.66	73.2	4.73	94.6
/ei/	4.1	82	4.86	97.2
/oi/	4.36	87.2	4.76	95.2
/au/	4.5	90	4.93	98.6
Total score	3.84	76.88	4.66	93.24

When the overall correct percentage of diphthongs are examined, the score is 76,88% that is regarded as good according to the MoNE assessment scale while posttest is 93,24% which is evaluated as excellent in MoNE assessment chart. Before the training course, non-native English teachers had difficulty in perceiving diphthongs since the result is less than cut point 85. However, training with the participants worked and post-test score turned into 93,24% with 16,36 points increase.

When the pre-test scores are studied, the sequence of diphthongs from the least scored to the highest ones are as follows: /oo/, /ai/, /ei/, /oi/, /au/. The scores of /oo/, /ai/, /ei/ are less than 85%. They are 52%, 73,2% and 82% respectively. The least scored diphthong proves to be /oo/ which is constructed with the combination of two round vowel sounds /o/ and /u/. The results are in line with another research. 'The diphthong /oo/ proves to be challenging for Turkish learners no matter what their proficiency level is' (Albağlar,2015, p.86). Regardless of their proficiency level, Turkish learners have difficulty in uttering diphthong /oo/.

When the post-test overall score is examined, the total success is 93,24. It is a valid result according to MONE assessment scale. It can be inferred that there is not a need for treatment since it the score is higher than cut point 85.

4. Is there a significant difference between overall pre-test and post-test results?

A comparison has been done to see whether a significant difference has occurred after training course or not by discussing the pre-test and post-test results. This comparison is evidence of the effect of training between two tests. The results will be discussed according to the generated tables.

Table 4. *The correlation between pre-test and post-test results*

Outcome	Pre-test		Post-test		n	95% CI for Mean Difference	t	df
	M	SD	M	SD				
Pre-test and post-test	19.23	4.80	23.33	2.10	30	-5.89, -2.30	-4.67*	29

* $p < .05$.

The results prove that there is a significant difference between the pre-test and post-test results since the 2-tailed value is less than 0,05. When both of the results are studied, it is clear that there is an increase in the pre-test score. When it was 76, 92% in pre-test, it turned 93,24% after training. The overall success of the participants increased after the training. It can be said that the training between the tests worked and non-native English teachers improved in the auditory perception of diphthongs.

5. Discussion and Conclusion

The primary aim of this study is to reveal the auditory perception level of non-native English teachers in Turkey and the challenging diphthongs for them. There are a number of reasons causing this difficulty like linguistic differences and teachers' awareness of diphthongs etc. This research study reveals the importance of mastering diphthongs in successful L2 oral communication. It stresses that Turkish EFL teachers fall short in articulating English diphthongs by being under the heavy influence of their mother tongue, Turkish. In this study, the comparison between tests was made to see the efficiency of training.

This study revealed that not all but some of the diphthongs are troublesome for teachers like /oo/. This diphthong is a bit different from the other ones since tongue has a slight upward movement in oral cavity. It is a hard to recognize this slight glide from /o/ through/ʊ/ vowel. Since both of them are rounded ones, it is hard to notice the transition because of the similarity. In addition, /oo/ diphthong doesn't appear in Turkish. Lack of diphthongs in Turkish vowel inventory is another reason of difficulty (Yavuz & Balçı, 2011, p. 39). Since the first vowel is generally more stressed than the second part in English, participants may not be aware of the second part. Turkish learners sometimes disregard the second vowel by omitting and making it slightly or hardly audible by not stressing the second part. English language teachers in Turkey generally do not stress on the second vowel. Participants tend to stress the first vowel and omit the second part since it causes a neurological fatigue to pronounce another vowel after the first vowel. As a result, it causes non-native like communication and an interaction far from an intelligible one. Edwards and Zampini (2008, p.72) stated that language specific sounds that just appear in foreign language different from mother tongue prove to be easier for the learners since they are more obvious and different from the other sounds. However, this study has proved the opposite of this hypothesis since Turkish sound system is lack of /oo/ and this deficiency makes perception and production of diphthongs difficult. The interference of L1 on foreign language is another reason. While learning a new language, learners construct target language with L1 structures (Selinker, 1972). They are inclined to adopt and go on L1 habits. Non-native English teachers can pronounce similar diphthongs correctly, while they can't produce the ones that are totally different from L1. Turkish sound system lacks /oo/ and this deficiency makes the perception and production of diphthongs difficult for the participants. Another effect is orthography. Orthographic reasons hinder learners from pronouncing

diphthongs accurately (Albağlar, 2015). /ɔʊ/ diphthong is a sample for this error. Participants would like to see two vowels in the same syllable side by side. The reason of failure in /ɔʊ/ diphthong is learners' previous habits in L1 and their intent to see two vowels in written form. If one insists on making pronunciation mistakes, then mistakes turn into errors, errors turn into fossilizations. Even if it is hard to rehabilitate fossilization in speech, it is possible to cure it with repetition activities. Audio articulation method played an important role while curing them. When one emphasizes on correct pronunciation, he/she can improve her pronunciation skills. The importance of accurate and meaningful input is undeniable. Pronunciation is not for the sake of it. It is for the sake of an intelligible and clear communication.

It is surprising that even if /aʊ/ diphthong doesn't appear in Turkish sound system, teachers are good at discriminating it via written and vocal inputs since /a/ and /ʊ/ vowel sounds are clearer and more obvious than when compared to /ɔʊ/ diphthongs. The glide from /a/ to /ʊ/ is firm and visible.

Acoustically similar but not totally the same sounds in Turkish and English like /aɪ/, /eɪ/, /ɔɪ/ are high scored according to the results of the tables. The similarity causes success in these diphthongs since they are all more than 85% cut point.

Based on the findings, it is not wrong to assert that if one wants to be a near native like and good at communication skills, he/she needs to pay attention to subheads of pronunciation like diphthongs and language specific sounds.

6. Comments and Further Suggestions

The questionnaire used in this study was the written-auditory test. This test had two types of input: Visual and auditory. It provided teachers with a better understanding of the diphthongs since they had the chance of both seeing and hearing the input simultaneously. The total success of the participants in auditory pre-test is 76, 88. On the other hand, it turned into 93, 24% after training course. It is claimed as good and excellent respectively according to assessment scale. There is a significant difference between the tests. The easiest one in perception is /aʊ/ since it is easy to hear the glide from /a/ into /ʊ/ vowel in auditory input. The transition is clear and visible to hear. Since the gliding is very audible and perceptible, it is easy to find the right option.

This study was conducted with non-native English teachers who still work in secondary and high schools of MONE. The results of the study are just concerned with them but the scope would be extended to primary school and university levels. The number of the participants is 30 and the quantity is enough for a scientific study but the rise in the number of participants would increase the validity and the reliability of the study evenly so it is possible to expand the number of teachers who participate in the research for the following studies

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Appendix A (QUESTIONNAIRE)

You are going to take an auditory test, in which diphthong vocabulary items are inserted in each of the multiple-choice questions. Please pick the right option after hearing the items.

1. In which of the following words is there an /eɪ/ sound?

- a) volcanic
- b) vocabulary
- c) volleyball
- d) vocation
- e) voiceless

2. In which of the following words is there an /aɪ/ sound?

- a) mathematical
- b) practical
- c) identical
- d) magical
- e) dramatically

3. In which of the following words is there an /ɔɪ/ sound?

- a) boiler
- b) bomber
- c) buyer
- d) border
- e) borrow

4. In which of the following words is there an /oʊ/ sound?

- a) glue
- b) gloomy
- c) glove
- d) glorious
- e) globe

5. In which of the following words is there an /ɔɪ/ sound?

- a) spoken
- b) spoil
- c) spoon
- d) sporty
- e) spotlight

6. In which of the following words is there an /aʊ/ sound?

- a) forty
- b) forward
- c) formulate
- d) former
- e) founder

7. In which of the following words is there an /**oo**/ sound?

- a) evoke
- b) elastic
- c) evolve
- d) election
- e) electrical

8. In which of the following words is there an /**ai**/ sound?

- a) example
- b) exercise
- c) excuse
- d) explanation
- e) exam

9. In which of the following words is there an /**oo**/ sound?

- a) prove
- b) somehow
- c) slow
- d) however
- e) housewife

10. In which of the following words is there an /**au**/ sound?

- a) old-fashioned
- b) outer
- c) opener
- d) operation
- e) opposite

11. In which of the following words is there an /**ei**/ sound?

- a) water
- b) watcher
- c) waste
- d) wardrobe
- e) warrior

12. In which of the following words is there an /**oi**/ sound?

- a) jolly
- b) jobless
- c) journey
- d) journal
- e) joiner

13. In which of the following words is there an /aɪ/ sound?

- a)narrator
- b)later
- c)monitor
- d)fighter
- e)grater

14. In which of the following words is there an /oo/ sound?

- a)promote
- b)promise
- c)prominent
- d)prolong
- e)project

15. In which of the following words is there an /eɪ/ sound?

- a)entitle
- b)unable
- c)inactive
- d)inaccurate
- e)unacceptable

16. In which of the following words is there an /eɪ/ sound?

- a)branch
- b)brand
- c)break
- d)bread
- e)breath

17. In which of the following words is there an /aʊ/ sound?

- a)grocery
- b)green
- c)grow
- d)group
- e)ground

18. In which of the following words is there an /ɔɪ/ sound?

- a)advocate
- b)devote
- c)avoid
- d)remote
- e)awake

19. In which of the following words is there an /aɪ/ sound?

a)air-play

b)reply

c)delay

d)really

e)overlay

20. In which of the following words is there an /aʊ/ sound?

a)rounded

b)routine

c)rotation

d)roller

e)robbery

21. In which of the following words is there an /eɪ/ sound?

a)particular

b)participation

c)part-time

d)party

e)partner

22. In which of the following words is there an /oʊ/ sound?

a)application

b)approximately

c)approach

d)stomach

e)headache

23. In which of the following words is there an /aʊ/ sound?

a)clock

b)clone

c)closed

d)clown

e)clothe

24. In which of the following words is there an /ɔɪ/ sound?

a)noisy

b)bossy

c)greasy

d)easy

e)busy

25. In which of the following words is there an /aɪ/ sound?

a)attendance

b)guidance

c)accordance

d)redundancy

e)abondance




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AN INVESTIGATION INTO EFL TEACHERS' ASSESSMENT OF YOUNG LEARNERS OF ENGLISH: DOES PRACTICE MATCH THE POLICY?


Research article

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AN INVESTIGATION INTO EFL TEACHERS' ASSESSMENT OF YOUNG LEARNERS OF ENGLISH: DOES PRACTICE MATCH THE POLICY?¹

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Abstract

On the grounds that assessment stands for a mirror of teaching and learning practices, its value cannot be ignored in teaching English as a Foreign Language (EFL) programmes as all those involved in foreign language teaching in non-native settings need constant feedback about the effectiveness of their ventures. Assessment of young learners of English has been also receiving rising attention as this group of language learners at the preliminary stages of learning a foreign language differ from adult learners in nature and thereby their assessment requires great care. While there exist continuous amendments in foreign language teaching policies nationally to improve the quality of EFL teaching and its assessment, it is significant to look inside the classrooms to realize whether the actual assessment practices reflect the performance outcomes expected by the policy documents. This paper, therefore, attempts to investigate the consistency between the ELT policy and EFL teachers' in-class practices of assessment of young learners in middle schools in the Turkish context. The study was conducted at the end of the spring term of 2017-2018 academic year with 152 EFL teachers working in middle schools in the central districts of Denizli province. The study employed both quantitative and qualitative research methods: the quantitative method provided information about EFL teachers' preferences of item types in terms of traditional and alternative assessment types with the help of a questionnaire while the qualitative method provided information about how frequently EFL teachers assessed four skills through exam papers they used in their classrooms. Results showed inconsistency between the policy and assessment practices of EFL teachers in the study: EFL teachers tended to design traditional paper and pencil tests based on language structures and vocabulary rather than the assessment of learners' communicative competence or language skills through alternative assessment methods.

Keywords: English as a foreign language (EFL), young learners, assessment, policy, practice.

1. Introduction

The booming technology and all lines of business, economics, politics and education require acquisition of English language for communication. With the aim of teaching English for communicative purposes, revisions in the educational policies of countries are therefore continuous. In Turkey, the Ministry of National Education (MoNE), responsible for the

¹ This study is based on the second author's M.A. dissertation submitted to the Graduate School of Educational Sciences, Pamukkale University, Denizli, Turkey in 2019.

supervision of public education under a national curriculum, designs English language teaching (ELT) programmes for all levels based on the Common European Framework of References for Languages (CEFR) (MoNE, 2018). Accordingly, Ministry of National Education policies emphasize English language teaching communicatively and suggest tasks and materials promoting learners' communicative competence. In such classrooms where the communicative competence is the main objective, assessment should also be in accordance with such objectives. In foreign language education, teaching and learning practices and assessment practices should go hand-in-hand as language assessment and teaching programme should be consistent with each other in terms of learning objectives, the kinds of tasks which the children are expected to perform, and the assessment types (Hughes, 2003). It is therefore important for teachers to understand the reasons and theoretical considerations behind such policy changes since they have the responsibility to transfer these changes to the classrooms. It can then be argued that tests can help to see what actually happens in the classroom since language assessment techniques and tools preferred by language teachers are assumed to mirror their teaching practices as well as perceptions about language teaching and learning (Alderson & Wall, 1993).

EFL teachers may be willing to create an appealing atmosphere and inspire students to be engaged in meaningful language activities keenly; however, the requirements of national structural examinations may put language teachers under pressure to complete the syllabus in a limited time, prepare students for examinations (Carless, 2003), and ignore the proposed assessment methods. One of the possible reasons that may cause language teachers to avoid alternative assessment tools may be the High School Placement Test, a standardized test offered by the MoNE involving only multiple choice items in contrast with the communicative objectives of ELT curriculum (Basok, 2017). Another possible reason for teachers' inconsistent assessment practices may be the limited time allocated to ELT courses in the curriculum, which may make it difficult to include four skills in the tests they apply. Regardless of what the underlying reasons may be, the mismatch between the policy and the practices of assessment is likely to bring out negative backwash effect to students' language learning and lead to undesirable consequences such as failure in the acquisition of communicative competence and ignorance of language skills (Paker, 2013). The reasons behind this mismatch need to be investigated thoroughly, and solutions be produced accordingly.

This study, therefore, aims to identify assessment practices of EFL teachers working in state middle schools seeking to find out whether there is a consistency or not between the assessment practices of EFL teachers of young learners in state middle school 5th, 6th, 7th, and 8th grades and the ELT Curriculum proposed by the MoNE for 5th, 6th, 7th, and 8th grades in middle schools. The study may therefore help English language teachers, teacher trainers, and curriculum developers better understand and improve the assessment of young learners in EFL classrooms. The study that attempts to shed light on EFL teachers' assessment practices at state middle schools seeks to answer the following questions:

1. What are the assessment practices of EFL teachers working in state middle schools?
2. To what extent are the assessment practices of EFL teachers consistent with the Ministry of National Education policy for the 5th, 6th, 7th and 8th grades' English Language Teaching Programmes?

2. Theoretical Background

Assessment has become one of the prevalent issues of today's language teaching and learning (Brown, 2007; Bachman & Palmer, 2010; Cheng & Fox, 2017) and can be realised in a number of varying applications. Cheng and Fox (2017) point out that in real classroom environments, teachers can apply both *assessment for learning* which is of formative assessment and *assessment of learning* which is of summative assessment. When the assessment provides "immediate feedback" for "ongoing teaching and learning", this type of assessment is formative (Cameron, 2001, p.222), including informal quizzes and tests as well as observations and portfolios (Hughes, 2003). With the help of feedback by formative assessment, both teachers and students may make changes in their teaching and learning (Bachman & Palmer, 2010) since the purpose lying behind formative assessment involves more high-stake decisions instead of low-stake decisions (Mckay, 2009). On the other hand, summative assessment that can take place at the end of a unit, a term, a school year or any type of study period may be based on the teacher's summative observations of the students or the results of tests formalizing their achievement and focusing on the mastery of linguistic accuracy (Brown, 2004; Shaaban, 2005; Bachman & Palmer, 2010), emphasizing the linguistic competence rather than communicative competence (Shaaban, 2005). Additionally, Cheng and Fox (2017, p.188) argue that "teachers use assessment in their classrooms as something that is done *with* learners not *to* them" in order to stress the distinction between traditional and alternative types of assessment. Brown (2007) uses the term *alternatives in assessment* that include portfolios, projects, self-assessment, peer assessment, journals, formal/informal observations, presentations, informal questioning, and teacher-student conferences, and self- and peer assessments. As a matter of fact, traditional assessment that focuses on the accurate production of structures through such common item types as multiple-choice items, true/false items, matching items, and fill-in-the-blank items (Simonson, Smaldino, Albright, & Zvacek, 2000) fails to address the complex uniformity of language for communicative purposes (Clark, 1972; Oller, 1976). This type of assessment can be more practical than alternative assessment and can be preferred more. However, alternative assessment that requires more time, more subjective evaluation, more individualization, and more interaction in the process of providing feedback (Brown, 2004, 2007; Shaaban, 2005, Cameron, 2001, Mckay, 2009; Bachman & Palmer, 2010) indicates successful performance, highlights positive traits, provides formative rather than summative evaluation and takes into account students' needs, interests, and learning styles (Shaaban, 2005).

Until the revision of the Ministry of National Education 1997 foreign language teaching curriculum in 2005, assessment in EFL classrooms had been based on traditional structure-based paper-and-pencil tests and after the revision, performance-based assessment was proposed in parallel with the principles of CLT (Kırkgöz, 2007). Along with the 2012 reform in the Turkish educational system and the ELT Programme, MoNE (2013, p. XV) suggested four types of assessment: "project and portfolio evaluation, pen and paper tests, self and peer evaluation, and teacher observation and evaluation. The revised version of the ELT Programme for Primary and Middle Schools published in 2018 stresses the unity of teaching, learning and assessment in order to create *beneficial backwash effect* on the whole teaching and learning process (MoNE, 2018). With the revision in 2018, MoNE made dramatic changes in the suggested assessment types and techniques. When compared to the previous types of assessment, this revised version has a broader scope and supports a mixture of all assessment types instead of overuse of certain assessment techniques. In the 2018 ELT Programme, *learner autonomy* and *communicative competence* in language teaching have certain emphasis and accordingly *self-assessment*, *alternative*, and *process-oriented assessment* are within the main suggested assessment tools (MoNE, 2018). The suggested testing techniques for the

assessment of four skills for the ELT programme of MoNE (2018, pp. 7-8) include testing techniques for four language skills as well as integrated skills and alternative assessment such as “Portfolio Assessment, Project Assessment, Performance Assessment, Creative Drama Tasks, Class Newspaper/Social Media Projects, Journal Performance” in line with CEFR assessment (CoE, 2001). On the other hand, formal assessment tools such as written and oral exams, quizzes, homework and projects are within the suggested assessment tools in the 2018 ELT Programme (MoNE, 2018). It is stated in the ELT Programme (MoNE, 2018) that 2nd and 3rd graders are suggested to be assessed with the help of formative procedures. However, the young learners in the 4th, 5th, 6th, 7th, and 8th grades are advised to be assessed via both summative and formative assessment tools and techniques in both product and process-oriented procedures. It is obvious that MoNE (2018) suggests EFL teachers of young learners to utilize all the possible assessment techniques and tools in regard to young learners’ developmental features since young learners are different in nature and their assessment needs to reflect such peculiar characteristics (Cameron, 2001; McKay, 2006; Nikolov, 2016; Cheng & Fox, 2017).

Limited research investigating studies on the EFL teachers’ assessment practices of young learners of English may offer insights into understanding how assessment is implemented in EFL contexts. Yildirim and Orsdemir’s (2013) study to find out the reality in classrooms of young learners in the Turkish context in terms of availability of performance tasks in line with the policy proposals revealed that teachers utilized performance tasks effectively compatible with the curriculum; however, the document analysis showed a different application as listening, reading and speaking skills were totally ignored while writing and grammar were slightly fostered. Thus, the researchers concluded that rather than a match, a mismatch showed up between EFL teachers’ assessment practices of performance assessment in young learners’ classrooms and the policy proposals. The results of Brumen, Cagran, and Rixon’s (2009) study with EFL teachers of young learners in three Eastern European countries showed that Croatian teachers were prone to assessing listening and speaking more frequently, Czech teachers mostly went in for assessing the literacy skills (reading and writing) rather than oral skills (listening and speaking) and Slovenian teachers tended to use more grammar and vocabulary-oriented tests. In the Turkish context Han and Kaya’s (2014) survey to find out primary and secondary state Turkish EFL teachers’ perceptions and in-class practices of assessment of four skills revealed that reading and writing skills were mostly assessed by EFL teachers while listening and speaking were assessed less frequently. Similarly, Basok (2017) investigated the consistency between policy and implementations of the curriculum by the EFL teachers in Turkey and the study results showed that teachers could not implement what the policy suggested and instead they preferred to prepare the students for the examinations by using grammar-based teaching and assessment practices. Sarıgöz and Fişne’s (2018) investigation of the consistency between the policy and the actual language assessment practices in the 4th grade classrooms also revealed that English language assessment and evaluation fit formative purposes and written exams and assignments mainly tested learners’ writing and vocabulary. In addition, this particular study aims to find out the extent to which EFL teachers of young learners working in state middle schools follow the suggested procedures while assessing young learners and also to what extent they assess language skills.

3. Method of Study

This study, which seeks to examine EFL teachers’ testing and assessment practices and their consistency with the ELT Programme suggested by the Turkish MoNE, was designed as a mixed-methods research. Since single application of questionnaire as a means of quantitative data would result in insufficient information about how the EFL teachers assess middle school students’ English, assessment documents used by the EFL teachers in real classrooms would enhance the results of quantitative data. In this study, *parallel databases design* under the

Convergent Parallel Approach of mixed-methods research was applied through “the collection of different but complementary data on the same phenomena” and “for the converging and subsequent interpretation of quantitative and qualitative data” (Edmonds & Kennedy, 2017, p.181). Parallel databases design involves the simultaneous but separate collection of the quantitative and qualitative data and “allows researchers to validate data by converging the QUAN results with the QUAL findings” (Edmonds & Kennedy, 2017, p.182). In this study, the quantitative method provides information about EFL teachers’ preferences of item types in terms of traditional and alternative assessment types with the help of a questionnaire. Qualitative method provides information about how frequently EFL teachers assess four skills through exam papers teachers use in their classrooms. The quantitative and qualitative data are collected at the same time but with the help of different collection tools in conformity with parallel databases design.

3.1. Data Collection Procedures

3.1.1. Setting & participants

This study aims to find out the assessment practices of EFL teachers working with young learners at 5th, 6th, 7th and 8th grades in state middle schools in two central districts (Merkezefendi and Pamukkale) in Denizli. In the target districts of Denizli there were 286 EFL teachers working in 70 state middle schools in the spring term of 2017-2018 academic year. On a voluntary basis, 152 EFL teachers out of 286 accepted to participate in the study. In the first part of the questionnaire a consent part was presented to the teachers in order to formally ensure the teachers’ willingness to participate in the study and also to share their assessment documents. However, in the qualitative data collection procedure only 41 out of 152 teachers voluntarily shared their documents they used in assessing their students. The documents were only formal achievement tests which were administered after a few units were completed during and at the end of the semester. 56 achievement tests were collected in total. In this study, the tests are mentioned as *assessment documents* or *exam papers* interchangeably. 69.08 % of participants were female EFL teachers while 30.92 % of participants were male EFL teachers. The vast majority (75.7 %) of teachers graduated from the ELT Departments while 17 teachers (11.2 %) graduated from English Language and Literature Departments and 11 teachers graduated from other teaching branches such as Maths Teaching, Turkish Teaching and Primary School Teaching. The highest percentages belong to teachers whose experiences were between 6-10 years (n=48) and 11-15 years (n=58). The lowest percentage belongs to the teachers who had experience for over 20 years (n=4). 94.1% of teachers (n=143) held BA degree while 5.3% of teachers (n=8) held Master of Arts (MA) and only one teacher was with a PhD degree.

3.1.2. Instrumentation

In the quantitative part of this study, a Likert-scale questionnaire was adapted and developed by utilizing the studies of Anderson (1998) and Çalışkan and Kaşıkçı (2010). When preparing the questionnaire, the researchers consulted two field experts and some English language teachers in order to enhance its validity. Of 25 five-point Likert-scale items in the questionnaire the first two items addressed teachers’ general attitudes of assessment in terms of accuracy and communicative competence. The other 23 items were composed of several traditional and alternative assessment types. Table 1 presents the items in the questionnaire.

Table 1. *ELT teachers' assessment practices*

Assessment 1: I design my tests in order to assess accuracy

Assessment 2: I design my tests in order to assess communicative competence

I apply the following assessment types:

- 1-Multiple-choice questions (students select the answer from a set of options).
- 2-True/False questions (students select one of two choices, true or false).
- 3-Matching questions (students select the answers in one list that match the ones in the other list).
- 4-Fill-in-the-blank questions (students fill in a word or a phrase in a blank).
- 5-Wh- questions (students write content information depending on the question word)
- 6-Yes/No questions (students scrutinize a question or statement and construct a short response starting with Yes or No).
- 7-Translation questions (students translate the given words or sentence/s into the requested language).
- 8-Unscramble (students places the given letters or words in order to construct the requested word/s or sentence/s).
- 9-Informal question-answer (you ask students questions during the teaching and learning process).
- 10-Oral exams (you rate students with interviews).
- 11-Teacher-student conferences (you engage in a focused discussion with students about their work without giving marks).
- 12-Informal observations (you rate students' performance without pre-set criteria).
- 13-Formal observations (you rate students' performance with pre-set criteria).
- 14-Role-playing (an improvised conversation performed by students when given a situation).
- 15-Musical presentation (students sing songs or rhymes).
- 16-Presentations (students-created report/demonstration).
- 17-Portfolios (students' compilations of selected work with rating/reflection)
- 18-Creative writing (students-created poetry, short stories)
- 19-Journals (students' personal writing on self-chosen or assigned topics)
- 20-Projects (assignments given to students which involve the use of more time and resources than available during the normal class period)
- 21-Products (student-created graphs, tables, crafts, maps, web pages)
- 22-Self-assessment (students evaluate their own work)
- 23-Peer assessment (students evaluate other students' work)

In addition, EFL teachers' assessment documents formed the qualitative part of the study. 41 of 152 teachers shared whatever they had used as assessment tools in their exams already administered to their students in middle schools.

3.1.3. Data analysis

Quantitative data obtained from the questionnaires were analysed by the Statistical Package for Social Sciences (SPSS) 24. Cronbach's Alpha value of study was .85 and the number of items was 25. Results of Kolmogorov-Smirnov and Shapiro-Wilk normality tests showed the quantitative data as non-parametric ($p < 0.05$). For this reason, Kruskal Wallis Test and Mann Whitney U Test as non-parametric tests were applied. Qualitative data were gathered from teachers' exam papers. As *document analysis* brings the elements of *content analysis and thematic analysis* (Bowen, 2009), *document analysis* (Bowen, 2009) was applied to find out the type of items teachers used in their exams and also whether or to what extent teachers

assessed four skills of EFL students. The exam papers of EFL teachers were therefore specifically analysed through *content analysis* (Cohen, Manion, & Morrison, 2018, p. 674). In that sense *superficial examination* was applied in this study to provide evidence to the information about the assessment types of teachers gathered from the questionnaires. Exam papers were firstly examined by the researchers in order to detect the existence and frequency of four skills' assessment both on grade basis (5th, 6th, 7th, 8th grades separately) and in total. In order to enhance the rater-reliability, the other two coders checked the exam papers one after another. By this way, the analysis of the questionnaire and the analysis of the assessment documents complemented each other.

4. Findings

4.1. EFL Teachers' Assessment Practices: Traditional or Alternative Assessment?

152 EFL teachers completed a questionnaire as to whether they applied traditional paper-pencil tests or alternative ways of assessment. Table 2 displays descriptive statistics regarding EFL teachers' traditional and alternative assessment practices.

Table 2. *Assessment types: traditional and alternative assessment*

Item Types	Never	Rarely	Sometimes	Usually	Always	Mean \bar{x}	Std. Deviation
Assessment 1 accuracy	0	17	32	84	19	3.69	.83
Assessment 2 communicative competence	4	24	51	58	15	3.36	.95
1. Multiple choice	0	15	36	52	49	3.88	.97
2. True-false	0	4	22	68	58	4.18	.77
3. Matching	0	6	17	56	73	4.28	.81
4. Fill in the blanks	0	7	28	50	67	4.16	.88
5. Wh-question (open-ended)	0	16	55	45	36	3.66	.95
6. Yes/No (closed)	19	28	77	20	8	2.80	.99
7. Translation	48	46	37	17	4	2.23	1.09
8. Unscramble (words/sentences)	8	24	52	47	21	3.32	1.06
9. Informal question/answer	3	17	47	49	36	3.64	1.02
10. Oral exams	28	40	64	12	8	2.55	1.04
11. Teacher student conferences	30	33	55	22	12	2.69	1.17
12. Informal observations	10	28	58	43	13	3.13	1.02
13. Formal observations	13	27	54	41	17	3.14	1.10
14. Role playing	1	14	48	52	37	3.72	.95
15. Musical presentation	21	17	46	39	29	3.25	1.27
16. Presentations	7	20	69	40	16	3.25	.97
17. Portfolios	7	43	48	32	22	3.12	1.11
18. Creative writing	26	45	55	18	8	2.58	1.07
19. Journals	46	47	38	19	2	2.23	1.05
20. Projects	7	15	31	60	39	3.71	1.09
21. Products	11	21	43	49	28	3.40	1.15
22. Self-assessment	30	30	57	25	10	2.70	1.15
23. Peer assessment	17	36	55	37	7	2.87	1.05

* Traditional Test: \bar{x} =3.87 (items 1-8) *Alternative Assessment: \bar{x} =2.98 (items 9-23)

The first two items in the questionnaire were related to assessing accuracy and communicative competence: the mean scores of them were very similar while the teachers

preferred assessing accuracy ($\bar{x}=3.69$) more frequently than the assessment of communicative competence ($\bar{x}=3.36$). As it is also demonstrated in Table 2, *traditional assessment* and *alternative assessment* item types were compared in terms of teachers' frequency of preference: traditional assessment ($\bar{x}=3.87$) was more frequently preferred by the teachers than alternative assessment ($\bar{x}=2.98$). The highest mean scores belonged to *matching* ($\bar{x}=4.28$), *true-false* ($\bar{x}=4.18$) and *fill-in-the blank* items ($\bar{x}=4.16$) with slight differences. The lowest mean scores within traditional assessment belonged to *translation* ($\bar{x}=2.23$), *journals* ($\bar{x}=2.23$), *oral exams* ($\bar{x}=2.55$) and *creative writing* ($\bar{x}=2.58$). The highest mean scores within alternative assessment types belonged to *role-plays* ($\bar{x}=3.72$) and *projects* ($\bar{x}=3.71$) while the lowest mean scores belonged to *journals* ($\bar{x}=2.23$) and *oral exams* ($\bar{x}=2.55$). It could be concluded that most of the teachers preferred assessing accuracy rather than communicative competence in their exams or traditional assessment was more preferable for teachers than alternative assessment. Results supported that the mean scores of traditional assessment were higher than those of the alternatives. It meant EFL teachers mostly applied traditional pen and paper tests while assessing young learners in middle schools.

In addition to the questionnaire as a source of data about teachers' assessment practices, 41 out of 152 teachers shared 56 exam papers they administered during a semester. There were 12 papers for 5th grade, 13 papers for the 6th grade, 16 papers for the 7th grade and 15 papers for the 8th grade in this study. Table 3 demonstrates the item types used in the exams of 5th grade EFL students and their frequencies within all the 5th grade exam papers. 56 exam papers collected from EFL teachers were also analysed in order to find out the item types used and the skills assessed in the exams.

Table 3. *Item types: 5th grade exam papers*

Item Type	Related Linguistic Components	f	Total papers	%
Matching	Grammar- Vocabulary	12	12	100
Fill-in-the blank	Grammar-Vocabulary	12	12	100
Multiple choice	Grammar-Vocabulary- Reading	6	12	50
Wh- items	Grammar- Reading	4	12	33.3
Translation	Grammar	3	12	25
Unscrambling (word/sentence)	Grammar	2	12	16.6
Odd-one out	Grammar- Vocabulary	1	12	8.3
Restricted response essay (paragraph writing)	Writing	1	12	8.3

As can be seen in Table 3, eight different item types were detected concerning the EFL exams of 5th grade students. The most preferred item types were *matching* and *fill-in-the blanks* items of all the exams of 5th grade students. However, both *odd-one out* and *restricted response* items were used in only one exam. In half of the exam papers there were *multiple choice* items. *Wh- items*, *translation* and *unscrambling* items were within the item types but less frequently used in the 5th grade EFL exams. As for the linguistic components to be assessed in 5th grade exam papers, *matching*, *fill-in-the blank* and *odd-one-out* items were prepared to assess grammar and vocabulary components. *Multiple choice* items were prepared to assess reading skill in addition to grammar and vocabulary. *Wh- items* were prepared to assess grammar and reading skill. *Translation* and *unscrambling* items were prepared to assess only grammar.

Finally, restricted response essays were prepared to assess writing skill. In addition, Table 4 demonstrates the item types used in the 6th grade EFL exams.

Table 4. *Item types: 6th grade exam papers*

	Related Linguistic Components	f	Total papers	%
Matching	Grammar- Vocabulary	13	13	100
Fill-in-the-blanks	Grammar- Vocabulary- Listening	13	13	100
Multiple choice	Grammar- Vocabulary- Reading	8	13	61.5
Wh- items	Grammar- Reading	5	13	38.4
True/False	Reading	3	13	23
Translation	Grammar- Vocabulary	2	13	15.3

Table 4 shows six different types of items in the 6th grade exam papers. The most preferred item types by the EFL teachers were *matching* and *fill-in-the blanks* items in the 6th grade EFL exams the same as the 5th grade. Teachers used these item types in all the exams they administered. Another mostly used item type was *multiple choice* items. Eight out of 13 papers included multiple choice items. The other item types used in the 6th grade papers were *wh-*, *true/false* and *translation* items. Language components assessed in the 6th grade exam papers were similar to the ones in the 5th grade exam papers. For instance, *matching* and *translation* items were prepared to assess grammar and vocabulary; *fill-in-the blank* items were prepared to assess listening skill in addition to grammar and vocabulary; *multiple choice* items were prepared to assess reading skill in addition to grammar and vocabulary; and *true/false* items were prepared to assess only reading skill. Table 5 demonstrates the item types included in the 7th grade EFL exam papers.

Table 5. *Item types: 7th grade exam papers*

	Related Linguistic Components	f	Total papers	%
Matching	Grammar- Vocabulary	16	16	100
Fill-in-the-blank	Grammar- Vocabulary	16	16	100
Multiple choice	Grammar- Vocabulary- Reading	10	16	62.5
Wh- items	Grammar- Reading	7	16	43.7
Unscrambling(word/sentence)	Grammar- Vocabulary	5	16	31.2
Translation	Grammar- Vocabulary	3	16	18.7
Yes/No	Reading	2	16	12.5

According to Table 5 seven types of items were used in the 7th grade EFL exam papers. Similar to 5th and 6th grades, *matching* and *fill-in-the blanks* items were used in all the 7th grade exam papers. *Multiple choice* items, one of the most preferred items, were available in 10 out of 16 7th grade exam papers. The other item types used in the 7th grade EFL exams were *wh-*, *unscrambling*, *translation* and *Yes/No* items. As for the linguistic components to be assessed

in the 7th grade exam papers, it is clear that they were prepared with similar purposes to the items prepared in the 5th and 6th grade exam papers. For instance, *matching*, *fill-in-the blank*, *unscrambling* and *translation* items were prepared to assess grammar and vocabulary. Likewise, *multiple choice* items were prepared to assess reading skill in addition to grammar and vocabulary. *Wh- items* were prepared to assess grammar and reading. Finally, *Yes/No items* were prepared to assess reading skill. Table 6 demonstrates the item types used in the 8th grade EFL exams.

Table 6. *Item types: 8th grade exam papers*

	Related Linguistic Components	f	Total papers	%
Matching	Grammar- Vocabulary	15	15	100
Fill-in-the blanks	Grammar- Vocabulary	15	15	100
Multiple choice	Grammar- Vocabulary- Reading	13	15	86.6
Wh- items	Grammar- Vocabulary- Reading	8	15	53.3
True/False	Reading	6	15	40
Yes/No items	Grammar- Reading	5	15	33.3
Restricted response (paragraph writing)	Writing	3	15	20
Error-correcting	Grammar	2	15	13.3
Odd-one-out	Vocabulary	1	15	6.6

According to Table 6 there were nine types of items in the 8th grade EFL exams. Not surprisingly, *matching* and *fill-in-the blanks* items were available in all the 8th grade exam papers. More frequently than in the other grade exam papers, *multiple choice* items were within the mostly preferred item types in the 8th grade exam papers. Differently from the item types in the exam papers of 5th, 6th, and 7th grades, in two 8th grade exam papers there were *error correcting* items. Linguistic components assessed in the 8th grade exam papers were similar to the ones in the 5th, 6th and 7th grade exam papers. For instance, *matching* and *fill-in-the blank* items were prepared to assess grammar and vocabulary; *multiple choice* and *wh- items* were prepared to assess reading skill in addition to grammar and vocabulary; *true/false* items were prepared to assess only the reading skill; *Yes/No items* were prepared to assess grammar and reading skill; *restricted response essays* were prepared to assess writing skill; *error-correcting* items were prepared to assess grammar; and *odd-one-out* items were prepared to assess vocabulary.

4.2. EFL Teachers' Assessment of Language Skills

Furthermore, analysis of exam papers prepared by EFL teachers for young learners of English at state middle schools in this particular study shows that no exam papers were designed specifically for the assessment of four skills. All the papers included formal questions for the assessment of a few skills together. Table 7 demonstrates the frequencies and percentages of assessed skills. *Frequency (f)* refers to the existence of the skills per exam paper.

Table 7. *Frequencies of assessed skills*

Skills	5 th Grade			6 th Grade			7 th Grade			8 th Grade		
	f	Total	%	f	Total	%	f	Total	%	f	Total	%
Listening	0	12	0	1	13	7.69	0	16	0	0	15	0
Reading	6	12	50	6	13	46.15	9	16	56.2	15	15	100
Writing	1	12	8.33	3	13	23.07	0	16	0	3	15	20
Grammar	12	12	100	13	13	100	16	16	100	15	15	100
Vocabulary	12	12	100	13	13	100	16	16	100	15	15	100

Table 7 displays that none of the 5th grade papers included the assessment of listening skill. In half (n=6) of the 5th grade papers there were parts assigned to reading questions. In all the 5th grade exam papers (n=12) there were parts assigned to the assessment of grammar and vocabulary. Finally, in only one of the 5th grade exam papers there was a part in which the students were requested to write a paragraph on a given topic which was intended to assess writing skill. Likewise, in the 6th grade exam papers (n=13) there were questions prepared for both grammar and vocabulary assessment. In nearly half (n=6) of the 6th grade papers there were parts involving questions for reading assessment. In three of the 6th grade exam papers there was a part assigned to writing a paragraph. Surprisingly in only one of the 6th grade exam papers there was a part which involved questions for listening assessment about an audio-record. The percentages of the assessed skills at 7th grade were similar to the percentages at 5th and 6th grades. For example, in all the exam papers at 7th grade there were parts which involved questions for both grammar and vocabulary assessment. Similar to 5th and 6th grade papers, there were no single questions assigned to listening and writing skills in any of the 7th grade exam papers. In nine of the 7th grade papers there were parts assigned to the assessment of reading skill. The results of 8th grades were very similar to the results of 5th, 6th and 7th grade exam paper analyses. For example, again grammar and vocabulary were assessed in the entire (n=15) 8th grade EFL exam papers. In 8th grade papers, there was a remarkable difference from the other grades in the percentage of reading assessment: the entire exam papers involved reading assessment. In the 8th grade EFL exam papers it was exactly the same as the 5th, 6th and 7th grades since there was no inclusion of listening skill at all.

With regard to the percentages of assessed skills in the 56 exam papers in total, it is clear that EFL teachers tended to assess grammar and vocabulary in all exams while they did not assess listening and speaking except for one 6th grade exam paper involving a listening part. As to the assessment of speaking skill assessment teachers did not share any separate assessment documents, so it can be inferred that EFL teachers did not assess speaking skill at all. As for the reading skill, it was assessed in all exam papers just like grammar and vocabulary at the 8th grade. However, at the other grades percentage of reading assessment decreased below 50 %. On the other hand, it could also be inferred that teachers did not prefer assessing writing skill regularly at middle schools since its percentage was also pretty low.

5. Discussion

Both quantitative and qualitative data were analysed and it was found out that despite the proposals of the policy which insistently emphasize communicative language testing and alternative ways of assessment in harmony with other possible assessment tools, teachers utilized merely the traditional paper and pencil exams. Although the teachers reported that they used alternative ways of assessment together with the traditional types in the questionnaires, the only assessment tools shared by the teachers were exam papers rather than materials of

alternative assessment such as portfolios and projects. On this basis, it could be inferred that EFL teachers working in state middle schools assessed their students by applying achievement tests in certain periods during the semester. Even though they might have used alternative types of assessment to some extent, they did not share them with the researchers.

The findings gathered from the document analysis of the teachers' exam papers were also parallel to the findings of the descriptive statistics. The exam papers were analysed in order to detect the item types used by the teachers. Accordingly, it was determined that the most frequent items were matching, fill-in-the blanks and multiple choice items. That is to say, document analysis enabled us to crosscheck the findings of the questionnaire: there was a perfect match between the findings of these data. It was remarkable that in every single exam paper there were matching and fill-in-the blank items and all of them were prepared to assess grammar and vocabulary.

Similar to our study, in some other studies (Pandian, 2002; Brumen et al., 2009; Han & Kaya, 2014; Basok, 2017) both traditional and alternative assessment types were practiced by EFL teachers. Similar to Turkish teachers of English in our study, Slovenian EFL teachers also mostly preferred fill-in-the blank items; Czech EFL teachers mostly preferred true/false items while Croatian teachers mostly preferred repeat-and-drill practices in the study of Brumen et al. (2009). Additionally, Han and Kaya's (2014) study had also similar findings to our study. For example, in both studies true/false and matching items were the mostly preferred traditional assessment tools in order to assess reading skill. Moreover, in both of the studies, teachers reported that role-plays were mostly preferred alternative assessment tools in order to assess speaking skill.

All in all, teachers did not administer any separate skills examinations in middle schools, but they mostly prepared exams in which grammar, vocabulary and reading had the greatest inclusion. Teachers did not assess speaking and listening skills of young learners at any grade levels with an exception of one exam paper including a listening part. Basok (2017) came up with similar findings to our study findings: EFL teachers declared that they designed structure-based exams including grammar and reading assessment; whereas, they ignored communicative skills of listening and speaking because of the pressure by the central language examinations administered by the government. In the study reported by Pandian (2002), EFL teachers also prepared exams including grammar, vocabulary, reading and writing assessment but ignored listening and speaking skills similar to Basok's (2017) and our studies. Additionally, Yildirim and Orsdemir (2013) had similar findings in terms of the assessment of four skills; for instance, EFL teachers ignored speaking, listening and reading skills totally while preparing performance assessment in young learners' classrooms; and they just included grammar and writing in the performance tasks. However, there was a difference: in our study reading skill was among the mostly assessed language skills while in Yildirim and Orsdemir's (2013) study it was not assessed via performance tasks by the EFL teachers. Han and Kaya (2014) came up with very similar findings to those of our study and also to the aforementioned studies in terms of the assessment of four skills on the grounds that listening and speaking assessment were totally ignored and reading and writing skills were assessed through the exams prepared by the EFL teachers working with young learners.

Brumen et al. (2009) indicated similar findings to our study findings. Slovenian teachers mostly assessed grammar and vocabulary and made use of fill-in-the blanks type of items in their EFL exams. Czech teachers put the emphasis on literacy skills (reading and writing) and overused true/false items in the exams of young learners; Contradictorily Croatian teachers ignored literacy skills and focused on oral skills in company with repeat-and-drill exercises of vocabulary. The study findings obtained by Sarıgöz and Fişne (2018) are also similar to our

study findings as EFL teachers' assessment and evaluation practices of the 4th graders fit the formative purposes and writing and vocabulary components were also among the common assessment types through written exams and assignments.

It can also be argued that the assessment practices of EFL teachers were not consistent with those stated by the Ministry of National Education for the 5th, 6th, 7th and 8th grades English Language Teaching programmes. Together with the results of the quantitative data it could be inferred that EFL teachers tended to implement grammar-based traditional paper and pencil assessment procedures as opposed to policy suggestions by the MoNE (2018, pp. 6-7) including summative and formative, product and process-oriented tests and traditional and alternative assessment tools which cover four skills and all the linguistic components.

In parallel with our study, Basok's (2017) investigation into the consistency between the curriculum and the implementations of EFL teachers working in primary, secondary and high schools showed that assessment implementations did not match the policy. Yildirim and Ordemir's (2013) study also indicated a mismatch between the curriculum proposals and the teachers working with young learners as teachers tended to assess grammar and writing rather than all four skills in their implementations of performance tasks. The contradiction between the in-class practices and assessment procedures may put forth a trouble in the validity and reliability of the exams. Even though teachers may attempt to integrate the language skills into their teaching, assessment practices lacking those skills can cause a mismatch even between their own practices of teaching and assessment before the policy. However, unlike all these study findings and also ours, Kirkgoz, Babanoglu, and Ağçam (2017) came up with contradictory results since EFL teachers of young learners in the Turkish state primary school context preferred performance-based and communication-based assessment more than the traditional assessment. Such a practice is promising and needs to be disseminated in the overall Turkish context as this is one of the major reasons for which we conducted this particular study.

6. Conclusion

CEFR has been accepted and implemented as a pathfinder in Turkey since 2006 and accordingly ELT programmes have been revised several times in terms of language teaching, language learning and assessment of language (MoNE, 2013; MoNE, 2018). Considering the policy innovations in the ELT programmes of the MoNE, this study aimed to find out the assessment practices of EFL teachers in middle schools (5th, 6th, 7th, and 8th grades) by examining the types of assessment tools EFL teachers used in young learners' classrooms and also to find out the extent of consistency between the proposed course outcomes of the ELT Programme suggested by the MoNE and the EFL teachers' assessment practices in middle schools.

Findings of the descriptive statistics revealed that EFL teachers preferred to assess accuracy more frequently than communicative competence as they used traditional assessment more frequently than alternative assessment while they mostly preferred matching, true/false, fill-in-the blank and multiple choice items rather than translation, journals, oral exams and creative writing. The findings of the document analysis substantially supported such findings; namely, the skills assessed in the exam papers were grammar and vocabulary with a hundred percent. In nearly half of the exam papers, there were parts for reading assessment and in some exam papers writing skill was also assessed. However, in any of the exam papers there were no questions for the assessment of listening skill. As for the speaking skill, since it cannot be assessed through written materials, and none of the teachers shared any documents or declared they assessed speaking skill, it was interpreted that teachers did not assess speaking skill at all. Above and all, the findings of this study revealed that the assessment practices of the EFL

teachers working in state middle schools did not match the CEFR-oriented ELT policy of the MoNE since the EFL teachers tended to design traditional structure-based tests instead of a harmony of all kind of assessment tools and techniques based on communicative competence. Why EFL teachers prefer traditional assessment types may be related to their language assessment knowledge (LAK) as Ölmezer-Öztürk and Belgin (2019) found out in their study that EFL teachers received low scores in the LAK scale they developed. Tavassoli and Farhady (2018) also support such results as EFL teachers in their study reported that they needed to improve their language assessment knowledge. Such studies might indicate the urgency of in-service training of EFL teachers in alternative assessment types.

This study being one of the few studies examining the assessment practices of EFL teachers of young learners and their consistency with the policy in Turkey might contribute to the comprehension of the policy and its implementation in a more compatible way in the Turkish context. The study may provide feedback to the teachers, teacher trainers, and policy makers in order to find a common ground in language assessment. Above all, it is significant to determine the underlying reasons of the inconsistency between policy and practice to be able to produce applicable solutions. Therefore, this study paves the way for further research on investigating the background problems of this inconsistency. Researchers may conduct more research focusing on the underlying reasons of such problems in the implementation of the policies at schools.

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TERTIARY EFL STUDENTS' MORPHOLOGICAL AWARENESS OF ENGLISH

Research Article

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TERTIARY EFL STUDENTS' MORPHOLOGICAL AWARENESS OF ENGLISH

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Abstract

Morphological awareness is regarded as a significant predictor of vocabulary acquisition, reading comprehension, and the advancement of various literary competences. Thus, the present study sought to investigate tertiary EFL students' morphological awareness of English in terms of morphological identification and morphological structure awareness. By making use of the total sampling technique, 51 tertiary EFL students from one of the universities in Bengkulu, Indonesia, were involved as the participants. Their English morphological awareness was assessed using a valid and reliable test already developed by a previous researcher. The results indicated that their English morphological awareness was moderate. Such condition became a positive potential which might contribute to consolidate them in the process of English vocabulary acquisition, in dealing with reading comprehension, and in fulfilling various English literary needs. This study recommends that both deductive and inductive English morphological interventions be given to tertiary EFL students in tandem with adequate practices that can continuously train their English morphological awareness.

Keywords: EFL morphological awareness, morphological identification, morphological structure

1. Introduction

Morphological awareness is a visual processing ability to analyze morphemic features in order to be able to construct meaning (Ke & Xiao, 2015). The ability as such refers to a metalinguistic ability to understand, reflect on, and manipulate morphemic properties wherein this ability allows one to develop words into more complex and detailed forms (Hamavandi, Rezai, & Mazdayasna, 2017; Kuo, Ramirez, de Marin, Kim, & Unal-Gezer, 2017; Wolter & Gibson, 2015). The properties of morphology in common extend to roots, affixes, inflection, derivation, compound words, blends, and phrasal words (Carstairs-Mccarthy, 2002; Harley, 2006). The metalinguistic ability in terms of morphological awareness also aligns with deliberate awareness of morphemic constituents (Vaknin-Nusbaum & Raveh, 2019).

For learners who learn English as the other language, the case of morphological awareness development to some extent is determined by the degree of L1 and L2 similarity. A study conducted by Xue and Jiang (2017) revealed that in the context of EFL learners, if the morphological features of L1 and L2 and the bilingual speakers' proficiency between their L1 and L2 have adequate similarities, their morphological awareness can be a unique predictor of their reading skill for both languages. The aforesaid study implies that sufficient similarities in the aspects of proficiency and linguistic forms between L1 and L2 become the bridge of morphological awareness improvement.

Morphological awareness is correlated with reading comprehension ability (Ke & Xiao, 2015). It becomes an important predictor of reading comprehension (Tighe & Binder, 2015) so that students with good morphological awareness can improve their reading comprehension in an effective way (Vaknin-Nusbaum, Sarid, Raveh, & Nevo, 2016). Otherwise, the lack of morphological awareness is related to the lack of comprehension in reading (MacKay, Levesque, & Deacon, 2017). A study conducted by Deacon, Holliman, Dobson, and Harrison (2018) indicated that morphological awareness independently contributes to students' literary ability in terms of word reading, the accuracy of reading, and reading comprehension. With adequate morphological awareness, learners will be assisted in dealing with extensive reading activities (Y. Zhang & Li, 2016). In addition, morphological awareness is also associated with writing skill. A study conducted by McCutchen and Stull, (2015) informed that morphological awareness affects students' writing skill in the aspects of both spelling accuracy and word production.

Besides being associated with reading comprehension, morphological awareness also influences vocabulary acquisition (Bae & Joshi, 2017; Sparks & Deacon, 2015). The study undertaken by Gottardo, Mirza, Koh, Ferreira, and Javier (2018) showed that morphological awareness alongside the knowledge of syntax positively contribute to the acquisition of vocabularies in depth. The improvement of morphological awareness positively aids the extent and depth of ESL vocabularies, and it can also equip learners with detailed understanding of word features alongside the related words and phrases (Haomin & Bilü, 2017), lexical inference (Zhang, Koda, & Leong, 2016), and word spelling (Wilson-Fowler & Apel, 2015; Zhao, Joshi, Dixon, & Chen, 2017).

In the context of teaching and learning, drawing upon prior studies, the efforts made to improve students' morphological awareness have been carried out in both deductive and inductive ways. In a deductive way, in the context of foreign language learning, the study conducted by Leonet, Cenoz, and Gorter (2020) revealed that translanguaging pedagogy, teaching morphology across languages, has a significantly positive effect on students' foreign language morphological awareness. The foregoing study indicates that students' first language knowledge and competence can be good modes that help students understand foreign language morphological rules better. In line with the foregoing, learning from the study conducted by Kim et al. (2015), morphological awareness is influenced by both instruction and cross-language transfer. In this sense, bilingual education has a positive impact on the improvement of learners' morphological awareness by means of a cross-language transfer. Bilingual education also enhances students' sensitivity to the structure of language features (Kuo et al., 2017).

Morphological instructions potentially develop students' morphological awareness so that students are able to effectively extract meanings from texts (Vaknin-Nusbaum & Raveh, 2019). The study undertaken by Amirjalili and Jabbari (2018) revealed that morphological instructions can effectively improve EFL students' morphological awareness and reading comprehension. This study recommended that morphological instructions be applied in EFL

classrooms for the sake of improving students' English literacy. Good, Lance, and Rainey (2015; and Wolter and Gibson (2015) also revealed that direct morphological instructions designed to enhance morphological awareness have a significantly positive impact on the improvement of literary skills. Zhang (2016) recommended that morphological instructions be applied in order to develop bilingual students' reading skill.

According to the study conducted by Kraut (2015), drawing upon the data solicited from ESL learners, it is found out that L2 learners' morphological awareness does not necessarily affect their automatic morphological decomposition. The aforesaid study recommended that non-native English learners need to be deliberately provided with morphological exposures and also to be trained to compose as well as decompose English morphological families in practices in order that they can improve their automatic morphological decomposition that can assist them in dealing with efficient and speed reading. In addition, teaching students sufficient knowledge *vis-a-vis* morphology and inductive reasoning can improve students' morphological awareness (Yeh, Joshi, & Ji, 2015).

A study conducted by Lin, Cheng, and Wang (2018) with respect to morphological awareness interventions amid Chinese bilingual speakers who use English as the other language, in teaching compound structures to bilingual learners, the teacher is expected to teach students to identify the compound head and to understand how it works in meaning making towards the entire words. In addition, the teacher is also suggested to teach students the compound structure similarities between the two languages. The aforementioned studies highlight the importance of implicit or deductive teaching of morphological awareness to help develop students' vocabulary acquisition, reading comprehension, and literary developments.

In an inductive way of teaching and learning, the study conducted by Reynolds (2019) suggested that a variety of word formations can be acquired through extensive reading. In this sense, morphological awareness can be enhanced by means of incidental learning. However, this study also suggests that if more complex varieties of word formations are expected to be acquired, direct morphological instructions that deliberately expose learners with the explanations of morphemic parts are needed. In addition, learning vocabularies in context will improve students' morphological awareness. As the foregoing, students will acquire morphological knowledge, word definitions, the usages of words, and other necessary knowledge such as synonyms and antonyms of words (Spencer et al., 2015). In this regard, learning vocabularies in context refers to part of incidental learning or the so-called inductive learning.

Anchored in a range of studies above that prove the paramount importance and the pivotal roles of morphological awareness in vocabulary acquisition, reading comprehension, writing skill, and other literary needs, the present study is proposed to assess EFL tertiary students' morphological awareness in terms of morphemic identification and morphemic structure. Two research questions are formulated as follows:

1. How is tertiary EFL students' morphological awareness of English in terms of morphemic identification?
2. How is tertiary EFL students' morphological awareness of English in terms of morphemic structure?

2. Method

This study applied a descriptive quantitative method to measure tertiary EFL students' morphological awareness of English. The morphological awareness examined in the present study was comprised of analytical and structural aspects of morphology. The rationale

beyond the application of this study method was because this study sought to solicit rigorous data that could be generalized, and the data could also be the source of developing English morphology teaching materials in order to meet EFL students' needs. This study was conducted in one of the universities in Bengkulu, Indonesia.

2.1. Participants

The participants of this study were the first-year tertiary EFL students who were going to take an English morphology subject in the following year. 51 tertiary students were engaged, and they were collected using a total sampling technique. They aged between 18-20 years old. Resting upon the proficiency test of college students' enrolment, the participants of this study were categorized as pre-intermediate to intermediate English students.

2.2. Technique of Collecting Data

The data were collected using an English morphology test adopted from an instrument constructed by Farsi (2008). A part of his study measured tertiary students' English morphological awareness in the analytical and structural components. The two components aligned with the aspects measured by the present study. In addition, the participants' conditions in his study also had a range of similarities compared to those of the present study, wherein they were the first-year college students and non-native English users. They used English as a foreign language. The range of participants' ages was also adequately similar. Hence, adopting a test already constructed and used by Farsi (2008) was ideal. This test was assigned to measure tertiary students in reflecting on and manipulating English morphemic constituents. The framework of this test was comprised of the analyses and structures of word formations which were further called the morphological identification and morphological structure tests.

2.2.1. English morphological identification test

This test was deployed to measure tertiary EFL students' English morphological awareness in terms of analyzing and breaking down English words into smaller meanings. The test consisted of 15 items. In this test, tertiary EFL students were provided with a variety of complex English words which were free from contexts, and they were demanded to segment the morphemic constituents of those words into the morphemes that represented the smallest meaning each. Both validity and reliability of this test had already been verified by Farsi (2008) so that this test was ready to be used by other researchers who studied similar cases.

2.2.2. English morphological structure test

The function of this test was to measure tertiary EFL students' English morphological awareness in terms of synthesizing morphemes to form new meanings. This test subsumed 15 items. All items were displayed in the form of incomplete sentences. The students were further asked to modify words needed to complete the English sentences in an accurate way. Each item was preceded by a sentence example having the same concept but modifying a different word. In detail, this test examined students' knowledge with regard to word structures, the connections between words and within words, and word parts. Both validity and reliability of this test had already been verified by Farsi (2008) so that this test was ready to be used by other researchers who studied similar cases.

2.3. Technique of Data Analysis

The data were analyzed using descriptive statistic calculations to obtain the percentages of tertiary students' English morphological awareness. The following formula was deployed to analyze the data:

$$X = R / (T \times n) \times 100 \%$$

Note:

x = The percentage of each kind of the tests

R = Total number of correct answers

T = Number of samples

n = Number of items

The mean score was further calculated resting upon the total score of the two kinds of test.

$$M = (\sum\%) / N$$

Note:

M : Mean

$\sum\%$: Total percentage of overall scores

N : Number of samples

The next step was to determine the levels of students' morphological awareness. The following tabulated scales are the five point scales adopted from Nurgiyantoro's (2010) classification.

Table 1. *Nurgiyantoro's (2010) score classification*

No	Score Percentages	Interpretation
1	90 %-100%	Very good
2	75%-89%	Good
3	60%-74%	enough
4	40%-59%	Less/low
5	0%-40%	Poor / very low

3. Results and Discussion

The following presentation provides a quantitative description of tertiary EFL students' morphological awareness of English in terms of morphological identification and morphological structure awareness.

3.1. Tertiary EFL Students' Morphological Identification Awareness of English

Resting upon the data gained from the morphological identification test containing 15 items that measure students' ability to analyze and break down English words into smaller meanings, the results are obtained as presented in the following diagram.

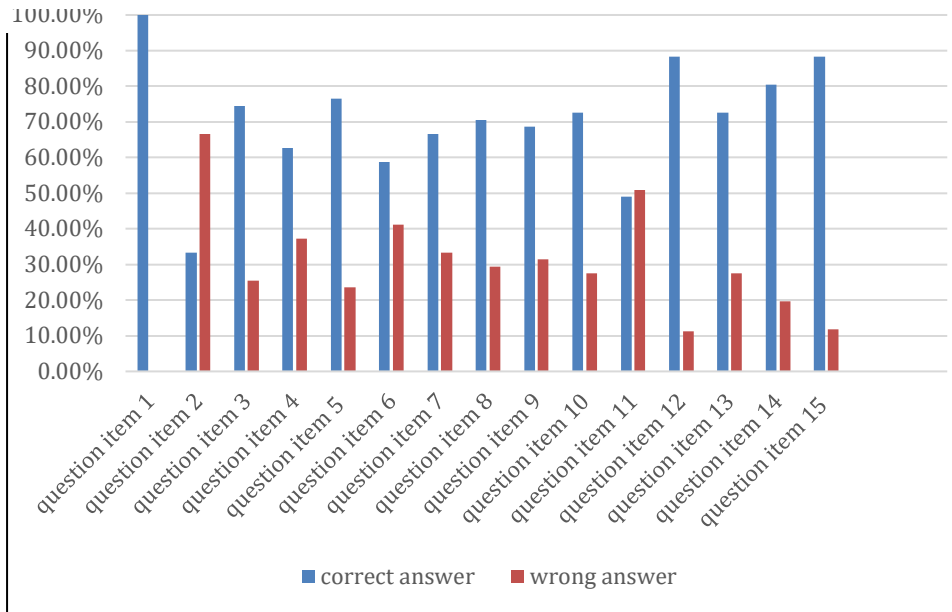


Diagram 1. The results of tertiary EFL students' morphological identification awareness test

Diagram 1 displays the condition of the overall data. Subsequently, from the statistical calculations, the total of correct answers gained was 542, and that of incorrect answers was 223. The percentage of the correct answers gained was 70.84%.

3.2. Tertiary EFL students' morphological awareness of English

Anchored in the data garnered from the morphological structure test comprising 15 items that measure students' ability to synthesize English morphemes to form new meanings, the results are obtained as presented in the following diagram.

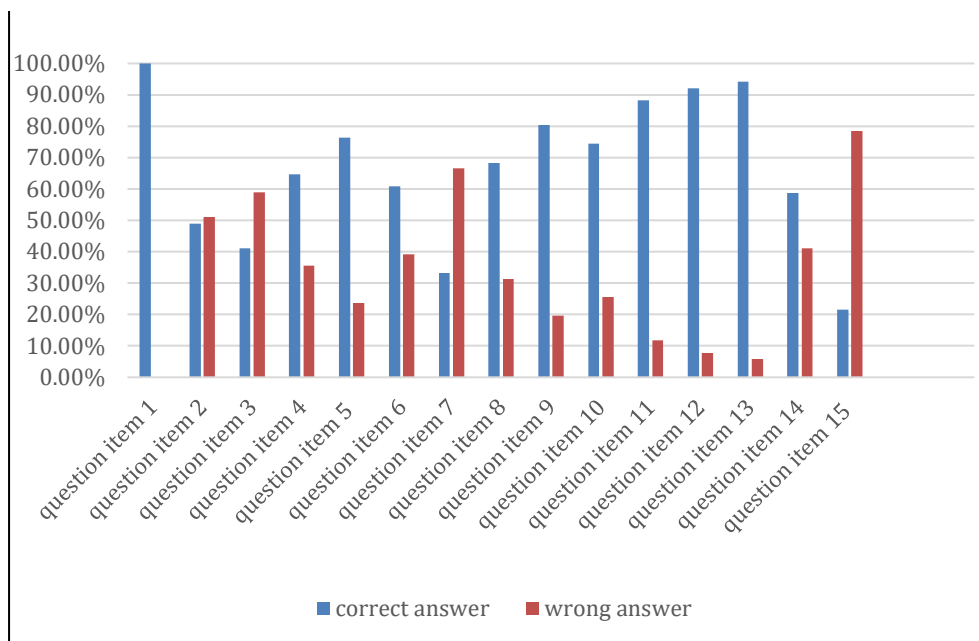


Diagram 2. The results of tertiary EFL students' morphological structure awareness test

Diagram 2 displays the condition of the overall data. Subsequently, from the statistical calculations, the total of correct answers gained was 515, and that of incorrect answers was 250. The percentage of the correct answers gained was 67.32%.

The next stage undertaken was to classify the level of tertiary EFL students' morphological awareness of English based upon Nurgiyantoro's (2010) classification. The following diagram highlights the distribution of data based on the related percentages.

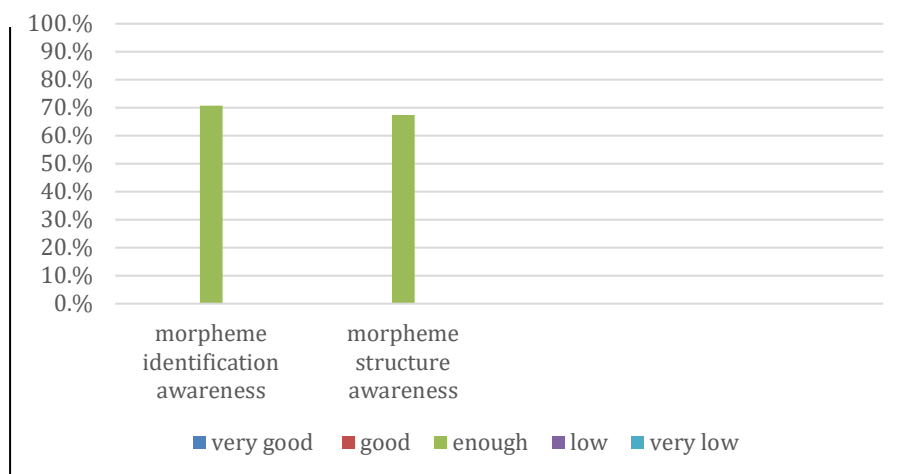


Diagram 3. The level of students' morphological awareness of English

Diagram 3 indicates that the classification of tertiary EFL students' morphological identification and morphological structure awareness was in enough category because Nurgiyantoro (2010) elucidated that if the scores emerge in the percentage from 64% to 74%, the scores represent an "enough" category. The result of students' morphological identification awareness was 70.84%, and that of students' morphological structure awareness was 67.32%. It means that students' morphological awareness level was enough in terms of both morphological identification and morphological structure awareness.

The results of the present study indicate that tertiary EFL students have sufficiently been capable of analyzing as well as breaking down English words into smaller meanings and synthesizing English morphemes to form new meanings (Carlisle, 2000; Farsi, 2008). This efficacy will moderately consolidate tertiary EFL students in the process of vocabulary acquisition (Bae & Joshi, 2017; Gottardo et al., 2018; Haomin & Bilü, 2017; Sparks & Deacon, 2015; Wilson-Fowler & Apel, 2015; Zhang et al., 2016), in coping with reading comprehension, and various literary needs (Ke & Xiao, 2015; Tighe & Binder, 2015; Vaknin-Nusbaum et al., 2016). However, the moderate level of English morphological awareness owned by tertiary EFL students in this study merely lies as the temporary English morphological potential which can increase or perhaps decrease dependent upon the further English morphological interventions that will be given to students. The researchers recommend that their English morphological potential be improved by provisioning both deductive and inductive interventions alongside adequate practices that continuously train their English morphological awareness.

As an implication for the context of English education in Indonesia, considering the scientific consensus which internationally positions English as the world lingua franca whose users are multicultural people in the world (Baker, 2016; Deniz, Özkan, & Bayyurt, 2016; Fang, 2017; Ishikawa, 2016; Kirkpatrick, 2018; Kusumaningputri & Widodo, 2018; J. Liu & Fang, 2017; K. L. Liu, 2019; Matsuura, Rilling, Chiba, Kim, & Rini, 2016; Mauranen, 2018; Rahatlou, Fazilatfar, & Allami, 2018; Sherman, 2018; Si, 2018; Sung, 2017) and the nature

of Indonesian people, including students, that is multicultural *in situ* (Hamied, 2012; Morganna, Sumardi, & Tarjana, 2018a, 2018b, 2020; Sukyadi, 2015), the natural English interactions that Indonesian English students take part in will always be across cultures, and such interactions willy-nilly call for their English linguistic competences which meet the adequate extent of English fluency and accuracy. English morphological awareness is a part of the aforesaid linguistic competences. Thus, the English morphological awareness of Indonesian students has to meet both fluent and accurate degrees. In this regard, English teaching and learning processes undertaken in the classrooms have to assist students in learning English morphology in both deductive and inductive ways. Deductive English morphological interventions can improve students' English morphological awareness in terms of accuracy (Amirjalili & Jabbari, 2018; Good et al., 2015; Kim et al., 2015; Kraut, 2015; Kuo et al., 2017; Leonet et al., 2020; Lin et al., 2018; Vaknin-Nusbaum & Raveh, 2019; Wolter & Gibson, 2015; Yeh et al., 2015; D. Zhang, 2016). Subsequently, inductive English morphological interventions can improve their English morphological awareness in terms of fluency (Reynolds, 2019; Spencer et al., 2015). The present study really supports English teachers to teach students English morphology deductively and inductively.

4. Conclusion

The present study reveals that tertiary EFL students' morphological awareness of English is moderate. This condition becomes a positive potential which may contribute to consolidate them in the process of English vocabulary acquisition, in dealing with reading comprehension, and in fulfilling various English literary needs. Nonetheless, such morphological potential can either increase or decrease dependent upon the English morphological interventions that will further be given to them. This study recommends that both deductive and inductive English morphological interventions be given to them in tandem with adequate practices that can continuously train their English morphological awareness.

Further studies are expected to address the practices of English morphological interventions in the contexts of Indonesian EFL students.

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LEARNING ENTREPRENEURSHIP FOR STUDENTS IN PREPARATION FOR JOB OPPORTUNITIES

Research Article

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LEARNING ENTREPRENEURSHIP FOR STUDENTS IN PREPARATION FOR JOB OPPORTUNITIES

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Abstract

The background of this research starts from seeing and analyzing the importance of skills for Education Technology students, especially talent in the field of entrepreneurship. The purpose of this study is for them to gain learning and experience in the field of entrepreneurship as well as in the effort to create independence in finding employment opportunities or creating work. The main problem in this study is to provide experience and knowledge to students of Education Technology in terms of entrepreneurship. The method used in this study is a qualitative perspective approach with the phenomenological model, because the subject of this problem is a phenomenon that often occurs, when students have already finished college and then returned to the community, and the job opportunities they have not obtained. This research requires about 15 weeks, with the students as participants of 8 students. The results of this study indicate a positive level of progress and nature of efforts to increase motivation in entrepreneurship, and this is a finding, novelty (novelty) in increasing learning motivation, business motivation for students. .

Keywords: entrepreneurship, technology, education, motivation learning

1. Introduction

Education is the future passport, so education is a major factor in the success of a nation, while the background of this research is to provide knowledge to students, in addition to formal knowledge to students majoring in technology education also providing knowledge to they are about entrepreneurial knowledge which will certainly be useful after they finish college, so that students are able to have motivation and independence in opening business opportunities, both for themselves and others.

As educators in motivating and innovating to advance students' thinking patterns, it must be creative, qualitative approaches in teaching are needed, such as the opinions of (Matheson & Sutcliffe, 2017) Qualitative interpretative approaches capture student perceptions about aspects of design and delivery of curriculum that is help their transition, promote ownership, and empower them as students, which leads to transformational change.

What are the main problems and questions in this research ?, The authors see several problems faced by graduates, especially students in educational technology programs. Motivation for students is very important in the direction of success such as the opinion of (Andresen et al., 2014) Weak willpower can cause ineffective efforts in the sense that people who lack the will fail to start, to stay on track, to choose the way that play a role, and to act efficiently. However, using simple self-regulatory strategies (eg, forming implementation intentions or making if-then plans) can overcome this problem by drastically increasing objectives.(Bergmann et al., 2018)

In this study the authors also took several examples of results from the previous opinion of previous researchers, as a comparison and to add to the treasury in conducting this research. In formal learning, in the opinion (Taufik et al., 2019) to check the success of a field, then tests must be needed that can measure the success. Skills in technology are a form of entrepreneurship, for example, being a technician in computers, in science and technology education, which is in line with the expected needs of the environment, economy and society supported. (Korkmaz et al., 2017)

In the opinion of (Luca et al., 2012) as they get older. It is said that motivation, naturally for respondents' experience and mental readiness, as well as academic intelligence, cannot be concluded. This implies that motivation changes as people get older and are enriched with academic and cultural gifts, so mentors in the academic world must provide enriching leaps for development Furthermore. In the opinion (Ng et al., 2018) that motivation that is measured valid will determine the level of validity nationally, but will also have the opposite effect.

In improving human resources, especially educational technology, it is indeed necessary the readiness of teachers or lecturers to provide teaching or be able to ask for help from third parties, so that programs in learning technology based on entrepreneurship can run, as the opinion of (Brečka & Valentová, 2017) Teachers who are not qualified which only teaches the subject as a substitute for educated and technology-qualified teachers, but also opinions of such teachers whose level of critical thinking is inadequate. The results of mapping the level of critical thinking of teachers in secondary schools, such as that will be difficult to develop learning technology.(Minkes & Foxall, 2015)

Between motivation and learning educational technology related to entrepreneurial activities do need to be improved, so students have experiences that make them more confident and of course this makes them more motivated in learning.

In addition to the entrepreneurial skill factors, also in multimedia such as computers, such as those needed by offices and companies, campuses / schools, these courses are made, so that they become trained and reliable for their future preparation. In general the department of education technology in its application is to provide learning about educational media as well as innovation in education, but in this study the author tries to give a " feel of novelty " that is by combining formal education technology with entrepreneurship which still has to do with educational technology, universally.

The entrepreneurship is, the reality of global development for the future is very much needed the value of the transformation of understanding and understanding of the potential empowerment of both natural and human resources. Through controlling the implementation of human resource development will be programmed generally in the scope of the educational and learning processes both formal, informal, and non-formal. Facts, then from the results of research on entrepreneurship.

Why is the entrepreneurial program so important in learning technology education? because they are closely related to the future, predictable mediation. In this context, different constituent

dimensions in their effects on exploration and exploitation, and performance, call for proper consideration of reciprocal interactions, activities, and performance. And this is important for their readiness when plunging into society.

Opinions from (Lowery, 2019) as teachers and school principals. Changing reflective views about my life experience as an educator creates a space where I try to make meaning from relevant cultural practice phenomena in education, how students can learn and try, both in learning and when they return to society.

For teachers / lecturers, it is better to have a broader educational spirit and not only teach formal things, such as opinions (Nixon, 2015) for academic workers to think together not only about their own pedagogical practices but also about the implications of these practices for broader social and political spaces and teaching in Higher Education can open up potentially important spaces for thinking together about the broader nature and objectives of teaching and learning.

In this case Lowery tries to create a culture of independence, so that students are able to stand on their own, of course one of them is the efforts of the teacher / lecturer, to provide knowledge and fields that can provide results independently.

In one study said that the economy is very influential on the progress of a nation, such as opinions (Batool & Ullah, 2018) the emerging economic forces affect the shape of the global economy. For the prosperity of the nation, it is important that women should be involved in job creation activities rather than providing employment opportunities, because businesses are more flexible in time than being employees.

One good form of entrepreneurship to develop is to be a business consultant in addition to entrepreneurship in the form of products, for students of educational technology programs in the opinion (Kremel, 2016) Taking the perspective of entrepreneurs and a broad view of business consulting services, is to examine the extent of the need for consulting services business among beginners in Sweden, first-generation immigrants compared to non-immigrants, is fulfilled. This research shows that how important is a consultant for beginners

Students who are given additional education in educational technology programs with knowledge in the field of entrepreneurship, can provide motivation for them, such as opinions (Vuong & Tran, 2011) performance expectations, business expectations, service quality, and personal innovation affect behavioral intentions, while the influence of lecturers has no effect on behavioral intentions. In addition, behavioral intention influences usage behavior while the facilitation conditions do not affect use behavior.(Roman & Maxim, 2017)

In general Lecturers / Teachers can actually remember and teach entrepreneurial learning programs early on to their students, in the opinion (Yu & Prince, 2016) realistically, the teacher's teaching situation and / or teaching procedures in traditional classrooms. The material has a high media wealth because of their important features such as showing the face of the teacher, hearing the teacher's voice, and presenting teaching material in the largest screen area, for experiments also involved to test the effects of the learning effect(Vanevenhoven & Liguori, 2013)

Other opinions from technology are important and will develop into thinking power towards entrepreneurship, this is the opinion of (Barton & Dexter, 2020) consistently maximizing the potential of classroom technology to enhance student learning. Because their self-efficacy is positively related to technology integration, the development of teacher's self-efficacy can enhance high-quality integration. We investigate how a holistic professional learning system about technology integration including formal, informal and independent professional learning

can allow access to and encourage reflection on information sources of self-efficacy(Peltier & Scovotti, 2010)

Technology is one form of progress in education and in the opinion (Yu & Prince, 2016) the success of the integration of educational technology in schools depends on the ability of the school administrator's technological leadership. The purpose of this study is to investigate the alleged ability of prospective school managers to meet the technology standards set by the ISTE Standards for administrators (formerly known as NETS • A) and to determine which standards they wish to pursue for future professional development(Jones, 2014)

Education and tenology then combined with the concept of entrepreneurship will be able to create innovative thinking patterns for students, from opinions (Kollmann & Stöckmann, 2014) Integration of technology into the classroom remains a challenge for those involved. A concept-guided approach to technology development has been suggested as a way to meet this challenge. This multiple case study was carried out in the context of a project where five primary schools in the Netherlands with the concept of schools labeled as 'traditional' or 'innovative' were developed and realized up to four technology-supported learning settings in line with their school education concept

In the opinion of (Isenberg, 2008) Online teacher entrepreneurship occurs when current P-12 teachers or former teachers distribute their original class resources and ideas through online education markets such as online teaching material models have become very popular in the classroom , but little is known about these people or their practices. The main problem in research is about how a lecturer / teacher is able to provide entrepreneurial motivation and learning, in developing human resources, for students, in addition to getting formal learning at school / campus. (Andy Irawan, 2017)

The purpose of this research is to prepare students to have knowledge outside of the formal knowledge they get at school / on campus, that is by providing entrepreneurial knowledge / skills that are in accordance with their talents and interests, especially in business fields that do not spend large capital .

The results of this study indicate that students are very enthusiastic in participating in training and they understand / master the procedures in processing product products, for example drinks / snacks, and also mastery in photogarfi techniques, MC (Master of Ceremony) etc. Of course this is, as their preparation if when they return to the community, they are able to create opportunities for independent work or other people. Of course in this study there are also several obstacles faced, for example, preparation of equipment, funding and experts from third parties, in addition to the researchers themselves as lecturers and mentors in these activities.

The main objective of this study is to express perceptions about the enthusiasm of students when taking entrepreneurship lessons, and they also know the benefits in the future after they finish college.

- (1) How important is entrepreneurship learning? can you give us thoughts and opinions about this?
- (2). What is the role of the lecturer or teacher in the entrepreneurship learning program?
- (3) What is your job (as students) to deepen entrepreneurial learning?

2. Methodology

2.1. Research Method and Participants

This research is to prove students' motivation to learn about educational technology which is combined with entrepreneurship education, in an effort to provide additional knowledge for students of Educational Technology programs, there are 8 participants participating in the program in this study. In the opinion of (Creswell, 2013) *qualitative research is "a process of understanding understanding of inquiry based on the tradition of various research methodologies that explore social or human problems"*, while the model of fenomenology is research that in nature reveals what happens around us naturally and natural, in the opinion (Moustakas, 2011) Phenomenology / phenomena is a philosophical expression and also a model of approach in research that is qualitative in nature, which is essentially. phenomenology deals with the understanding of how everyday, world, inter-subjective behavior or also the real world (reality).

This research was conducted for 15 weeks, in addition to oral interviews, the authors also conducted written questions to the participants / informants, and provided a limited questionnaire (purposive sampling) to the informants, in qualitative research the questionnaire function was not to search for the population but was used to further deepen information personally / individual, so that the information obtained is more accurate, not just numbers and percentages on paper. Because between the author and the object under study (participants) meet directly (face to face) as many as 8 participants.

2.1.1. Data analysis and data collection

Answers and questions are open to participants in oral and written form, then the researcher analyzes the data using descriptive analysis methods. In analyzing phenomenological data, codes or numbers are usually given that do not depend on their initials or gender or ethnic names. The participants studied were given the IC 1 code, IC2, as their identification.

This phenomenology research model also uses data collection techniques and data analysis, using the IPA (Interpretative Phenomenological Analysis). The model from (Smith & Osborn, 2007) Stages (a). Read and reread (b). Initial notes (c). Developing Emergent themes; (d) Looking for connections in all themes that appear; (E). Move the next case; (f). Look for patterns in all cases. The author validates the data by processing it according to qualitative research procedures, by deepening the analysis of the data obtained, and processing the interview data. In general, data collection is done through interviews and field observations, also reinforced by the review of relevant documents. drawing conclusions from the analysis of data, which is a process of analysis of data collection in the field, which is in accordance with the formulation of the problem, then also proved by the results of data processing in the form of narrative comments from the informant , for proof of realistic.(Lukjanska et al., 2016)

Qualitative research is more focused on the narrative / words, actions and realities of the time and on the object of people in a particular context, then that context can be seen as an immediate relevant aspect of the situation in question, so that qualitative research can be said is an initial level in the phase a study(Shaw, 2008)

Data is carried out with an inventory of data sources from the field evaluation results, analyzing talent and hobbies, and this is proven by a personal test system when carrying out the given task, namely conducting demonstrations / skills on the participants, then the researchers conduct oral tests related to the results obtained in the demonstration of skills.

3. Findings and Discussion

From the findings of the analysis of this study the authors see and prove that the combination of educational technology programs and entrepreneurial programs undertaken provides good results for improving their human resources. Ten participants from the educational technology study program students who participated in the entrepreneurial education program, all expressed motivation and were able to implement the results of the entrepreneurial program. The research findings are then evaluated and presented based on the research objectives. This is "The benefit of students studying entrepreneurship, in addition to regular studies, as one of their job opportunities after education"

From the results of data processing and the results of interviews with four participants / informants who have also been given questionnaire questions, which are then analyzed and analyzed, the results of the questionnaire distributed to participants can be seen the results, this is the result of direct interviews and the results of the questionnaire has been processed into a narrative in the form of standard language, through the stages of analysis, which is in accordance with the rules of qualitative research in the phenomenological model. The following is the findings of an excerpt from the author's interview with participants

3.1. The Need for Students to Study Entrepreneurship in Addition to Regular Studies

Participants were very enthusiastic about entrepreneurial learning skills, so in answering the question, "Does entrepreneurial learning need to be included in formal learning? And does it benefit students? And this shows the importance of entrepreneurial learning in creating work opportunities when they finish their education.

In joining the entrepreneurship education program, which was added in the education technology program, I have gained experience in making snack products. And this is certainly very useful for me,! (IC 1)

I have participated in an entrepreneurial program from the study of educational technology, and now I have skills in small business, this makes us motivated to learn (IC 2)

I as a student feel motivated and helped by the existence of additional programs in the study of educational technology, with this entrepreneurship field (IC 4)

In the development of the business world, I as a student of the education technology program, gained useful experience with additional lessons for entrepreneurs.(IC5)

I have participated in an entrepreneurial education program organized by the educational technology program, from that education I have been able to make a small business, and this is very useful (IC 3)

I am motivated by the addition of non-formal entrepreneurship courses for students of educational technology programs, because this is very useful, if I return to the community(IC 6)

From the results of the interview above it can be concluded that the entrepreneurial program which is combined with the educational technology program, is very attractive to students, this can be seen from the results of interviews conducted by the author on the participants

3.2. The Duties of Lecturers / Teachers, Leaders, and as Students

Participants' perceptions will be identified on two questions about the benefits of entrepreneurship and employment opportunities, after completing education

Besides lecturers, of course I hope that from the university support the entrepreneurial learning program conducted by lecturers, to take advantage of it. (IC 1)

Leaders and other lecturers must support this pattern (entrepreneurship) and be included in the formal curriculum so that the program does not stop halfway. (IC 2)

As a lecturer who has the responsibility in teaching students, the course is not theoretical material, but also appropriate knowledge (entrepreneurship), and of course must have the support of various parties, so that the program can run smoothly.(IC 4)

At the beginning of the lecture, we did not get entrepreneurship lessons, even from the previous graduates they did not receive entrepreneurship lessons. Of course the lecturer idea that provides entrepreneurial learning is a useful one, especially after we graduate later(IC 7)

*Entrepreneurship learning programs really need to be organized. to prepare students for lunch after education, because job opportunities are increasingly difficult, of course they can be minimized, with the skills they **have** (IC 6)*

Besides the comments, most of the participants held opinions :

The lecturer asked us to always be ready to participate in entrepreneurship learning, with reasons to add to our insights and knowledge. We see that there are still obstacles, for example, the difficulty of finding media and practice materials, as well as limited funds (IC 1)

For the first time our faculty conducts a learning system by integrating a formal learning model with an entrepreneurial program, and we strongly support this being carried out every year and included in the standard curriculum (formal), support from lecturers, leaders, and the government, of course very much expected, as well as on community (IC 8)

4. Conclusion

After conducting a marathon and comprehensive analysis and interview to the participants, the writer can conclude that the motivation of students in participating in the entrepreneurial world education program combined with educational technology is very high, and this can be proven by the results of the interview questionnaire and the results of the direct trial / practice in the field of entrepreneurship. There is a need for improvement in teaching on educational technology programs which have so far only been focused on learning media strategies, so that when students finish college, they only have formal skills. Certainly this will become an obstacle when there are no / limited job opportunities, and as a result students will become unemployed

In the research the author has collaborated between the formal curriculum with the addition of extracurricular activities related to the entrepreneurial program which is very attractive to students, and of course this research, can be followed up with other approach models so that it will find something new (novelty). science that has benefits for humanity.

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JUNIOR HIGH SCHOOL STUDENTS' DISRUPTIVE BEHAVIOUR AND THEIR EXPECTATIONS ON EFL CLASS

Research Article

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Abstract

Students are at the heart of teaching and learning. Students will learn effectively if they are willing to learn. However, students may conduct disruptive behaviour in the classroom. This study addresses these following objectives: (1) to describe the forms of students' disruptive behaviour; (2) to describe the sources of students' disruptive behaviour; and (3) to describe students' expectations to cope with that behaviour in EFL class. This study employed descriptive study design. The sampling was purposive sampling. To collect the data, open-ended and closed-ended questionnaire using 4-likert scale, focus group structured-interview, and complete participant observation were employed. To validate the data, methodological triangulation was used. The data were analyzed using qualitative data analysis developed by Miles, Huberman, and Saldaña (2014). The results of this study have revealed the forms of students' disruptive behaviour, the sources of students' disruptive behaviour, and students' expectations to cope with that behaviour in EFL class. The results are discussed and further studies are encouraged.

Keywords: EFL class, students' disruptive behaviour, students' expectation

1. Introduction

Students become more diverse nowadays. This phenomenon becomes an educational challenge over the world about how to provide the students' diversity. It gives impact on the existence of students who show disruptive behaviour (Wearmouth, Glynn, & Berryman, 2005). Whereas, students are at the heart of teaching and learning. Students will learn effectively if they are willing to learn. Otherwise, they will not learn when they are not willing to learn.

Disruptive behaviour is considered as one of the most crucial problems in education (Farrell, 2011). Moreover, students' disruptive behaviour is a nowadays' interest to persons within the fields of psychology and education (Arbuckle & Little, 2004). Students' disruptive behaviour has become a familiar topic in teachers' talk. Both new teachers and experienced teachers perceive students' disruptive behaviour as a subject of concern (Silva & Neves, 2007). Teachers often find students' disruptive behaviour in their classroom. Most disruptive behaviours to deal with are trivial enough (Leflot, van Lier, Onghena, & Colpin, 2010). Consequently, teachers are in fear if they are unable to manage students' disruptive behaviour which may occur suddenly in the classroom (Silva & Neves, 2007).

It is truly a difficult work to educate and facilitate students with disruptive behaviour. For teachers and others involved in this work, they may at times feel de-skilling, stressful, and unrewarding. It is necessary to support teachers and others involved in educating students with disruptive behaviour (Farrell, 2011). Ideally, the teacher controls the class. However, disruptive behaviour such as refusing to work, insults, backchat, and other attention-seeking tactics are attempted by students to take control the class. Thus, teachers who cope with students' disruptive behaviour spend large amounts of time and energy to think about it (Chaplain, 2003).

Several studies related to students' disruptive behaviour have been undertaken by researchers. However, particular studies on the forms and sources of students' disruptive behaviour and students' expectations to cope with that behaviour in certain subject matter should be encouraged. To provoke this, Rahimi and Karkami (2015) encourage extensive research on finding the sources of students' disruptive behaviour and developing principles to educate teachers in managing their classes effectively. In fact, there are still few EFL researchers who give attention to the issue concerning on students' disruptive behaviour in language classes and how language teachers should manage students' disruptive behaviour.

To fill this gap, this present study addresses the forms and sources of students' disruptive behaviour and students' expectations to cope with that behaviour in English as a Foreign Language (EFL) classroom. This present study has similar limitation with the study conducted by Silva and Neves (2007) in which disruptive behaviour is limited into a manifestation of illegitimate students' acts or conducts which disrupt the normal teaching-learning process. Therefore, this study addresses these following objectives: (1) to describe the forms of students' disruptive behaviour; (2) to describe the sources of students' disruptive behaviour; and (3) to describe students' expectations to cope with that behaviour in EFL class.

2. Literature Review

2.1. Concept of Students' Disruptive Behaviour

Porter (2000) defines students' disruptive behaviour as students' behaviour which interrupts or disrupts the class during the lesson. It is also labelled as 'problem behaviour'. Moreover, Silva and Neves (2007) define disruptive behaviour as a manifestation of acts or conducts undertaken by students encouraged by attitudes not legitimized by the teacher in the regulative context of pedagogic practice, consequently disrupting the normal teaching-learning process. Dobmeier and Moran (2008) also state that students' disruptive behaviour means behaviour conducted by students which obstruct learning in an education setting. According to Fauziati (2015), students' disruptive behaviour interrupts the teacher when managing teaching-learning process and disturbs other students who are willing to learn.

2.2. Forms of Students' Disruptive Behaviour

Dixon (2010) gives examples that students might show their disruptive behaviour in classroom by shouting out and behaving as if they were in their own world. According to Lambert, Cartledge, Heward, and Lo (2006), students' disruptive behaviour includes these following behaviour: having conversation with others during teacher-directed instruction, provoking others (e.g., making faces at others, laughing at or touching others, making noises or sounds with voice, tapping objects, pounding on desk, voicing disapproval with instruction, throwing or twirling objects), attending to other stimuli (e.g., looking at or playing with other objects in desk or misusing instructional tools), writing notes to friends or drawing pictures, spitting, sucking on fingers, or leaving assigned seat without permission (including tipping back in chair on two legs).

2.3. Sources of Students' Disruptive Behaviour

Teachers are often unable to determine what the sources of students' disruptive behaviour are. Teachers usually guess that the factors causing students' disruptive behaviour are poor attitude, poor home environment, low IQ or limited learning ability, low socio-economic status, lack of parental support for school, health problem, and emotional problem. These assumptions indicate that teachers have very limited or no control over their students' behaviour. However, it is very essential for the teachers to know the sources before taking the necessary steps to cope with the students' disruptive behaviour (Fauziati, 2015).

There are many sources which make students behave disruptively. According to Porter (2000), students' disruptive behaviour might be because faulty external controls and students' emotional or relationship needs which are unmet. Esturgó-Deu and Sala-Roca (2010) state that the lack of emotional abilities also becomes the source of students' disruptive behaviour, particularly the capacity for emotional self-regulation and self-control. Meanwhile, Silva and Neves (2007) argue that students' disruptive behaviour is complex relational and interactive phenomenon caused by several factors coming from social, family, personal, and schooling. Porter (2000) also points out that disruptive behaviour represents a faulty decision. It means that disruptive students have chosen an inappropriate way to reach their goal of seeking to be a part of the group.

2.4. Impact of Students' Disruptive Behaviour

The impact of students' disruptive behaviour is very dangerous. Perle (2016) states that a single student's disruptive behaviour can influence his own and other students' learning. Similarly, Fauziati (2015) argues that a student who is disruptive can cause other students to become anxious and insecure in the classroom. Students' disruptive behaviour can spread throughout the learning environment and influence other students. However, teachers get difficult to cope with students' disruptive behaviour because they may not be sure how to manage the situation.

Karaj and Rapti (2013) highlight that researchers are in consensus that students' disruptive behaviour is one of the most important sources of teachers' stress. According to Parsonson (2012), students' disruptive behaviour can increase the stress levels of teachers and students, disrupt the flow of lesson, and give bad impact on learning objectives and processes. It also changes the focus of attention which shifts from the academic tasks to the distractions resulted by disruptive behaviours.

3. Research Methodology

This study employed qualitative approach. Sukmadinata (2012) defines qualitative approach as the approach of study aiming at describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, and thoughts of person or group. Moreover, the design used in this study was descriptive study. According to Kothari (2004), descriptive study is a research design describing the characteristics of a specific individual or group. It aims at portraying the characteristics of a specific individual, situation, or group accurately. Its main purpose is accurate description of the state of affairs as it exists at present.

3.1. Population and Sample

This study took place in a private junior high school located in Sukoharjo, Central Java, Indonesia. The target population of this study was students of the 8th grade. There were twelve classes at the 8th grade. The sampling used in this study was purposive sampling because the sample was selected for a particular purpose (Alston & Bowles, 2003). There were two students from each class who responded to the questionnaire. There were thirty-six students from six classes who were interviewed; six students came from each class. Meanwhile, the observation was done in all classes.

3.2. Instruments

To collect the data, questionnaire, interview, and observation were employed. The questionnaire was open-ended and closed-ended using 4-likert scale. The interview was focus group structured-interview. Structured interview is often used in descriptive studies because it is more economical, provides a safe basis for generalization, and requires the interviewer's lesser skill (Kothari, 2004). Meanwhile, complete participant observation was employed

because the researcher took part as an insider in the group being studied and he did not state that he was a researcher (Cohen, Manion, & Morrison, 2007). The observation was done in 9 months.

To validate the data, triangulation was used. According to Cohen et al. (2007), triangulation is the use of two or more data collection methods in the study of some aspects of human behaviour. This study employed methodological triangulation since different methods were used on the same object of study. Those three methodologies in collecting the data were questionnaire, interview, and observation.

3.3. Data Analysis

The data were analyzed using qualitative data analysis developed by Miles, Huberman, and Saldaña (2014). They perceive data analysis as three concurrent flows of activity: (1) data condensation, (2) data display, and (3) conclusion drawing/verification.

4. Findings and Discussion

4.1. The Forms of Students' Disruptive Behaviour

Students' willingness and unwillingness affect much on their behaviour in classroom affecting their performance and achievement. Students will show positive behaviour when they are willing to learn. On the other hand, they will show disruptive behaviour when they are not willing to learn. Students' disruptive behaviour may also happen because their basic needs are not met. It can also be caused by their unmet or unsatisfied expectations toward the lesson.

Murphy (2007) states that students' disruptive behaviour must be addressed to achieve effective learning environment and to help teachers to be effective. Murphy (2010) also points out that teachers should develop strategies to cope with students' disruptive behaviour. It can be done by understanding the characteristics of each group of students and preparing strategies to cope with students' disruptive behaviour which will enable novice and expert teachers to be more effective.

There are numerous disruptive behaviours done by students in EFL class. They might conduct the disruptive behaviour intentionally or unintentionally. The forms of students' disruptive behaviour found in EFL class are as follows: sleeping, reading other books/novels/magazines/comics, doing homework of other subjects, studying other subjects, eating foods, talking/chatting with friends, walking/moving around, shouting, not paying attention to the teacher, running away/leaving the classroom, singing songs, not doing homework and exercise given by the teacher, and ignoring the teacher.

In their study, Dobmeier and Moran (2008) divide disruptive behaviour of students into three different types of behaviour comprising a continuum. The first type is "inattention". Inattention refers to behaviours which disrupt learning process because of lack of focus on the learning activities. Students do not intend to disrupt learning or to offend others. It results in learning which is obstructed for disruptive students and often for other students. The second type is called as "acting-out". Acting-out means breaking rules and offending others. In this type of disruptive behaviour, students express their negative feelings, like frustration or anger by acting overtly. The examples are arriving late, taking cell phone calls, refusing to participate, and stating that the learning activities are ineffective to express anger because of being forced to attend training. Acting out behaviour is intended to disrupt the teaching-learning process for the teacher, the disruptive students, and other students. The third one is "threatening/harmful/violent" behaviour. Threatening/harmful/violent behaviour is intended to give or to inflict physical and/or psychological harm to other students, the teacher, or

properties. The examples are swearing, fighting with other students, pushing the teacher, or threatening to do the same.

According to Dobmeier and Moran (2008), the forms of students' disruptive behaviour found in this study can be categorized as follows:

- 1) Inattention: sleeping, reading other books/novels/magazines/comics, doing homework of other subjects, studying other subjects, not paying attention to the teacher;
- 2) Acting-out: shouting, talking/chatting with friends, walking/moving around, running away/leaving the classroom, singing songs, eating foods, not doing homework and exercise given by the teacher, ignoring the teacher;
- 3) Threatening/harmful/violent: nothing.

It is found that "inattention" and "acting-out" behaviour mostly occur in EFL class. These disruptive behaviours indicate that there are many students who lack of focus on the lesson, break the rules, and often offend others to express negative feelings such as frustration and anger. These behaviours interrupt teaching-learning process in EFL class. These behaviours happen in EFL class every week. As the students reflect, they state that their disruptive behaviours occur because they have these following attitudes in EFL class: lazy, bored, selfish, emotional, hyperactive, and tired.

Hoffman and Lee (2014) conducted a study to develop a typology of students' disruptive behaviour. The typology comprises six types of students' disruptive behaviours. These are mentioned as follows: 1) side discussion issues including students' conversation on class or unrelated class material; 2) technology issues including using phones, laptops, or music players in the classroom; 3) over-the-top participation issues including students' domination in discussion, students' irrelevant question, or discussion which is off-topic; 4) commitment issues including sleeping, coming late, leaving early, or not preparing for class; 5) proximity issues including having meal, unhealthy students, territorial issues (body odor, invasion of space), etc.; and 6) miscellaneous issues including various disruptive behaviours like bullying, bringing a child or pet to class, and public show of affection.

According to the typology of students' disruptive behaviour developed by Hoffman and Lee (2014), students' disruptive behaviour found in this study can be categorized as follows:

- 1) Side discussion issues: talking/chatting with friends;
- 2) Technology issues: nothing;
- 3) Over-the-top participation issues: nothing;
- 4) Commitment issues: not paying attention to the teacher, ignoring the teacher, sleeping, walking/moving around, running away/leaving the classroom, reading other books/novels/magazines/comics, not doing homework and exercise given by the teacher, doing homework of other subjects, studying other subjects;
- 5) Proximity issues: eating foods;
- 6) Miscellaneous issues: singing songs, shouting.

It is clear that commitment issues are the most dominant among others. At the same time, miscellaneous issues become the second serious problem. Meanwhile, there is no technology issue. It is because the students are not allowed to bring any electronic stuff or gadget. It has become the rule of an Islamic boarding school to prohibit the students from bringing electronic stuffs or gadgets such as laptops, mobile phones, music players, etc. to school environment. There is also no over-the-top participation issue. It is because the students seem to not actively

participate in the lesson. They lack focus on the lesson. They tend to do activities which are not related with the lesson. In contrast, Hoffman and Lee (2014) found that side discussion issues and technology issues become the most frequently listed disruptive behaviours in the students' classroom experience.

4.2. The Sources of Students' Disruptive Behaviour

The sources of students' disruptive behaviour must be identified to help the teacher copes with students' disruptive behaviour. Several studies have revealed the sources of students' disruptive behaviour. The sources of students' disruptive behaviour may be the teacher's disengagement and students' history of academic and social failure (Scott, Hirn, & Alter, 2014). Students' disruptive behaviours are caused by the interaction between students' socio-affective dispositions to teachers' pedagogic practices and their specific coding orientation to control relations (Silva & Neves, 2007).

There is no relation between disruptive behaviour and age. However, disruptive behaviours have relation with sex and emotional abilities. Boys behave more disruptively than girls. In addition, there is a significant relation between disruptive behaviours and the general index of emotional intelligence, especially stress management and interpersonal relations (Esturgó-Deu & Sala-Roca, 2010).

In this study, the sources of students' disruptive behaviour are described as follows:

- 1) Sleeping: The students sleep in EFL class because they feel bored with the teacher and the lesson. They say that the teaching-learning process is not enjoyable. If they are too full, they become sleepy. It is also because they are sleepy. They are tired because there are lots of activities to do; so that, they do not have enough time to sleep. If they are sick or lazy, they also sleep during the EFL class. They also sleep if the lesson is difficult for them;
- 2) Reading other books/novels/magazines/comics: The students read other readings because the teacher is not friendly. They say that the teacher is ignorant. They also say that they get bored with the teacher and the lesson. It is because the readings are very interesting too. It often happens when the students must return the readings soon. If they are lazy to do the exercise given by the teacher, they read other readings. They also read other readings if the lesson is not easy for them;
- 3) Doing homework of other subjects: The students do homework of other subjects because they forget to do it. Sometimes, homework of certain subjects is difficult for the students; so, they work cooperatively with their classmates in the classroom. It also happens when the homework must be submitted soon. If the students are lazy, they do their homework in the classroom;
- 4) Studying other subjects: The students study other subject because they will have an examination on the subject. They also do it when they complete the notebook of other subject;
- 5) Eating foods: The students eat foods in EFL class because they are hungry. They say that they do not have enough break time. The problem is that they have to queue in a long time to pay the foods in the canteen. So, they do not have enough time to eat their foods in the break time. When they are sleepy, they eat foods to stay awake. They also eat foods because they have stock of foods in the classroom;
- 6) Talking/chatting with friends: The students talk or chat with friends because they want to tell something. It is also because they are bored with the teacher and the lesson. Moreover, they talk with friends when they feel bad mood or have problems. They also talk with friends when they need to refresh their mind and when they are sleepy. It happens too

when they have an idea spontaneously. They say that talking with friends is more interesting than the lesson. If the task or exercise given is difficult, they also talk with friends;

- 7) Walking/moving around: If the students are not comfortable to remain sitting down, they walk around. When they are sleepy, they walk around to stay awake. They also walk around if they are bored with the teacher and the lesson. If they want to talk with friends, borrow something, request foods or drinks from their friends, look for something, and ask the answers of exercise or task, they walk around too;
- 8) Shouting: The students shout in the classroom because their friends cannot listen well. They also shout when they are disturbed by their friends. Moreover, it happens when they are bad mood, resentful, or angry. They also shout when they have quarrel;
- 9) Not paying attention to the teacher: The students do not pay attention to the teacher because they are bored with the teacher and the lesson. It is also because the teacher is not friendly;
- 10) Running away/leaving the classroom: The students leave the class because they have not finished the task or homework given by the teacher. It is also because they lack of holiday and need to refresh their mind. If there is an interesting spot outside, they leave the classroom too. They also leave the classroom if they need to clean or change their dirty uniform. If the teacher is killer and ignorant, they leave the classroom too. They also leave the classroom if they are bored. Moreover, uncomfortable classroom condition (bad smell, hot air, etc.) can make them leave the classroom. If they want to see outside condition, they leave the classroom too;
- 11) Singing songs: The students sing songs because they are bored, have problems, remember the past, or fail to move on. When they know a hit-song, they often sing it in the classroom. They also sing songs because there is no music in the classroom;
- 12) Not doing homework and exercise given by the teacher: The students do not do homework and exercise given by the teacher because they think that the punishment does not give deterrent effect. It also happens because they disrespect the teacher. If they have many activities till night in the previous day, they do not do their homework too. They also do not do homework and exercise because they are lazy and think that the homework and the exercise are difficult. Sometimes, they cannot do homework and exercise because their book is lost;
- 13) Ignoring the teacher: The students ignore the teacher because the teacher is also ignorant. They also ignore the teacher because the teacher's answers are not satisfying. Moreover, they become ignorant if they need to refresh their mind by watching movie, sharing, telling story, going to library, or having outing class. They also say that they become ignorant because the teacher is not friendly.

To gain more insights, twenty-four students' responses toward positive and negative statements about EFL class were collected. These responses are used to identify and give deeper understanding on the sources of students' disruptive behaviour. Students' responses are presented on table 1.

Table 1. *Students' responses*

Statement	Percentage
1. I love English subject.	71.88
2. I always talk with my friends during the teaching-learning of English.	53.13
3. I never sleep during the teaching-learning of English.	57.29
4. My English teacher is not interesting and makes me bored.	51.04
5. I have never been sleepy during the teaching-learning of English.	54.17
6. I like to walk around in the classroom during the teaching-learning of English.	63.54
7. English is an enjoyable subject.	66.67
8. I am not enthusiastic in joining the teaching-learning of English.	58.33
9. I respect my English teacher.	75.00
10. I often do not finish my homework on English subject.	67.71
11. English subject is very easy.	70.83
12. I like a noisy classroom during the teaching-learning of English.	72.92
13. I never make the class noisy during the teaching-learning of English.	59.38
14. I am lazy to learn English subject.	73.96
15. I always pay attention thoroughly when the teacher is explaining a topic of English subject.	64.58
16. I am easy to be bored during the teaching-learning of English.	53.13
17. I never forget to bring the textbook of English subject during the teaching-learning of English.	68.75
18. I often think about other things during the teaching-learning of English.	42.71
19. My English teacher uses understandable, interesting, and enjoyable teaching methods/techniques/strategies.	55.21
20. I never write down the teacher's explanation during the teaching-learning of English.	68.75
21. I always actively question, answer, discuss, and give opinion during the teaching-learning of English.	57.29
22. I often do not get excited during the teaching-learning of English.	62.50

From table 1, some insights can be drawn. There are 71.88% students who love English subject. However, 53.13% students always have conversation with their friends during the teaching-learning of English. 57.29% students say that they never sleep during the teaching-learning of English. According to the students' opinion, their English teacher is not interesting and makes them bored because 51.04% students say so. Moreover, there are 54.17% students who have never been sleepy during the teaching-learning of English; so, the rests have ever been sleepy in EFL class. Meanwhile, 63.54% students like to walk around in the classroom during the teaching-learning process.

Although 66.67% students say that English is an enjoyable subject, 58.33% students are not enthusiastic in joining the teaching-learning of English. Even lots of students are not enthusiastic, 75.00% students still respect their English teacher. Moreover, 67.71% students often do not finish their homework on English subject but 70.83% students claim that English subject is very easy. Unfortunately, 72.92% students like a noisy classroom during the teaching-learning of English but 59.38% students say that they never make the class noisy. In addition, 73.96% students admit that they are lazy to learn English subject and 53.13% students get bored easily during the teaching-learning of English. However, 64.58% students still pay attention thoroughly when the teacher is explaining a topic of English subject.

68.75% students say that they never forget to bring the textbook of English subject. However, 42.71% students often think about other things during the teaching-learning of English. 55.21% students also argue that their English teacher uses understandable, interesting, and enjoyable teaching methods/techniques/strategies; the rests do not. On the other hand, 68.75% students admit that they never write down the teacher's explanation during the teaching-learning of English. Meanwhile, only 57.29% students actively question, answer, discuss, and give opinion in EFL class because 62.50% students do not get excited during the teaching-learning of English.

According to the students' responses, they admit that they conduct these disruptive behaviours: 1) talking or chatting with friends (53.13%), 2) sleeping (42.71%), 3) walking or moving around in the classroom (63.54%), 4) not finishing the homework (67.71%), 5) making the class noisy (40.62%), and 6) not paying attention thoroughly to the teacher (35.42%). These disruptive behaviours happen because: 1) the teacher is not interesting and makes the students bored (51.04%); 2) the students are sleepy (45.83%); 3) the students are not enthusiastic during the lesson (58.33%); 4) the students like a noisy classroom (72.92%); 5) the students are lazy to learn (73.96%); 6) the students get bored easily during the lesson (53.13%); 7) the students think about other things or do not focus on the lesson (42.71%); 8) the teacher does not use understandable, interesting, and enjoyable teaching methods/techniques/strategies (44.79%); and 9) the students do not get excited during the lesson (62.50%).

Supporting these evidences, Dobmeier and Moran (2008) argue that students become disruptive because of several variables in the learning environment like mandatory participation, unclear learning objectives, disconnection from others, or poor quality of teaching. Students' disruptive behaviour also increases if the teacher or institution has not sufficiently planned and structured the learning activity and environment.

4.3. Students' Expectations to Cope with Disruptive Behaviour

There are numerous intervention studies done to cope with students' disruptive behaviour (Kehle, Bray, Theodore, Jenson, & Clark, 2000; Martini-Scully, Bray, & Kehle, 2000; Meany-Walen, Bratton, & Kottman, 2014; Biliias-Lolis, Chafouleas, Kehle, & Bray, 2012; McDaniel & Flower, 2015; Hulac & Benson, 2010; Lambert, et al., 2006; Cihak, Kirk, & Boon, 2009). The use of response card in answering the teacher's questions can reduce students' disruptive behaviour and increase students' academic responding. The students become less disruptive, participate more in instruction, and answer more questions correctly (Lambert et al., 2006). Moreover, the use of the "tootling" intervention in combination with a group contingency procedure can decrease students' disruptive behaviours, establishing a functional relation (Cihak, et al., 2009). Parsonson (2012) also conducted a study aiming at reviewing a range of evidence-based strategies to be applied by teachers in decreasing disruptive and challenging behaviours in their classrooms.

To deal with students' disruptive behaviour, teachers usually persuade students to behave appropriately during the lesson and punish them if they misbehave (Fauziati, 2015). The teacher tries to cope with students' disruptive behaviour by advising and warning the students to be silent, calm, and cooperative. Sometimes, the teacher seems to be punitive when the students conduct severe disruptive behaviour. However, Rahimi and Karkami (2015) reveal that the use of punitive strategies in managing students' disruptive behaviour decreases students' motivation resulting in students' problems in learning.

The punitive strategies used include threatening the students using words, giving them questions, asking them to re-explain the lesson, reinforcing them to be silent, calm, and cooperative by hitting the table, forcing them to sit down on their own seats, enforcing them to not moving or walking around in the classroom, awakening them by touching their body or speaking louder to them, asking them to wash their faces if they are sleepy, and giving them punishment such as push-up as well as standing up in front of the classroom. Although they have been given those treatments, they always do the same things in other occasions. They repeatedly conduct disruptive behaviour. It makes the teacher suffered, stressed, and confused about how to cope with students' disruptive behaviour effectively.

Teachers may think that it is difficult to handle highly disruptive students when they are continually seeking attention from the teacher and other students. What the teacher must do is to remain professional and reinforce any effort to make the disruptive students behave appropriately (Nordlund, 2003). It is because students' disruptive behaviour will become more serious if the teacher lets it unchecked and/or if the teacher gives responses which may endanger the students' self-esteem (Dobmeier & Moran, 2008).

It is why this study addresses students' expectations in EFL class so that they can cope with their disruptive behaviour when their expectations are considered and accommodated through some considerations. Students' expectations to cope with disruptive behaviour in EFL class can be described as follows:

- 1) The teacher provides activities to refresh the students' mind such as watching movie, listening to music, playing game, having quiz, sharing, and telling story or news/information;
- 2) The teacher should sometimes conduct outdoor class or library visit;
- 3) The teacher should care the students more;
- 4) The teacher should be closer to and friendlier with the students;
- 5) The students must learn and improve their attitude and politeness;
- 6) The teacher and students should create comfortable classroom atmosphere (free from stress and pressure, clean, and tidy);
- 7) The teacher should use ICT (information and communication technology) and multimedia (PowerPoint, music, video, picture);
- 8) The students should motivate themselves by setting target or goal to achieve;
- 9) The teacher should be able to manage the class well;
- 10) The teacher should be able to joke and have sense of humor;
- 11) The teacher gives reward to the students by giving bonus score, prize, or something useful for them;
- 12) The teacher should be interesting (both manner and appearance);

- 13) The teacher should satisfy the students when answering their questions;
- 14) The teacher should tell motivating or valuable stories;
- 15) The teacher should be able to motivate the students using wise words or stories;
- 16) The teacher should check the students' attendance regularly on every meeting.

Besides decreasing the existence of students' disruptive behaviour, it is also essential to make sure that this decrease is followed up by increasing task engagement to encourage students' learning (McKissick, Hawkins, Lentz, Hailley, & McGuire, 2010).

5. Conclusion

If students' disruptive behaviour is not successfully coped, students will not learn effectively in EFL class. It makes the teaching-learning process meaningless and less powerful. As results, students' knowledge, attitude, and skill in EFL will not be effectively developed. To respond this issue, EFL teachers must facilitate students to cope with their disruptive behaviour. Both teacher and students must have intention, commitment, and effort to deal with disruptive behaviour.

Once the forms and sources of students' disruptive behaviour have been identified, the teacher can take it as an insight to make strategies to deal with that behaviour. Moreover, students' expectations in EFL class must be taken into consideration by the teacher to decrease students' disruptive behaviour. Of course, it will improve the teacher's professionalism. Having succeeded to deal with students' disruptive behaviour, the teaching-learning process of EFL will be more effective and efficient since the teacher can conduct the teaching-learning process smoothly, without severe problems coming from students' disruptive behaviour.

Furthermore, the results of this study can be used by other EFL teachers to deal with similar students' disruptive behaviour in different place and time. It is encouraged to clarify whether the sources of similar students' disruptive behaviour in other contexts are quite the same with the results of this study or not. Teachers may also examine whether the strategies proposed by themselves or students' expectations which are more effective to be implemented in dealing with students' disruptive behaviour. All in all, students' disruptive behaviour must be confronted until it decreases and goes away from EFL class.

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A CORRELATIONAL STUDY ON PRIMARY SCHOOL STUDENTS' SCHOOL READINESS AND ADAPTATION PROBLEMS¹

Research article

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A CORRELATIONAL STUDY ON PRIMARY SCHOOL STUDENTS' SCHOOL READINESS AND ADAPTATION PROBLEMS

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Abstract

The aim of this study is to examine the relationship between school readiness and adaptation problems of primary school first-grade students in the 2017-2018 academic year. In this study, correlational survey model was used. The sample of the study consists of 909 primary school students studying in İstanbul, Kayseri, Gaziantep and Van provinces determined by stratified purposeful sampling method. "Primary School Readiness Scale" and "Adaptation to School Scale" were used as data collection instruments. Pearson Product Moment Correlation Coefficient and stepwise regression analysis were used to analyze the data. The results indicated that a high level, a negative and significant relationship existed between school readiness and adaptation problems of primary school students. It was determined that primary school students' readiness concerning affective skills (54.4%), psychomotor skills (4.4%) and cognitive skills (0.5%) accounted for 59.3% of the variance in school adaptation problems of primary school students. It was concluded that students' readiness for self-care skills did not contribute significantly to the variance in school adaptation problems. To this connection, it may be advisable to carry out activities such as collaborative learning, drama, role-play and group work to increase students' affective readiness level, especially in the pre-school education period.

Keywords: School readiness, school adaptation problems, primary school students

1. Introduction

Primary school is an important turning point in a child's educational life. The child, who starts primary school, establishes relations with the social environment and socializes in this way. Primary school, which is different from the family environment for the child, is a period in which basic knowledge and skills are acquired. Therefore, primary school is critical for a child's learning life (Kırca, 2007). Primary school is an important level of education for children to adapt to the cultural values and rules of society (Çubukçu & Gültekin, 2006). Primary school is the first stage in the formal education process. For this reason, the children starting primary school are faced with performing the first scheduled education activities. Students face tasks such as learning subjects within a curriculum, follow the rules and teacher's instructions, and more importantly learn the basic skills of reading, writing, basic numerical skills and so on (Oktay & Unutkan, 2003). Therefore, children who leave their

families for the first time during primary school are likely to experience adaptation problems in the face of new situations and tasks in the school environment.

Individuals' reactions to new environments bring about the adaptation problem. Yavuzer (2014) defined the adaptation problem as emotional disorders that arise as a result of the difficulties caused by the environment and the developmental stages of the individual. The problem of adaptation can be seen in many areas as well as in the school environment, which includes the adaptation of new children to the school environment. While Birch and Ladd (1997) correlated school adaptation with the concepts of school success, social interaction, interest and comfort; Ladd, Birch and Buhs (1999) described school adaptation as a concept that includes positive attitudes of students about classroom and school environment, and successful interactions with friends and teachers in the classroom and extracurricular activities. On the other hand, Kim, Kwon and Han (2015) considered school adaptation as being compatible with the stimuli from the environment in the school and the relationships with other people. In this case, school adaptation can be considered as the ability of the child to react and adapt to the environment, individuals and the situations he/she encounters in school.

In order to fulfill the duties and responsibilities of the school, it is important that students adapt effectively to the school. Therefore, the child's adaptation to school is very important. Starting and adapting to school is one of the most serious challenges faced by children in the primary school period (Gill, Winters & Friedman, 2006). This adaptation process is directly related to the child's readiness for school, the support of their parents, and the educational understanding of teachers and school administrators (Altınkaymak & Akman, 2016; İnal, 2012). As mentioned above, the adaptation of children to school, especially at the beginning of primary school, is crucial for their academic achievement, social and emotional behaviors, and it also affects students' future learning and life processes. In addition to social and environmental factors, individual factors such as cognitive, affective and psychomotor developmental characteristics of children also influence the school adaptation process which is of such importance in children's life.

One of the most crucial factors influencing the adaptation of primary school first-grade students and their academic success is their readiness level. Successful exhibition of the skills and behaviors expected from the child in primary school is directly related to school readiness. School readiness includes cognitive, affective, psychomotor and self-care skills. The child should be ready for school cognitively, physically and socially (Güler, 2001). Different researchers have made various definitions of school readiness. Pianta, Cox and Snow (2007) described school readiness as having sufficient knowledge and skills necessary to achieve success in school, while Edwards (1999) referred to school readiness as being suitable for achieving the goals set by the school. Similarly, Rafoth, Buchenauer, Crissman, and Halko (2004) described school readiness as the level of the child's cognitive, behavioral and emotional ability to successfully perform school learning. In this case, school readiness can be defined as having sufficient knowledge, skills or attitudes for the child to achieve the objectives required by the school.

The success of the children in the school environment will be possible only if they are at the level of readiness to achieve the school's achievements. The success of children in primary school will have a positive effect on future educational steps, as well as creating a positive self-perception, gaining self-confidence and self-efficacy. The child is struggling with many problems by himself/herself in the school where he/she separates from his/her family. The ability of the child to overcome these problems is directly related to his/her readiness to struggle. It is generally stated that every child can reach school readiness at the

age of six years. However, school readiness may vary due to individual differences. Although the developmental steps are the same for all children in all areas, some children may have access to these steps more slowly or faster than others. In this case, it would be wrong to consider only the age as a criterion for starting school. Therefore, various tests are applied to decide children's readiness to start school (Snow, 2006), different programs are conducted to prepare the child for school, facilitate adaptation and importance is given to cognitive, emotional, physical, social readiness of the child (Erkan & Kırca, 2010).

School readiness is not a numerical value and is too versatile not to be reduced to a single criterion. Cognitive, language, social-emotional and psychomotor development are the criteria that makeup school readiness. All these areas of development should be mature enough to demonstrate primary school skills and behaviors. The development of child's skills such as walking, running, jumping, bouncing on one leg, cutting with scissors, drawing pictures and letters, playing with friends, waiting for their order, listening, distinguishing sounds, distinguishing similarities and differences, understanding many concepts, matching, sorting, classification, etc. and development of attention span prepare the child for school. School readiness and adaptation are two complementary concepts in terms of meeting the qualifications of the curriculum implemented in schools. In this respect, it is very essential for children to be ready for school in terms of cognitive, affective, social and psychomotor skills as well as adapt to the school environment.

In the literature, there are studies determining the school readiness/maturity levels and school adaptation of primary school students (Baker, 2006; Canbulut, 2017; Ercan & Kırca, 2010; Lau, Li & Rao, 2011; Özarslan, 2014; Polat et al., 2014; Uzun, 2015; Yüce, 2016), but the studies to determine the relationship and predictive power between school readiness and school adaptation problems are quite limited. Studies conducted in Turkey are mostly descriptive. On the other hand, school readiness was associated with the variables such as parent involvement in studies conducted abroad (Lau, Li & Rao, 2011), teacher-student relationship (Baker, 2006) etc. Although there are two studies conducted in Turkey (Canbulut, 2017; Polat et al, 2014) examining the relationship between school adaptation and school readiness, these studies are only limited to students studying in one province. Child adaptation to school can be affected by many elements such as socio-emotional, academic, behavioral and cognitive competences (McIntyre, Blacher & Baker, 2006). Therefore, comprehensive studies are needed to determine the relationship between school readiness and adaptation problems that may have an impact on the school success of first-grade students in primary school.

The aim of this study is to analyze the relationship between school readiness and adaptation problems of primary school first-grade students in 2017-2018 academic year. For this aim, the following questions are addressed:

1. Is there a significant relationship between primary school students' readiness levels and school adaptation problems?
2. Do primary school students' readiness levels predict their school adaptation problems significantly?

This study differs from similar studies in the literature in terms of sampling primary school first-grade students from different provinces in Turkey and thus generalizability of this study is considered to be high. This study is important in terms of determining the relationship between primary school first-grade students' readiness and adaptation problems. In addition, this study is expected to provide data for future studies concerning model testing on determining the variables causing school adaptation problems.

2. Method

2.1. Research Model

In this study, correlational survey model was used. The correlational survey model aims to investigate the relationships between multiple variables and the level of these relationships (Karasar, 2015). The correlational survey model is considered to be appropriate for this study as it is aimed to analyze the relationship between school readiness and adaptation problems of primary school students.

2.2. Population and Sample

The study population includes the students who started primary school in public schools of Istanbul, Kayseri, Gaziantep, and Van in 2017-2018 academic year. According to data obtained from Ministry of National Education Strategy Development Presidency (2018), 313.433 primary school first-grade students are enrolled in public schools of Istanbul (214.834 students), Kayseri (22.328 students), Gaziantep (51.696 students) and Van (24.575 students).

A purposeful sampling method was used in this study. Purposeful sampling allows in-depth analysis of situations that can best represent the population and offer rich data (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2016). The researcher chooses the sample that will best serve the purpose of the study (Fraenkel, Wallen & Hyun, 2012). From this point, in this study, the stratified purposeful sampling method was used. In a stratified purposeful sampling method; the population is separated into strata, the sample is selected from the strata to reflect the characteristics of the population and to make comparisons. The main element that distinguishes this method from random stratified sampling is that randomness is not considered in the selection of units for sampling (Büyüköztürk et al., 2016; Patton, 2002).

In this study, when strata were determined, samples were taken from provinces in different socio-economic development levels on the grounds that the socio-economic development level of the provinces could affect the readiness and adaptation problems of the students. Accordingly, results of the report "Socio-Economic Development Ranking Survey of Provinces and Regions" published by Ministry of Development in 2013 were taken into consideration. According to this report; 81 provinces were classified into four strata as high, medium-high, medium-low and low socio-economic development level (Ministry of Development, 2013). Therefore, four provinces were determined to represent each stratum: Istanbul at high socio-economic development level, Kayseri at medium-high socio-economic development level, Gaziantep at medium-low socio-economic development level, Van at low-socio-economic development level. In these provinces, 909 students were included in the sample who started primary school in 2017-2018 academic year. The personal characteristics of primary school students in the sample are presented in Table 1.

Table 1. *Personal characteristics of primary school students in the sample*

Characteristics	Category	Number (N)
Gender	Female	474
	Male	435
Province	Istanbul	216
	Kayseri	206
	Gaziantep	235
	Van	252
Total		909

As seen in Table 1, 474 of the students are female and 435 of them are male. 216 of the students are studying in Istanbul, 206 in Kayseri, 235 in Gaziantep and 252 in Van. According to Çingı (1994), if the number of population is 500.000 at “.01” significance level, sample size of “665” is considered sufficient to represent the population (Cited in Büyüköztürk et al., 2016). In this case, it can be said that the sample of this study is large enough to represent the population.

2.3. Data Collection Tools

2.3.1. Primary school readiness scale: Canbulut and Kırıktaş (2016) developed the scale to determine school readiness levels of primary school students. The scale, which is scored by primary school teacher, consists of 33 items in 5-point Likert type. As a result of Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) conducted to ensure the scale's construct validity, the scale was determined as four sub-dimensions: cognitive skills, affective skills, self-care skills and psychomotor skills. Cronbach Alpha internal consistency coefficient of the scale was found as 0.98 in sub-dimension of cognitive skills, 0.97 in affective skills, 0.96 in self-care skills and 0.96 in psychomotor skills (Canbulut & Kırıktaş, 2016). In this study, it was found as 0.98, 0.96, 0.94 and 0.96 for above-mentioned sub-dimensions, respectively. In this case, it can be said that the data obtained from the scale is highly reliable (Büyüköztürk et al., 2016).

2.3.2. School adaptation scale: Özarslan (2014) developed the scale to specify school adaptation problems of primary school students. The scale, which is scored by the primary school teacher, consists of 15 items in 5-point Likert type. According to the results of Exploratory Factor Analysis (EFA), it was concluded that the scale is one-dimensional. The Cronbach Alpha internal consistency coefficients of the scale were calculated as 0.92 and 0.90 for 60-71 months and 72-84 months old children (Özarslan, 2014). Cronbach Alpha value for the total scale was found as 0.95 in this study. Accordingly, the data obtained from the scale can be said to be reliable (Büyüköztürk et al., 2016).

2.4. Data Analysis

Pearson Product Moment Correlation Coefficients (r) were used to analyze the relationship between students' school readiness and school adaptation problems. These scores were interpreted as low between “0.00-0.29”, medium between “0.30-0.69” and high level between “0.70-1.00” (Büyüköztürk, 2012). Stepwise regression analysis was used to specify to what extent students' school readiness levels predict their school adaptation problems in which independent variables having a significant effect on the dependent variable are included in the analysis in the order of importance (Cohen, Cohen, West and Aiken, 2003). Assumptions of stepwise regression were tested before the analysis in terms of linearity, univariate and multivariate normality, homogeneity of variance-covariance matrix and multicollinearity problem (Büyüköztürk, 2012; Pallant, 2005).

For univariate normality, skewness/kurtosis values of dependent variables and histogram graphs were examined. Accordingly, it was found that the skewness values of the dependent variables on school readiness scale ranged between 0.566 and -0.985, and kurtosis values ranged between -0.332 and -0.597; it was found that skewness value was 0.922 and kurtosis value was 0.112 in school adaptation scale. In this case, it was concluded that the skewness and kurtosis coefficients of the dependent variables were in the range of ± 1 and the data showed normal distribution according to histogram graphs (Büyüköztürk, 2012). Levene's Test and Box's M results were examined for homogeneity of variances and distribution of covariance matrices. Accordingly, it was concluded that the results were not statistically significant ($p > .05$) and therefore the assumptions of homogeneity of variance-covariance

matrices were achieved (Büyüköztürk, 2012). For multivariate normality, Mahalanobis distance values were calculated and the extreme values were excluded from the data set before analysis. The linearity between the dependent variables was examined by scatter plots and it was found that the linearity assumption regarding the sub-dimensions of the scales was achieved. In addition, it was calculated that there was a medium and high level of relationships between dependent variables, and the highest correlation between variables was "-.762". In this case, it was concluded that multivariate normality and linearity are achieved and there is no multicollinearity problem between dependent variables.

3. Results

Table 2 shows the Pearson Product Moment Correlation Coefficients calculated to examine the relationship between students' school adaptation problems and school readiness levels.

Table 2. *Pearson product moments correlation coefficients for school adaptation problems and school readiness*

<i>Scales and sub-dimensions</i>	<i>School Scale (total)</i>	<i>Readiness</i>	<i>Cognitive Skills</i>	<i>Affective Skills</i>	<i>Psychomotor Skills</i>	<i>Self-Care Skills</i>
<i>School Adaptation Problems</i>	-.762**		-.733**	-.737**	-.708**	-.651**

p < .05 *, *p* < .01**

As seen in Table 2, there is a high level, negative and significant relationship between primary school first grade students' adaptation problems and school readiness levels ($r = -.762$; $p < .01$). Similarly, there is a high level, negative and significant relationship between students' adaptation problems and school readiness scale's sub-dimensions of cognitive skills ($r = -.733$; $p < .01$), affective skills ($r = -.737$; $p < .01$), psychomotor skills ($r = -.708$; $p < .01$); while there is a medium level, negative and significant relationship between students' adaptation problems and self-care skills ($r = -.651$; $p < .01$).

Stepwise regression analysis results concerning the prediction of students' school adaptation problems with school readiness are presented in Table 3.

Table 3. *Stepwise regression analysis results concerning the prediction of students' school adaptation problems with school readiness*

<i>Steps</i>	<i>Predictive Variables</i>	β	<i>Predictive Power (R)</i>	<i>Explained Variance (R²)</i>
1	Affective Skills	-.737	.737	.544
2	Psychomotor Skills	-.337	.767	.588
3	Cognitive Skills	-.188	.770	.593

As seen in Table 3, it was found that students' school readiness concerning affective, psychomotor and cognitive skills can explain 59.3% of the variance in school adaptation problems. ANOVA results for the stepwise regression analysis in Table 3 are presented in Table 4.

Table 4. ANOVA results concerning the prediction of students' school adaptation problems with school readiness

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean of Squares</i>	<i>F</i>	<i>p</i>
Regression	427.005	3	142.352		
Residual	292.731	905	.323	440.090	.000

According to the findings in Table 4, the predictive power of the stepwise regression analysis shown in Table 3 is significant ($F(3, 905) = 440.090, p < .000$). The regression analysis was carried out in three steps. It was found that three variables are important predictors in terms of their contribution to the variance concerning students' school adaptation problems. In the first step; "affective skills" explaining 54.4% of the variance was included in the analysis. In the second step, "psychomotor skills" contributing 4.4% to the explained variance was included. In the third step, "cognitive skills" contributing 0.5% to the explained variance was included. These analysis results show that the three variables together that are included in the regression equation as important predictors can explain more than half (59.3%) of the variance concerning students' school adaptation problems. When the signs of regression coefficients are examined, it is seen that there is a negative relationship between all three variables and students' adaptation problems. In this case, it is seen that "affective skills", "psychomotor skills" and "cognitive skills" are important predictors of students' school adaptation problems in the order of importance. On the other hand, it was found that "self-care skills" did not contribute significantly to the total variance; in other words, it did not predict school adaptation problems significantly.

4. Discussion and Conclusion

In this study aiming to analyze the relationship between school readiness and adaptation problems of first-grade students in primary school, it was concluded that there is a high level, negative and significant relationship between primary school first-grade students' school readiness and school adaptation problems. Accordingly; a high level, negative and significant relationship was found between students' adaptation problems and school readiness scale's sub-dimensions of cognitive skills, affective skills, psychomotor skills; a medium level, negative and significant relationship was concluded between students' adaptation problems and self-care skills. These results support the literature. In parallel with the results of this study, Canbulut (2017) found that there is a medium level, positive and significant relationship between primary school first grade students' school adaptation and school readiness. Similarly, Polat et al. (2014) concluded that school readiness is an important factor in school adaptation. In their study, it was found that increased school readiness positively affected school adaptation. In the study conducted by Yüce (2016), teachers associated school readiness with school adaptation. Uzun (2015) stated that the school readiness of children affects their general development and adaptation level, and they are all influenced by each other. Based on the results of similar studies in the literature and this study's results, it can be said that there is a strong relationship between school adaptation and school readiness. Accordingly, it can be concluded that as school readiness of first-grade students decreases, school adaptation problems increase. It is seen that there is a strong relationship between school adaptation and readiness concerning cognitive, affective, psychomotor skills, while there is a medium level relationship between school adaptation and readiness concerning self-care skills. Considering that students mostly use these skills in the classroom, a significant relationship between these skills and school adaptation problems can be considered as an expected result. When students are ready concerning cognitive and psychomotor skills, they

face fewer problems in achievement of their initial literacy gains and adaption to the school. It can be said that the students, who are affectively ready for school, can adapt to the school, friends and teachers in a shorter time. In addition, it can be put forward that the students, who have self-care skills, can meet their needs without getting help and thus the adaptation problems are more likely to decrease.

In addition, it was concluded that school readiness of first-grade primary school students concerning affective, cognitive and psychomotor skills explained 59.3% of the variance in students' school adaptation problems. Accordingly; readiness for affective skills explained 54.4% of the variance, readiness for psychomotor skills explained 4.4% of the variance, readiness for cognitive skills explained 0.5% of the variance in school adaptation problems; while readiness for self-care skills did not contribute significantly to the variance in students' school adaptation problems. When the levels of prediction concerning school adaptation problems are examined, it is seen that readiness for affective skills comes first and explains more than half of school adaptation problems alone. In this case, it can be said that readiness for affective skills is an important predictor of school adaptation problems. It can be said that readiness for psychomotor skills in second-order and readiness for cognitive skills in third-order are significant predictors of school adaptation problems, while readiness for self-care skills is not a significant variable in predicting school adaptation problems. These results coincide with the results of similar studies in the literature.

According to the results of this study, it can be said that school readiness is a strong predictor of school adaptation problems. In parallel with the results of this study; Kagan, Moore and Bredekamp (1995) and Carol (2000) defined “social and emotional development” as one of the five dimensions explaining child’s readiness. Furthermore, they explained social development with the child's social interaction and school adaptation. Uzun (2015) associated the child’s school adaptation, being able to perform the duties and responsibilities of the school, learning the basic skills, academic knowledge with school readiness. In their study, Polat et al. (2014) found that students who are ready for school adapt to school more quickly. Similarly, Boz and Yıldırım (2014) concluded that 60-65 months old students were not cognitively ready for school, thus these children had adaptation problems and failed academically. According to Başar (1999), one of the reasons for not adapting to school is the low level of readiness. Özarslan (2014) stated that adaptation problems can be seen frequently in children who are not ready for school. Based on the results of similar studies in the literature and the results of this study, it is seen that there is a strong cause-effect relationship between school readiness and school adaptation problems. This result is consistent with the relevant theoretical literature. McIntyre, Blacher and Baker (2006) stated that adaptation to school can be affected by many factors such as academic, social, emotional, behavioral and cognitive competences. Similarly, Neuenschwander et al. (2012) emphasized that an effective school adaptation process is influenced by variables such as school readiness as well as motivation, participation, teacher-student relationship, etc. In this case, it can be said that one of the most important reasons for primary school first-grade students' having school adaptation problems is the level of school readiness.

It is seen that readiness for affective skills comes to the forefront in predicting school adaptation problems and is a more powerful predictor than other skills. Parallel to the results of this study, scientific studies in the literature point to the critical role of social and emotional readiness in an effective school adaptation process (Blair, 2003; Raver & Knitzer, 2002). Affectively ready students for school are the ones who do not hesitate to take responsibility, finish the work they have started, behave appropriately in society, comply with the rules, establish strong relationships with their friends, communicate strongly with their environment, and use course materials orderly (Canbulut & Kırıktaş, 2016). The child faces a

new environment by starting to primary school. Being a new environment for the child, adaptation to the school depends on his ability to interact with the people around him, establish positive relations with his friends and follow the rules of the school. These students will not have problems adapting to school such as requesting family members, crying in class, shyness, not able to communicate, etc. However, the school brings certain duties and responsibilities to the student. The student's not hesitating to undertake these duties and responsibilities and striving to fulfill these responsibilities will make him/ her self-confident and have self-efficacy at school. Affectively ready children will face school adaptation problems less such as refusing the school, making excuses for not going to school, constantly waiting for help from the teacher, being indifferent to school and lesson, refusing to participate in activities, showing infantile behaviors that are not suitable for his/her age, lack of perception of school and lessons because of the fact that they do not hesitate to fulfill the duties and responsibilities of the school. In this case, considering that social-emotional problems are the basis of school adaptation problems, readiness for affective skills' being the most important predictor can be considered as an expected result.

It can be said that psychomotor readiness facilitates school adaptation. Students who are ready for school concerning psychomotor skills will be able to do the activities easily such as writing, holding pencil, painting, cutting and pasting. As small muscle skills are developed sufficiently in these students, there will be no problems of school adaptation such as rapid fatigue and constant waiting for help from the teacher. Therefore, it will be easier for these students to adapt to the school. Cognitive readiness is also a significant predictor of school adaptation even if it is at low level. Accordingly, the students, who have the skills sufficiently that the school expects from the child cognitively such as understanding the relationships and stimuli between the events, knowing the basic geometric concepts, matching objects, grouping and sorting, etc., will experience school adaptation problems less such as refusing to participate in school activities, constantly waiting for help from the teacher, lack of school and lesson perception, etc.

On the other hand, it was found that self-care skills did not significantly predict school adaptation problems. Before starting school, the child receives most of the self-care education in the family. Although the child cannot fulfill his/her self-care skills due to the education he/she receives from the family and age, there may be a lack of fear, because our society may not refer to children of this age to fulfill self-care skills alone such as feeding, cleaning, taking on/off clothes. Therefore, the failure of the child to perform his/her self-care skills may not be considered as an abnormal condition for him/her. Then, children will not feel contradictory or insufficient because of the fact that they cannot fulfill their self-care skills. The student may get the idea that I can't because I'm a child. Therefore, it can be said that readiness for self-care skills is not a significant variable in terms of school adaptation problems.

5. Recommendations

Based on the results of this study, it is seen that readiness for affective skills is a stronger predictor of predicting school adaptation problems than other skills. In this case, it may be suggested to carry out activities such as cooperative learning, drama, role playing, group work and speech ring in pre-school education and school adaptation programs, especially to increase affective readiness. Considering the relationship between school readiness and school adaptation, it may be suggested to prepare effective adaptation education programs for primary school first grade students. Similarly, it can be suggested to prepare action plans for the elimination of deficiencies on determining the readiness levels of students starting primary school by applying maturity/readiness tests. This study is limited to the relationship

and prediction between school readiness and school adaptation, future studies can be conducted using structural equation modeling to identify variables that cause school adaptation problems.

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DETERMINATION OF MIDDLE SCHOOL STUDENTS' VIEWS ABOUT STEM ACTIVITIES

Research article

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DETERMINATION OF MIDDLE SCHOOL STUDENTS' VIEWS ABOUT STEM ACTIVITIES

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Abstract

In this research, it is aimed to determine the opinions of middle school students about STEM activities. The research, which used case study from qualitative research designs, was conducted in 2018-2019 academic year. The research working group is composed of 27 middle school students studying in a private school in Turkey. In the data collection, semi-structured interview forms prepared by the researchers were used. The data were analyzed in accordance with the descriptive analysis. According to the findings of the research, it was determined that STEM activities were related to daily life problems, and that students' lessons, occupational preferences and communication skills were affected. In addition, lack of time and material and lack of information have been found to have problems in the realization of STEM activities.

Keywords: STEM education, STEM activity, middle school students

1. Introduction

Developments in science and technology have changed the needs of the age, social structure, and the change in economics and educational policies of countries. In order to increase the competitiveness of the countries in the international dimension and to have a voice, qualified individuals should be trained (Karakaya, Avgın & Yılmaz, 2018a; Tekerek & Karakaya, 2018). At this point, the strategic importance of STEM training is enormous (Çorlu, Capraro & Capraro, 2014). STEM is the abbreviation of the initials of science, technology, engineering and mathematics (Gonzalez & Kuenzi, 2012; Yıldırım & Selvi, 2015). STEM is an educational approach that aims to gain interdisciplinary cooperation, openness to communication, ethical values, problem-solving skills using research, production and creativity by focusing on the engineering design of science and technology-engineering and mathematics knowledge and skills (Buyruk & Korkmaz, 2016; Karakaya, Avgın & Yılmaz, 2018a).

The interdisciplinary approach STEM (Eroğlu & Bektaş, 2016) includes 21st century skills that will enable students to look at life through different windows (Baran, Canbazoglu Bilici & Mesutoğlu, 2016). The use of STEM programs within the education system will enable students to develop skills in science-technology-mathematics and engineering disciplines (MacFarlane, 2016) and increase their readiness (Thomasian, 2011). According to Honey, Pearson and Schweingruber (2014), STEM education aims to improve students' skills in preparing for STEM workforce, training as STEM literate and linking their discipline to students. In Turkey this context, the Ministry of National Education (MEB) by from 4th published in Science Curriculum in 2017, "Science and Engineering and Entrepreneurship applications," says the subject field is added (Karakaya, Unal, Çimen & Yılmaz, 2018b). The subject area of Science, Engineering and Entrepreneurship applications aims to enable students to establish the connection between engineering and science, to understand the interdisciplinary interaction and to develop worldview by making them experience and experiencing what they have learned (MEB, 2018).

Turkey's scientific research and technological development capacity, to improve the socio-economic development and competitiveness is important updates students to experience science and engineering applications (MEB, 2018). From an early age, it is necessary to develop learning environments and activities that will improve students' thinking skills and develop knowledge levels that they will use to solve their life problems (Akbiyık & Kalkan-Ay, 2014).

When the literature on the subject is examined, it is determined that there are different studies. For example, Savran Gencer, Doğan, and Bilen (2020) aimed to develop an integrated biomimicry STEM activity about the unit of Living Things World at grade five. Karakaya, Yantırı, Yılmaz and Yılmaz (2019) have determined the opinions of the primary school students about STEM activities. In the research conducted by Özcan and Koca (2019), it was determined that the effect of a teaching module on the topic of pressure, developed with STEM approach, on the academic achievements of the students as well as on their attitudes towards STEM. In the research conducted by Retnowati, Riyadi and Subanti (2020), the effect of the developed rectangular module with the STEM approach students' critical thinking skills was determined.

It is important to develop STEM focused activities in order to improve the experience and to increase the persistence in learning. STEM activities enable students to be active in the education process (Bransford, Brown & Cocking, 2000). In addition, STEM focused activities allow students to find solutions to their real life problems and to test hypotheses they develop (Sanders, 2008). However, in order to determine the suitability, quality, success, contribution of students to the purpose of the prepared activities and the problems that have occurred, students' opinions should be taken. It is thought that this research will contribute to the literature. The aim of this study was to determine the views of middle school students on STEM activities.

2. Method

2.1. Research model

In this study, a case study of qualitative research designs was used. The case study refers to the elaboration of the situation or events in a system (Creswell, 2003). The case study enables the study of the subject to be investigated in different dimensions.

2.2. Study group of the research

The study, which used case study from qualitative research designs, was conducted in 2018-2019 academic year. The research working group is composed of 27 middle school students studying in a private school in Turkey. The students in the study group of the research were selected from STEM activity club members in the 2018-2019 academic years. Demographic information of the study group is given in Table 1.

Table 1. *Demographic information of the study group*

Demographic information		f	%
Gender	Female	15	55.6
	Male	12	44.4
Grade level	5 th grade	3	11.1
	6 th grade	6	22.2
	7 th grade	11	40.8
	8 th grade	7	25.9

2.3. Data collection tool

The data were collected through the semi-structured opinion form prepared by the researchers. For the validity of the semi-structured opinion form, two different experts from STEM field were consulted and the final form was given. The opinion form consists of five questions. The questions in the data collection tool are given below:

- a. Do you think team work is important in STEM activities? Explain briefly with the reasons.
- b. Do you think that STEM activities contribute to your lessons? Explain briefly with reasons.
- c. Do you think STEM activities are related to daily life? Explain briefly with the reasons.
- d. What do you think is the most important problem for STEM activities? Explain briefly with the reasons.
- e. Do you think that STEM activities are effective in your future career choices? Briefly explain reasons.

2.4. Collection of data

Within the scope of the study, 27 primary school students carried out STEM-oriented applications for 6 weeks (3 hours per week) during the 2018-2019 academic years. The program content related to STEM oriented applications performed presents in Table 2.

Table 2. *Program content related to STEM oriented applications*

Week	Content
1 st	The definition of STEM, its importance and theoretical knowledge about how it emerged
2 nd	How can STEM focused events be performed? Theoretical knowledge on engineering design process
3 rd	Workshop 1: Greenhouse design activity
4 th	Workshop 2: Bridge design activity
5 th	Workshop 3: Energy transformations design efficiency
6 th	Giving student opinions about theoretical information and workshops

In the implementation of the activities, engineering design process steps (ask, imagine, plan, create, and improve) developed by EiE (Engineering is Elementary) were used (Cunningham & Hester, 2007). The engineering design process is given in Figure 1. The applications of students in the engineering design process are given in Table 3.

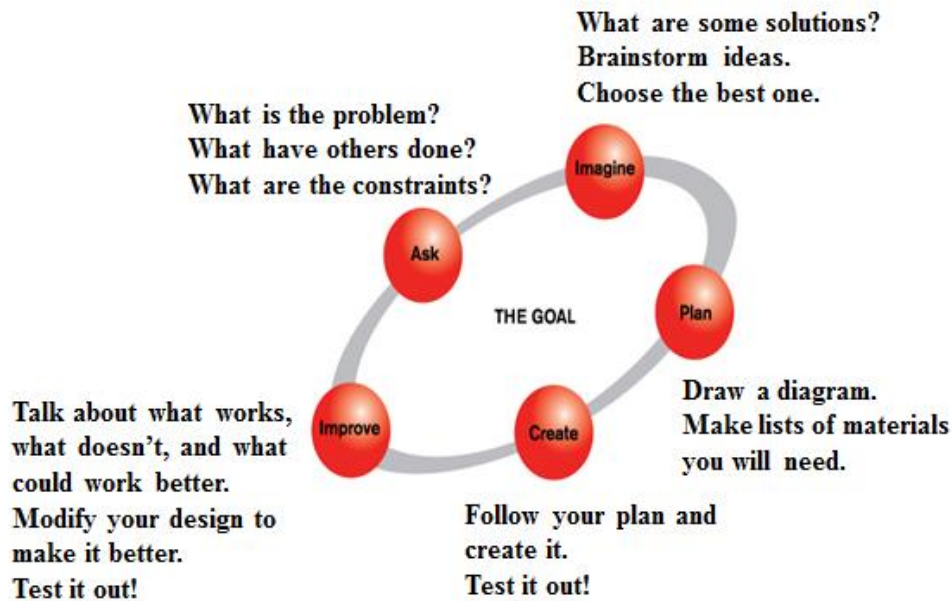


Figure 1. The Engineering Design Process (Cunningham & Hester, 2007).

Table 3. The applications of students in the engineering design process

EiE Process	Student application
Ask	The students determined the problems and limitations in the given scenario.
Image	Students made different suggestions about the solution of the problem. Then, they chose the most suitable solution proposal.
Plan	The students determined the plan suitable for the solution proposal. They made drawings. They also identified the necessary materials.
Create	Students followed the plan. Students made their design products.
Improve	Students; They completed the project by making tests and improvements.

Problem scenarios have been given to teams (groups) formed by researchers. The students evaluated the problem scenarios with their teammates and developed solution suggestions according to the conditions given in the problem content. The groups decided on the most appropriate form of their proposals and formed the drawing, material selection and implementation plans. Then, the students formed their designs for solving the problem by bringing together the materials they chose. The designs have been tested and found to be incomplete, if there are faulty directions, and the designs have been finalized. The same steps were performed for the other activity. Researchers, in the process of the documents (student opinions, activity photos, such as student drawings) have realized the collection. Sample drawings and products of the students are given in the figure.



Figure 2. Tinkercad drawings and models of the students

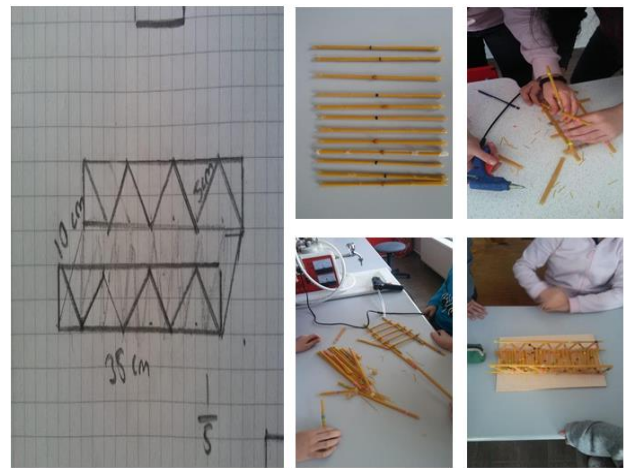


Figure 3. Bridge design of the students

2.4. Analysis of data

In the analysis of the data, the answers given by the students to the semi-structured opinion form were examined separately by two experts. In the analysis of the data, student opinion forms were read and coded by two different researchers. To determine whether there is consistency between the researchers after this coding, Miles and Huberman (2015) formulated the formula (Reliability=Consensus/All opinions). As a result of the calculation, reliability was calculated as 0.81.

3. Results

In this section, the findings of the research are presented. “Do you think team work is important in STEM activities? Explain briefly about the reasons”. The results are given in Table 4.

Table 4. Findings related to the importance of team work in STEM activities

Codes	f	%	Sample student opinions
Yes, because	26	96.3	S-1: We can finish things more easily.
			S-2: Important for us to do group work in the future.
			S-4: Everyone is knowledgeable about different subjects and adds value to work.
			S-8: We cannot do any work on our own.
			S-13: Exchange of ideas in such studies is important.
			S-18: We can easily and successfully carry out our works with team work.
No, because	1	3.7	S-25: The group members interact with each other and the lessons are consolidated.
			S-16: It is difficult to gather and work with the team.

S: Student

When the data in Table 4 were analyzed, 96.3% of the students (f = 26) stated that group work was important in STEM activities and 3.7% (f = 1) stated that it was not important.

In the research “Do you think that STEM activities contribute to your lessons? Explain briefly about the reasons”. The results are given in Table 5.

Table 5. Findings about the contribution of STEM activities to the lesson

Codes	f	%	Sample student opinions
Yes, Because	25	92.6	<i>S-1: It makes me objective in the lessons.</i>
			<i>S-2: It allows me to use my knowledge of science and mathematics.</i>
			<i>S-5: Our activities enable me to understand the topics.</i>
			<i>S-6: I can use my different course information together.</i>
			<i>S-7: I can focus my attention on lessons.</i>
			<i>S-10: I can interpret the long questions in LGS tests.</i>
			<i>S-13: It makes me think analytically.</i>
			<i>S-15: I am learning new information during activities.</i>
			<i>S-24: We learn different information and change our perspective.</i>
			<i>S-27: Our activities reinforce our lessons.</i>
No, Because	2	7.4	<i>S-12: There is no lecture about the lessons.</i>
			<i>S-22: We do not use the subjects that we have learned in the course.</i>

S: Student

When the data in Table 5 were examined, 92.6% of the students ($f = 25$) stated that they contributed to STEM activities and they did not contribute to 7.4% ($f = 2$).

In the research “Do you think STEM activities are related to daily life? Explain briefly with the reasons”. The results are given in Table 6.

Table 6. Findings about the relationship of STEM activities with daily life

Codes	f	%	Sample student opinions
Yes, Because	25	92.6	<i>S-1: I think the problems in the places I go and find solutions.</i>
			<i>S-2: We use information obtained from most professions in daily life.</i>
			<i>S-5: Studies in daily life are also encountered.</i>
			<i>S-6: Activities include problems in our lives.</i>
			<i>S-12: It helps us to raise awareness about the subjects.</i>
			<i>S-15: Our activities are based on real-life problems.</i>
			<i>S-18: We are trying to find solutions to the problems of people with projects.</i>
			<i>S-19: It can be seen all over our lives.</i>
			<i>S-20: We are experiencing the same things in real life.</i>
			No, Because
<i>S-16: We don't do construction or engineering in daily life.</i>			

S: Student

When the data in Table 6 were examined, 92.6% of the students ($f = 25$) stated that STEM activities were related to daily life and 7.4% ($f = 2$) stated that they were not related to daily life.

In the research “What do you think is the most important problem for STEM activities? Explain briefly with the reasons”. The results are given in Table 7.

Table 7. Findings for the most important problem in STEM activities

Codes	f	%	Sample student opinions
Shortage of time	12	44.4	<i>S-2: Not enough time for activities.</i> <i>S-5: Time is limited.</i> <i>S-20: Time shortage.</i>
Material shortage	11	40.8	<i>S-1: Inadequate materials for prepared projects.</i> <i>S-6: Inadequate materials for activities.</i> <i>S-9: Inadequacy of opportunities.</i> <i>S-22: Lack of materials.</i> <i>S-25: Lack of materials for our ideas.</i>
Lack of information.	4	14.8	<i>S-10: We do not have enough knowledge about the courses.</i> <i>S-11: Personally inadequate.</i> <i>S-13: We do not have enough information about the problem encountered.</i> <i>S-16: Failure to find solutions to problems.</i> <i>S-23: The information in the lessons cannot be related to each other.</i>

S: Student

When the data in Table 7 were examined, 44.4% (f = 12) of the students who participated in the research were experiencing lack of time, 40.8% (f = 11) of material deficiency and 14.8% (f = 4) of the lack of knowledge of STEM activities have stated that it will be a major problem.

In the research “Do you think that STEM activities are effective in your future career choices? Briefly explain reasons”. The results are given in Table 8.

Table 8. Findings about the effects of STEM activities on occupational preferences

Codes	f	%	Sample student opinions
Yes, Because	24	88.9	<i>S-2: After the events, I realized that I had to choose a profession related to science or mathematics.</i> <i>S-6: I realized that I should become an engineer in the future.</i> <i>S-7: I saw the contribution of being an engineer to life.</i> <i>S-8: The fun of STEM activities showed that I should be happy in my profession.</i> <i>S-10: The happiness of connecting lives by bridge is good.</i> <i>S-13: STEM studies have improved my ability to solve problems. I want to be an engineer.</i> <i>S-15: My problem solving skills have increased.</i> <i>S-18: I saw the importance of knowledge.</i> <i>S-20: Events showed which course I was interested in.</i>
No, Because	3	11.1	<i>S-9: I didn't decide on my job.</i> <i>S-11: No, it was not very effective.</i> <i>S-16: I want to be a musician. Therefore, it was not effective.</i>

S: Student

When the data in Table 8 were analyzed, 89.9% (f = 24) of the students who participated in the study stated that STEM activities were effective in their job choices, while 11.1% (f = 3) stated that STEM activities were not effective in their job choices.

4. Discussion and Conclusion

The aim of this study was to determine the views of middle school students on STEM activities. The students who participated in the research conducted STEM focused activities prepared by the researchers for 6 weeks. In the research, it was determined that team work was important in STEM activities according to student opinions. When the research findings are examined, the primary school students stated that team work is important in STEM activities. The students stated that they could complete the works more easily by performing STEM activities with team work and they could share information with different perspectives. According to these results, it can be said that it is important that students work together in order to realize STEM activities more actively and efficiently. When the researches on the subject are examined, it is seen that there are researches showing that STEM activities encourage collaborative learning (Çınar, Pırasa & Sadoğlu, 2016; Uğraş & Genç, 2018). In addition, as a result of some researches in the literature, STEM activities have been developed to develop creativity, cooperation and communication skills that will enable students to learn lifelong (Altan & Üçüncüoğlu; 2018; Eroğlu & Bektaş; 2016; Şahin, Ayar & Adıgüzel; 2016; Yıldırım & Selvi, 2018). STEM education programs enable the gathering of students and researchers from different countries, group work and communication skills (Choi & Hong, 2013; Kim, Ko & Han, 2014).

In the research, it was determined that the STEM activities contributed to the lessons. Primary school students stated that STEM activities contributed to their attitudes, behaviors and academic success. According to this result, it can be said that the use of STEM activities is effective in students' positive attitudes and behaviors towards lessons. Eroğlu and Bektaş (2016) stated that the use of STEM activities in science courses has benefited teachers in different subjects such as recognition, addendum and effective teaching. In addition, the use of STEM activities in science courses has been found to benefit students in terms of motivation, interest, achievement, responsibility and development of scientific process skills (Eroğlu & Bektaş, 2016). In the research conducted by Gülhan and Şahin (2018), it was determined that STEAM activities contributed positively to the students' academic achievement and attitudes towards the courses. Gökbayrak and Karışan (2017) found that STEM activities developed for science prospective teachers constitute a statistical difference in scientific process skills of teacher candidates. In the studies conducted by Strong (2013) and Sullivan (2008), it was determined that the STEM-oriented activities that were prepared provided the development of scientific process skills. When the literature is examined, it is seen that the researches which focus on engineering applications (Bozkurt, 2014; Sungur-Gül & Marulcu, 2014) are effective in the scientific process skills and science achievement of prospective teachers. STEM activities have a positive effect on the scientific process skills and attitudes of the 5th grade students towards science course (Yamak, Bulut & Dündar, 2014). STEM activities increase the academic success of the students due to the development of cognitive, affective and psychomotor skills (Acar, Tertemiz & Taşdemir, 2018; Çavaş, Bulut, Holbrook & Rannikmae, 2013; Yıldırım & Selvi, 2018). These results are consistent with the findings of the result.

In the research, whether or not STEM activities are related to daily life was determined according to student opinions. As a result of STEM activities conducted in the research, students stated that they realized their abilities, knowledge, skills to be oriented towards professions and happiness of problems they solved with very similar problems in their daily lives. According to the research findings, it can be said that students associate STEM activities with daily life. In a study conducted by Damar, Durmaz and Onder (2018), it was determined that middle school students were very happy at STEM activities and they were able to develop projects by doing scientific research. Timur and İnançlı (2018) concluded that

STEM education is a solution-oriented approach centering on the life of individuals. In the research conducted by Uğraş (2017), it was determined that STEM activities of preschool teachers included daily life problems. These results coincide with the findings of the study.

In the research, the problems that may occur in the realization of STEM activities are determined according to the views of the students. According to the students, lack of time, lack of material and lack of knowledge are defined as the most important problems to be experienced in the realization of STEM activities. In order for STEM training to be carried out for its purpose and without any problems, it is necessary to have different materials, technological equipment and classes designed for activities (Morrison, 2006). When the literature on the subject is examined, there are studies that overlap with the findings of the research (Eroğlu & Bektaş, 2016; Geng, Jong & Chai, 2019; Kurtuluş, Akçay & Karahan, 2017; Siew, Amir & Chong, 2015; Timur & İnançlı, 2018). In researches (Eroğlu & Bektaş, 2016; Siew, Amir and Chong, 2015), it has been determined that there are negativities about STEM-based lesson activities such as time, material shortage, lack of knowledge about the subject. According to preschool teachers and teacher candidates, STEM is experiencing problems in the realization of applications, lack of education for the service, lack of adequate information for the disciplines and costly practices (Park, Dimitrov, Patterson & Park, 2017; Uğraş & Genç, 2018). According to Yıldırım (2018), time management and pedagogical knowledge are very important for effective STEM education. In a study by Baran, Canbazoglu Bilici, Mesutoglu and Ocağ (2016), it was suggested that time, material and information sources should be increased in order to increase activities in STEM education programs.

In the research, it was determined whether STEM activities were effective in the career choices of the students. STEM activities are effective when students become aware of their talents, knowledge, skills they need to address and the happiness they solve. Therefore, it was determined that STEM activities were effective in students' career choices in the future. According to these results, STEM activities can be said to be a factor that influences the future professional preferences of the students. According to Gencer (2017), career awareness and knowledge levels of students in STEM activities are increasing. In the study conducted by In the study conducted by Özçelik and Akgündüz (2018), it was determined that STEM activities provided an increase in the students' vocational tendencies towards STEM. The research conducted by Dieker, Grillo and Ramlakhan (2012) found that the STEM summer camp, which they conducted with technology focus, had a significant impact on students' career preferences. According to Guzey, Harwell and Moore (2014), STEM-oriented schools provide positive developments in STEM career attitudes towards students. Baran et al. (2016) determined that STEM activities increased the awareness of the 6th grade students towards the occupations. Christensen, Knezek and Tyler Wood (2015) stated that STEM activities are effective in career choice of students at different levels of education. These results support the findings of the study.

STEM activities are the right process for students to improve their problem solving skills, choose engineering and work in teams. Therefore, more STEM activities are recommended in schools. In addition, the necessary time, material and information infrastructure should be provided to the students in order to achieve the purpose of the activities. According to the research findings, it is also recommended that STEM activities problem scenarios be associated with daily life.

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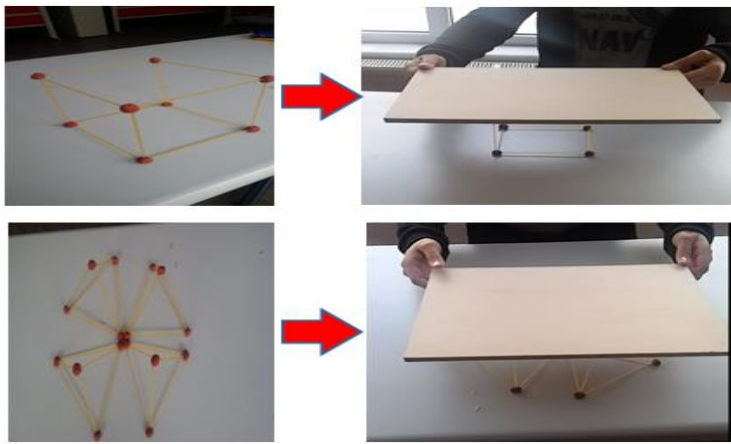
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APPENDIX

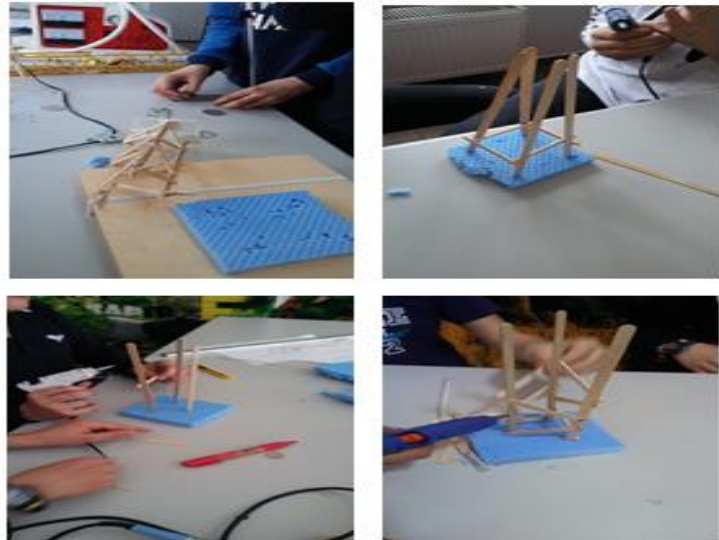
Workshop 2: Bridge Design Activity

Problem scenario

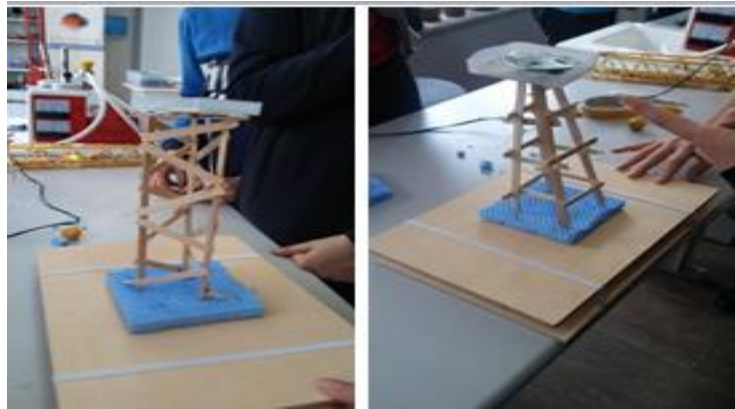
Turkey is a country where different seismic zone. Therefore, engineers in construction projects in Turkey, it will take into account this situation. Istanbul Metropolitan Municipality wants to build a bridge over the Marmara Sea. However, the ground on which the feet of the bridge will be located is located above the earthquake zone. For this reason, Istanbul Metropolitan Municipality does not want to make mistakes in bridge construction. Istanbul Metropolitan Municipality launched an earthquake-resistant bridge project, the first of which will be determined by the votes of the people. If you were an engineer who wanted to participate in this competition, what kind of a bridge would you make?

<p>Students first explored how to improve the durability of the materials.</p>	
<p>Students played games on the digital platform to learn how to build bridges.</p>	
<p>Students have investigated the effect of geometric shape on durability.</p>	

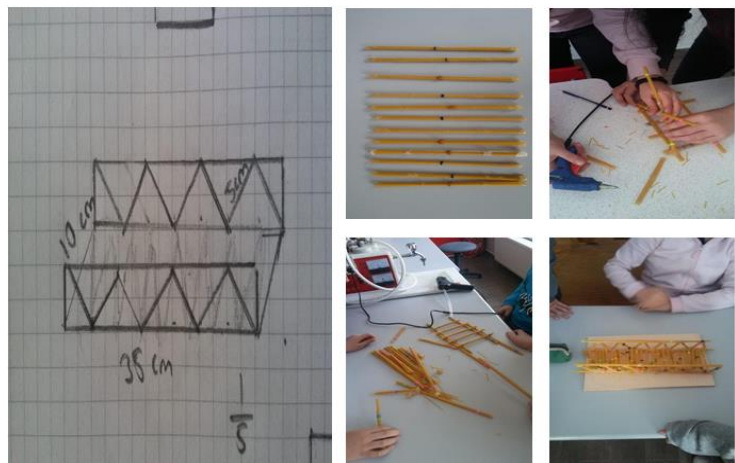
Students have prepared bridge legs.



The students tested the earthquake resistance of the bridge legs.



The students drew the designs of their bridges and made their bridges.





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AUTHENTIC MATERIALS FOR FRESHMEN STUDENTS: A CASE OF SPEAKING CLASS IN A PRIVATE UNIVERSITY

Research Article

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Abstract

This study aims at exploring Authentic Materials used in teaching speaking for university students. A case study method is implemented. The study was conducted at the language center of a university in Indonesia in the first semester of the 2018/2019 academic year. The data were collected by three instruments: interview, classroom observation, and document analysis. The data were analyzed using an interactive method. The results show that the teachers used three kinds of AMs in the classroom: audio material such as recordings and broadcast news, audio-visual material such as videos, and printed material such as photos, pictures, images, articles, and a map. It is found that the most used type is video since it can be very useful to develop speaking, listening and pronunciation skills. The results of this study also reveal that teachers might take useful AMs from selected websites and combine them with the course book in order to support teaching-learning activity.

Keywords: authentic materials, teaching, speaking, EFL, university students

1. Introduction

Nowadays, it is important for teachers to prepare students to face real-life situations especially in the case of speaking a foreign language. Consequently, teachers are expected to prepare appropriate materials, including authentic materials such as printed magazines, videos, and songs. Authentic materials (AMs) are defined as realistic everyday materials that are not produced specifically for pedagogical purposes, yet they can be used as learning tools for students. AMs can help students to be aware of the relevancy and meaningfulness of what they are learning. This study aims to investigate the use of AMs in the teaching of speaking to university students in English classes. The impetus of this study comes from the researcher's interest in the phenomena in the speaking classroom. Many students find it difficult to speak in English since they rarely use the language in daily life. Most students know English speaking theories, yet they are confused about speaking the language in real conversation. This study aims to answer the research question: What kinds of Authentic Materials are used in teaching speaking for university students?

2. Review of Literature

Relating to the present research, there are several studies about the use of AMs in teaching activities. Ciornei and Dina (2015) conducted a study untitled *Authentic Text in Teaching English*. The objective of the study was to establish the relation between the use of authentic texts and the improvement of communicative abilities. In addition, it also identified the types

of authentic texts which facilitated the students' academic performances and the understanding of the target culture. It was done by using an experimental approach and analyzing with Kramsch's framework (2010) that focused on the context and culture in language teaching. The results obtained supply positive arguments for the use of authentic texts in the improvement of communicative abilities and cultural acquisitions. However, these materials bring benefits only when used in accordance with students' proficiency level and interests. By helping students comprehend authentic texts, we develop their language capabilities while strengthening their cross-cultural and literacy skills.

Gilmore (2011) aimed to explore the effects of authentic versus textbook input on learners' development of linguistic, pragmalinguistic, sociopragmatic, strategic, and discourse competencies. This quasi-experimental study results indicated that the experimental group outperformed the control group in five of the eight measures, suggesting that the authentic materials and their associated tasks were more effective in developing a broader range of communicative competencies in learners than the textbook materials.

A third study was carried out in a foreign language school at a Colombian public university by Losada et al. (2017). Its main purpose was to analyze the extent to which the use of authentic materials and tasks contributes to the enhancement of the communicative competence on an a2 level English course. This study was a mixed study composed of a quasi-experimental and descriptive-qualitative research design was implemented through a pre-test, a post-test, observations, semi-structured interviews, surveys, and diaries. The findings showed that the use of authentic materials and tasks, within the framework of a pedagogical project, had an impact on students' communicative competence progress and on the teaching practices of the experimental group teacher. Similarly, authentic materials lead the teacher to a continuous reflection process in which he/she is free to intervene in his/her own teaching practice. Therefore, the use of authentic materials in the language classroom must be strongly encouraged as they have a positive impact on the students' linguistic and affective domains.

2.1. Authentic Materials

This section goes through some common definitions of the term "authentic materials" from several experts' point of view. First, Herod (2002) states that authentic learning "materials and activities" are designed to imitate real-world situations. Next, Nunan (1988) defines authentic materials as the materials "which have been produced for purposes other than to teach language". Then, Carter and Nunan (2001, p. 68) propose authentic materials are 'ordinary texts not produced specifically for language teaching purposes. Besides, Laniro (2007, p.1) opines that authentic materials are print, video, and audio materials students encounter in their daily lives, such as change-of-address forms, job applications, menus, voice mail messages, radio programs, and videos. Authentic materials are not created specifically to be used in the classroom, but they make excellent learning tools for students precisely because they are authentic. Similarly, Gilmore (2007, p. 98) defines an authentic text as a stretch of real language produced by a real speaker or writer for a real audience and designed to convey a real message of some sort. Besides, authentic learning is defined as learning that is seamlessly integrated or implanted into meaningful, "real-life" situations (Jonassen, Howland, Marra, & Crismond, 2008) as cited in Iucu, 2014, p .410. Further, Martinez (2002, p. 1) states that "authentic would be material designed for native speakers of English used in the classroom in a way similar to the one it was designed for". Based on those definitions, it could be concluded that authentic materials are realistic everyday materials that are not produced specifically for pedagogical purposes, yet they can be used as learning tools for students.

2.2. Types of Authentic Materials

Teaching material is a very essential part of teaching and learning a foreign language. These days, the resources for teaching materials are widely available to everybody. The internet is regarded as a very important and rich source of authentic materials. Genhard (1996) classified authentic materials into three categories as follows: authentic listening/audio materials, such as radio news, cartoons, songs, etc; authentic visual materials, such as street signs, magazines, and newspapers pictures, post cards, etc; authentic printed materials, such as sports reports, newspapers, restaurant menus, train tickets, etc. The sources of authentic materials that can be used in the classroom (whether spoken or written) are infinite, but the most common materials are newspapers, magazines, TV programs, movies, videos/DVDs, radios and recordings, songs, rhymes and poems, pictures, charts, diagrams, advertisements, realia such as airline tickets, hotel information, leaflets, posters, instruction manuals, telephone books, menus, maps, books, dictionaries, storybooks, comics, original letters, post cards, timetables, and the world outside the classroom: shop, library, museum, art gallery, theatre, telephone, talks, cinema, and menus which are useful for anyone who needs English to travel abroad, particularly if their language level is pre-intermediate or below (Ellis, 1996, p. 168). Moreover, in this modern era, the internet is known as the most useful resource. While newspapers, magazines, brochures and any other printed materials date very quickly, the Internet is continuously updated. It is more visually stimulating as well as interactive. Therefore, the internet promotes a more active approach to reading rather than a passive one. From a more practical point of view, the internet is a modern day reality. Most students use it. For teachers, it provides ease of access to endless amounts of many different types of materials.

2.3. Advantages and Disadvantages of Authentic Materials

Most researchers realize the role of authentic materials in language teaching. They believe that authentic materials scaffold learners' learning of a target language more sufficiently (Guariento & Morley, 2001; Wilcox & Oaks, 1999; Weyers, 1999). Berardo (2006, p. 64) supports the idea of using AMs in the foreign language teaching process for these reasons: having a positive effect on student motivation, giving authentic cultural information, exposing students to real language, relating more closely to students' needs, and supporting a more creative approach to teaching. "Authentic texts can be motivating because they are proof that the language is used for real-life purposes by real people." (Nuttall, 1996, p.172). Researchers such as Gilmore (2007) and Sherman (2003) believe that authentic materials have a strong positive effect on motivation. Motivation is regarded as the key element in the success of learning in general, and in learning languages in particular. For his part, Kilickaya (2004) states that using authentic materials helps increase learners' motivation for learning a language, because they feel that they are practicing a real language used beyond the classroom.

Although authentic materials play an important role in supporting students' learning of a foreign language, many difficulties hinder the use of such materials by teachers. Kilickaya (2004) claims that authentic materials add a burden on teachers, as they may contain difficult vocabulary and structures which need more effort to be simplified and explained, in order to make them appropriate for their learners. Similarly, Miller (2005) also states that authentic materials are "too difficult and time-consuming to select, edit and prepare." In addition, Martinez (2002) argues that authentic materials are regarded as too culturally biased and difficult to comprehend by learners in the classroom. He also adds concerning the cultural effect, that "authentic texts from one culture may give a false impression to students from another, unless they are presented in an authentic context which makes it clear precisely what they exemplify."

2.4. Teaching Speaking in EFL Speaking Class

According to Iucu (2014, p. 412), there are five ways to support authentic learning: providing students with coaching and scaffolding at critical times, providing students with the opportunity to reflect, providing the opportunity to collaborate, promoting articulation to encourage students to verbalize their knowledge and thinking, and enabling students to use technology. Although these problems may cause a burden for the teachers of lower-level classes, Richards (2006, p. 20) supports the idea of using authentic materials in the foreign language teaching process due to these reasons: they provide cultural information about the target language, they provide exposure to real language, they relate more closely to learners' needs, and they support a more creative approach to teaching.

2.5. The Criteria of Selecting Authentic Materials in Teaching Speaking

In this regard, McGrath (2002) provides a useful set of guiding principles for choosing AMs, which apply as much as to the teaching of listening skills as to other areas cited in Field (2008, pp. 275-276). Field lists these guiding principles adding his own comments with connection to speaking in the following way: relevance, intrinsic interest of topic, cultural appropriateness, linguistic demands, cognitive demands, logistical considerations, quality, and exploitability. Furthermore, Lee (1995, p. ii) states that the important criteria for selecting AMs are textual authenticity, suitability of content, compatibility with course objectives, and exploitability. In addition, Nuttall (1996, p. 54) gives three main criteria when choosing texts to be used in the classroom; they are suitability of content, exploitability and readability. Suitability of content can be considered to be the most important of the three, in that the reading material should interest the students and be relevant to their needs as well as the texts should motivate. Exploitability refers to how the text can be used to develop the students' competence as readers. A text which cannot be exploited for teaching purposes has no use in the classroom. Just because it is in English does not mean that it can be useful. Readability is used to describe the combination of structural and lexical difficulty of a text, as well as referring to the amount of new vocabulary and any new grammatical forms present. Based on this explanation, it can be concluded there are five important criteria based on some criteria proposed by the experts, they are relevance to course objectives, topic interest, cognitive demands, linguistic demands, and exploitability.

3. Method

A case study approach was used in this research as an attempt to explore the use of AMs in teaching speaking for university students in-depth. Yin states that a case study is an empirical inquiry that investigates a contemporary phenomenon (the "case") in-depth and within a real-world context, especially when the boundaries between phenomenon and context may not be clearly evident (2014, p. 16). It relies on multiple sources of evidence, with data needing to converge in triangulating fashion (p. 17). The current study was conducted in a Language Training Centre in one of a private university in Yogyakarta, Indonesia. There were 2 teachers teaching a Free Conversation Class who became the main informants in this study since the teachers used some authentic materials in the classroom.

The data sources of this study were; (1) event consisting teachers' authentic materials in teaching speaking and the process of teaching, (2) informants, the teachers and students who give information the impact of using authentic materials in teaching speaking for university students, (3) documents which consist of syllabus and lesson plans are the last data source in this research. Thus, this research looked at the use of authentic materials in the teaching speaking process, with teachers and students as an informant, and documents related to the use

of authentic materials in teaching speaking in the classroom as sources of data for doing this research.

4. Findings

The kinds of AMs in teaching speaking for university students could be clearly seen during the teaching-learning process. The data were also supported by related documents, such as syllabus and course book. The data were obtained from interviewing two main teachers for exploring what kinds of AMs used in their speaking classes. Based on the data gained, it showed that the teachers used three kinds of AMs in the classroom, they were (1) audio material: recordings and broadcast news (2) audio-visual material: videos (3) printed material: photos, pictures, images, articles, and a map.

Table 1. *The types of authentic materials used by teacher in teaching speaking*

Data	Audio Materials	Audio-Visual Material	Printed Materials
Course book	Recordings of report news, TV program, advice, quiz show, and conversation	Videos	Photos, pictures, images, articles from newspapers and a map
Teaching-learning activity	Recordings and broadcast news	Videos of Vlog, news, film, survey, and cartoon	Photos, pictures, images, articles, and a map
Interview	Recordings and songs	Videos from the Internet, Youtube	Poets, poetry, songs, pictures, maps, and newspapers

Table 1 shows that teaching-learning activity (TLA) in the classroom was in line with the course book. On the other hand, Table 2 shows that the interview's result was not in line with the course book and TLA. From the interview, *Teacher O* said that she used not only photos, pictures, articles, and maps but she also used poets, poetry, and songs in her class whereas the researcher did not find them during the observation. Afterward, from the course book, the researcher found that the content of the course book contained several AMs that we could see in the following table:

Table 2. *Authentic materials found in the course book*

Unit	Audio Materials	Audio-Visual Material (video)	Printed Materials
Unit 1 JUDGING BY APPEARANCES	p.9: recorded report Activity 4. Jaw Surgery	p.8: video Activity 3. Video 1. Appearances Can be Deceiving, Video 2. Don't Judge People by Their Appearance, Video 3. Never Judge People by their Appearance	p.4: picture Introduction page p 5: articles of survey Activity 1. Appearance pp.6-7: photo Language Spot. Describing Appearance p.10: image Activity 4. Changing Appearance pp.11-12

			Activity 5. Judging Appearance
Unit 2 WHAT'S ON TONIGHT	p.20: recorded TV program Activity 3. Discussing TV Program	p.20: video Activity 2. What's on Tonight Catie Couric p.27: video Activity 7. I, Robot	p.17: image Introduction Page p.18: photo Snapshot. Stargazing pp.19-20: picture Activity 1. My Tastes & Interests pp.24-25: picture Activity 5. Legendary TV Programmes p.26: image Activity 6. Favorite Movie Scene p.27: image Activity 7. Group Discussion p.28: image Activity 8. Talk Show
Unit 3 THE ADVICE	p.34: recorded advice Activity 3. Hello Can I help You?	p.36: video Activity 4. Video 1. 911, Call Of Dad Delivering Baby! Video 2. Little Girl Calls 911, Adorable - He Can't Hardly Breathe Activity 4. Video 3. Police 4-Year-Old's 911 Call Saves Mom's Life p.39: video Activity 7. Lifeline Australia	p.33: picture Activity 1. Snapshot p.39: photo, picture and news article Activity 7. Group Presentation
Unit 4 LEAN ON ME	-	p.44: video Snapshot. What is a Helper? Video 1. Life Vest Video 2. Snapshot. Are you a helper? p. 45: video Activity 1. Single Mother Can't Afford Food. 'What Would You Do' p.47: video Activity 4. Beggars in USA	p.46: image Activity 3. Will You Give a Hand? p.48: image Activity 4. Giving or Not Giving? p.49: image Activity 5. Role Play
Unit 5 THE GIFT	-	p.54: video Snapshot. JCPenney: The Gift of Giving	p.54: picture Introduction page p.62: photo

		p.60: video Activity 4. Describing Gifts (Pentatonix Receiving Gifts May 2016)	Activity 5. Shall We Swap?
Unit 6 CONCRETE JUNGLES	p.66: recorded quiz show Snapshot. Let's Check Our Knowledge p.71 : recorded interview Activity 5. Welham Then and Now	p.70: video Activity 3. Video 1. Thousands Rally against Blasphemy Video 2. Activity 4. The City of London	p.66: a map Introduction Page
Unit 7 GOOD FENCES MAKE GOOD NEIGHBORS	-	p.77: video Activity 2. Types of Neighbors	pp.75-76: image Introduction Page p.76: picture Activity 3. Choose Your Own Ideal Neighbors
Unit 8 DANGEROUS SITUATION	p.86: recorded conversation Audio Snapshot. Got a Light part 1 Audio Snapshot. Got a Light part 2 Audio Snapshot (Full)	p.90: video Activity 4A. Video 1. 10 Deadliest Countries. Video 2. Top 10 Countries With the Lowest Violence Rates – Pastimers p.91: video Activity 4B. Video 1. Girl Escapes from Alleged Kidnapper in Walmart Caught on Tape Video 2. Stranger Danger! Stanger Danger!	p.85: image Introduction Page p.86: image and picture Activity 1. Got a Light p.89-90: photo Activity 4. Gang Violence p.92: picture Activity 5. Watch Out p.93: picture Activity 6. Act It Out

Audio Materials

In the course book, there are 5 of 8 units used AMs in the form of audio materials and in total the recorded audio consists of 8 files. The first authentic audio material is on page 9 in the form of a recorded report in Activity 4 about Jaw Surgery. Second, there is a recorded TV program on page 20 in Activity 3, Discussing TV Program. Third, there is recorded advice on page 34 in Activity 3, Hello Can I Help You. Fourth, there is a recorded quiz show on page 66 in Snapshot, Let's Check Our Knowledge. Fifth, there is a recorded interview on page 71 in Activity 5, Welham Then and Now. Sixth, there is a recorded conversation on page 86 in Snapshot, Got a Light part 1. Seventh, still on page 86, there is a recorded conversation in Snapshot, Got a Light part 2. Lastly, there is a full recorded conversation for Snapshot Got a Light on page 86. Based on the data, it can be concluded that authentic audio materials used in teaching speaking are mostly in the form of recorded audio with various topics, such as reports, TV programs, advice, quiz shows, interviews, and conversations.

The major resource used for this course is Slater, S., Collie, J. (1995). *Speaking 3*. Cambridge: Cambridge University Press. In the interview teachers admitted that they only used audio provided by the institution and focused on following the task from the course book, so, they usually prepared the laptop and speaker in the classroom and played it for the students. The authentic audio materials are in the form of a soft file that is provided by the institution only for the teachers. In addition, the teachers may give additional materials, but they preferred to use the provided audio since they thought the audio materials were clear enough for introduction and exercise. It was not really necessary to find more because there would be video after playing the recording. However, *Teacher I* said that sometimes, she used songs in the classroom; yet, the researcher could not find it in observation. Besides, from the observation, the teachers reported using mainly recording for audio material type. After greetings, the teacher usually played it twice or more. The origin of speakers in the recording was 95% native speakers, only one person was from India, Asia.

Audio- Visual Materials

The Audio-visual materials came from the course book, observation, and interview. From Table 2 Authentic Materials found in the course book, every unit had at least a video and the total of the videos are 22 files. In unit 6, there are 2 videos on page 70; Video 1 is Thousands Rally against Blasphemy. It is news about a demonstration in Jakarta and the source of the video is from Aljazeera News Channel. Then, Video 2 is The City of London. It is news that reporting the situation in London then and now and the source of the video is from BBC News Channel. While watching the video, the students completed the sentence in the activity 3 and 4. Next, in unit 7 on page 77, there is a Vlog video about the types of neighbors that was taken from Askylitavenue Youtube Channel. After watching the video, the students answered the following questions in Activity 2 and wrote notes if necessary.

Meanwhile, in unit 8, there are 4 videos related to the topic 'Dangerous Situation'. The first and second video are on page 90; Video 1 tells 10 deadliest countries in the world that come from Alltime Youtube Channel and Video 2 tells 10 countries with the lowest violence rates that came from Amazonaw News Channel. After reading an article and watching the videos, the students had to choose the country to live, which country that he and their group would choose and told the class about the reason in Activity 4A. The third and fourth videos are on page 91; Video 1 is a video of a girl escaping from an alleged kidnapper in Walmart which is caught on tape and Video 2 is a video that tells eleven traps to avoid children crimes. After watching the videos, the students discussed the questions and wrote a list of what kind of traps used by strangers children should avoid in Activity 4B.

Other data came from the observation that most of the time teachers used videos not only in the beginning of the lesson as a model but also in the main activity as an exercise. They were played 1 to 4 times according to the length and difficulties of the videos. The materials shown were in the form of videos without subtitles; therefore, if the students seemed confused or asked for repeating, the teacher would show the video again. After that, she continued with a simple discussion before going to the main part of the lesson. The contents of the videos were in the form of Vlog, talkshow, demonstration, and news. Next, from the interview, *Teacher O* said that she only used prepared video from the institution and selected videos from Youtube based on the topic of the day; she usually chose a short movie and showed it to students.

I choose the materials depending on the topic discussion in the classroom. For example, if it is about movies, I will find short movies from Youtube, like in the previous meeting. After cutting the movie, I showed it to the students. [The teacher also prepared her additional materials based on the current topic in the classroom, such as finding short movies from Youtube channel.](Obv.2, 1/11/2018)

Based on the data above, it can be concluded that authentic video materials used in teaching speaking are mostly from the Internet such as Youtube, BBC News, Aljazeera News, Amazona News, and ABC News Channels.

Printed Materials

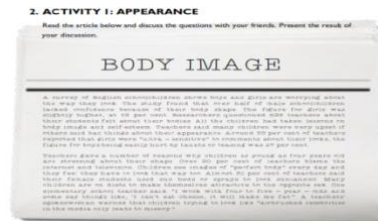


Figure 1. A survey printed authentic material

source:

https://breakingnewsenglish.com/1303/130325-body_image.html

The printed materials came from the analysis of the course book and observation. From Table 2, there are 33 authentic printed materials found in the course book and the 5 major types are photos, pictures, images, articles, and a map. There are several pictures and photos in the course book. For instance, in unit 1, page 4, there were photos of famous artists and survey articles. Besides, she found a map in unit 6, page 66 as the activity for students to understand the map of 'jungle'. It was found that the source of the printed materials were not only came from the real printing but also taken from the news website. Besides, the use of the online source was also seen during observation. *Teacher I* took a picture from social media *Instagram* and showed it to students by using LCD in front of the class. It was about the survey of Indonesia as the most generous country in the world. *Teacher I* said the purpose of showing it was to make students trigger to give charity to the poor people since millennial students right now seem apathetic to problems around them. Below are the examples of printed material found in Unit 1.

From the examples of printed materials found in the course book, it was noticed that the institution gave enough models for students not only as an introduction but also as the students' task. From the observation, the teachers usually discussed the tasks quickly by making short whole-class discussion and directly moved to the next task, following the course book. First, Figure 1, the authentic printed material is in the form of an article survey. It was used for Activity 1: Appearance, the task was reading the article and discussing the questions. The students then presented the result of the discussion.



Figure 2. A photo of Justin Bieber
Source: google.com

Second, Figure 2, the authentic printed material is in the form of a photo. The photo was used to illustrate how to describe someone's appearance, such as describing the eyes' colors, characters, and hobbies. The third, Figure 3, the authentic printed material is in the form of photos. The photo was used for Activity 5: Judging Appearance, the task was choosing the

preference from 6 photos, and giving the reason why they like and dislike them. The language features are provided below the photos, so the students could learn from them.



Figure 3. Photos of a woman and a man

Source: google.com

5. Discussion

The research findings reveal that there are three kinds of AMs in teaching speaking for university students; they are audio, audio-visual, and printed materials. From the findings, it is found that authentic materials used in teaching speaking are mainly combined in course book and teachers' additional materials that come from the Internet source. First, authentic audio materials used in teaching speaking are mostly in the form of recorded audio with various topics, such as report, TV program, advice, a quiz show, interview, and conversation. According to Zafarghandi (2014), using authentic materials made students interested in language learning. Authentic listening materials cause exposure to real language and are more related to natural needs of the language learners. Real-life listening materials bring the chance of applying a more creative approach toward teaching.

Next, authentic audio-visual materials used in teaching speaking are mostly in the form of video taken from the Internet such as Youtube and news channel. This finding is relevant with Berardo (2006), who assumed that the Internet as the most powerful source. Compared to the other sources, the Internet is more useful because teachers can get articles, audio clips, podcasts and videos that are always updated, interactive, and provided with visual stimulation (Berardo, 2006). Besides, from the observation it is found that authentic videos materials used in teaching speaking are mostly from the Internet such as Youtube, BBC News, Aljazeera News, Amazona News, and ABC News Channels. In addition, this statement is in line with Bordonaro (2018, p.4) who says that the Internet also offers gateways to many collections of materials posted specifically for ESL teachers who could incorporate such material into speaking activities. He gave examples of such sites including Dave's ESL Café, The English Zone, Randall's ESL Cyber Listening Café, Interesting Things for ESL Students, and Activities for ESL Students.

Afterwards, authentic printed material in teaching speaking are found in the course book and the 5 major types are photos, pictures, images, articles, and a map. The uses of printed materials are used for supporting the videos as the main materials. The printed materials are used as the helper, by giving visual images in reinforcing students' understanding toward the videos. As stated by Berardo (2006, p.63) that the "authentic" presentation, through the use of pictures, diagrams, photographs, helps put the text into a context. This helps the reader not only understand the meaning of the text better but also how it would be used. A more "attractive" text will appeal to the student and motivate them into reading. An "attractive" looking article is more likely to grab the reader's attention rather than a page full of type.

In brief, the three kinds of AMs in teaching speaking are combined in course book and teachers' additional materials that come from the Internet source. However, there are many sources from the Internet that teachers could find in teaching speaking. From selected websites,

teachers might take useful AMs and combine them with course books in order to support the teaching-learning activity.

6. Conclusion

Authentic Materials mastery is one of the most important abilities in teaching speaking; the materials can be classified into three types: audio, audio-visual, and printed material. They are mainly used in the opening and main stages combined with a range of speaking activities. The results of this research show that the three kinds of AMs in teaching speaking are combined in course book and teachers' additional materials that come from the Internet source. Further, there are boundless sources from the Internet that teachers could find in teaching speaking. From selected websites, teachers might take useful AMs and combine them with course book in order to support teaching-learning activity.

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EXPLORING THE RELATIONSHIP BETWEEN THE BELIEFS AND PRACTICES OF INSTRUCTORS ABOUT ORAL CORRECTIVE FEEDBACK IN EFL CLASSES: A CASE STUDY FROM TURKEY

Case Study

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Abstract

Although many studies were conducted on stated beliefs and observed practices of oral corrective feedback (OCF) in language classes, relatively little is known about the actual relationship between them. Therefore, this study focused on the relationship between the teachers' stated beliefs and observed practices of oral corrective feedback (OCF) to explore how beliefs and practices interact. The participants of the study were four Turkish EFL instructors coming from English Language Teaching (ELT) and Translation and Interpreting Studies. The data were collected through a questionnaire, classroom observations, and interviews. The results showed that the participants' stated beliefs and observed practices held some inconsistencies. These inconsistencies were explained by different factors stated by the participants during the stimulated recall sessions. The content knowledge of OCF and the proceduralization of this knowledge have been found to be the indicators of this inconsistency. In addition to highlighting these different factors on the study of OCF, this study presents the insights for the integration of OCF in EFL classes.

Keywords: teacher cognition, oral corrective feedback, EFL

1. Introduction

Oral corrective feedback has become one of the most disputable topics of current teaching methodologies. The type of feedback, the mode of feedback, proficiency level of students, teachers' educational background, feedback setting, attitudes towards feedback, the timing of feedback and length of feedback are the most investigated sub-topics of OCF. Nearly most of the scholars elaborate on the effectiveness of OCF (e.g. Mackey & Goo, 2007; Russell & Spada, 2006). Some scholars have conducted much research on the subject to offer positive evidence for OCF. In their research, Ammar and Spada (2006) reported that the learners who were provided OCF performed better than those who did not. Along with these proponents, some researchers (e.g. Carroll, 1997) accept L2 learning as the same process with L1 acquisition while others (Russell & Spada, 2006) highly recommend OCF in language classes and claim that it has considerable amount of contribution to the interlanguage development.

With the publication of six corrective feedback types (explicit correction, recast, clarification request, metalinguistic feedback, elicitation, and repetition) by Lyster and Ranta (1997), the foci of OCF studies have moved to the types of OCF. All features of OCF such as feedback type (Kamiya, 2014; Mori, 2002), timing of feedback (Basturkmen et al., 2004), length of treatment and interlocutor type (Dong, 2012) have been examined in studies. In one of these studies, Li's (2010) meta-analysis grouped interlocutors into three broad types: a teacher, a native speaker, and a computer. In most research, literature has focused on teachers as the most prevalent feedback provider since they are the most common interlocutors. Several attempts have been made to clarify what type of feedback they use and their beliefs of OCF are.

The global economy requires more people in the expanding circle of English to learn English, hence the need for more English teachers. With the increasing demand of English teachers, the profile of English teachers has changed and broadened. Native speaker (NEST) or non-native speaker (NNEST), experienced or novice, and ELT graduate or non-ELT graduate teachers have become primary concerns in teacher profiles. In a considerable amount of studies, the dichotomy of NEST vs. NNEST and novice vs. experienced teacher has become a central issue in OCF analysis. However, the effect of different educational backgrounds (ELT vs. non-ELT) has been ignored. To fill this gap, this study investigates the relationship between teachers' knowledge of OCF and their use of OCF observing their use of OCF in pre-intermediate preparatory classes at a foundation university context in Turkey.

2. Literature Review

2.1. Definition and Types of OCF

Lightbown and Spada (2006) define corrective feedback as any feedback indicating to learners that their output is incorrect. Along with this definition Ellis (2009) describes OCF as any kind of response to student's wrong utterances. In their study, Su and Tian (2016) identify four different constructs of OCF: the provider of feedback (teacher, classmate and a competent person in the target language), the receiver of feedback (learner), the purpose of feedback (to reinforce language teaching) and the type of corrective feedback (depends upon teachers' perception and needs of the learner) (Su & Tian, 2016).

Lyster and Ranta (1997) claim that only comprehensible input is not adequate in language classes and students should be provided with negative evidence based on their observations in French immersion programs in Canada. Therefore, they grouped six different oral corrective feedback types for SLA classes: explicit correction, recast, clarification request, metalinguistic feedback, elicitation, and repetition.

2.1.1. Explicit Correction

It states the learner's mistake explicitly and provides the correct utterance. For instance,
Learner: In Tuesday.

Teacher: Not in Tuesday, on Tuesday. We should say "I will come on Tuesday."

2.1.2. Recast

It refers to reformulate the wrong utterance of the learner indicating that learner's utterance was incorrect without explaining it. For instance,

T: I didn't see you yesterday. Why didn't you come?

L: sick.

T: Ohh, you were sick yesterday.

2.1.3. Clarification Request

It tries to clarify the utterance of the learner with a question or a phrase. For instance,

L: I came go.

T: What?

2.1.4. Metalinguistic Feedback

It proposes a short metalinguistic explanation for learner's wrong utterance. For instance,

L: I eated chicken yesterday.

T: Eat is an irregular verb.

2.1.5. Elicitation

It leads the learner to correct their own mistake by prompting them. For instance,

L: I will come, if I will finish my homework.

T: I will come, if I.....?

2.1.6. Repetition

It repeats the wrong form of the learner with intonation. For instance,

L: She drink milk every day.

T: She DRINK milk every day.

2.2. Research on Teacher Beliefs of OCF

Over the past two decades, a lot of research has been conducted to identify the effects of OCF in EFL (Olmezer-Ozturk, 2016; Roothoof, 2014) and ESL (Kamiya, 2014; Mori, 2002) context. In the light of these studies, many researchers (Russel & Spada, 2006; Li, 2010; Lyster & Saito, 2010) indicated the benefit of correcting a wrong utterance or implying a mistake in language classes. They assert that using six OCF types in the classroom develops speaking abilities of learners. Also, Lyster et al. (2013) propose oral OCF as a facilitator reinforcing oral skills for the target linguistic form in the input. According to the study of Mendez and Cruz (2012), conducted on 45 university instructors, 80 % of instructors advocate the positive effect of oral OCF in the classroom, and Sepehrinia and Mehdizadeh (2018) claim that not all OCF types facilitate student learning in the short run, but they are helpful in the long run.

To have an in-depth investigation of the types of OCF used in the classroom, some studies have been carried out (Lyster, Saito, & Sato, 2013; Basturkmen, Loewen, & Ellis, 2004; Dong, 2012). Regarding these studies, it was concluded that most of the teachers prefer using various corrective feedback types in their classes. As regards a considerable amount of research, recast was found to be the most common OCF among the other types and it was assumed to help improve L2 use (Lyster & Mori, 2006; Lyster & Ranta, 1997). To observe its long-lasting effects Long, Inagaki and Ortega (1998); and Mackey and Philp (1998) conducted research both in laboratory and classroom contexts. As a consequence of these studies, not all results supported the positive impact of recast in classes although recast was found to be the most commonly used OCF by teachers. Some of the findings maintained the benefits of recast referring to its practical application in the classroom as it saves time. However, others (Lyster, 2002; Li, 2014) rejected recast claiming that it is not obvious in lower levels and students do not prefer it since it does not integrate them into the learning process as much as elicitation and clarification request do. Yoshida (2010) emphasizes that teachers are aware of recast's ineffectiveness, but they use it because it prevents fear among students.

Whilst many of the studies have been carried out types of OCF, only few studies have investigated other types of OCF apart from recast. With regard to this limited literature, some studies approved the positive beliefs of teachers towards elicitation. They claimed that elicitation increases participation of students, especially in lower levels. However, Ammar and Spada (2006) stated that elicitation is not helpful for beginners, but it is more beneficial for advanced learners. Also, Lochman's study (2002), conducted in the classroom context, found out that metalinguistic feedback and elicitation have 98% of success rate in language classes.

2.3. Background to the Study

A number of studies have examined teachers' belief of OCF and found out different beliefs of OCF. With the recent trend of classroom research, the classroom practices of teachers started to be observed. The findings of the classroom research have reported a dichotomy of a consistency between beliefs and practices (Kamiya, 2014) and an inconsistency between stated beliefs and observed practices of teachers on OCF (Karavas-Doukas, 1996; Basturkmen, Loewen, & Ellis, 2004; Farrell & Lim, 2005). Based on preliminary research exploring the inconsistency, various perspectives have been addressed: native or non-native status, novice or experienced teacher dichotomy and educational backgrounds of teachers.

Native and non-native status is a highly disputed topic regarding OCF. However, this difference was not analyzed in Turkish EFL setting commonly. Demir and Ozmen (2017) observed seven native and non-native English teachers in Turkey and concluded that these teachers have salient differences regarding their tolerance of feedback, timing and amount of feedback and type of feedback.

Another dichotomy mentioned in studies is experienced vs. novice teachers' OCF use. The results of a great amount of research indicated that novice teachers have more inconsistencies between their OCF beliefs and practices (Basturkmen, Loewen & Ellis, 2004). Oakeshott (1962) attributes that lack of inconsistency to the proceduralization of knowledge developing with the experience. Another research by Kamiya (2014) supports the claim with her findings that inconsistency between teachers' stated beliefs and classroom practices decreases while teaching experience increases. On the other hand, Pouriran and Mukundan (2012) refuted those findings with their research on the frequency of oral OCF among experienced and novice teachers in EFL setting. According to their results, the use of oral corrective feedback among experienced teachers was more frequent compared to novice teachers.

The effect of teacher education on OCF has been investigated in few studies (Kagan, 1992; Richardson, 1996; Freeman & Richards, 1996). Their educational background was examined under the title of individual differences (Mackey, Polio & McDonough, 2004).

As summarized in the literature review part, there is an inconsistency between what teachers believe and do in the class regarding oral corrective feedback. As the reasons for this inconsistency, native vs. non-native status, novice- experienced teacher dichotomy and educational background of teachers were emphasized. However, the relationship between teachers' knowledge of OCF and how they provide corrective feedback has not been studied in the Turkish EFL context. Therefore, it is necessary to conduct further research to understand the reasons for the preference of different OCF types by EFL teachers from different educational background in Turkey. To address this gap in previous research, the relationship between teachers' perception of oral OCF and their educational backgrounds was searched observing their use of corrective feedback in Turkish EFL setting.

The following research questions were examined in the present study:

1. What are the corrective feedback beliefs of the participant EFL instructors?
2. What kind of corrective feedback do the participant EFL instructors integrate into their classes?
3. Is there an inconsistency between their stated beliefs and observed practices in terms of OCF?
4. What are the factors that lead to inconsistency between participants' stated beliefs and observed practices?

3.Method

This study uses qualitative approach including an observation, the following questionnaire, and a stimulated recall session to gain insights to OCF beliefs and practices of teachers.

3.1. Participants

Four non-native English instructors with L1 Turkish from a foundation university volunteered to participate in this research. Based on their educational backgrounds, the teachers were divided into two categories: (a) instructors who are both BA graduates and MA students currently in Translation and Interpreting Studies Department of a public university in Turkey (b) instructors who are both BA graduates and MA students currently in English Language Teaching Department of a public university in Turkey. One of the Group A teachers did not attend any English language teaching courses at institutes or university, and one of them took a course for language teaching while group B teachers completed all of English Language Teaching Must Courses during their university education. . Teachers from translation studies department were one male and one female having three years of teaching experience. Teachers from the English Language Teaching Department were females having teaching experience from 1 to 2 years. The average of ages in Group A ranges from 28 to 30. The average of ages in Group B ranges from 22 to 24. Criteria for selecting subjects were to determine whether there is an effect of the departmental difference on the use of oral corrective feedback in Turkish preparatory class setting. There were 19 students in each class and all students were aged between 17 and 20. Pre-intermediate classes were chosen to observe for their need to be corrected because of their lack of vocabulary and grammar knowledge at this level.

Table 1. *The categories of participants*

	B.A.	M.A	Certificates	Experience
Ali	Trans.and Interp. Studies	Trans.and Interp. Studies	Yes	3 years
Ebru	Trans.and Interp. Studies	Trans.and Interp. Studies	No	3 years
Öykü	English Lang. Teach.	English Lang. Teach.	Yes	2 years
Pelin	English Lang. Teach.	English Lang. Teach.	Yes	1 year

3.2. Instrumentation

For the observation part, the class was in its natural setting. New Success Pre-intermediate student book was the course book, and grammatical forms and vocabulary covered in the lessons were coherent with the book. The lessons were voice-recorded with a tape-recorder to capture teacher and student voices.

The questionnaire was an adapted version of Yuksel (2018, unpublished). (See Appendix). It aimed to define instructors' stated beliefs about oral corrective feedback and the type of oral corrective feedback they use in the class. The questionnaire included items in figuring out what type of OCF the participants would use to correct student mistakes in the classroom. In stimulated recall part, the oral corrective feedback types that instructors used in the natural classroom setting were used to gain insights to reasons of the selection.

3.3. Procedures

The current study includes three main parts: an observation, a questionnaire, and an interview. The data was collected from four instructors from the Foreign Languages School of a private university in one of the major cities of Turkey. Before the study, the required permissions from the institution and the participants were obtained. Foreign Language Schools provide one year of English education in English-medium universities. In this university, there are four levels: elementary, pre-intermediate, intermediate and upper-intermediate and students are categorized by their English level tested by Proficiency Exam at the end of each module. Majors of the students are not taken into consideration in class formation. Four skills are integrated into the classrooms and students are responsible for each of these skills in Proficiency exam. The classes are divided into two: main course classes including speaking, listening and reading skills, and writing classes. Each level is taught 19 hours of main course and 6 hours writing classes. To have consistency, instructors were observed during the main course classes. Teachers were not told that the aim of the study was to observe OCF, because this would change teachers' OCF preference. As each level followed the same pacing schedule, the topics, vocabulary and grammar points were the same in all classes. In order to carry out the study, each instructor was observed for 1 slot (45 minutes) during the same week. Immediately after the observation teachers were provided with a questionnaire to identify their corrective feedback beliefs. To prevent the biases of research and priming, the questionnaire was given after observation. Participant did not get any information about the research before observation. At the end of each day, teachers were interviewed by the researcher in stimulated recall session to investigate them why they had applied such correction strategies in their classes. To reduce common pitfalls of time the Stimulated Recall interviews were carried out immediately after the observation (Mackey & Gass, 2005).

3.3.1. Research Setting

English Language Teaching has two different settings: EFL (English as a Foreign Language) and ESL (English as a Second Language). In the EFL setting, students do not learn the language as a way of communication in their linguistic community (e.g., an L1 Turkish speaker learning English in Turkey). In the ESL setting, students learn the language as the way communication in their linguistic community (e.g., an L1 Turkish speaker learning English in England). According to Li (2010), the research setting determines the type of feedback used in the classroom. Loewen et al. supported this idea with the research conducted among SL and FL learners, and he concluded that FL context is more appropriate for language correction and corrective feedback (Loewen et al., 2009). In the present study, students learn English in the EFL setting. They are all Turkish students who live in Turkey where English is taught as a foreign language.

3.3.2. Research Context

Research in the area of feedback has been conducted both in laboratories and classrooms. Li (2010) states that laboratory context is freer from distracters and does not leave a space for corrective feedback. On the other side, classroom context is a better place for natural observation of the use of corrective feedback types. In the current study, pre-intermediate classroom context was used to be able to observe the classroom interventions.

3.3.3. Educational Background

ELT graduates are teachers who got their degrees from the English Language Teaching Departments of Education Faculties of universities in Turkey. They all successfully completed L1 and L2 Acquisition in Adults and Young Learners, Current Teaching

Methodologies in SLA and Micro-Macro Teaching Courses. Non-ELT graduates are teachers who got their degrees from Translation and Interpreting Studies, Linguistics, English Language and Literature, American Language and Literature Departments of the Faculty of Arts and Sciences. They do not get any formal teaching education courses.

3.4. Data Analysis

The analysis of data includes the analysis of questionnaire results, coding observation results (transcription of observation data and determining OCF types), coding stimulated recall memos and theorizing (interpreting data and drawing conclusions). The data were analyzed regarding the taxonomy of OCF (explained below) and cross-checked by a colleague with M.A. degree in ELT and suggested in the current literature part on OCF (Lyster and Ranta, 1997). Questionnaire items were coded according to Lyster and Ranta(1997) taxonomy. (An example of item analysis criterion was provided below.) The results of the questionnaire were given in numbers and percentage. For the stimulated recall and observed data results, thematic analysis was used. Braun and Clarke (2006) define thematic analysis as the method that analyses and describes the elements inside the data in qualitative studies.

Example 1:

Teacher: What did you do at home last night?

Student: I goed home late so I couldn't do much.

A) Teacher: No, not goed, went. (Explicit Correction)

B) Teacher: You went home late? Why? What did you do? (Recast)

C) Teacher: I am sorry? (Clarification Request)

D) Teacher: You need to use the past form of the verb (Metalinguistic Feedback)

E) Teacher: You... (pausing)? (rising intonation) (Elicitation)

F) Teacher: I GOED home late. (stressing the mistake, with rising intonation)(Repetition)

4. Results

4.1. Pelin

Table 2. *Amount and types of oral corrective feedback stated in the questionnaire and observed in the lesson*

	Stated Belief		Observed Practice	
	Nr of OCF	% of OCF	Nr of OCF	% of OCF
Repetition	2	20%	0	0%
Metalinguistic Feedback	3	30%	1	3%
Recast	3	30%	14	45%
Elicitation	2	20%	8	26%
Clarification Request	0	0%	2	7%
Explicit Correction	0	0%	6	19%

According to questionnaire results, she mostly prefers metalinguistic feedback (30%) and recast (30%). Repetition (20%) and elicitation (20%) are the second most used OCF though their numbers are less than previously mentioned ones. She does not favor clarification request and explicit correction. When her observed practice is examined, recast (45%) and elicitation (26%) are the mostly used OCF in her class which does not contradict with her stated belief. However, metalinguistic feedback (3%) is the least used OCF in her observed class although it is the most preferred one in the questionnaire. What is more, she chooses repetition more than one time in her stated belief; still, there is no place for repetition in her observed practice. Furthermore, she uses explicit correction and clarification request although she does not prefer them in her stated belief.

When Pelin was asked about her corrective feedback decisions for grammar mistakes during stimulated recall session, she stated that they are generally quick decisions and she was unable to notice why she used that specific OCF type. Although she explained that she generally prefers explicit OCF for grammar mistakes due to students' expectations and needs, this statement was not consistent with her observed data results.

Her common OCF was for pronunciation mistakes and recast was the mostly used OCF type for these mistakes. When she was asked about that, she stated she knows recast is not useful in the classroom and explicit feedback is more effective than implicit, yet she still uses it without realizing. She described recast as her pitfall likening recast to spoon-feeding, but she defended her action stating there are many problematic sounds like –th in English for Turkish students. As she teaches in EFL context, she feels that she needs to correct pronunciation mistakes arising from these problematic sounds that will lead to vocabulary misunderstanding as she was the only source for her students. Her students are not prone to check their correct pronunciations, so she is trying to raise awareness of these different sounds without losing time and uses recast. Also, as she had a professor at the university who was sensitive about phonetics and phonology she feels responsible for correcting her students' pronunciation mistakes since this is the way she was taught. When she was asked other forms of OCF, she does not change her feedback choice.

She explains her OCF was affected by her English Language Teaching Education. With the help of the lessons that she took during her education, she knows the specific names of OCF types emphasizing the studies about the effectiveness of them. When she was asked the substitutive types, she could easily find other OCF, yet she chose to keep the ones that she provided in the class as they were more convenient at that time.

Example 1:

S: Do you know this object?

T: Television. (Wrong pronunciation, they are very similar in L1 and L2)

T: So?

S: Television. (Correct Pronunciation)

The teacher's recall:

“They are cognates, and they sometimes create big problems, I try to make them aware of these cognates with elicitation.”

4.2. Öykü

Table 3. Amount and types of oral corrective feedback stated in the questionnaire and observed in the lesson

	Stated Belief		Observed Practice	
	Nr of OCF	% of OCF	Nr of OCF	% of OCF
Repetition	3	30%	3	20%
Metalinguistic Feedback	4	40%	0	0%
Recast	2	20%	6	40%
Elicitation	0	0%	2	13%
Clarification Request	0	0%	1	7%
Explicit Correction	1	10%	3	20%

In her questionnaire results, metalinguistic feedback (40%), repetition (30%), recast (20%) and explicit correction (10%) are the chosen OCF types. She did not prefer elicitation and clarification request in her stated belief. However, recast (40%) was the mostly used OCF in her observed practice, and she never mentioned metalinguistic feedback. Repetition (20%), explicit correction (20%), elicitation (13%) and clarification request (13%) were observed in the classroom. Although metalinguistic feedback was the most preferred OCF in her stated belief, she never used it in her observed practice. Furthermore, she used clarification request and elicitation which were not selected in the questionnaire.

She did not correct every mistake in the classroom environment. As the reason for it, she stated that she corrects the oral communication mistakes that will lead to a huge communication problem. During her lesson, she gave OCF to the whole class instead of giving to every student one by one during pair work. She believes giving whole class feedback is more effective than giving one by one feedback while monitoring their frequent mistakes.

She used recast to correct all of the pronunciation mistakes. When she was asked about she affirmed that she does it by purpose. With high intonation, she indicates that there is something wrong in student's utterance without losing time. Also, she used clarification request in one of the pronunciation, and she explained that she does not want to offend students with the direct answer and tries to do it more funnily. However, she indicated that she does not use recast for grammar mistakes instead she emphasizes explicit feedback types like metalinguistic feedback which is inconsistent with her observed practice but consisted with her stated belief. When she was showed the example of a recast for grammar mistake from her teaching, she explained that she was not teaching grammar in that point and the topic was not grammar, so it was not necessary to use explicit correction.

She was familiar with the OCF types from the courses she took during her English Language Teaching Education. In grammar teaching lessons, the type of feedback and their effectiveness on mistake types were taught to her, so she was confident while explaining her OCF choices based on the theories that she learned during these courses. Also, she explained that she knows which OCF will lead to more uptake rate, so she tries to use these OCF types in her class.

Example 1:

S: Frozen.

T: Frozen! (rising intonation)

S: Freezer.

The teacher's recall:

"The mistake was very obvious and easy to notice for the student, and I used implicit feedback type here."

Example 2:

S: They are keep on eating vegetables.

T: They keep on vegetables. (Recast for a grammar mistake)

The teacher's recall:

"Because we were focusing on speaking here and the topic was not related to grammar. We were talking about our different diets. I mean it wasn't necessary to use it."

4.3. Ebru

Table 4. *Amount and types of oral corrective feedback stated in the questionnaire and observed in the lesson*

	Stated Belief		Observed Practice	
	Nr of OCF	% of OCF	Nr of OCF	% of OCF
Repetition	3	30%	3	27%
Metalinguistic Feedback	0	0%	0	0%
Recast	2	20%	1	9%
Elicitation	5	50%	5	46%
Clarification Request	0	0%	0	0%
Explicit Correction	0	0%	2	18%

She was the most consistent teacher with her OCF choices both in her stated beliefs and observed practices despite her lack of language teaching education. Elicitation (50%) has the greatest per cent and respectively repetition (30%) and recast (20%). She did not select metalinguistic feedback, clarification request and explicit correction in the questionnaire. In line with the occurrence frequency of her stated beliefs, elicitation (46%) is the first mostly used OCF type and repetition (27%) is the second most used in her observed practice. Only contrast between her stated belief and observed practice is the use of explicit correction. Although she never preferred explicit correction in her stated belief, she used it in her observed practice.

When she was asked about her OCF choices, she explained the reason for using elicitation by referring to her previous lessons. As students learned the correct utterance before, she makes them remember their previous knowledge. Recast was used only for new vocabulary.

She does not know specific names and differences of OCF types and she did not take a special education about them. Nonetheless, she benefits from her own earlier learning

experience. She selects her feedbacks regarding her previous expectations from her teachers about OCF. Also, she asserted that her teaching experience shaped her OCF strategies.

4.4. Ali

Table 5. Amount and types of oral corrective feedback stated in the questionnaire and observed in the lesson

	Stated Belief		Observed Practice	
	Nr of OCF	% of OCF	Nr of OCF	% of OCF
Repetition	0	0%	1	8%
Metalinguistic Feedback	0	0%	0	0%
Recast	3	30%	9	69%
Elicitation	6	60%	0	0%
Clarification Request	0	0%	3	23%
Explicit Correction	1	10%	0	0%

Elicitation (60%), recast (30%) and explicit correction (10%) are the mostly selected OCF types in his questionnaire. He did not prefer repetition, metalinguistic feedback and clarification request. Still, when we look at his observed practice, his most common OCF is recast (69%). Clarification request (23%) and repetition (8%) follow recast. In contrast to his stated belief, he never used elicitation or explicit correction in his observed practice, and he used clarification request in his observed practice although he did not choose it in his stated belief.

If he is aware of that student knows the correct answer, he uses repetition to make them understand their mistake. Yet, if students do not know the answer he prefers recast not to waste time. In his lesson, clarification request was common. When it was asked, he explained that he used it by purpose because students were learning clarification request utterances at that time. Due to that, he wanted to emphasize them by using these questions in his OCF types.

For pronunciation mistakes, he uses recast over and over again as he believes that they will learn when he emphasizes the mistakes every time. However, he ignores some of the students' mistakes since students' will be embarrassed and start to think about making a mistake during their conversation which decreases their fluency.

Example 1:

S: I goes to seminar.

T: You went to a seminar.

Teacher's recall:

"Actually, I waited here, but she was not aware of her mistake. I just say it, then she was aware of her mistake."

4.5. The Teachers' Stated Beliefs and Observed Practices of OCF

Table 6. *Amount and types of oral corrective feedback stated in the questionnaire and observed in the lesson*

	Stated Beliefs						Observed Practice					
	Expl Cor	Rep	Metal Feedb	Recast	Clari Requ	Elici	Expl Cor	Rep	Metal Feedb	Recast	Clari Requ	Elici
Ali	1	0	0	3	0	6	0	1	0	9	3	0
Ebru	0	3	0	2	0	5	2	3	0	1	0	5
Öykü	1	3	4	2	0	0	3	3	0	6	1	2
Pelin	0	2	3	3	0	2	6	0	1	14	2	8

Regarding the current data, three teachers (Ali, Ebru, and Öykü) had the nearly same amount (11) of OCF in their classes while Pelin had two times more OCF. They all believe the effectiveness of feedback: Ali (70%), Pelin (75%), Ebru (90%) and Öykü (90%). All of them have inconsistent data regarding their stated beliefs and observed practices. In ELT group teachers, metalinguistic feedback is the commonly selected OCF in stated beliefs, while in practice they used recast and elicitation. For example, Pelin chose commonly recast and metalinguistic feedback in the questionnaire, but she did not use metalinguistic feedback in her class. Öykü preferred metalinguistic feedback in the questionnaire, yet she used recast mostly in the class. Between translation studies teachers, elicitation was the most elected OCF in their stated beliefs. However, they had different practices in their classrooms; Ali used recast while Ebru chose elicitation. Although Ebru had one inconsistent item in her data, against she is the teacher that had the most consistent stated belief and observed practice data concerning their number.

Regarding their stimulated recall data, all of them seemed to have formed their own beliefs of OCF and applied them into their classes. The only difference between translation and ELT graduates was the knowledge of OCF types. While ELT graduates knew the effectiveness of OCF types, the translation studies graduates were not aware of their functions. Nonetheless, when we look at their practices, in both groups there were inconsistencies in terms of their beliefs and practices.

Regarding the numbers of OCF, Pelin who is less experienced than other teachers had twice more OCF. This situation may be attributed to the proceduralization of knowledge (Oakeshott, 1962). However, the experience could not be counted as the differentiating variable for the inconsistency of stated belief and observed practice as all teachers with different experiences have inconsistency between their beliefs and practices in the present study.

Recast was the most frequent OCF type their observed data. Ali, Öykü and Pelin indicated that they prefer recast to correct pronunciation mistakes. Also, Öykü and Pelin (ELT graduates) stated that they prefer explicit OCF for grammar mistakes, but this explanation was not coherent with their practice. Ali and Ebru (non-ELT graduates) matched recast to present new knowledge to save time.

5. Discussion

The current study indicates inconsistency related to the participants' stated beliefs and observed practices contrary to previous studies that pointed out consistencies between stated

beliefs and classroom practices of OCF among EFL teachers (e.g., Kamiya, 2014). 2 ELT graduates and 1 Translation Studies graduate with a pedagogical certificate had more significant inconsistencies, while 1 Translation studies graduate had relatively more consistent data. This situation implied one possibility regarding their educational backgrounds. Teachers who have knowledge about OCF were aware of the effectiveness of OCF types and knew how they should correct the specific student mistake, so they could monitor their knowledge and choose the most applicable feedback types since they had enough time to monitor their OCF knowledge during the questionnaire. Nonetheless, in the classroom practice as they do not have enough time they could not apply their knowledge to their teaching behaviors and use the most common OCF type(recast) in line with the findings of Lyster and Ranta, 1997. On the other hand, one participant from Translation Studies was not knowledgeable about the OCF taxonomy of Lyster and Ranta (1997) or the effect of OCF types, but her observed and stated beliefs were entirely consistent. The reason for it may be attributed to her lack of knowledge of different types of OCF. Therefore, she preferred the same OCF in the questionnaire as the one that she used in the class. The only input for her choice of OCF was her previous learning experiences. The result can be related to her own learning experience. This study supports the hypotheses that there cannot be a perfect match between teachers' stated beliefs and observed practices of OCF (Basturkmen, Loewen, & Ellis, 2004). Novice-experienced teacher differentiation was not found applicable in terms of stated belief and observed practice inconsistency. It was just logical the number of OCF provided by the less experienced teacher.

5.1. Limitations

The present research has some limitations regarding the methodologies and research design. The author could collect the data just for one lesson due to time restriction of school rules, but it would be more useful to collect longitudinal data as the relationship between stated beliefs and observed practices can change. The author needed to listen to the recorded tapes of each observed lesson before the stimulated recall sessions, so it was not possible to carry out the interviews immediately after class. Due to this, stimulated recall sessions had to be conducted the next day of the observation, which did not cause any retrieval problem and participants could remember what they had been thinking about during OCF episodes.

Regarding the data analysis, as all studies including self-reported data inevitably do, the analysis needed my assumptions. The research design of stimulated recall sessions, as well as the audio recording of the classes, resulted in a small number of voluntary participants and lessons. Although the objective of the present study is not to generalize the results, teachers' OCF beliefs and practices will definitely need to be further explored in more participant numbers with a longitudinal design with the immediate stimulated recall.

Despite the above limitations, the present study had significant findings concerning the inconsistency between teachers' OCF beliefs and practices. The data were collected with multiple methodologies: classroom observation, audio-recording of the classes, questionnaire and stimulated recall sessions with the teachers. The data of audio-recording and the teachers' retrievals in their stimulated recall sessions were carefully analyzed benefiting from the detailed notes of the classroom observation, referring to the contexts in which OCF occurred.

Interpretation of the data was repeatedly reviewed during the process of data analysis and changed when necessary. Consequently, the combination of audio recording the classes with the retrospective method and teacher questionnaires provided more useful data for more in-depth analysis of the inconsistency between teachers' stated OCF beliefs and observed practices and their reasons.

6. Conclusion

Stimulated Recall Sessions were fruitful and longer with English Language Teaching graduates as they have the knowledge of OCF to be able to discuss and explain. Their data were rich in terms of the contribution to the study results. They could name all OCF types and indicate what kind of OCF was helpful for the specific mistakes in the classroom. Nonetheless, their education was not indicative in their classroom practices. Although they have the knowledge of OCF stated in the questionnaire and stimulated recall sessions, they could not apply this knowledge into the classroom. This inconsistency can be explained with the proceduralization of knowledge of the teachers (Oakeshott, 1962). As they have the knowledge of OCF, they try to apply their knowledge into their practices, but they are still in the process of internalization of OCF knowledge. However, one participant from Translation and Interpreting Studies could not attach to the conversation during the stimulated recall session as she did not have a full command of OCF terminology. She could not explain the reasons of her OCF choices and attributed them to her previous learning experiences.

Finally, the present study showed the inconsistency between stated beliefs and observed practices of OCF regarding teachers' educational backgrounds. The researcher sincerely hopes that the current study contributes to the area.

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THE PERCEPTIONS AND PREFERENCES OF 8TH GRADE STUDENTS IN DIGITAL STORYTELLING IN ENGLISH

Research Article

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THE PERCEPTIONS AND PREFERENCES OF 8th GRADE STUDENTS IN DIGITAL STORYTELLING IN ENGLISH

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Abstract

Digital storytelling is the focus of the present study due to scarcity of studies in Turkey. This study investigates the perceptions of 8th grade students on the integration of technology via Digital Storytelling to English courses. Another aim is to find out students' preferences for topic and characters in their digital stories. The study was conducted with 15 students in a public school. The data were collected through pre-survey, digital stories, and post-survey. The study was carried out in a month period in which 5 different digital stories were created. The findings based on qualitative and quantitative analysis indicated that the perceptions of the participants toward the use of digital storytelling in English lessons were positive before and after the implementation process with no significant difference between them pre and post-tests. In general, the participants wanted to keep using digital storytelling because they believed digital storytelling is motivating, contributes to language learning, and enables collaboration. The topics preferred were adrenalin, love, sadness, friendship, and fear. The characters were generally female heroines. The implications are that digital storytelling can be integrated into speaking, listening, grammar, vocabulary and writing activities since it is an engaging way of practising language skills.

Keywords: Digital Storytelling, Students' Perceptions and Preference, Pixton

1. Introduction

With the advent of technology, there have been lots of attempts to integrate technology into courses for educational purposes. This leads us to the term "Computer Assisted Language Learning". Computer Assisted Language Learning (CALL) is defined as "the search for and study of applications of the computer in language teaching and learning" (Levy, 1997). Now, CALL is in the phase called "integrative CALL" following the behaviourist and communicative phases (Warschauer, 1996). In this phase, Web 2.0 tools play an important role. They are online software and applications which enables communication, interaction, collaboration, creation of new contents with images and audios, editing, having social networks and sharing (Alexander, 2006). Blogs, wikis, social networking sites and digital story tools can be considered as examples of Web 2.0.

The field of English as a Second Language has been affected by this trend as well (Blake, 2007; Chappelle, 2003). Hence, there has been a change in language teaching practices (Blake, 2007). Information and Communication Technologies (ICT) have created great opportunities to make use of digital tools for teaching English. There have been various instructional tools integrated into English courses. One of these tools which has emerged over the last ten years is digital storytelling. Digital storytelling is the practice of combining still images with a narrated soundtrack like voice and music or computer-generated text (Bull & Kajder, 2005; Robin, 2008). It enables learners to tell their story in a digital way. As this age's students are called 'Digital Natives (Pyrensky, 2001a, 2001b) and are fond of technological tools and applications, Digital Storytelling can be an appealing way to teach English to them. It can be even way more appealing if we let them create their own stories via Digital storytelling websites and applications because it engages these students through their learning process

(Campbell et al.,2001; Robin, 2016). As they create their own stories, they are not passive receivers yet active creators in the learning environment (Niemi & Multisilta, 2016). In addition, students can practice their language skills, reading, writing, listening, and speaking. Instructional tools also back up students' creativity, critical thinking, meaning construction, independent learning, and motivation (Grgurović & Chapelle, 2008). Ultimately, a learning environment which is collaborative, flexible, and effective can be formed via technological tools (Sadik, 2008).

2.1. Literature Review

2.1.1. Theory Behind Digital Storytelling

A learning theory refers to the attempt to explain how learning occurs, and a paradigm to understand what the learning process includes basically (Hill, 2002). The learning theory behind Digital Storytelling is Constructivism which "proposes that learning environments should support multiple perspectives or interpretations of reality, knowledge construction, and context-rich, experience-based activities." (Jonassen, 1999).

There are various activities which can be done in a constructivist learning environment. Some include creating concept maps, cartoons, charts, multimedia presentations, and digital stories etc. Thanks to these activities, a learning environment can be transformed into a constructivist one where active, intentional, collaborative, complex, conversational, contextualised and reflective learning occur (Jonassen, 1999). According to Constructivism, the learner should be at the centre of the learning process as they construct the knowledge based on their personal experience (Merill, 1991) and help each other by asking and answering questions and working together to construct the knowledge (Bouman, 2012). Thus, Constructivism forms the foundations of Digital Storytelling for teaching and learning. It can be a beneficial mean of integrating digital media into the process of innovative teaching and learning. In addition to making contributions to the technological skills of the students, it can help teachers design learning environments which allow for engaging activities, collaboration, peer-to-peer communication (Dakich, 2008). As Behmer (2005) emphasized, the combination of digital storytelling and constructivism provides learners with such a learning environment that it makes them make use of their communication and technological skills on a task they are expected to complete in collaboration with their peers. Furthermore, the convergence of student-centred learning strategies proposed by Barret (2005) shows that Digital Storytelling helps and supports these strategies which are student engagement, reflection for deep learning, project-based learning, and the effective integration of technology into instruction.



Figure 1. Convergence of Student-Centred Learning Strategies

2.1.2. Previous Studies on Digital Storytelling

Some studies have been conducted on the use of Digital Storytelling as an instructional tool in English courses so far. The reason is the fact that the language of pictures and music helps lower-level students to communicate when they do not have the necessary language to communicate exclusively in writing (Reinders, 2011).

Seng (2017) investigated 34 primary four teachers' and 116 primary four students' perceptions of storytelling as a teaching and learning tool. Both questionnaires and interviews were administered to both teachers and students. 98.3% of the students expressed that they enjoyed listening to and reading stories, whereas 81 % of them liked acting out parts of the storytelling. However, some teachers did not try to integrate storytelling into their English classes because of lack of training and support from administration. Based on the analysis of questionnaires and interviews, it can be said that there are language and socio-emotional benefits which students can gain from storytelling. Both parties have positive perceptions of storytelling as a language learning tool.

Another research was conducted on the effect of digital storytelling technique on the perceptions of students toward instructional technologies (Balaman, 2016). Twenty students from a public vocational school were divided into seven groups and prepared digital stories. Before and after the implementation, pre and post-tests were administered, and interviews were also performed after the implementation. Based on the analysis, Balaman (2016) claimed that Digital Storytelling had a positive effect on students' attitudes toward education technologies, and it can also increase the level of knowledge and interest upon subject via using the education technologies.

Another study was done by Yoon (2013) to explore the effects of using digital storytelling in English lessons on Korean ELL learners' attitudes and perception toward learning English. Thirty-two 5th grade students took part in a 12-week study. Self-evaluation and lecture review reports were analysed as qualitative data while pre- and post-survey were conducted to collect data on learning attitude and reading comprehension of the students. Digital storytelling had a positive effect on attitudinal changes in learning English, deeper understanding of the lesson, active participation, and led to positive change in student motivation and involvement.

Dollar and Tolu (2015) worked with sixty-three 5th grade students to investigate the implementation of digital story writing in English via Storybird, free online story reading and writing website. The analysis was done based on classroom observation, interviews with the students and their teachers, and the written stories. The results showed that digital story writing can be used as an effective technique to promote writing and there was a positive change in students' motivation and involvement, and they were also eager to continue using it.

One of the studies conducted in Turkey on digital storytelling focused on how 77 junior students of English Language Teaching (ELT) program perceive the world of stories for young learners. Content analysis of EFL students' digital stories for young learners in terms of topic and characters revealed that friendship and philanthropy were the common topic and the heroes were generally male, children or animals (Bozdoğan, 2012).

Smeda (2014) conducted a research to find out the pedagogical aspects of digital storytelling and its effect on students learning. A new e-learning Digital Storytelling (elDist) framework which is based on learners' needs and capabilities was developed. Primary and secondary levels in one Australian school participated into the study. Both teachers and students experienced digital storytelling. In order to collect quantitative data, rubric

evaluation was used while interviews and observations were administered for qualitative data. The findings showed that teachers can benefit from digital storytelling as an instructional tool to design constructivist learning environment. Hence, student engagement can be increased, and educational outcomes can be improved with this approach.

Pixton, a digital storytelling tool, was used to support grammar and vocabulary teaching in a state school located in Ecuador (Cabrera et al., 2018). There were 163 junior high school students and 14 pre-service English teachers as participants. In order to collect data, pre and post questionnaires, pre and post-tests, and observation sheets were applied. While experimental groups took lessons given with the help of Pixton, the control group did not receive any treatment. According to the analysed data, the fact that the experimental group performed better in post-tests proved Pixton to be an efficient mean of teaching grammar and vocabulary in an enjoyable way.

Having discussed these aspects, the aims of the present study are to explore the perceptions of students toward digital storytelling and their preferences of topic and characters and ultimately to promote 21st century skills like Communication and Collaboration (Robin, 2008). There is a need to do research on digital storytelling because there are not many studies conducted in the context of public schools in Turkey. In addition, as the students of this generation are “Digital Natives”, we need to adjust the teaching and learning methods based on their needs and interests. One way of doing this is to integrate digital tools into English Language Teaching (ELT) field. If we are to benefit from educational technology tools, it is of significance that we as teachers need to know which tools work in the classroom environment and what our learners think of these tools as means of teaching and learning English. Moreover, it is also important to gather data to make deductions about the effect of technology integration via digital storytelling on students learning, motivation, engagement and how teaching practices are transformed with this technology integration (Barret, 2005). That is why we need to do classroom research so as to find answers to these questions.

This study was a small scale, empirical study within the scope of public secondary schools in Turkey. The subjects of the study were 8th grade students. They created digital stories via Pixton in collaboration with their classmates and teacher. Pre and post-surveys, and five digital stories created by the students were the main source of the data for this study. The data were analysed to learn about perceptions toward the use of digital storytelling in English lessons and preferences of the students for story topic and characters in their own stories. Based on this ground, the research questions to be addressed were the followings:

1. What are the perceptions of students on the integration of technology via Digital Storytelling to English classes?
2. What are the students’ preferences for topic and character in their own digital stories?

3. Methodology

3.1. Participants

The study was conducted in a public school in the region of Central Anatolia of Turkey. The participants were 15 eighth grade students; eight of them were female (53,33%) while seven of them were male (46,67%). Their age ranged from 13 to 14 ($M=13.33$). They have been learning English since fourth grade. They had two hours of English a week in fourth grade, four hours a week in fifth, sixth and seventh grades. In eighth grade, they had 6 hours of English a week. According to the Turkish Ministry of Education, these students represent the A2 proficiency level of the Common European Framework of Reference for Languages (CEFR; Council of Europe, 2001).

3.2. Data Collection Instruments

For the present study, three data collection instruments were used: a pre-survey, digital stories created by the students, and a post-survey.

The pre-survey was designed for collecting demographic data and data on experience in technology, finding about the students' readiness and perceptions toward technology integration through digital storytelling into English courses. The Part A and Part B in pre-survey were adapted from a previous research conducted by Cirit (2015) on the perceptions of the ELT pre-service teachers on the integration of web 2.0 tools to the courses for alternative assessment. There were three sections in pre-survey: Demographic information and experience in technology (PART A), Perceptions of technology (PART B), Open-ended questions (PART C). In the demographic data and experience in technology part, the subjects were expected to fill in the parts asking for their age, gender, their experience in internet technologies, their proficiency in computer use, how long they have been using computer, how they access the internet, the purpose of their computer use, and their experience in digital storytelling, and with which tools and how many times they have experienced digital storytelling. Part B was designed on a four-point Likert scale with values ranging from 1 to 4. One stands for "Totally Disagree" while 4 stands for "Totally Agree". In total there were 10 statements in part B. The subjects were posed questions about their perceptions of the integration of technology via Digital Storytelling to English lessons. In Part C, 2 open-ended questions were included about their favourite topic for story writing and which type of stories they like most so as to explore their preferences for topic in story writing.

The second data collection instrument was digital stories created by the students in collaboration with their friends and teacher via Pixton, which is an online digital storytelling tool. There were five digital stories which were analysed in terms of topic, and characters.

The post-survey was the last data collection instrument. The post-survey consisted of three sections: demographic data and experience in technology (Part A), perceptions about technology integration via digital storytelling (Part B), and open-ended questions and suggestions (Part C). In the demographic data and experience in technology section, the items were the same as the items in pre-survey. In the second section, the participants revealed their perceptions about the integration of technology with a digital storytelling tool called Pixton into English lessons. Ten items in the post-survey were the same with the ones in Part B of pre-survey. The reason for which I made use of the same questions of pre-survey is to learn if the perceptions of the students toward technology integration via digital storytelling has changed after the implementation of digital storytelling. In the last section (Part C), five open-ended questions were posed to the participants. These questions asked for three things they liked about digital storytelling activities in class, the challenges they faced while using digital storytelling in class, and whether they would like to use it in their future English lessons. Two of these questions were seeking suggestions on different ways of using digital storytelling in English and, further comments and questions on digital storytelling.

3.3. Data Collection Procedure

The data for the present study were gathered in a month in the academic year of 2018-2019. This was a small-scale empirical study and both quantitative and qualitative data were gathered to carry out the research. While qualitative data were collected with the help of open-ended questions in pre- and post-surveys and digital stories created by the students, pre- and post-surveys were administered to collect the quantitative data. Digital stories were created via an instructional tool called Pixton.

There were four steps to follow in data collection process. First, the students were informed that the data gathered from them would be used for the study that the researcher carried out. They were also told that participating to the research was on voluntary basis and they may leave the survey undone. Thus, it was made sure that they do not have to participate to the research and their performance will not influence their total grade of English.

First, pre-survey was introduced to the students and the instructions for how they were supposed to fill in the surveys and what is expected from them were explained. If they had any questions about the research or the surveys, they were encouraged to ask beforehand. After their questions were answered, the consent form was sent to their parents as they are under 18 on December 5, 2018. Then, all the students accepted to take part in the study and they filled in the pre-survey and gave it to the researcher on December 12, 2018.

Secondly, the researcher made a presentation about what “Digital Storytelling” is and how to use Pixton on December 12, 2018. The students were provided with a step-by-step instruction on the smartboard so that they learn how to use it. In case they need any assistance about a problem, the researcher would be there to solve any problem. After the introduction, the students were divided into three groups which are character, background and story writers on December 13, 2018. Each group had a mission: Story writer group was to write the story, character group was to choose the characters based on the story written, Background group was expected to select the setting from the alternatives provided on Pixton. Each student had the chance to work in different groups. Thus, they had experienced all the story writing process. The students had the opportunity to write five stories in one month.

Lastly, on January 2, 2019, the post-survey was administered after the students had been given parent consent form and reminded of the fact that it was not obligatory to take part in the study. During the survey, the researcher explained the questions so as to make them clear.

3.4. Data Analysis Methods

The quantitative data gathered with the pre- and post-surveys were statistically analysed by using a statistical analysis program. For analysis, the items in both pre- and post-surveys part B were designed on a four-point Likert Scale from 1 to 4. What these scores stand for is as follows: Strongly Agree = 4, Agree= 3, Disagree = 2, Strongly Disagree= 1. As mentioned before, the two sections were Demographic data and experience in technology (Part A), perceptions about technology integration via Digital Storytelling (Part B). After gathering and entering the data into the software, the mean scores for the items in pre and post-surveys Part B were calculated, and normality tests were run. As the result of Shapiro-Wilk test and the visual inspection of the histograms indicated that data was not normally distributed, $W(15) = .758$, $p = .001$. Therefore, the means of pre- and post-surveys were compared via Wilcoxon Signed Ranks Test, non-parametric test for dependant-sample, to see if there is any significant change in the students’ perception of technology integration through digital storytelling to English lesson.

The qualitative data were collected with the help of the open-ended questions in pre and post-surveys. The digital stories were analysed in terms of topic and characters. The data were analysed with the constant comparative method (Creswell, 2013). In constant comparative method, each information taken from the data collection is compared to the categories emerging (Creswell, 2013). The themes appeared were put under basic categories and themes.

4. Findings

In order to answer the research questions of the present study, the qualitative and quantitative data were collected with pre-survey, digital stories, and post-survey, and analysed. The aim of gathering both types of data is to find out the perceptions of the subjects about the integration of technology via digital storytelling into English lessons and their preferences for topic and characters in their own digital stories.

When the means of pre-survey and post-survey were compared in terms of any significant difference in the students' perception of technology integration through digital storytelling to English lessons, the results of non-parametric test, Wilcoxon Signed Ranks Test, turned out to be non-significant, $Z = .205$, $p = .838$ as presented in Table 1.

Table 1. *The Results of Wilcoxon Signed Ranks Test*

Posttest-Pretest	N	Mean Rank	Sum of Ranks	z	p
Negative Ranks	5	5.10	25.50	.205	.838
Positive Ranks	5	5.90	29.50		
Ties	5	-			

4.1. Pre-Survey Findings

4.1.1. Pre-Survey Part A: Findings

There were 10 questions in pre-survey Part A and they were asking for demographic information and experience in technology and digital storytelling. The results of the analysis were presented with tables and figures.

More than half of the participants (60%) have been using computer and internet technologies for at least 6 years. The participants make use of different means to access to the internet. While almost all students had smartphones as a way of accessing the internet, eight students had the opportunity to use tablets as the tool to access to the internet. Only seven of them chose computers or laptops for this question. All the students could access to the internet via Smartboard in their classrooms, which was the other option. Most of the participants (66,67%) expressed that they are advanced internet user whereas only five of them (33,33%) defined themselves as intermediate internet users.

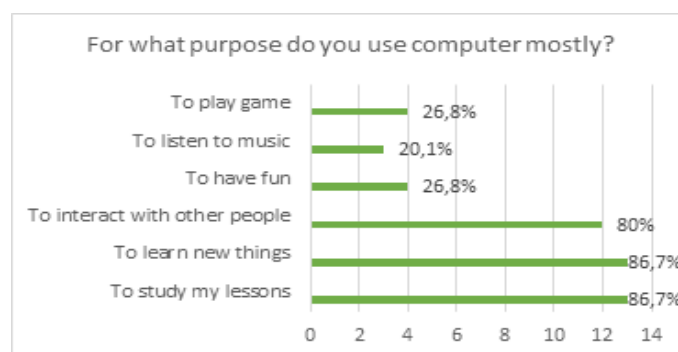


Figure 1. *The purpose of computer uses mostly*

As it is indicated in figure 1, 86,7% of the participants used computer both to study lessons and learn new things. Almost all the participants (80%) used it to communicate with other people. Eleven of the participants specified other purposes such as playing game, having fun, and listening to music.

As for the knowledge in digital storytelling, the students did not have any idea about what digital storytelling is. Although the students did not have any experience in digital storytelling, they all indicated that they have known the tool called “Movie Maker”.

4.1.2. Pre-Survey Part B: Results

In the second section of the pre-survey, the goal was to learn how the participants perceive the technology integration via digital storytelling into English lessons before the intervention. There were ten items designed on a four-point Likert Scale from 1 to 4. What these scorings stand for was as follows: Strongly Agree = 4, Agree= 3, Disagree = 2, Strongly Disagree= 1. The means of each item and frequency for each score were presented in Table 2.

Table 2. Results of the questions in pre-survey Part B

Items	General Perception		Mean		Number of Items	
	Item Means	Mean	SD	Answer Choices	f	P
1. I use the Web 2.0 tools (wikis, blogs, social networking sites etc.) actively in my daily activities.	3,73	,594		Disagree	1	6,7
				Agree	2	13,3
				Totally Agree	12	80,0
2. I believe I am more motivated by the use of technology in my course.	3,87	,352		Agree	2	
				Totally Agree	13	
3. I think technology should be integrated to our lessons more.	3,80	,414		Agree	3	20,0
				Totally Agree	12	80,0
4. I learn better if I get to practice what I have learned with the help of multimedia such as images, videos, maps etc.	3,60	,507		Agree	6	40,0
				Totally Agree	9	60,0
5. I like my teacher to use digital stories to teach me English.	3,67	,488		Agree	5	33,3
				Totally Agree	10	66,7
6. Technological tools distract me in my learning.	1,67	1,234		Totally disagree	11	73,3
				Disagree	1	6,7
				Totally agree	3	20,0
7. I enjoy acting out parts of the stories read by me, my classmates or my teacher during English language lessons.	3,73	,458		Agree	4	6,7
				Totally Agree	11	73,3
8. I believe the use of technological tools will contribute to my success in English courses.	3,87	,352		Agree	2	13,3
				Totally Agree	13	86,7

9. I enjoy listening to digital stories in English during English language lessons.	3,73	,458	Agree	4	26,7
			Totally Agree	11	73,3
10. I think digital storytelling will contribute to my language.	3,84	,414	Agree	3	20,0
			Totally Agree	12	80,0
Note: SD: Standard Deviation, f: frequency, p: percentage					

Based on the analysis of ten questions, the students have a highly positive perception toward the use of technology via digital storytelling in English lessons. They generally chose “agree” and “totally agree” as an answer for the questions 1,3,4,5,7,9,10. Especially for the questions 2 and 8, they have the most positive perception (M=3.87). However, for the question 6, almost all the students (n=11) chose “Totally Disagree” as an answer (M=1.67).

In the question 6, while 12 students chose “Totally Disagree” and “Disagree”, only 3 of them opted for “Totally Agree”. As the number of participants who selected “Totally Disagree” is 11, it can be said that they believe that technological tools do not distract them during their learning. On the other hand, there were a few students who think that technological tools distract their attention during learning. Nevertheless, this may not necessarily mean that they are against technology integration to their lessons.

All in all, as indicated in table 2, the subjects hold a positive view of the technology integration via digital storytelling with the mean of 3,547. Most of the students (n=12) expressed that technological tools should be integrated into English lessons. The reason behind this opinion is that they feel more motivated with the help of the technology (n=15). In addition, all the students (n=15) think that they learn better when there is multimedia such as images and visuals. They also enjoy listening to stories and acting out the stories (n=15). Moreover, all of them believe that technological tools will make a significant contribution to their language skills as well as to their success (n=15).

4.1.3. Pre-Survey Part C: Results

In Part C, two open-ended questions were asked, which are as follow;

4.1.3.1. *What is your favourite topic for story writing?*

The subjects were expected to write the topic which they like to write about in story. There were 34 responses in total given by 15 participants. The most favourite topic for story writing is Adrenalin because 10 of the participants mentioned it. The second most favourite topics are Love and Sadness with the percent of 18, which is followed by Friendship and Fear (15%). The least favourite ones are Travelling and Respect with the percentage of 3.

4.1.3.2. *Which types of stories do you like most?*

The participants were asked of their favourite type of stories. There were 42 types of story written. According to figure 4.9, the type of story which the students like most is Action with the percentage of 24 followed by Horror with 21%. In the second place, there are Romance stories (12%) followed by Comedy and Historical stories (10% each). Science-Fiction, Detective, Realistic and Travel stories are the least favourite story types with the percent of 5 each as only 2 students mentioned these in their answers.

4.2. Digital Stories Created via Pixton: The analysis of Topic and Characters

The students created 5 digital stories in collaboration with their classmates in a month. The digital stories were analysed in terms of the topic and the characters with constant comparative method (Creswell, 2013). The aim of this analysis is to find out the students' preferences for topic and characters in digital story writing.

Table 3. *Coding Categories for Digital Stories created by students*

Category	Explanation
Topic	What is the story about?
Characters; -Gender -Roles	General features of the characters such as their gender and their roles in the story.

Five digital stories were analysed following the coding displayed in table 3. The topics of the five digital stories are the adventures of a princess, betrayal of a friend, creating a dinosaur, a teenage boy's change and love, the adventures of two Vikings. Almost all include some action and most of the stories have happy ending. The topics can be categorized as adrenalin, love, sadness, fear and friendship. The genres for these stories can be sorted as adventure, action, horror, science-fiction, historical, and romance.

As for the characters in the stories, there were 22 characters in total; 17 of them were males while only 5 of them were females. In almost all stories, females were the heroines. However, in one of the stories, there were both male hero and female heroine. When it comes to the roles of the characters, there was a variety of roles which the characters play. In the digital story called "Dark Night", there was a princess, her friend and a servant who turns into a creature at nights. In the second story called "Betrayal", there were a female thief and a male thief, a servant and a rich man. In the third story named "Dinosaur on the run", a scientist, his helper and a super woman were the main characters. In the other story called "Nerd Hasan", Hasan and Emma were teenagers and students. In the last story called "Two Crazy Vikings", there were two Vikings, a woman, two soldiers. Overall, although the stories were created by both female and male students, the heroines of the stories were generally females. The female and male characters had a variety of roles to play in the stories.

4.3. Post-Survey Findings

The analysis of the post-survey provided the researcher with the information on the subjects' demographic data, experience in digital storytelling, their perception of technology integration via digital storytelling.

4.3.1. Post-Survey Part A: Findings

There were ten items posing questions on the subjects' demographic data and their experience in technology and digital storytelling. There were 15 students participated to the study in pre-survey phase. In post-survey, 15 students joined the survey in total. The number of participants in pre and post-survey were even. The data gathered via post-survey were analysed statistically and displayed with the help of a table, bar graphs and pie charts.

After the implementation, there were 2 basic users (13,33%), 8 intermediate users (53,33%), and 5 advanced users with the percentage of 33,33. The results of the question "How proficient do you feel as an internet user?" in pre-survey were compared with the results of the same question in post-survey. Based on what it is stated, there is an increase in the basic level by 13,33% and intermediate level by 20% whereas the number participants who are advanced as an internet user decreased by 33,34%. After the implementation, the participants changed their view on their own proficiency level as internet users.

The participants learned what digital storytelling is after the implementation. The question was asked to establish the fact that they had no idea about it before they experience it. In post-survey, all the participants chose the option “Yes” as they have learned digital storytelling during the implementation (100%). The sixth question post-survey asked if the participants had any experience in Digital Storytelling. While they had no experience in digital storytelling according to the results of pre-survey, they had the chance to experience it during the implementation (100%). In post-survey, they were expected to answer this question because their answer to the question 5 was “Yes”.

The participants were asked how many times they have tried digital storytelling. In pre-survey, they did not answer the question as they were to skip the question if they do not know what digital storytelling is. During the implementation, they had the chance to try it more than three times (15; 100%). The subjects were asked of the tools with which they have experience before. They stated that they have had experience with Movie Maker in pre-survey. In post-survey, it is shown that they have experienced Pixton which was the tool they used to create their digital stories during the implementation.

4.3.2. Post-Survey Part B: Results

The perceptions of the subjects about the technology integration via digital storytelling are revealed. This section consisted of 10 four-points Likert scale type questions whose values ranged from 1 to 4. What these values meant as follows: *Strongly Agree = 4, Agree= 3, Disagree = 2, Strongly Disagree= 1*. The means of each item and frequency for each score were presented in Table 4.

Table 4. *The results of the questions in Part B in post-survey*

Items	General Perception		Mean		Number of Items	
	Item Means		3,599		10	
	Mean	SD	Answer	Choices	f	P
1.I use the Web 2.0 tools (wikis, blogs, social networking sites etc.) actively in my daily activities.	3,80	,414	Agree		3	20,0
			Totally Agree		12	80,0
2.I believe I am more motivated by the use of technology in my course.	3,73	,458	Agree		4	26,7
			Totally Agree		11	73,3
3.I think technology should be integrated to our lessons more.	3,73	,458	Agree		4	26,7
			Totally Agree		11	73,3
4.I learn better if I get to practice what I have learned with the help of multimedia such as images, videos, maps etc.	4,00	,000	Totally Agree		15	100,0
5.I like my teacher to use digital stories to teach me English.	3,93	,258	Agree		1	6,7
			Totally Agree		14	93,3
6.Technological tools distract me in my learning.	1,40	,632	Totally disagree		10	66,7
			Disagree		4	26,7
			Agree		1	6,7

7.I enjoy acting out parts of the stories read by me, my classmates or my teacher during English language lessons.	4,00	,000	Totally Agree	15	100,0
8.I believe the use of technological tools will contribute to my success in English courses.	3,80	,414	Agree	3	20,0
			Totally Agree	12	80,0
9. I enjoy listening to digital stories in English during English language lessons.	3,93	,258	Agree	1	6,7
			Totally Agree	14	93,3
10.I think digital storytelling will contribute to my language.	3,80	,414	Agree	3	20,0
			Totally Agree	12	80,0

Note: SD: Standard Deviation, f: frequency, p: percentage

In question 1, almost all the participants (n=12 for Totally Agree; n=3 for Agree) stated that they use Web 2.0 tools actively in their daily lives. For question 2 and 3, the mean is 3,73, which means that almost all participants think that they are more motivated by the technology integration (n=15) and therefore they believe that technology integration should be increased in their courses (n=15). In question 4, all the participants stated that they learn better if they can practice what they have covered with the help of multimedia such as images, videos, maps etc. As a result, the question 4 is the item with the highest mean, 4,00 among all ten questions. In question 5, except for one participant 14 participants selected the option 'totally agree' to express that they like their teacher to use digital storytelling to teach English. The question 6 is the item with the lowest mean, which suggests that the technological tools do not distract them during their learning process. The question 7 with the mean of 4,00 indicates that the participants enjoy the acting out parts of the stories read by them, their classmates or their teacher during English language lessons. In question 8, many participants stated that technological tools will make contributions to their success in courses. Therefore, in question 10, they indicated that digital storytelling will contribute to their language. In question 9, almost all said that they enjoy listening to digital stories in English lessons (M=3,93). Overall, the mean of all the items in part B is 3,599, which proves that the students support the technology integration via digital storytelling to English lessons.

4.3.3. Post-Survey Part C: Results

In post survey part C, there were 5 open-ended questions posed to collect qualitative data on the perceptions of the participants about the use of digital storytelling in English lessons. The data of the post-survey part C were collected, translated into English and analysed via constant comparative method (Creswell, 2013). The results are presented under each question.

4.3.3.1. *What are the things that you liked about Digital Storytelling activities in class? Please, write at least three by giving reasons.*

In question 1, the participants were asked to write three things which they liked about digital storytelling activities in class and explain the reasons why they liked these things. In total, there are 47 points mentioned.

It was observed that they liked working collaboratively while they were working on their story, which is the most mentioned aspect the participants liked. Secondly, they stated that it

facilitates the students-centred learning because they had the opportunity to write their own stories and make their choices on their own. Additionally, they indicated the pros of the digital storytelling tool such as easy to navigate and the variety of the choices provided. Next, they said that digital storytelling activities help them practice their language skills like writing and speaking. One of the aspects mentioned once is creativity. They believe that these activities improve their creativity.

During the analysis, the researcher made the initial categorization of the subjects' responses and these categories were classified under the basic themes. The basic themes and the category for the question 1 as follows:

a) Perceptions toward Digital Storytelling

With the help of the first question in post-survey Part C, the data on the perceptions of the participants toward digital storytelling can be gathered. The three things the participants liked about the digital storytelling activities were coded under five basic themes.

a.1) Digital Storytelling activities support Collaborative Writing:

The analysis of the responses given by the students indicates that they enjoy the digital storytelling activities because they had the chance to work with their friends as a team on their story. Some sample comments showing that they like writing in collaboration with their classmates are given below:

I like it because we can work on the story in groups and we had the chance to work both on the story, the characters and the background as a team. (P7)

The comments above proves that the students have a positive perception toward digital storytelling because they enjoy the activities on which they work collaboratively.

a.2) Digital Storytelling activities facilitate Student-Centred learning:

The subject pointed out that they like the idea of writing their own story by making their own decisions. Their opinions are as presented in their comments below:

I like it because we had the opportunity to decide everything such as characters and background of our own story. (P11)

The comments above show that the students like learning and studying in a student-centred environment.

a.3) Digital Storytelling activities help me practice my language skills:

Another point mentioned by the participants is that they have the opportunity to practice their language skills such as writing and speaking. There are various language skills pointed out in the responses. These skills are mentioned as follows;

I like it because it was fun to act out the stories which we created. (P7)

Third, I like it because it facilitates my language learning process. (P10)

Just like the comments indicate, the students practice their language skills depending on the way the digital storytelling activities are done in English lessons.

a.4) Digital Storytelling Tool, Pixton, has some advantages.

One of the mostly mentioned aspects the participants liked about Digital storytelling is about the characteristics of the tool. There are a few points appeared in the comments. These comments are as the followings:

First, it is easy to navigate the website because we can change the characteristics of our characters easily on smartboard. (P8)

First, we can play with the characters, change their positions and moves in the way we want to. Second, I like choosing the background because there are lots of choices. (P13)

As presented in the comments above, the students like the website called Pixton because it has easy navigation and offers lots of choices for the characters and the background.

a.5) Digital Storytelling activities improve my creativity:

This is the least mentioned aspect because there is only one participant pointed out this aspect of these type of activities. Only comment including this aspect is as follows:

Third, it is a creative website. Thus, we can improve our creativity as well by writing our story. (P8)

This student believe that it can improve their creativity since it is a creative website and it makes them think creatively while they are writing their story.

4.3.3.2. What are the challenges you faced while you are using Digital Storytelling in class, if any?

In second question in post-survey Part C, the participants were expected to write the challenges they faced while they were using Digital storytelling in class. There was only one challenge they pointed out in their comments, which is as follows:

I had difficulty in decision making process because everyone had different ideas about which character to choose and what to write as a story. (P2)

While twelve of the participants stated that they had difficulty in making decisions, only three of them did not experience any difficulty during this process.

4.3.3.3. Would you like to use Digital Storytelling tools in your future English lessons? Why? Why not?

In question 3, the researcher asked the participants whether they would like to use Digital storytelling tools in their future English lessons by giving their reasons. All participants indicated that they would like to continue using the Digital Storytelling tools in their future English lessons as they are beneficial for their language skills just as indicated in figure 4.15. In total, there were 26 reasons mentioned.

During the analysis, the researcher made the initial categorization of the subjects' responses and these categories were classified under three basic themes. These basic themes and the category for the question 3 are as follow:

b) Perceptions toward Digital Storytelling Tools

With the help of question 3 in post-survey part C, the researcher collected data on the participants view on the digital storytelling tools and their willingness to continue using these types of tools.

b.1) Digital Storytelling tools are beneficial for my language:

Most of the participants pointed that they would like to continue using the digital storytelling tools because they believe that the digital storytelling tools are beneficial for their language with the percentage of 46 (f=12). The comments showing these beliefs are as follow:

I would like to use it in my future English lessons because we can learn new vocabularies while we are writing our stories and it is both fun and useful for my English. (P3)

I would like to use it in my future English lessons because it is a practical way to learn a language and is an alternative way of learning English. (P10)

I would like to use it in my future English lessons because I can understand the meaning of the words better. As there are dialogues in our stories, I can write dialogues better in English. (P15)

Just like mentioned in the comments above, they believe that the digital storytelling tools contribute to their language in a positive way.

b.2) Digital Storytelling tools have some benefits:

Almost half of the participants mentioned the benefits of the digital storytelling tools (f=7). They pointed out the positive effects of the visuals on them. They think that these tools are an alternative way of learning English. The comments about the benefits of the digital storytelling tools are as the followings:

I would like to use it in my future English lessons because I feel like I can understand English better when there are visuals and digital stories. (P4)

I would like to use it in my future English lessons because I think digital stories help me learn English. (P8)

As presented in the comments, the students want to benefit from the digital storytelling tools because they learn better when there are visuals and stories integrated into English lessons.

b.3) Digital Storytelling tools are fun:

Twenty-seven percent of the subjects wants to continue using the digital storytelling tools because these tools are fun (f=7). These comments are presented as follow:

I would like to use it in my future English lessons because it is both fun and useful for my English. (P14)

In the comment above, the participants stated that the digital storytelling tools are fun. Therefore, they want to keep using these tools in the future.

4.3.3.4. In what other ways would you suggest Digital Storytelling to be used in English lesson? (For example, how often and for which topics?)

In question 4 in post-survey part C, the participants were asked to make suggestions for other ways the digital storytelling can be used in English lessons. There were types of activities, topics and some frequency adverbs suggested in responses. There were 35 types of activities, five topics and 4 frequency adverbs indicated.

As displayed in figure 4.16, there are six types of activities proposed for future use in English lessons. The activities suggested mostly are vocabulary (40%) and speaking activities (31%). The least mentioned one are grammar activities and the use of digital storytelling as a reflection task (3%).

As for the topics suggested to be used in digital storytelling activities, the stories of the inventors can be described, which is the most mentioned topic (f=4). The second topics with the frequency of 2 are writing personal stories and phone conversations. The least mentioned topics are adventure stories (f=1) and creating TV shows about different cuisines (f=1). As

displayed in figure 4.18, there are four different frequency of adverbs. The participants would like digital storytelling to be used at least three times a month. Mostly, they want to use it either always or twice a week with the percentage of 37,5. Some want to use it four times a week (n=3;18,75%).

During the analysis, the researcher made the initial categorization of the subjects' responses and these categories were classified under three basic themes. These basic themes and the category for the question 4 as follows:

c) Digital Storytelling in English Lessons

The researcher gathered data on the possible uses of digital storytelling in English lessons, topics and how often it can be used in the lessons.

c.1) There are various digital storytelling activities to be done in English lessons:

The participants suggested six different activities in which digital storytelling can be used. The comments including these activities are as follow:

We can use it for creating a role play, digital stories, and reading new stories. (P9)

I suggest it to be used to learn new vocabularies and practice our reading skills. We can use it for learning English grammar in context. (P11)

I suggest it to be used as a reflection task. We can write our thoughts and what we have learned after each lesson we had. (P14)

Considering the comments above, the activities suggested are vocabulary, reading, grammar and speaking activities. It is also suggested to be used as a reflection task by one of the participants.

c.2) The topics are suggested to be used for Digital Storytelling:

In question 4, the participants suggested some topics which can be used for digital storytelling. The comments present some of the topics below:

We can use it for telling the stories of inventors. (P2)

We can use it for writing about adventures and our personal stories. (P5)

We can use it for writing a phone conversation or a Tv show about different cuisines. (P7)

I want to use it to share my happy moments with digital storytelling. (P13)

As also seen in the comments, the students want to work on the stories of the inventors, adventure stories, personal stories, phone conversation, Tv show about different cuisines in digital storytelling activities. One of them also mentioned sharing happy moments with digital storytelling.

c.3) The frequency for using Digital Storytelling is offered:

Some of the participants made an offer on how often they can use digital storytelling. They expressed their choice with the comments below:

I think we can use it twice a week. (P4)

I think we can use it four times a month to create our digital stories. (P10)

The comments reveal that the students would like digital storytelling to be integrated into their English lessons at least twice a week and at most four times a month.

4.3.3.5. Any other comments or questions about Digital Storytelling?

In part C question 5 in post-survey, the participants were asked to write their comments and questions about Digital Storytelling. The comments and questions of the subjects made were as the followings:

4.3.3.5.1. Comments

The participants commented on the digital storytelling tool. They pointed out that Pixton is a good website and digital storytelling is a fun way to learn English. Thus, they can understand English better. Therefore, they want to use it more often in the future. Some emphasized that they can use it for other lessons as well. One of the participants wish they could change the dresses of the characters. In addition, one of them stated that he liked digital storytelling so much that he created his own account on Pixton.

4.3.3.5.2. Questions

There was only one question about digital storytelling posed by the participants. The question is “Why don’t we use digital storytelling in other lessons?”, which suggests that they want to use digital storytelling not only in English lessons but also in other subjects.

All in all, they displayed a positive attitude toward the integration of technology via digital storytelling to their English courses based on their responses and comments.

5. Discussion

The present study aimed to find out the perceptions of the students toward the technology integration via digital storytelling and their preference for topic and characters in their own digital stories. In order to gather data, pre- and post-surveys were conducted, and digital stories were created by the students.

The results of the pre-survey revealed that the students had a positive perception toward the integration of technology via digital storytelling ($M=3,547$). The similar results were reached via the post-survey regarding the perceptions of the students about the digital storytelling as an educational technology tool ($M=3,599$). Although there is not a significant difference between the results of the pre-survey and post-survey part B, the students have a positive perception of digital storytelling integration into English lessons both before and after the implementation. These results are in line with the results of the previous studies conducted by Seng (2017) as it is found that both teachers and students have a positive perception of digital storytelling as a language learning tool. The results of both pre-survey and post-surveys indicated that the students are motivated by using technological tools in their courses ($M=3,87$ in pre-survey; $M=3,73$ in post-survey). This result ties well with previous studies wherein digital storytelling leads to positive change in students’ motivation and involvement (Yoon, 2013). In addition, the researcher has verified that digital storytelling affects the students’ perceptions toward educational technologies positively (Balaman, 2016), which is the case in the present study ($M:3,87$ in pre-survey; $M: 3,73$ in post-survey). The students stated that they like their teacher to use digital storytelling to teach English ($M=3,67$ in pre-survey; $M=3,93$ in post-survey), listening to digital stories in English lessons ($M=3,73$ in pre-survey; $M=3,93$ in post-survey), and acting out the digital stories ($M=3,73$ in pre-survey; $M=4,00$ in post-survey). Thanks to these activities, they also believe that digital storytelling will contribute their language ($M=3,80$ in pre-survey; $M=3,80$ in post-survey). These are consistent with what has been found in previous studies carried out by Seng (2017), Yoon (2013), and Balaman (2016). Additively, the students pointed out that they want to keep using digital storytelling tools in their future English lessons, which is in accordance with the findings reported by Dollar and Talu (2015). This shows that their

interest into digital storytelling is not temporary. Moreover, the students mentioned that they liked digital storytelling because they had the opportunity to write their own story and they could make their own decisions regarding the characters, the background and the flow of their story. These comments mean that the students like studying in a constructivist learning environment as they construct the knowledge based on their experience. This result was suggested by a previous study that teachers can benefit from digital storytelling as an instructional tool to design constructivist learning environment, which can lead to an increase in student engagement into the lessons (Smeda, 2014). Furthermore, the students suggested some activities to use with digital storytelling. These activities include speaking activities such as creating role plays and acting out the stories written, reading activities, learning new vocabularies and using them in context via digital stories, and learning grammar. One of the previously conducted studies suggested the digital storytelling to be used to teach grammatical structure and vocabulary by the teachers (Cabrera et al., 2018). The suggestions made by the students joined the present study were in line with this result. One of the students put forward a suggestion for using digital storytelling as a reflection task which they used to write their thoughts and what they learned in the lessons. This result goes beyond previous reports, showing that the students, also known as digital natives, can come up with brand new ideas related to the use of digital tools in their courses.

As for the second research question of this study, it is about the preferences of the students for topic and characters in their own digital stories which were created via Pixton. The open-ended questions in pre- and post-surveys and the digital stories were analysed to find out answers for this question. To start with the topics, they recommended topics like adrenalin, love, sadness, friendship, fear, travelling, and respect in pre-survey before they experience digital storytelling. When the digital stories were analysed, it could be seen that the topics which are adrenalin, love, sadness, friendship, and fear are the same offered by the students in pre-survey. The type of stories written by the students can be categorized as adventure, action, horror, science-fiction, historical, and romance. These are also in accordance with what they mentioned in pre-survey as their favourite story types. However, these results are not totally in line with what Bozdoğan (2012) revealed as the common topics which are friendship and philanthropy in digital stories created for young learners by prospective English teachers. Additionally, the characters in the stories were analysed. Contrary to the findings of Bozdoğan (2012), the researcher did not find that the heroes were generally male, children or animals. On the contrary, the females were the heroines in this study although the stories were created by both female and male students.

6. Conclusion

Overall, the analysis of both quantitative and qualitative data gathered via pre- and post-surveys, and digital stories created by the students revealed that the students have a positive perception toward the integration of digital storytelling into English lessons. The findings of this study can be understood as the students would like to use digital storytelling as well as technological tools in the future. The common topics among the digital stories written by the students consist of adrenalin, love, sadness, friendship, and fear. The characters of these stories are generally female heroines. As for the implications for English Language Teaching, digital storytelling can be integrated into the lessons in forms of speaking, listening, grammar, vocabulary and writing activities since it is a fun and engaging way of practising language skills, thus the students can be motivated towards English lessons. Lastly, the limitation of the present study is that there is not any comment on the use of digital storytelling in English lessons by English teachers. Therefore, it will be of significance that future research investigates the teachers' perspective on the integration of digital storytelling into English lessons with surveys and interviews.

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FLIPPED CLASSROOM IMPLEMENTATION IN SCIENCE TEACHING

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Abstract

Along with the fast development in the internet technologies, every day new learning and teaching approaches are introduced and implemented. In this context, the aim of this research is to reveal the effect of Flipped Classroom model on the academic success of the students for the subject of Interaction of Matter with Heat of 8th grade Science course and opinions of students on the Flipped Classroom Model. Study group of the research consists of a total of 63 8th grade students, studied in a state middle school located in the central part of city of Konya during the 2017-2018 school year. In the research, mixed method, a method that allows integration of research results via utilization of quantitative and qualitative data collection methods conjointly is used. As the quantitative data collection tool, "Success Test" developed by a group of four, consisting of four professionalist science teachers and researchers, and as the qualitative data collection tool, "Semi-Structured Review" form, developed by the researcher have been used. In the research, a quasi-experimental design with a posttest control group has been used. As the result of the research; It was concluded that the academic achievement of the experimental group was statistically significant and positively higher than the control group. Students consisting the experimental group has expressed that with the flipped classroom application, their success and their participation to the class has improved and they found this method to be more fun than listening to the lecturing as per the current program requires. Also, the students have stated their absence of internet access at home and the problems they encounter due to hardware inadequacies of their computers are the drawbacks of the implementation.

Keywords: Flipped classroom, EBA course, academic success.

1. Introduction

Along with the fast paced changes in all the industries of the global world, factors such as population growth and technological advancements define and change the personal needs of humans.

Fast improvements in the field of science and technology have also caused important changes in fields such as economics, health, art and literature. Another field that has been deeply influenced by the improvements in technology and expected to show changes in paradigms of which is education sector. Among all, the ones that are effected by such changes the most are the children and youngsters who are also called as the Generation Z or the digital citizens (Prensky, 2001). Following the generations X and Y, people born after 1995 in some sources and 2000 in others, are called the Generation Z (Taş, Demirdöğmez, Küçüköğlü, 2017).

The most important characteristic of Z generation individuals is their ability to integrate technology much faster in their daily lives. These individuals, as per such characteristics have differentiated by the previous generations and it is observed that educational technologies should be actively used during this generation's course of education (Orhan, Kurt, Ozan, Vural & Türkan, 2014). This situation reveals the fact that different methods and tools should be developed and used in education as well as in all fields. Because traditional education models have proven to be insufficient to meet the needs arising from changing individual differences.

In today's world, considering the differences in the learning style and learning speed of individuals, it is necessary to use learning environments that vary according to individual needs, instead of models where all individuals are given the same education. There is a need for learning experiences in which individuals can transfer the knowledge they have learned through active learning activities to their daily lives. Therefore, it is thought that flipped classroom model can be effective in meeting educational needs and providing change (Roehl, Reddy, Shannon, 2013; Tucker, 2012).

In recent years, the use and popularity of the flipped classroom model is now widely preferred in many areas, including education and engineering (Bolat, 2016; Muir, 2017). In the literature, concepts such as inverted classrooms, flipped classrooms, inverted learning, flipped learning and class at home, homework in school are used for the flipped learning model. While the "classroom" was the focal point at the early implementations of this model, lately this focal point has shifted to "learning". While "flipped classrooms" concept had been used commonly at the early implementations, later this concept has been substituted with "flipped learning" (Hayırsever, Orhan, 2018).

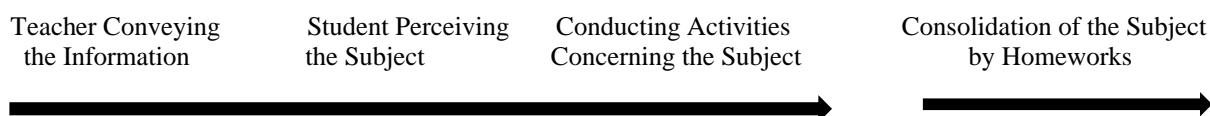
The term "Flipped classroom" has been used for the first time by chemistry teachers Bergman and Sams, working at the Woodland Park High located in the state of Colorado of the United States of America, in the year of 2006. Bergman and Sams defined this model, in which they aim to allocate more time for constructivist activities in the classroom, as what is traditionally done in school is done at home and what is done at home is done in school (Bergman ve Sams, 2012).

Flipped classroom model consists of two main components. These components are defined as "Out-of class implementations" and "In-class active education activities" (Kara, 2016). Flipped classroom practice is confused with online education, blended learning and distance education programs (Hamdan, McKnight, McKnight, Arfstrom, 2013).

However, in online education, students and teachers are not in the same environment. On the other hand, in distance education teacher-student interaction is very limited. When evaluated in terms of the presence and interaction of the teacher and the student in the same environment, the model closest to the flipped classroom practice is the blended learning model. Even though the blended learning also includes an online element, activities done using information technologies are mostly done in the classroom environment within the framework of teacher - student communication (Allen, Seaman, & Garrett, 2007).

The flipped classroom model model is a pedagogical model developed to utilize the time spent in the classroom in the most efficient way by using educational technologies. In this model, unlike traditional education, tasks such as acquiring knowledge are performed by students before they come to class. Thus, more time is allocated for the in-class active learning activities (Roehl, Reddy, Shannon, 2013; Tucker, 2012).

Traditional Model



Flipped Classroom Model

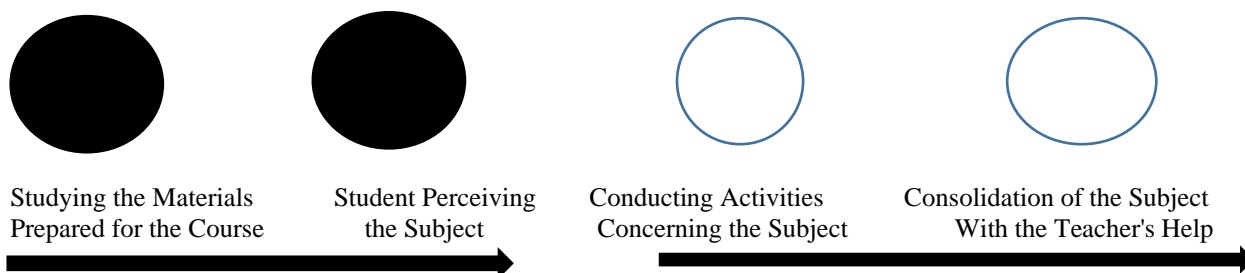


Figure 1. Comparison of Flipped Classroom Model and Traditional Education Model (Zownorega, 2013)

From the perspective of traditional learning, in teacher-centered education, the teacher is not a guide in reaching information for his students, but in the role of giving information directly. In the traditional approach, the teacher is active and the students are passive. However, in the flipped classroom model, it is guaranteed that the students are active in the in-class activities. Utilization of information technologies for educational activities in out-of-classroom settings and allocating more time in the classroom for activities, projects and experiments with the flipped classroom application is another important factor in terms of both interactive learning and effective use of materials (Kahramanoğlu, Şenel, 2018). However, it is crucial to make good planning before the implementation of this model. Miller (2012) stated that there are five basic elements to be considered when planning the flipped classroom model:

1. Why one should learn: Learners should be told why they should learn this content and their willingness should be ensured.
2. Accommodation of the models: Learning effectiveness can be increased with conjoint implementation of the flipped classroom model with another model (game-based learning, project-based learning, etc.).
3. Technology: The technology to use with the flipped classroom model should be selected.
4. Reflection: It should be ensured that the learners show the content they have learned and their learning behaviors are seen perceptibly with the flipped classroom model.
5. Time and place: It should be determined in what settings and how it will be implemented.

It is expected that the model to be implemented with the planning elements emphasized by Miller (2012) will be suitable for the intended purpose and thus be more effective. It is observed that both in Turkey and around the world, number of studies on the flipped classroom model has been increased dramatically in the recent years (Farah, 2014; Bell, 2015; Yestrebsky, 2015; Çalışkan, 2016; Yavuz, 2016; Çakır, 2017; Çibik, 2017; İyitoğlu, 2018; Öztürk, 2018;). As can be seen on the studies concluded, flipped learning model has a positive contribution on the academic success (Johnson ve Renner, 2012; Farah, 2014; Aydın, 2016; İyitoğlu, 2018; Öztürk, 2018; Yestrebsky, 2015), attitude towards the subject (Bell, 2015; Ceylaner, 2016;

İyitoğlu, 2018) and motivation (Turan, 2015; Aydın, 2016; Çukurbaşı ve Kıyıcı 2017; İyitoğlu, 2018;) of the learners.

Also, in our country serious actions are being taken on the integration of technology into education. When the investments of the Ministry of Development in Public Information and Communication Technologies (ICT) for the year of 2018 are examined, it is seen that the education sector has a share of approximately 29.05% (Ministry of Development, 2018). In addition, according to the reports of the Ministry of Development, "FATİH Project" is the ICT project with the highest appropriation for 2018 with 1 billion TL (Ministry of Development, 2018). The "Fatih Education Project", which was first implemented in 2010 with the protocol signed, was initiated for more and more effective use of information technology tools in the learning-teaching process with the aim of improving equality of opportunity among individuals in education and training. The steps of this project consist of five main components;

- 1) Providing Hardware and Software Infrastructure,
- 2) Providing and Managing Educational e-Content,
- 3) Effective IT Utilization in Educational Programs,
- 4) In-Service Training of the Teachers,
- 5) Ensuring Conscious, Secure, Manageable and Measurable IT Utilization (Fatih Project, 2017)

Within the scope of the project, interactive boards (smart boards) are being installed in classrooms in schools, tablet computers are provided for both students and teachers, network infrastructure installations are being made and fiber internet services are provided (Fatih Project, 2017). An interactive classroom management application is used in students' and teachers' tablets. With this software called "V Class", which has two versions, one for the teachers and one for the students, the interaction between the interactive board, teacher's tablet and students' tablets is provided, and the teacher can control the students' tablets.

Within the scope of the e-content component of Fatih Project, EIN platform has been in use since 2012 to provide educational content for teachers, students and the public. With the EIN Course module, teachers can share their work with teachers and students in a virtual environment, send homework and exams to students and follow up their work. The "V Class" software, created for EIN Course application and the "Effective IT Utilization in Education Programs" component provided great convenience for teachers in terms of integrating technology into education.

Observation of the academic success of the students V Class software and EIN Course modules are preferred and flipped classroom model is implemented in classes of which and hearing of their opinions on this matter are important factors for this research to contribute to other researches made on the researches made on the flipped classroom model at middle school level in Turkey and to be original and up-to-date for the process of implementation of the progresses made within the educational technologies to the teaching process of the science classes.

In this context, the aim of this research is to examine the effect of Flipped Classroom model on the academic success of the students for the subject of Interaction of Matter with Heat of 8th grade Science classes and opinions of students on the Flipped Classroom Model.

2. Methodology

2.1. Research model

In the research, mixed methods, a method that allows integration of research results via utilization of quantitative and qualitative data collection methods conjointly. Mixed research includes the collection, analysis and interpretation of a single study or qualitative and quantitative research data within the studies (Leech and Onwuegbuzie, 2009). Quantitative and qualitative data are collected in a single step and in two different processes in a simultaneous or convergent pattern, and similarities and divergences are tried to be discovered (Creswell and Clark, 2014). Quantitative aspect of the research consists of a quasi-experimental design with a posttest control group while the qualitative aspect consists of interviews made with students in person. As the quantitative data collection tool, the "Achievement Test" developed by a group of four, consisting of four professionalist science teachers and researchers, and as the qualitative data collection tool, "Semi-Structured Review" form, developed by the researcher have been used. Semi-structured interview form is one of the techniques used for data collection in the qualitative area. In this method, participants are expected to answer the question. These answers are recorded in audio and converted to the written format after (Creswell, 2005; Yıldırım ve Şimşek, 2016)

2.2 Study group

Study group of the research consists of a total of 63 8th grade students, studied in a state middle school located in the central part of city of Konya during the 2017-2018 school year. Of the students who participated in the research, 33 are girls and 30 are boys. The groups were considered to be equivalent, since the students saw the subject of application for the first time and the classes were formed with the same academic grade point average. The table below shows the number of students in the experimental and control groups by gender.

Table 1. *Numbers of experimental and control groups by gender*

Gender	Experimental Group	Control Group	Total
Girls	15	15	30
Boys	17	16	33
Total	32	31	63

2.3 Implementation process

The study has been carried out based on the subject of Interaction of Matter with Heat of 8th grade Science course during the 2017-2018 school year. Prior to the implementation, students were given practical information on how to use the EIN system, how to watch videos and what to do if they encounter any problems. In the study, the two-week topics in which the experimental group continues the application process, the videos prepared by the researcher, the information notes and the materials such as pictures, videos, simulation, exercises, tests and educational games in the Education Information Network (EIN) were sent to all students in the class before the application via EIN. In addition, since the EIN module provides the

opportunity to see the percentage of completion and success of the materials sent by the student or throughout the classroom, the teacher had the opportunity to follow up. At the beginning of the course, the subjects / points that were not understood by the students were repeated, the questions they asked were answered and plenty of practical activities were performed. However, in the control group, the teacher lectured on the subject, examples were solved and homework assignments were given. After the implementation, both groups took the "Achievement Test". After the application, a semi-structured interview form prepared by the researcher was used to collect the opinions of the students in the experimental group.

2.4 Data collection tools and analysis

For the purpose of the research, an achievement test was developed by the instructor of the course and semi-structured interview form was used as a qualitative data collection tool to measure the academic achievement of the students. In order to ensure the validity and reliability of the semi-structured interview form, three experts were interviewed and the form was finalized in light of their opinions.

In the study, an achievement test was prepared by the researcher and four science teachers in accordance with the subject of Interaction of Matter with Heat in the 8th grade Science course. In order to determine the scope validity of the measurement tool, the unit was examined several times and a multiple choice achievement test of 20 questions, 5 questions for each acquisition related to the 4 gains of "Interaction of Matter with Heat" in the eighth grade Science curriculum was prepared. While evaluating the achievement test answers, 1 point was awarded for the correct answer and 0 points for the wrong answer. The highest possible score for the test is 16. A pilot implementation was conducted with 242 students for the validity and reliability studies of the achievement test. As a result of the pilot implementation, 4 items with distinctive indices less than 0.2 were excluded from the test. As the result of the analysis, the average difficulty index (r) of the test was found to be 0.62. The value found is within the ideal difficulty range expected for these types of test (Atılgan, 2006). Item difficulty indices, which show the correct response rate of the items used in tests where knowledge and skills such as skill and achievement tests are measured, item difficulties are expected to be around 0.50 (Büyüköztürk et al. 2013). Following the pilot application, Kuder Richardson-20 (KR-20) reliability was used to examine the internal consistency of the achievement test. Kuder Richardson-20 (KR-20) reliability is used in cases where the answers given to the test items are "True", "False" or "0", "1 and test items have different item difficulties (p) (Büyüköztürk, 2005). Tests with a reliability coefficient of .70 and above are generally considered to have sufficient reliability (Fraenkel and Wallen, 2009). As a result of the calculation, the reliability coefficient (KR – 20) of the test was found to be 0.84. SPSS 22 was used in the analysis of the results obtained from the academic achievement test. Normality test was performed to determine whether the responses by the groups demonstrated normal distribution. Kolmogorov-Smirnov test was picked to be the normality test. As a result of the normality test, the data is observed to demonstrate a normal distribution ($F = 0.92$, $P > 0.05$). As the data showed normal distribution, independent t test was used to determine the significance of the difference between the groups.

In the study, individual interviews were conducted with semi-structured interview technique, and 32 of the experimental group students were selected by the criteria of active participation and willingness to interview in order to establish their opinions on the flipped classroom. While preparing the interview form questions, the related literature was searched, and the interview form consisting of 5 questions to determine positive-negative opinions, difficulties and motivations experienced in reverse-straight classes was formed by taking 2

expert opinions. Descriptive analyzes are performed with the results of the interviews with students about flipped classroom applications, descriptive analyzes were performed on the findings. In presenting the qualitative findings, the interview questions formed the thematic framework.

3. Findings

In this section, the statistical analysis of the students' answers to the questions in the achievement test were presented as quantitative findings and the data of the semi-constructivist interviews conducted with the students as qualitative findings.

3.1 Quantitative findings of the research

Table 2. *Statistical analysis of the achievement test*

Groups		Mean	Std. Deviation	t	df	p
General Success	Experimental	11,3750	3,27010	2.786	61	,007
	Control	9,1613	3,03421			

($p < 0,05$)

Table 1 shows the average scores of the answers given by the experimental and control group students to the questions in the achievement test. The difference between the mean scores of the groups was found to be statistically significant and in favor of the experimental group ($p < 0.05$). In this respect, it can be said that the application of flipped learning model positively affects students' academic achievement levels.

3.2 Qualitative findings of the research

In this part of the research, the data that are obtained in the form of semi-structured interviews with experimental group students will be analyzed at the end of the applications.

Student views on satisfaction from flipped learning environment

As a result of the interviews, the majority of the students stated that they were pleased to have been in the flipped learning environment. The students stated that they perceived the subject better in general. The students expressed their satisfaction with the application in different ways. Some students' views about their satisfaction with the flipped learning environment are as follows:

S2: *"Yes, I enjoyed the program very much. Because thanks to the flipped classroom I perceived the subject easier".*

S6: *"Yes, I'm very pleased. Because with this application, I can go over the subjects again".*

S8: *"Yes, I'm very pleased. Because this way, I was informed about the subject before coming to the classroom. Thus, I can ask more questions to the teacher".*

S11: *"Yes, I'm pleased. I didn't had the chance to make enough practice on the Science course before. But now I can apply what I've learned better before coming to the classroom"*.

S11: *"I liked it very much. I study on the EIN before the classroom and thus, my participation in the class increases and I understand better "*.

S30: *"Yes, I'm pleased, I can work with the EBA at any time. The lectures are very nice and interesting, also I understand better"*.

It can be said that the students developed a positive view towards the flipped learning environment. On the other hand, the students state that in the flipped classroom environment, they perceive the subjects better and practice-based activities came to the forefront and that they are more successful than before and that it provides a more relaxed and free learning environment than the classroom environment because they can repeat the subject whenever they want.

Student Opinions on the Advantages of Sharing of the Subjects on the EIN Before the Class

Some of the students' views about the advantages of coming to the classroom by studying before class are as follows:

S6: *"Yes, it has advantages, because my my participation in the class has increased"*.

S7: *"Yes, it has advantages, because I understand the lesson much better after studying it at home"*.

S14: *"Yes, it is very advantageous, because when I study the subject beforehand, I learn the sections that I couldn't understand before by researching and if I cannot learn, I ask my teacher in class"*.

S19: *"I think it is advantageous. I can answer the teacher's questions during the class because I know the subject beforehand"*.

S24: *"Yes, it has advantages, because I'm more ready for class so I can solve more questions with the teacher in the classroom"*.

S26: *"Yes, it has advantages, because I understood the subject much better"*.

S31: *"I think it is advantageous, because now, I get better scores at tests"*.

The interviews indicated that it was advantageous for all students to share the subject content from the EIN on the internet before the class. Students stated that they understood the subject better with this application and their participation in the course increased.

Opinions of students about the problems faced while studying in flipped learning environment

During the interviews, it is seen that most of the students did not have any problems but some of them had problems in entering the EIN system. Some student views on the problems they encountered in entering the flipped learning environment:

S5: *"Since we didn't have internet access at home, I had to go to my friend's house to study"*.

S9: *"Some days the computer froze and the videos didn't play"*.

S11: *"The speed of the internet in our house was sometimes insufficient"*.

S16: *"My computer at home was an old model, so I had trouble opening the videos"*.

S28: *"I can only ask the teacher the subjects I have hard times understanding at the school now and I think it is a problem"*.

The problems that the students faced in the flipped classroom practice were generally observed as problems caused by lack of computer hardware or computers and internet speed. The lack of interaction with teachers outside the classroom can also be considered as a problem.

Student views on the advantages of reverse-face learning environments over traditional classroom:

In the interviews with students, the majority stated that the flipped learning environment is much better than the traditional classroom environment. Some students' opinions about this are as follows:

S3: "In flipped learning I learn the subjects faster and without getting bored".

S10: "I think the flipped learning environment is superior because it makes learning easier".

S12: "Flipped learning environment is more fun, I don't get bored".

S15: "Sometimes the time allocated may not be enough for the subjects in the classroom but flipped learning method allows me to go over them at home".

S17: "I can learn the subject before going to class in the flipped learning environment, so that we understand the subjects through the practices we do at school".

S27: "I think Reverse-face learning gives me the opportunity to study individually so that I understand the subject better".

In this study, it is seen that students find flipped learning environment more advantageous than traditional classroom environment. Students state that it is much more fun and enjoyable to study in a flipped learning environment. On the other hand, it can be said that in the flipped classroom environment, there is no such situation that the lectures cannot be completed. The absence of any time or space constraints in the flipped learning environment has been expressed by most students as a great convenience. In addition, being able to go over the subject and the constant access to the resources provided to them were expressed as the superiority of the reverse-face learning environment.

Students' views on the effect of conducting more activities and face-to face practices in the classroom due to coming to the classroom environment having studied the subjects beforehand on learning:

Students' answers on the matter of their teachers answering their questions concerning the problems they face during in-class activities, practices and the problems they encounter is as follows:

S1: "My performance has improved thanks to coming to the class having prepared".

S7: "It has had a positive impact on me, in the classroom, we go over the subjects that I studied at home and thus I don't forget the subjects".

S14: "By asking my teacher what I did not understand and with the activities we conducted, I understood the subjects better".

S23: "The subjects became more permanent in my memory because I repeated the subjects more".

S29: "I think I perceived the subject better".

S30: "I didn't use to participate in the classroom as much as I do now".

During the interviews, it was observed that all of the students responded positively to this interview question. In addition, they say that thanks to the flipped practices, they generally understand the subject better, participate more in class in the classroom, and the knowledge they obtain is more permanent.

4. Discussions, conclusions and recommendations

When the literature is analyzed, it is seen that the researches related to the flipped classroom model are mostly carried out at undergraduate level and in disciplines such as mathematics, engineering, medicine and foreign language education. In this study, flipped learning model was used in science teaching and the effect of the applied model on the academic achievements of the students in science lesson and their opinions about the reverse face learning model are examined. In this respect, it is thought that the findings obtained from the research will make important contributions to the related literature.

The results of the research show that the achievement test scores of the experimental group students studying with the flipped classroom model on the 8th grade science class's "Interaction of Matter with Heat" subject are significantly higher than the scores of the control group students studying with the current program. It is also seen in the different research results that the high science achievement test scores of the students in the experimental group of the flipped classroom model are due to the fact that the students learn the theoretical information about the subjects outside the classroom and when they come to the classroom, they are more likely to have more activities, exercises and problem solving (Alsancak Sırakaya, 2015; Aydın, 2016; Boyraz, 2014; Çakır ve Yaman, 2018; Karaca ve Ocak, 2017; Sezer, 2015; Tomory ve Watson, 2015; Yavuz, 2016). Contrary to the results of this study, in studies conducted by Marlowe (2012), Clark (2013), Devenci Topal and Akhisar (2018) no significant difference between the flipped classroom experimental group and the students in the traditional group has been found.

At the end of the research, one of the findings obtained from the interviews with the students stated that the students asked more questions to their teachers with the application of flipped classroom and their time of communication with the teachers in the classroom has increased. This is in line with the conclusion of studies of Fulton (2012) and Herold (2012) that show they can get help from the teacher at any time and have the chance to ask the teacher more questions.

One of the results obtained from the student interviews; that the flipped classroom practice increases their success and that they have the opportunity to go-over the topics they do not understand. The students also stated that they remembered what they had learned better and coming to the classroom having studied the subject has increased their participation in the lesson. This result shows similarity to the results of the studies conducted by Frydenberg (2012, Herold et al. (2012) and Stone.

Although the results of the research show that students like the flipped learning model and find it fun, some students encounter problems in practice. These problems are the lack of internet in the home environment, low internet speed or the lack of technical equipment of computers. The results of this study are consistent with the problems that the students participating in Görü Doğan's (2015) study have about the accessibility of the videos and the internet connection, and in Turan and Göktaş's (2015) study, where the students expressed the lack of technical tools as a disadvantage of the flipped learning model. Also similar to the results of this study, Turan (2015) has mentioned technical problems as one of the difficulties faced in the flipped classroom practice and Aydın (2016), on the study examining the effect of

the flipped classroom practice on the academic achievements of the students has stated technical and hardware problems as the problems encountered.

With this research, the applicability of flipped learning, one of the new learning models, for the Science classes is examined. As a result of the research, students expressed positive views for the flipped learning model and stated that this kind of learning environment would contribute to their learning. Today, in the education system, a new learning-teaching approach or model, method and various applications are produced day by day and all these innovations are used in many levels of education. Therefore, in order to implement the flipped learning model effectively, the technical infrastructure, especially the high-speed internet, should be reinforced and the students should be encouraged and motivated to study out-of-the-class using the videos, animations, simulations, interactive activities and course contents offered in the online mediums.

It is clear that the students express almost exclusively positive opinions about the flipped classroom model applications and find this method fun and effective. From this point of view, in order to make more accurate determinations, it is thought that the study of the flipped classroom model in terms of different levels and variables in education programs of other subjects would contribute.

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THE EFFECT OF THE EXPLICIT STRATEGY TRAINING ON LEARNER AUTONOMY

Case study

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Abstract

The study aimed to investigate the effect of the explicit strategy training on the students' autonomy in foreign language learning and to seek for their attitudes towards such training. The research lasted for fourteen weeks at the 2018-2019 academic year. Data were collected through the Course Evaluation Questionnaire, the Student Autonomous Learning Capacity Questionnaire, the learner diary, the researcher's diary and semi-structured interviews. The SALCQ was administered twice first at the beginning and secondly at the end of the training so as to identify any increases in the learners' capacity of autonomy. The results revealed that the strategy training helped learners enhance their capacity of autonomy in some factors. The study disclosed that the students held positive attitudes towards the training as it provided opportunities for the students to employ LLSs more effectively, deal with learning related problems, enhance self-directed out of class activities, to develop language learning skills and to monitor their learning process in an effective way by raising their awareness of strategy use and self-confidence. Furthermore, the strategy training provided opportunities for the students to reflect on their learning methods, classroom activities along with their classroom behaviour and how learning could be made easier.

Keywords: language learning strategies, learner autonomy, explicit strategy training, EFL

1. Introduction

Foreign language learning has been mainly dealt with the learners' needs and put them in the centre of learning in recent years contrary to the traditional teacher-centred learning, which gives priority to the effectiveness of the teacher on the improvement of the learner in the classroom. Collins (2009) asserts that the teacher's role is related with providing help for the learner to be a facilitator in learning environment while the learner needs to take more responsibility for their own learning, which constitutes the main principle of learner autonomy. The learner has been in the centre of learning in the domain of foreign language education as a result of this autonomous learning has been gaining more importance. Language learners need to be willing to take their own responsibility for the learning process and autonomy starts at this stage if they want to be successful and proficient in learning. Learner autonomy does not occur naturally, on the contrary, it is an interactive process between human beings. Investigating the influence of learner autonomy on the learners' improvement in English language learning and seeking for the different ways to cultivate this effect is essential in this study.

Researchers give various definitions of learner autonomy such as Holec (1980) defines autonomy as an ability to take responsibility of learners' own learning while Cotterall (1995)

views autonomy as a capacity to “to set goals, create and utilize practice opportunities, and evaluate progress” (cited in Smith & Craig, 2013, p. 253). According to Benson and Voller (1997), “autonomy is an innate ability but prevented from institutional education” (cited in Nunan, 2003, p. 193). Nevertheless, as Esch (1996) emphasizes that learner autonomy does not mean learning without any guidance from outside (cited in Joshi, 2011). Additionally, Collins (2009) states the teacher’s role is also important in learning, yet; the teacher should take the role of the facilitator when the learner is the person who takes charge of more responsibility. As can be seen from the definitions aforementioned, learners have an ability from their childhood to learn autonomously. In other words, as Little (2007) stresses, it is natural for people (cited in Ounis, 2016) and it is possible to enhance it. According to some researchers, learners who are assumed to be autonomous have common characteristics (Breen & Mann, 1997; Hughes, 2003; Dickinson, 1993). For Dickinson (1992), autonomous learners can set goals, select and use strategies consciously (cited in Çakıcı, 2014, p. 35). Hughes (2003) thinks that they have the capacity to control, reflect on and make plans about learning. Moreover, Breen and Mann (1997) explain that they have the capacity to learn independently and enthusiastically.

In order to enhance the students’ capacity of autonomous learning, the teacher’s role (Camilleri, 1997 as cited in Şanal, 2016; Cotteral, 1995; Voller, 1997 cited in Han, 2014; Xu & Xu, 2004; Nguyen, 2012) and the learner’s role (Joshi, 2011) should be taken into consideration along with reflection on learning (Reinders, 2010; Qing, 2013) and using language learning strategies effectively (Oxford, 2003; Chamot & O’Malley, 1990; Cohen, 2002; Lai, 2009; Rubin, 1987). Çakıcı (2015) acknowledges that cooperative learning, evaluation tests, diaries, self reports and learning strategies are among the ways cultivating learner autonomy. As one of the ways, language learning strategies play an important role in fostering learner autonomy. Rubin (1987) and Oxford (1990) classify them into two as direct and indirect strategies while Chamot and O’Malley (1990) categorize them into social/affective, metacognitive and cognitive strategies. Furthermore, for Stern (1992) cognitive, management and planning, cognitive, interpersonal, communicative-experiential and affective strategies are among language learning strategies (cited in Hismanoğlu, 2002).

Learner training is the name given to the ways employed to foster the autonomy of the learner. It is assumed that there is a close relationship between learner training, in other words, strategy training and learner autonomy (Harris, 1993; Cohen, 1998; Wenden, 2002 cited in Benson, 2001). Wang (2016) and Oxford (2002) assert that explicit strategy training needs to be consisted of teaching strategies in classroom since “learning cannot be achieved if learners do not use learning strategies so that autonomous learning may result in all talk, no action” (Wenden, 1991, p. 29). Accordingly, training in strategy use helps learners reflect on the reasons, which affect learning and investigate the useful language learning strategies (Ellis & Sinclair, 1989).

Since learner autonomy is closely correlated to the students’ needs and their active involvement in learning, the Strategy Based Instruction, SBI, (Cohen, 2003) and the Cognitive Academic Language Learning Approach (Chamot and O’Malley, 1996) were followed in the study. SBI promotes learner-centred teaching in which the learners are encouraged to be aware of their weak and strong sides while learning a language and to overcome learning difficulties. Therefore, they will have the capacity to monitor, improve and finally evaluate their learning (Cohen, 2003). Similarly, CALLA (Chamot & O’Malley, 1996) also promotes to increase the capacity of the learners’ autonomy through the implementation of strategy training (cited in Wang, 2016). In this approach, there are six stages consisting of preparation, presentation, practice, evaluation, expansion and assessment to be followed during the training program (Wang, 2016). Preparation stage is concerned

with raising the learners' awareness of strategy use while presentation stage contains to explain and model the target strategy. Furthermore, practice stage focuses on the learners' prior knowledge and its practice, evaluation stage provides opportunities for the learners to monitor and make an evaluation of their performance in a group or in pairs, expansion stage make students use the strategies in new contexts (Wang, 2016) and finally, assessment stage supports learners to utilize self assessment, self report and reflection (Chamot & Robbins, 2006).

Based on the information given above, this study intended to examine how to increase students' capacity of autonomy through the explicit strategy training and to encourage the learners towards independent learning with the use of the training. For this purpose, the following questions were asked:

1. Does involvement in explicit strategy training result in an increase in the students' autonomy?
2. What are learners' attitudes towards the explicit strategy training?

2. Method

2.1. Setting and Participants

The study was carried out in the academic year of 2018/2019 at a preparatory school of a state university in Turkey. The participants of the study were 22 English preparatory class students and 14 of them were female and 8 of them were male. The participants were placed into the classes according to the result of the placement test which was held at the beginning of the first semester of the academic year. They were categorized according to their level of CEFR. The students had 24 hours of courses in a week consisting of listening and speaking skills (4 hour), reading and writing skills (4 hour) and main course (16 hour). The present study was conducted in 4-hour reading and writing skills class.

2.2. Instruments

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explain and model the target strategy. Furthermore, practice stage focuses on the learners' prior knowledge and its practice, evaluation stage provides opportunities for the learners to monitor and make an evaluation of their performance in a group or in pairs, expansion stage make students use the strategies in new contexts (Wang, 2016) and finally, assessment stage supports learners to utilize self assessment, self report and reflection (Chamot & Robbins, 2006). Based on the information given above, this study utilized both quantitative and qualitative data collection instruments. The Student Autonomous Learning Capacity Questionnaire, the SALCQ, (Xu, Peng & Wu, 2004) and the Course Evaluation Questionnaire, the CEQ, (Marques, 2000) were used as quantitative data collecting tool while qualitative data tools involved learner diary, researcher's diary and semi-structured interviews. All the items in questionnaires and interviews were asked in Turkish as the focus of the study was not on the participants' English proficiency level.

2.3. Data collection and Analysis

Regarding the analysis of the data, quantitative data were subjected to SPSS, statistically analyzed and presented in the tables. Moreover, qualitative data were recorded and analyzed descriptively.

3. Findings

3.1. Does involvement in explicit strategy training result in an increase in the students' autonomy?

The SALCQ was administered before and after the explicit strategy training so as to find out whether involvement in explicit strategy training results in an increase in the students' autonomy considering pre-test and post-test results. Table 1 presents the results of the first section of the SALCQ regarding the students' understanding instructors' teaching objectives and requirements.

Table 1. *Understanding instructors' teaching objectives and requirements*

Items	Test	Mean	SD	Sig.
1. I understand the course requirements and the class requirements.	Pre-test	4.45	.80	.853
	Post-test	4.50	.74	
2. I am able to turn the teacher's teaching objectives into my own learning objectives.	Pre-test	3.82	.90	1.000
	Post-test	3.82	.73	
3. I know it's very important to study hard according to the course objectives.	Pre-test	4.32	.78	.446
	Post-test	4.14	.83	
4. I know why the teacher would use a certain class activity to improve my language skills.	Pre-test	4.09	.61	.296
	Post-test	4.27	.55	
5. I feel I can keep up with the progress of the course.	Pre-test	3.86	.94	.448
	Post-test	4.09	.92	

The mean scores of pre- and post-test results of the section indicated that the participants enhanced their autonomy in understanding the requirements of the course and the class and the reason for why a certain class activity was done by their instructor after the strategy training. Moreover, they increased their capacity of keeping up with the progress of the course. However, it was necessary to help the learners study more in terms of the course objectives.

Table 2 below presents the students' capacity of autonomy in setting up personal learning objectives and study plans before and after the implementation of the strategy training.

Table 2. *Setting up personal learning objectives and study plans pre-test and post-test results*

Items	Test	Mean	SD	Sig.
6. Besides the class tasks and assignments, I will make my own English study plan.	Pre-test	3.95	.84	.348
	Post-test	4.18	.73	
7. I make my own study objectives according to my own situation.	Pre-test	4.27	.94	.234
	Post-test	4.50	.74	
8. I adjust my study plan if necessary.	Pre-test	4.45	.67	.204
	Post-test	4.68	.48	
9. I make a time plan to study English.	Pre-test	3.77	1.06	.672
	Post-test	3.64	1.00	
10. I set up my English study objectives according the <i>Official English Syllabus of the School</i> .	Pre-test	2.82	1.09	.809
	Post-test	2.72	.94	

In general, it was apparent that the learners had capacity to organize their learning process with regard to the results of the pre-test of this section. The students had higher capacity in adjusting their study plan if necessary and making their own study objectives according to their own situation than making a time plan to study English and setting up their objectives according to the syllabus of the school. These findings disclosed an overall increase in the participants' capacity of making study plans and setting up personal learning objectives. However, the students needed to be encouraged to manage their own learning along with setting goals in learning English language.

Table 3 presents the results of the students' capacity of autonomy in using learning strategies in an effective way.

Table 3. *Using learning strategies in an effective way pre-test and post-test results*

Items	Test	Mean	SD	Sig.
11. I understand foreign language learning strategy in general.	Pre-test	3.91	.75	.047
	Post-test	4.36	.49	
12. I use listening strategies when I practice my listening skills.	Pre-test	3.59	.90	0.19
	Post-test	4.22	.61	

13. I use communicative strategies when I practice my oral English.	Pre-test	3.64	.73	.007
	Post-test	4.27	.46	
14. I use reading strategies when I do English reading.	Pre-test	3.45	.86	.006
	Post-test	4.18	.66	
15. I use writing strategies when I write in English.	Pre-test	3.59	.85	.013
	Post-test	4.22	.81	

Pre-test of section three regarding students' use of language learning strategies effectively obtained lower scores. Nevertheless, the results of the post-test demonstrated a considerable increase in using the strategies effectively with the mean score of 4.25. Concerning the findings, it was evident that the explicit strategy training influenced the students' use of LLSs as one aspect of the autonomous learning. This finding supported the idea that the learners could be autonomous in learning English if they were more involved in strategy use (Balçıkanlı, 2010).

Table 4 presents the students' capacity of autonomy in monitoring the use of learning strategies.

Table 4. *Monitoring the use of learning strategies pre-test and post-test results*

Items	Test	Mean	SD	Sig.
16. I adjust my listening learning strategies if I find they are not suitable for me.	Pre-test	4.14	.89	.724
	Post-test	4.22	.87	
17. I adjust my communicative learning strategies if I find they are not suitable for me.	Pre-test	4.09	.75	.589
	Post-test	4.22	.81	
18. I adjust my reading learning strategies if I find they are not suitable for me.	Pre-test	4.09	.87	.029
	Post-test	4.55	.51	
19. I adjust my writing learning strategies if I find they are not suitable for me.	Pre-test	3.95	.84	.010
	Post-test	4.59	.50	
20. I evaluate my learning approaches in order to find the problems of my study.	Pre-test	4.05	.65	.665
	Post-test	4.14	.56	
21. I change my learning approach when I find it inappropriate	Pre-test	4.23	.75	.724
	Post-test	4.14	.83	
22. I am aware of whether my learning approaches are suitable to myself or not.	Pre-test	3.86	1.03	.010
	Post-test	4.59	.50	

The findings of section four indicate that it is possible to increase the students' capacity of adjusting the strategies in language skills. Additionally, their awareness of learning approaches could be increased with the help of the strategy training. It is possible to say that

the learners are ready to overcome the difficulties they meet in their learning process, which supports their autonomous learning. As a consequence, these results show the enhancement in the learners' independency in learning English.

Table 5 presents the students' capacity of autonomy in monitoring and evaluating the English learning process.

Table 5. *Monitoring and evaluating the English learning process pre-test and post-test results*

Items	Test	Mean	SD	Sig.
23. I find opportunities to learn English outside class..	Pre-test	4.32	.72	.693
	Post-test	4.40	.73	
24. I find ways to conquer those affective factors that might have negative influence on my English study.	Pre-test	4.09	.68	.544
	Post-test	4.22	.69	
25. I try to take advantage of the learning resources available.	Pre-test	4.05	.79	.229
	Post-test	4.32	.65	
26. I try to use the new knowledge when I practice my English..	Pre-test	4.55	.60	.648
	Post-test	4.64	.58	
27. I try to cooperate and learn together with my classmates.	Pre-test	3.73	.98	.880
	Post-test	3.77	1.06	
28. I realize the learning mistakes I've made during my study process.	Pre-test	3.82	.91	.116
	Post-test	4.27	.70	
29. I know the reasons why I make mistakes and will take actions to correct them.	Pre-test	4.09	.81	.874
	Post-test	4.14	.94	
30. I try to use appropriate learning approaches to make myself a better language learner.	Pre-test	4.50	.67	.648
	Post-test	4.41	.51	
31. I check whether I've finished my study plans when I try to finish a learning task.	Pre-test	3.14	1.04	.135
	Post-test	3.59	1.05	
32. I check whether I've learned the previous knowledge when I try to finish a language learning task.	Pre-test	3.91	.87	.021
	Post-test	4.36	.58	

Concerning the results of section five, the learners should be trained specifically to find and use appropriate learning approaches so as to succeed in learning English. The students increased their capacity to check whether they have learned the previous knowledge when they try to finish a language task with the mean of pre-test (M= 3.91) and post-test (M= 4.36) following the strategy training. It is a statistically significant difference as the p value was .021.

3.2. What are learners' attitudes towards the explicit strategy training?

In order to give response to the second research question which was asked to identify the students' attitudes towards the strategy training, the CEQ, learner diary, semi-structured interviews and researcher's diary were utilized. According to the entries of the diaries, the participants presented their views about the target strategy use as can be seen from the following extracts:

“When I used inferencing strategy I applied some methods. Firstly, I tried to understand the text and then focused on the words that might help me select the main idea. I omitted the irrelevant words and chose the one left behind.” (PF14- Learner diary)

“Visualizing strategy had been probably one of the best I could use effectively not only in writing and reading in English in an effective way but also improving my speaking and listening skills.” (PM20-Learner diary)

The students utilized a series of reading strategies, which were used by successful readers such as skipping irrelevant words, identifying the grammatical category of words or guessing meaning from the context (Hosenfeld, 1984 as cited in Wiriyakarun, 2008). Furthermore, the most popular out of class activities employed by the participants were identified as listening to music in English, reading books and watching series or films in English. Meanwhile, using mobile applications, making jokes and using audio dictionary were selected as the least popular activities done by the learners. The following recording shows the student's choice of doing a specific activity:

“I had started to watch a series called the Haunting of the Hill House. First, I could feel myself more comfortable while watching it with subtitles to be sure that I understood correctly but later, I tried to watch it without subtitles and I succeed in understanding most of the dialogues.” (PM18-Learner diary)

The learners also report that they use mind mapping strategy effectively with the percentage of 77.3 %, visualizing strategy with the percentage of 72.7% and scanning with the percentage of 68.2 %.

The results of the semi-structured interviews indicate the participants' positive attitude towards strategy training. Specifically, the participants are aware of the concept of learner autonomy and regard themselves autonomous learners:

“Autonomous learning helps me know myself better because I am alone and I have some responsibilities to do. Therefore, I must think and act on my own and do my best. It is didactic and an effective method to use.” (PF11-Semi-structured interviews)

The participants give two major roles to the teacher as facilitator or resource facilitator and a guide who considers students' opinions and learning needs:

“I believe that my autonomy can be improved more with the help of a guide who can direct me in learning. I think the teacher should direct me in learning process rather than he or she just teaches me something.” (PF13- Semi-structured interviews)

The CEQ demonstrates that all of the students agree that the course provides them to reflect on their learning methods. Reflection is something that autonomous learners need to have (Hughes, 2003) and to be focused on (Little, 2007). Additionally, 95.5% of the students state that they can tell the teacher what they would like to learn, 90.9% of them report that the course provides opportunities for them to evaluate their learning methods, to monitor their learning and to learn how to organize their ideas into a composition.

4. Conclusion

The present study revealed the close relationship between participants' autonomy and their improvement in language learning strategies (Ceylan, 2015) and the use of LLSs effectively (Channuan & Wasanasomsithi, 2012; Lai, 2009; Nisbet, Tindall & Arroyo, 2005; Park, 1997; Tam, 2013). The more the students increased their autonomy the more proficiency they would have in learning a language (Dafai, 2007). As the strategy training was a way to be used to cultivate autonomy of the students (Course, 2017; Gholami & Bria, 2013), this study focused on the effect of the explicit strategy training on the enhancement of learners' autonomy. The first research question attempted to find answers whether the explicit strategy training increased the participants' autonomy. Specifically speaking, considering the results of pre- and post-test results of the SALCQ, it was possible to increase learner autonomy in understanding teachers' teaching objectives and requirements, setting up personal study plans and learning objectives, using and monitoring learning strategies effectively and monitoring and evaluating their English learning process.

The second research question sought for the students' attitudes towards the explicit strategy training. With this aim, the semi-structured interviews, the learner diary, the CEQ and the researcher's diary were benefited. The learners' responses given to the semi-structured interviews indicated their highly positive attitudes towards the training (Çakıcı, 2017). The themes emerged from the students' answers about self-assessment of autonomy could be summarized as increasing the awareness of autonomy, improving reading skills and self-study skills and desire for more responsibility. The students considered their teacher to involve in conducting learning, monitor their progress, act as a guide and care for learners' ideas. The students highlighted that the strategy training provided help for them to use various LLSs, improve their language skills, metacognitive skills and awareness of learning weaknesses. Additionally, the students used learner diary and technology to monitor their learning progress. Furthermore, the learner diaries disclosed that the students made efforts to use self-directed activities not only in the classroom but also out of it as "autonomy can take place both inside and outside the classroom" (Sinclair, 2008 as cited in Pichugova, I. L., Stepura, S. N. & Pravosudov, M. M., 2016, p. 2). Furthermore, the participants gained awareness of strategy use in learning a language and used both cognitive and metacognitive strategies in an effective way. Such activities as learner/teacher dialogues, goal-setting handout, and the use of library/study room seemed to assist learner autonomy. The learners were ready to take control of their learning, which was the preliminary principle of autonomy but they needed to be encouraged and felt more confident in learning English.

5. Implications and suggestions

The present study whose main aim is to encourage learners to be more autonomous in learning a language through the strategy training proposes to design the strategy instruction for EFL learners in the syllabus of the school concerning learners' and teachers' awareness of autonomy. Additionally, the syllabus of the course in which the training is involved should be prepared regarding the principles of autonomous learning. As the development of autonomy is a dynamic process, further studies need to be conducted through a longer period of time. Furthermore, cognitive and metacognitive strategies in developing reading and writing skills

are benefitted from so as to increase the learners' autonomous learning capacity of the strategy training. Nevertheless, the strategy training can also be involved in listening and speaking skills courses along with social and affective language learning strategies to enhance learner autonomy.

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ENDNOTE

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BRIDGING IN-CLASS AND OUT-OF-CLASS LEARNING THROUGH PODCAST-INTERTWINED COLLABORATIVE TASKS TO REDUCE EFL SPEAKING ANXIETY AMONG HIGHER PROFICIENCY LEARNERS

Research Article

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Abstract

Although speaking anxiety among foreign language learners at lower levels of proficiency has been extensively studied, far too little attention has been paid to learners at more advanced levels like student teachers enrolled in English Language Teaching (ELT) programs. However, speaking in the target language is a complicated mental process influenced by several other factors than proficiency. The present study has aptly been undertaken due to considerable reticence on the part of student teachers in communicative activities. An action plan was initiated to identify the sources of student teachers' avoidance behaviors in oral production and address the concerns generated by these factors. An open-ended survey, journals, overall reflection papers and field notes were employed to gain insights as to the research process. Analysis of qualitative data revealed that student teachers were susceptible to experiencing anxiety in oral production due to personal and interpersonal issues, and they were positive in their perceptions of the planned intervention since it helped them build a sense of community in their classroom and enhance their self-esteem. These findings suggest several courses of action for language practitioners and teacher training institutions.

Keywords: speaking anxiety; higher proficiency learners; student teachers; collaborative learning; podcasts; out-of-class learning

1. Introduction

English has become a lingua franca of education, science, technology, commerce and business in the rapidly globalizing world. Hence, having citizens capable of communicating in English has been in the limelight of the educational policies of worldwide countries. Turkey desiring to take an active part in the international arena has not been an exempt from this trend, either. Accordingly, English has been given priority over other foreign languages like French, German and Arabic in the Turkish context since mid-1900s as a response to the increasing economic and military power of English-speaking countries (Doğançay-Aktuna, 1998).

Yet, despite many initiatives to increase the quality and quantity of English learning experiences in educational settings, foreign language learners generally experience problems with oral communication in Turkey. Put differently, living in an expanding circle country where English has neither an official nor a co-official status (Kachru, 1992, Kırkgöz, 2009),

Turkish learners of English do not have opportunities to communicate in natural settings and their use of it is mostly limited to limited time in classrooms. This being the case, even learners with higher proficiency levels like students in ELT programs may go through negative experiences during communicative activities (Aydın, 2008; Tum & Kunt, 2013).

Several factors may interfere with learners' oral performance. Over the last four decades, there has been a burgeoning of research demonstrating the impact of affective factors on students' learning of foreign languages and anxiety has been particularly suggested as one of the most influential variables affecting learners' oral proficiency. According to Toth (2017), anxiety experienced by advanced learners is indeed not a matter of linguistic knowledge; but a psychological state of personal inadequacy resulting from "the disparity between the "true" self as known to the language learner and the more limited self as can be presented at any given moment in the foreign language" (Horwitz et al., 1986, p. 128).

It is this experience of anxiety manifested by student teachers in an ELT program that has driven the current action research. In order to reduce the feelings of apprehension, uneasiness and tension arising during communicative tasks, the researchers initially aimed to find out the sources of anxiety experienced during oral communication. In alignment with this, the first research question was formulated as follows:

1. What are the major factors that provoke anxiety in second-year student teachers in oral communication?

Having identified the reasons which were mostly related to personal and interpersonal anxieties, the researchers designed and implemented an action plan drawing on the literature on collaborative learning, out-of-class learning and podcasting. To this end, the following research question was used to guide the second part of the study:

2. What are the perceptions of second-year student teachers in relation to the overall impact of podcast-intertwined collaborative tasks on reducing speaking anxiety?

It is hoped that this research can contribute to the calls made by several researchers (Marzec-Stawiarska, 2015; Toth, 2017; Tum & Kunt, 2013) for further research into anxiety at higher levels of proficiency and generate fresh insights into the extant literature since it provides one of the first investigations into the effect of blending in-class collaborative tasks with out-of-class collaborative tasks through podcasting to alleviate speaking anxiety at more advanced levels.

2. Theoretical Background

Interest in affective variables in ELT dates back to 1970s. With the advent of humanistic theories, scholars such as Asher (1977), Curran (1976), Gattegno (1972), Lozanov (1979), and Krashen and Terrell (1983) suggested that cognition alone cannot account for the complex process of second language acquisition (SLA) and affective factors also have a decisive impact on language learning. As a result, a number of methods such as Silent Way, Community Language Learning, Desuggestopedia, Total Physical Response, the Natural Approach and the methodology of Communicative Language Teaching emerged to set the value of affect as well as cognition in ELT.

Affective domain includes several elements ranging from emotional and motivational aspects of human behavior to personal characteristics (Imai, 2010). However, as stated by many in the field (e.g. Arnold & Brown 1999; Dörnyei & Ryan, 2015; MacIntyre & Vincze, 2017; Oxford, 1999), anxiety is the most frequently experienced affective state influencing the process of language learning. Defined as "an unpleasant subjective experience of tension, apprehension or anticipation, imposed by the expectation of danger or distress or the need for

a special effort” (Kelly, Brown & Schaffer, 1970, p. 429), anxiety can play either a facilitative or a debilitating role in the learning process. Facilitating anxiety helps learners to be alert and more focused with respect to their learning processes; whereas, debilitating anxiety hinders learning and causes poor performance (Oxford, 1999). It is generally this harmful effect of anxiety that language learning has most often been associated with. As to its types, anxiety can be categorized as trait, state and situation-specific anxiety (MacIntyre & Gardner, 1991). While trait anxiety is defined as a predisposition to feel nervous in a variety of situations (Scovel, 1978), state anxiety refers to a sense of apprehension arising at a particular moment (Spielberger, 1983). Similar to trait anxiety, situation-specific anxiety is persistent but it is limited to specific situations like test-taking and classroom participation (Ellis, 1994).

Based on the works of Scovel (1978) and Gardner (1985) who posited that anxiety specific to the language acquisition context is different from a nervous personality and momentary experiences of feeling anxious, Horwitz, Horwitz and Cope (1986) proposed the situation-specific construct of foreign language classroom anxiety. Referring to the debilitating effects of anxiety (e.g. apprehension, distress, lack of concentration, palpitations, avoidance behaviors) on foreign language learners, the authors define this phenomenon as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (p. 128). Moreover, research (e.g. Cheng, Horwitz & Shallert, 1999; Öztürk & Gürbüz, 2014; Tsiplakides and Keramida, 2009; Young, 1991) indicates that although anxiety may show itself in all four language skills, it interferes most seriously with speaking skills given that during oral communication tasks, anxiety influences learners’ attention and as a result, inhibits comprehension and disrupts production (MacIntyre, 1999; Toth, 2006).

In order to reduce its negative impact on learners’ oral performance, several studies have been conducted to find out the sources of foreign language speaking anxiety. In her seminal article, Young (1991) states that related to the issues of self-esteem and competitiveness, personal and interpersonal anxieties come to the fore as the most frequently experienced affective states among foreign language learners. In line with this, Toth (2007) claims that low self-esteem along with competitiveness cause anxiety in learners and this results in low oral performance. Considering that success is contingent upon “what goes on inside and between the people in the classroom” (Stevick, 1980, p. 4), the nature of learning environment no doubt emerges as an important factor significantly affecting learners’ levels of anxiety.

According to Zhang (2010), “If the language class is meant to be a place where individuals can practice in communication in the foreign language, it is vital to establish a social and affective climate in which students are not restricted, aggressive, or feared” (p.82). In this respect, collaborative learning has long been considered beneficial to reduce personal and interpersonal anxieties in language classrooms. Brown (2004) states that collaboration in pursuit of common goals helps learners develop a community of learning and contributes to the establishment of an affective climate in language classrooms. Standing in stark contrast with competitive environments, collaborative classrooms encourage learners to act as a team and work together to accomplish a shared goal (Nunan, 1992). Therefore, Oxford (1997) suggests that since cooperation helps learners develop humane and altruistic relationships, anxiety interferes less and self-esteem gets enhanced.

Alongside with in-class collaborative activities, out-of-class learning opportunities should be utilized to deal with personal and interpersonal issues considering that out-of-class study can contribute to anxiety-free and self-directed learning experiences (Korucu-Kis, 2020).

Seen in another light, out-of-class study helps learners cross the boundaries of formal classrooms and offers a wide array of resources and options through which learners may overcome psychological and social barriers in more free, open and relaxing environments. Accordingly, Guth (2009) states that being a life-long process, second language acquisition does not end with formal education and it should be supported throughout life in out-of-class contexts as well. In a similar vein, Lai and Gu (2011) state that out-of-class study supplements in-class exposure and plays a complementary role for formal learning.

Providing learners with flexible, dynamic and social learning opportunities, technology is a promising venue where learners can continue practicing English outside of formal classrooms. According to Erben (2013), technology promotes motivation, supports learner-centered activities, offers authentic materials and decreases anxiety. Specifically, computer-mediated communication (CMC) often associated with features of participation, interaction, communication, and collaboration is suggested to help learners develop oral proficiency in tension-free learning environments (Arnold, 2007; Beauvois, 1998; Kartal & Balcikanli, 2018; Kern, 1995). Defined as communication that takes place between two or more people by means of computers (Herring, 1996), CMC takes its theoretical basis from several hypotheses in second language acquisition research (e.g. the input hypothesis, output hypothesis, interaction hypothesis). Offering learners unique opportunities to share their ideas, produce a large amount of output, work collaboratively and actively, focus on meaningful uses of language rather than language forms, alleviate anxiety and improve their linguistic performance (AbuSeileek & Qatawneh, 2013), CMC has proved to be an effective method in improving oral proficiency of learners in foreign language environments (Satar & Özdener, 2008).

CMC has two main modalities namely, synchronous and asynchronous. Abrams (2008) states that while synchronous CMC (SCMC) refers to real-time interaction, asynchronous CMC (ACMC) includes delayed interactions. In SCMC environments like chat rooms and audio/video conferencing, the immediacy of individuals and responses matters and this situation restricts the use of outside resources. Yet, unlike face to face communication, this mode provides learners with more time to process the input. On the other hand, learners are not confined by the limits of time and space in ACMC. They have extended time for processing input, planning, producing output and accessing outside resources. According to Chen (2015), so far, text-based ACMC (e.g. wikis, blogs, emails) has been used in a large bulk of research to improve learners' productive skills and the potential of voice-based ACMC like podcasts is yet to be explored in oral communication classes.

The term 'podcast' was derived from the combination of the words of iPod and broadcast and it refers to audio files that can be automatically downloaded to digital devices for later listening (O'Bannon, Lubke, Beard & Britt, 2011). Although audio programs are already available on the web, what differentiates podcasts from other programs is its use of Really Simple Syndication (RSS) feed. Through the use of RSS, users get alerts once new content is uploaded and the latest episodes are downloaded automatically (Rosell-Aguilar, 2007). Thorne and Payne (2005) suggest that podcasts display promising features for foreign language classrooms since they offer diverse authentic materials for aural comprehension and various possibilities for oral speech through dramatic performances, talk show formats, interviews or monologues. In a similar vein, Sze (2006) states that there are two main types of podcasts, namely radio and independent podcasts. In the independent podcasting, learners can either use podcasts created by others or produce their own podcasts. According to Dudeney and Hockly (2007), although the latter is "more demanding, but ultimately perhaps more rewarding" (p.99). In alignment with this, Sze (2006) points out that since creating podcasts allows learners to rehearse the content for several times, work collaboratively,

practice the language behind the scenes, and have product and a real audience at the end, they offer huge benefits for language learners to overcome their oral communication anxiety.

To put it in a nutshell, several studies showed that in-class collaborative activities (e.g. Brown, 2004; Oxford, 1997; Nunan, 1993), out-of-class learning (e.g. Guth, 2009; Lai & Gui, 2011) and CMC (e.g. Abrams, 2003; Arnold, 2007; Satar & Özdener, 2008; Sze, 2006) emerge as promising methods to address problems related to oral performance. Hence, drawing on these approaches, an action plan has been developed in an attempt to alleviate personal and interpersonal anxieties experienced by higher proficiency learners during communicative activities. What follows now is an account of the design and implementation process of the study.

3. Research Design

Richards (2003) states that action research “represents a move from descriptive/interpretive stance to an interventionist position, where a key aim is to understand better some aspect of professional practice as a means of bringing about improvement” (p. 24). Accordingly, this study has adopted an action research approach to identify and address a classroom issue that the researchers were concerned about and wanted to improve by implementing practical interventions. As suggested by Burns (2010), the first author acted as a practitioner-researcher who explored her own teaching context and engaged in the stages of plan, act, observe and reflect to resolve the question at issue.

3.1. Setting and Participants

This study was carried out in an ELT program of a state university in the spring term of the 2018-2019 academic year. In order to get a place at an ELT program in Turkey, senior year high school students majoring in English take two examinations, namely Basic Proficiency Test (TYT) and Foreign Language Examination (YDS). While in the former, learners are tested on such areas as the Turkish language and mathematics; in the latter, their knowledge about the English language and reading comprehension skills are measured through different kinds of questions about knowledge of vocabulary and grammar, translation and reading comprehension. The skills of listening, speaking and writing are neglected in this proficiency examination. The first year of ELT programs mainly focuses on the development of language skills and areas. As a result, undergraduates take courses like the structure of English language, reading, oral communication, writing, and listening and pronunciation. From the second year on, they start taking more pedagogically-oriented classes including but not limited to approaches, methods and techniques, second language acquisition, ELT methodology, teaching English to young learners, classroom management, and testing and evaluation. Participants of this study were second-year student teachers. They were comprised of 21 females and 7 males and ranged in age from 19 to 23 with the exception of two students who were 31 and 41 years of age.

3.2. Procedure

This study emerged from the first author’s concerns over encountering reticence, avoidance behaviors, and forgetful moments with second-year student teachers in classroom discussions. Although students were provided with course materials beforehand and told that the courses would be mostly run based on discussions and applications, prolonged silence and students’ general tendency to give short answers to the questions posed urged the practitioner-researcher to seek out the reasons for this problem. With this aim, students were first provided with an open-ended survey inquiring into the sources of their’ unwillingness to speak in classes. Having identified that the students were experiencing anxiety during oral performances primarily because of self-efficacy and peer pressure issues (see section 4 for

more details), the researchers decided to develop an action plan to address this problem. The results were subsequently shared with students and it was announced that a two-hour speaking practice session would be held each week from the following week on and the participation would be on a voluntary basis.

The study consisted of two cycles. The first cycle lasted for three weeks. It was based on in-class collaborative activities designed around fun and meant to break the ice between learners and establish interpersonal relationships. Based on learners' oral feedback and the practitioner-researchers' observation notes, the second cycle was built upon the idea of intertwining in-class activities with out-of-class learning experiences to increase interaction and communication opportunities in English and continue to promote self-efficacy and altruistic relationships through podcasts. To these ends, (a) groups were assigned randomly, (b) each group member had a responsibility while carrying out tasks and producing podcasts, (c) interesting, creative and entertaining topics were selected (e.g. surviving on a desert island, solving a mysterious crime, if you had a superpower, surviving a nuclear war... etc.), (d) various types of group works were implemented (i.e. games, simulation, role-plays, interviews, opinion exchange, brainstorming, drama, problem solving and decision making) and podcasts were shared on an educational platform called Edmodo and listened, commented upon and liked by class members. To illustrate, the topic of surviving a nuclear war required the use of simulation techniques. In the classroom, learners in groups of ten worked through the imaginary situation of surviving a nuclear war. There were eight people at the airport but only six of them would be able to go to an uninhabited island that was not influenced by radiation. Based on the occupations each student was assigned, the group had to discuss who would get on the plane and live, and who would die ("Idea for an EFL Conversation Class," 2010). This activity continued outside the classroom through the creation of podcasts about starting a new civilization with the survivors. The podcasts were shared on Edmodo and further interaction was ensured via students' likes and comments. The practitioner-researcher acted as a participant-observer throughout the whole process. This role enabled her to keep an account of what was taking place for research purposes. During and after each class, she jotted down some notes about activities, events, learners' actions, emotional ups and downs, and behaviors toward each other. In parallel, participants were asked to keep weekly journals and reflect on that day's learning experiences. The second cycle lasted for seven weeks and the process was finalized with learners' overall reflections about the whole process.

3.3. Data Collection and Analysis

Qualitative methods were used both for data collection and analysis. An open-ended survey, reflection journals, overall reflection papers and participant-observation notes were the tools used for collecting data since these methods lend themselves better to find out participants' perceptions and obtain rich data of their actions in situ (Creswell, 2012). The open-ended survey was administered before the stage of 'act' and inquired into how students felt during oral performances and what made them feel so. Observations involved the teacher-researcher's field notes written down either in situ or immediately after sessions with respect to events, activities, time and students' behaviors and reactions during individual and collaborative oral performances. To identify what improvements to do in the next cycle and have a deeper understanding of learners' perceptions, participants were asked to keep weekly journals and reflect on their learning experiences through such questions like "How did you feel in the class?, Have you ever felt anxious at any time in class today?, Did you find the tasks enjoyable or boring?" etc. At the end of the second cycle, they were also required to write a detailed reflection paper summarizing the whole process they underwent answering some guiding questions related to (a) their satisfaction level with the use of collaborative

activities and podcasts, (b) thoughts about the effect of these tools on their oral communication anxiety and (c) intentions to disseminate the results of this implementation with their peers and their future students and colleagues.

The questions utilized throughout the intervention process were prepared by the researchers in line with research purposes and pilot tested with some non-participant students to ensure the clarity and conciseness. While journals and practitioner researcher's fieldnotes were used to triangulate the data via constant comparison method, overall reflection papers provided the final data for analysis. Content analysis was used to search for patterns, interpret the data obtained and draw conclusions. Both of the researchers independently read through the open-ended surveys and reflection papers several times to discern key ideas, coded them, brought related codes together, put them into categories and developed themes. In order to ensure the reliability of encoded data, minor discrepancies between the researchers' codings were resolved through negotiated agreement and feedback of an outside researcher.

4. Findings and Discussion

1. What are the major factors that provoke anxiety in second-year student teachers in oral communication?

Results indicate that second-year EFL student teachers experience anxiety during oral activities and they attribute it to interpersonal (86%) and personal (68%) issues resulting primarily from peer pressure and low self-esteem. It should be noted that within the context of this study, while interpersonal factors involve issues related to others, personal factors are variables concerned with the individual itself and as the results imply there is not a clear-cut distinction between these two primary sources of anxiety since one may lead to another. Table 1 shows the themes and percentages of participants from the total sample.

Table 1. *Second-year student teachers' reported sources of speaking anxiety*

Categories	%	Themes	%
Fear of negative evaluation	82	Interpersonal factors	86
Competitiveness	21		
Sense of inhibition	61	Personal factors	86
Low self-esteem	46		

Fear of negative evaluation is defined as concern over others' evaluation, avoiding from evaluative situations, and apprehension about being negatively evaluated by others (Horwitz et al, 1986). According to Tsiplakides and Keramida (2009), learners who experience fear of negative evaluation regard making mistakes as a threat to their self-image and they are most often withdrawn and do not take part in language activities. Within the context of this study, fear of negative evaluation was the most frequent theme expressed by the majority of the student teachers (82%). The participants stated that making mistakes and the concomitant possibility of being derided made them feel anxious and caused them to display avoidance behaviors in participating oral activities as can be seen in one of the student teachers' comments:

I don't know why but whenever I want to speak in English, I am afraid of making mistakes. Yes, I know every person can make mistakes and it is normal, but this feeling impedes me...I feel like everyone is listening to me carefully and searching for my mistakes. Of course they do not do it, but I feel like that.

Furthermore, regarding making mistakes as a blow to his ego that can make him seem foolish in his peers' eyes, another student teacher stated:

The two most important reasons that cause anxiety in me are making silly mistakes and having failure during my speech. These thoughts cause me to think that I am going to make a mistake and others will make fun of me. Moreover, I will lose face if I make a mistake. I know such kind of thoughts should be overcome otherwise they will create a big obstacle for me to speak fluently and my eagerness to perform speaking in English.

In her study carried out with pre-service EFL teachers, Tum (2015) also obtained similar results. She stated that making mistakes and being ridiculed were major concerns for her students and those participants subsequently limited themselves from interacting with others in the target language. This sense of fragility can verily be explained by the concept of *language ego* which posits that adults with their native language-based egos feel defenseless when they have any difficulty in the target language and this may cause defensiveness in them against the situations requiring interaction (Brown, 2001).

Competitiveness was another recurring concept mentioned by some of the participants (21%) with respect to the interpersonal factors. According to Bailey (1983), competitive thoughts lead to negative comparisons with others, cause low self-concept and consequently induce communication apprehension. Likewise, participants of this study reported that when they compared themselves to their peers, they felt less proficient and fluent in speaking. They further stated that this situation made them anxious and decreased their willingness to communicate in English as exemplified in the following comments:

Another reason that makes me feel stressed is that some of my friends are more knowledgeable than me. Seeing them getting in conversation more easily than me makes me feel anxious about where I am. I begin to question my level of proficiency.

I feel stressed while I am speaking in English... There are a few people I refrain from in the class. They are good at speaking. They can answer questions without any anxiety... After speaking, I realize my errors and I do not want to speak again.

These results also reflect those of Bekleyen (2004). In her study conducted in an ELT program in Turkey, she found out that due to a competitive atmosphere in their classrooms, some of the participants tended to avoid from participating in oral activities since they thought that they couldn't perform as well as their peers.

As to factors related to personal issues, most of the student teachers (61%) indicated that they were suffering from feeling inhibited during oral activities. They noted that not remembering the words they intend to convey their messages with, forgetting what to say, and overthinking about grammar and pronunciation slow them down and inhibit their oral proficiency and fluency. The following comments depict these feelings:

Another reason that makes me feel stressed or anxious is to forget what I intend to say... Actually, I can put words together in my mind to make sentences but I can't transfer them to other people... Unfortunately, it interrupts my speech.

Other reason that makes me feel stressed is fear of forgetting what to say. This reason is probably my biggest fear... I am suffering from that a lot in daily life. What if I forget what to say, what am I going to do? I am trying to overcome that but I don't know how to do.

This result was also reported by Marzec-Stawiarska (2015) in her study conducted with 54 MA students specializing in EFL teaching. The researcher stated that more than half of the participants exhibited emotional reactions like lack of concentration, difficulty in retrieval, forgetting and the mind going blank during communicative activities. This state could be attributed to the fact that anxiety can be both an effect and a cause and there is a recursive

relationship between anxiety and achievement (Toth, 2007). In the same way, this theme suggests that as learners get anxious, their oral production is hindered and as they feel inhibited, their anxiety level increases.

Moreover, the findings show that student teachers' low self-esteem increases speaking apprehension and results in taking on passive roles in oral activities. Brown (2007) states that self-esteem refers to an individual's belief in his/her abilities to successfully undertake an activity and involves a process of self-evaluation through which the individual judges his/her worthiness. According to Kitano (2001), due to their negative perceptions about themselves, learners tend to perform poorly and have significantly higher anxiety levels. Similarly, almost half of the student teachers (46%) in the present study stated disbelief in their capabilities to communicate successfully in English. They further indicated that feelings of low self-esteem cause tension and disable them to engage in oral production actively as can be seen in the following excerpts:

Maybe, it is because of my thoughts about myself... Actually, I am my biggest judge. Every night I question myself about what I did during that day whether or not I fulfilled my expectations about me, lastly what and how I talked with others. There are some good things about this habit of mine. However, I sometimes can't help but to overthink. Overthinking generally results in finding faults in every behaviour of mine which triggers my anxiety about my speaking and I start to feel ashamed of myself and my inadequate skills. I do not want to think like that and feel humiliated instead I want to be more confident when it comes to speaking.

I feel very uncomfortable while speaking in English. Because, I don't speak with fluency, so I feel like I cannot speak when teacher calls upon my name. Moreover, my lack of confidence has an impact on this issue. If I believed in myself I wouldn't hesitate as much as now.

Admittedly, there is a close link between an individual's language anxiety and degree of self-esteem as aptly stated by Krashen (as cited in Young, 1991, p.427) "... the more I think about self-esteem, the more impressed I am with its impact. This is what causes anxiety in a lot of people."

Taken together, although it is a common expectation that as proficiency increases, foreign language anxiety declines (see Liu, 2006), the findings obtained from the student teachers' responses broadly support the work of other studies indicating that learners with higher proficiency levels also experience speaking apprehension in the target language mostly because of personal and interpersonal factors (e.g. Abrar, Failasofah, Fajaryani & Masbirorotni, 2016; Bekleyen, 2004; Kitano, 2001; Marzec-Stawiarska, 2015; Toth, 2015; Tum, 2015). According to Toth (2007), that advanced learners' detection of their mistakes easily induce feelings of embarrassment and anger in them is one of the possible explanations for higher levels of anxiety among competent users of foreign language. What is more, the results denote that personal and interpersonal variables are interactional factors influencing one another. It is therefore suggested that along with academic achievement, educational institutions should take emotional and social well-being of learners into account by employing classroom techniques that can help learners fulfill their true potential.

2. What are the perceptions of second-year student teachers in relation to the overall impact of podcast-intertwined collaborative tasks on reducing speaking anxiety?

In order to help the participants reduce their speaking anxiety stemming primarily from fear of negative evaluation, competitive thoughts, feelings of inhibition and low self-esteem, an approach based on the integration of collaborative in- and out-of-class study has been adopted to create a positive classroom atmosphere and to allow learners to experience group membership and a sense of accomplishment as a means to bolster self-esteem in them. Table 2 presents a lucid summary of the student teachers' perceptions about how podcast-

intertwined collaborative tasks allowed them to alleviate the tension they go through during oral performances.

Table 2. *Second-year student teachers' perceptions of podcast-intertwined collaborative tasks on reducing speaking anxiety*

Categories	%	Themes	%
Enhancing social interaction	89	Building a sense of community	100
Establishing an affective climate	64		
Fostering meaningful learning	29		
Improving communication skills	75	Promoting sense of self-efficacy	89
Increasing self-confidence	43		

Student teachers reported that the entertaining nature and rich variety of topics and activities created a warm and fuzzy environment, increased interdependence between class members, fostered supportive relationships and consequently helped them feel like they were members of a community and the most important thing was to successfully accomplish the tasks rather than worrying over making mistakes.

Enhanced social interaction was one of the most pervasive themes that emerged from the data. It is encouraging to compare this finding with that suggested by Oxford (1997) who noted in her preliminary article that working cooperatively improves poor relations among classmates, enhances tolerance, eliminates prejudice and increases intercultural understanding. In the same way, the majority of the participants (89%) stated that both in- and out-of-class collaborative tasks increased the interaction and communication among class members and decreased the apprehension they experienced during oral production as exemplified in the following quotes:

When I heard that we would use podcasts in our classes, I remembered that I felt excited. I believe that we did a lot of good podcasts during this term... Each time I had listened to podcasts, I was proud of all of us. We developed better relationships with our classmates. I started to talk to my classmates whom I had never talked during the whole two years, and I regret not talking to them before. One of the reasons of our speaking anxiety was the fact that we refrained from each other. We were afraid of being humiliated. With podcasts, we started to talk our different classmates in every week since our groups had changed every week. So, we learnt about each other and we began to feel more comfortable. Thanks to this, I started feel more relaxed when I spoke in English with my friends.

Second, there is this group work reality. When you do something with your group members, that task is getting easier and easier for you. In group works, there are other people to help you and cooperate with you to achieve the task. And you are not alone with them. This feeling, not to be alone, is so good and assuring. I think that being a group is one of the most relaxing factors for reducing speaking anxiety.

These findings were in line with those of Ibrahim et al. (2015) who pointed out that learners do not feel isolated from the rest of the class, depend on each other in their search of knowledge, support one another while carrying out tasks and feel like a part of community in collaborative classrooms. It is also suggested that learners do not feel anxious during interactive tasks, since collaborative activities provide learners with opportunities to negotiate and share their ideas freely (Tinzmann, 1990).

Closely related to the category of enhanced social interaction, the concept of having an affective classroom environment was another merit of collaboration in reducing anxiety that

most of the participants (64%) mentioned. According to Zhang (2010), since communication lies at the very heart of language classrooms, establishing a learning environment where learners do feel relaxed is vital and collaborative learning can help practitioners to create such a social and affective climate. In a similar vein, explaining how the collaborative atmosphere in the classroom made her feel relaxed and encouraged her to participate in oral activities, one of the student teachers stated:

So far, I have studied in traditional classes. In those classes, as we all know well, we were always taking notes and memorizing things. Our teachers were telling us what to do and we were doing all of them. So it was not effective teaching... When I came to university, I began to speak in English but I realized that I have speaking anxiety. However, with this lesson, everything began to change. It took time but it was totally worth it. Interactive tasks that we used in class provided us with funny, motivating and enjoyable class time. I remembered that in some classes I laughed out loud. So I felt relaxed most of the class times. When I felt relaxed and thanks to fun activities, I wanted to talk more and more.

Similarly, another student teacher noted:

We prepared a chicken recipe, we tried to stay alive on a deserted island, we talked about our regrets just like we were in group therapy, we became an investigator who tried to solve a crime, etc. During all of these, I enjoyed and tried to complete the task while having fun with the whole class. When you are feeling fine and entertained, you don't feel anxious or stressed. The topics were also the ones that we are highly interested in which made the tasks easier to complete and which made us speak more fluently.

These findings also go in line with those of Effiong (2015) who suggest that language classrooms should be considered as a social venue by learners to experience less anxiety while speaking in English. What's more, Hashemi and Abbasi (2013) suggest that creating a cooperative, friendly and comfortable learning environment helps learners relax through enjoyable activities and enable them to cope more effectively with language anxiety.

One of the strategies Alrabai (2014) proffered to induce positive changes in learners' foreign language anxiety is to promote collaborative learning in which learners get engaged in learning tasks. Given meaning is primary and language is a means to an end (Richards & Rodgers, 2014) it is suggested that collaborative activities enable learners to concentrate on fulfilling tasks rather than experiencing fear of being negatively evaluated by others. Likewise, some of the participants (29%) in the study referred to the importance of meaningful learning experiences in which their focus was on accomplishing the goals of the lesson rather than the bits and pieces of the target language as the comments below fully illustrate:

When we did an interactive task for the first time I didn't even realize what we were doing. I and my group friends only focused on the task, I didn't notice the grammar mistakes or any kind of syntactic error or I can say that I didn't care whether there was a mistake or not... Because I knew that we were not judging each other during activities and there is also no peer evaluation, I didn't get anxious while speaking. Even if I felt stressed, I knew that no one is thinking about grammatical forms of my speech and this thought made me feel relaxed a lot.

Throughout this term, we focused on lots of different topics. We solved a crime, we fell on a desert island, etc. and there was only one aim in our mind: finding an appropriate solution... Our focus was generally on the topic that needs to be solved. So, in some cases, I was even not aware of my speaking English very effectively... Later, through practicing in all those tasks, I recognized that I don't feel stressed or anxious anymore and the peers around me weren't focusing on how I was speaking, but trying to understand what I was saying. It was my biggest fear. I was always thinking like 'What if I say or pronounce something ridiculous and they laugh? ... Tasks in this

class were designed to promote communication as well as awareness of the target language by keeping you unconsciously busy with it.

Lastly, promoting self-efficacy was another salient theme that pervaded the majority of student teachers' oral communication experiences through collaborative tasks. As a result of engaging in a variety of activities, working in a supportive learning environment, practicing through podcasts repeatedly, interacting with different class members, focusing on functions rather than forms and experiencing a sense of accomplishment at the end of collaborative activities, 75% of the participants reported that their communication skills were positively influenced and 43% of them stated that their self-esteem increased. The following excerpts depict this theme:

Thanks to interactive tasks, we learned to listen to each other and respond to each other immediately. Before these activities, I used to focus on answering without listening to people, but now, I realize that first I listen and then answer.

...the more I practice something the better I become. I practiced a lot through podcasts... Listening to my voice, my tone showed my mistakes, and I tried to not to do these mistakes again...it helped me reduce my anxiety and improve my pronunciation. So, I think I began to feel more relaxed when I speak compared to the beginning of the term...

... when I listened to our podcasts, I saw that I can speak fluently and correctly. But, to do this I needed practice. For creating podcast I did practice and I improved myself ... Then I understood that the more practice the more fluency. When I speak fluently I feel myself good and this reduces my anxiety.

These findings evidently match those observed in earlier studies. For instance, Achmad and Yusuf (2014) highlight that taking part in collaborative activities help learners develop social skills like turn taking, politeness and respect in communicative activities. In a similar sense, Ur (1996) states that learners develop their oral fluency through group works thanks to increasing talk-time. Zhang (2010) epitomizes this theme noting that collaborative learning empowers learners with discourse control, provide them with more practicing opportunities through which they can promote their accuracy and fluency, makes them feel more competent at conversational skills and as a result, reduces anxiety. Focusing particularly on the significance of podcasts in developing oral fluency, Sze (2006) states that since creating podcasts allows learners to rehearse the content for several times, work collaboratively, practice the language behind the scenes, and have product and a real audience at the end, they offer huge benefits for language learners to overcome their oral communication anxiety.

Overall; student teachers' reflections indicated that intertwining in- and out-of-class learning through collaborative activities was highly effective in helping them alleviate their speaking anxiety resulting from fear of negative evaluation, competitive thoughts, sense of inhibition and low self-esteem given that this intervention offered a relaxing learning climate, fostered humane and caring relations, increased engagement on task, promoted proficiency through constant practicing and enhanced self-esteem through task achievement.

Based on the insights gained from these findings, there are a number of implications that can be drawn for language practitioners. Trainers of advanced learners of English need to be aware that higher proficiency does not imply anxiety-free oral communication since foreign language anxiety is a situation-specific phenomenon. They should not simply consider their anxious learners' low performance in oral activities as lacking proficiency, motivation or positive attitudes. To the contrary, practitioners should assume the role of researchers and understand the reasons underlying their learners' feelings of anxiety. Since awareness is the first step to solve any problem, it is thus essential for practitioners to help higher proficiency

learners suffering from communication apprehension realize the factors that heighten their tension in oral production. This should be accompanied by a carefully-designed action plan to respond to learners' needs appropriately. Because anxiety results primarily from the dynamic interplay between personal and interpersonal factors (Young, 1991), engaging learners in meaningful activities in supportive learning environments where they can work cooperatively, develop humane relations and discover their own capabilities is of considerable importance to help them overcome their anxiety. Language practitioners should also intertwine in-class learning with out-of-class facilities, make their learners aware of the availability of various instructional technologies (Korucu-Kis & Ozmen, 2019a, 2019b) and encourage them to utilize these resources outside the classroom to use the target language with their peers within less limited time conditions (Korucu-Kis, 2020). In summary, these findings suggest that language practitioners can have a profound influence on reducing learners' speaking anxiety by improving both the academic achievement and the emotional well-being of learners through in- and out-of-class collaborative activities seasoned with CMC tools like podcasts.

5. Conclusions

This article reported on an action research designed to identify the sources of EFL student teachers' speaking anxiety and address the concerns generated by these factors. The results revealed that the majority of student teachers were experiencing anxiety in oral production primarily due to fear of negative evaluation, competitiveness, feelings of inhibition and lack of self-esteem. As has been suggested, these findings lent support to the adoption of a sociocultural perspective and a collaborative learning approach was implemented both inside the classroom and with the help of podcasts outside the classroom. Participants' retrospective reflections indicated that the intervention was helpful in alleviating their speaking anxiety since it provided them with an innovative learning experience whereby they were working cooperatively in a positive learning environment to achieve learning goals, focusing on the meaning rather than language forms, having frequent opportunities to develop their communication skills and sensing self-efficacy over the accomplishment of tasks.

Although the present study was designed to address to the speaking anxiety of learners with higher proficiency levels in a Turkish setting, its implications go beyond this particular context. Teachers of lower proficiency levels or language practitioners in different settings may utilize from the procedures followed to add variety into their classrooms and help their learners ease the tension they feel in communicative activities. Nevertheless, despite the robust findings of the study, with a small sample size (N=28) and the uniqueness of each context, caution must also be applied as the findings might not be generalizable. Moreover, since foreign language anxiety of student teachers is an under-investigated area, further research is needed to develop alternative anxiety-coping strategies and implement these in teacher education programs to help student teachers overcome their anxiety since it may be likely that these anxious would-be teachers will be affected by the negative influence of anxiety in their on-the-job performance.

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L1 USE IN L2 TEACHING: THE AMOUNT, FUNCTIONS, AND PERCEPTION TOWARDS THE USE OF L1 IN TURKISH PRIMARY SCHOOL CONTEXT

Research Article

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L1 USE IN L2 TEACHING: THE AMOUNT, FUNCTIONS, AND PERCEPTION TOWARDS THE USE OF L1 IN TURKISH PRIMARY SCHOOL CONTEXT

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Abstract

The employment of the mother tongue or first language (L1) in foreign (FL) or second language (L2) teaching is a controversial issue and still continues to take considerable attention from researchers. Hence, the current study attempted to shed light into the use of L1 in Turkish EFL classes. In particular, it focused on the amount and the functions of L1 used by primary school EFL teachers in Turkish context. Moreover, it also aimed to investigate EFL teachers' perceptions towards the use of L1 and compare it with their actual classroom practices. Three EFL teachers participated in the study. The data of the study were collected through observations and semi-structured interviews. The data of the study were analyzed both qualitatively and quantitatively. The findings revealed that the three Turkish EFL teachers used comparable amount of L1 in their classes, ranging from 21% to 30% of all classroom instruction. The current study seemed to indicate that Turkish EFL teachers were inclined to use more L1 in lower grades. The findings also revealed that EFL teachers used Turkish in 9 different functions such as giving instruction, translation of unknown words, classroom management, checking understanding, eliciting, drawing attention, giving feedback, grammar instruction, and translation of sentences, respectively. The results also demonstrated that the perceptions of EFL teachers towards the use of L1 comply with their actual practices with minor differences.

Keywords: Language teaching, first language, foreign language, perception

1. Introduction

The employment of the mother tongue or first language (L1) in foreign (FL) or second language (L2) teaching is a controversial issue and still continues to take considerable attention from researchers. Many studies on this issue have been conducted and contradicting results have been found. The supporters of monolingual approach have suggested that the target language should be the only medium of communication in the classroom, which may increase the effectiveness of learning the target language (*see*. Tang, 2002). Krashen (1982) suggested that L1 should be excluded from the classrooms to maximize the exposure to target language. Ellis (1984) also claimed that L1 should be excluded for L2 acquisition because frequent use of L1 may create over-dependency, which in turn prevents learners from acquiring L2. Furthermore, Chaudron (1988) noted that "...the fullest competence in the TL (target language) is achieved by means of the teacher providing a rich target language environment, in which not only instruction and drill are executed in the TL, but also disciplinary and management operations" (p. 121). On the other hand, L1 use is regarded as

essential and proposed to have a facilitating role in foreign language teaching and learning process (Çelik, 2008; Jingxia, 2010). Some previous studies have suggested that foreign language teachers should use *judicious* amount of L1 in order to maximize learning second language (Brooks-Lewis, 2009; Butzkamm, 2003; Thongwichit, 2013). However, the judicious amount is not precise and differs from the use of L1 as a means of tool reducing learners' anxiety (Auerbach, 1993; Meyer, 2008) to a technique to explain complex grammar or vocabulary or to check understanding, and to give instructions (Afzal, 2013; Balabakgil and Mede, 2016; Brooks-Lewis, 2009). Moreover, previous studies showed that not only the quantity of L1 use in the classroom, but teachers' actual practices and perception vary in different degrees (Copland and Neokleous, 2010; Turnbull and Arnett, 2002). Hence, the current study aims to explore teachers' perception towards the use of L1 in L2 teaching and then, to compare their perception with their actual practices. This study also aims to investigate the reasons and the amount of L1 use in L2 teaching. Exploring teachers' perception towards the use of L1 in L2 teaching and comparing it with their actual practices would help teachers evaluate their own foreign language lessons objectively and help them realize the amount of L1 use by creating awareness about their FL classes.

2. Literature Review

Language teaching methods, and the role they assign to the use of L1 vary tremendously. This might be a reason why there is no certainty about the role of L1 in foreign language teaching. Some of the language teaching methods such as direct method, audiolingual methods, total physical response, situational language teaching, silent way and natural approach clearly bans the use of L1 on the grounds that learners could expose to the target language in maximum (Ellis and Shintani, 2014). However, “the theory underlying the banishment of the L1 was never clearly defined.” (Brooks-Lewis, 2009). Accordingly, there are a lot of studies in the literature that proves the contribution of L1 use in L2 classes (De la Campa and Nassaji, 2009; Köylü, 2018; Manara, 2007; Sariçoban, 2010). The previous studies investigated the issue from different perspectives. These previous studies can be categorized in two broad groups. A number of studies attempted to investigate the functions and the amount of L1 teachers use in L2 classes (Antón and DiCamilla, 1999; Balabakgil and Mede, 2016; Cook, 2001; Manara, 2007; Polio and Duff, 1994). A bulk of studies tried to examine teachers' perception towards the use of L1 in L2 classes (Ahsan, Ghani and Khaliq, 2016; Balabakgil and Mede, 2016; Edstrom, 2006; Macaro, 2005; Manara, 2007; Sali, 2014; Shabir, 2017; Yıldız and Yeşilyurt, 2017).

2.1. The Functions and Amount of L1 Use in L2 Classes

The various functions of L1 use in L2 classes are also related to the amount of total L1 use of the language teachers. The general tendency about the issue showed that although the primary aim in the classroom is to maximize the teaching of L2, there is no consensus about the proportion of L1 used in FL classes. Therefore, previous studies have found that teachers used L1 for various purposes and in different amounts in FL teaching. Duff and Polio (1990), for example, found that L1 use by university foreign language instructors varied considerably ranging from less than 10% to more than 90%. Moreover, the instructors were found to be consistent in the amount of L1 use across different lessons. In a follow-up study, Polio and Duff (1994) identified a number of different functions of L1 teachers use in university foreign language classes ranging from explaining grammar and classroom management to translation. Macaro (2001) investigated the amount of L1 use by student teachers in secondary school L2 classes and found that L1 use varied considerably ranging from completely exclusion of L1 to 23.8% with the mean of 6.56. The amount of L1 use was not consistent across the lessons. In a similar vein, Littlewood and Yu (2011) examined the

proportion of L1 teachers use in their lessons and identified that the percentage of L1 use ranged from less than 10% to over 75%. The study also showed that teachers' purposes for using L1 were establishing social relations, checking understanding, explaining grammar, giving the meaning of unknown words, and classroom management. In an explanatory study to discover the use of English (L1) and French (TL) by four secondary level French second language teachers, Turnbull (2000) ascertained that the amount of L1 used by teachers differed from 24% to 72%. Similarly, Kim and Elder (2005) conducted a cross-linguistic study on the language choice made by teachers of Japanese, Korean, German and French in the FL classroom in New Zealand secondary school context. The researchers found that although the teachers used English to some extent as the medium of instruction, the amount of L1 (English) used by teachers differed ranging from 12% to 77%. The study also showed that as in the amount of L1 use, the pedagogical functions of L1 use by the teachers also differed considerably. Similarly, De la Campa and Nassaji (2009) investigated the functions of L1 use in German-as-a-foreign-language classes. The result of the study showed that instructors used L1 for 14 different purposes such as translation, giving activity instructions, personal comment, administrative issues, and elicitation. Tang (2002) revealed that Chinese instructors use L1 while they were explaining abstract or culturally specific words and giving instructions in English as a Foreign Language (EFL) context. Investigating the purposes of L1 use in Indonesian university EFL context, Manara (2007) noted that L1 is mostly used by instructors for explaining grammar, emphasizing important points, establishing rapport, and giving feedback. Consequently, the previous studies on the use of L1 in L2 classes showed that the amount and the functions of L1 use varied considerably even in similar contexts.

2.2. Teachers' Perception towards the Use of L1

Some of the previous studies examined the perceptions and beliefs of teachers towards the use of L1 in FL classes. Previous findings indicated that most of the language teachers supported the judicious amount of L1 in FL classes (Ahsan, Ghani and Khaliq, 2016; Edstrom, 2006; Macaro, 2005; Manara, 2007; Shabir, 2017). Conducted at state colleges and universities with 156 participants, Ahsan, Ghani and Khaliq, (2016) found that teachers had positive attitudes towards the use of L1 in FL classes and they believe that L1 is necessary. On the other hand, Manara (2007) found that 57% of the teachers agreed that L2 should be the only medium of instruction and concluded that majority of the teachers have supported monolingual teaching but there is still room for L1 use in L2 classes. A scale questionnaire applied to 23 student teachers by Shabir (2017) revealed that limited use of L1 is necessary especially in certain classroom activities and L1 should not completely banned from the classes. Macaro (2005) noted that majority of teachers regard L1 use *unfortunate* and *regrettable* but *necessary*. Similarly, comparing her perception towards the use of L1 and her actual practice, Edstrom (2006) discovered that although she aimed to maximize the use of TL, she found herself using L1 for some classroom activities, which made her feel regretful. These studies showed that most of the teachers had positive attitudes towards the use of L1 and they believed that if used carefully and judiciously, L1 can facilitate L2 learning and teaching.

2.3. The Use of L1 in Turkish Context

Studies conducted in Turkish context are not different from the overall literature about the use of L1 in FL classes. Çelik (2008) reexamined the role of L1 in foreign language teaching by elaborating views concerning the use of L1 in L2 classes. He concluded that "use of the first language should not be perceived as a sin that must be avoided at all times. Instead, it should be seen as an invaluable resource that language teachers can, and should, utilize for successful language instruction" (p. 81). Balabakgil and Mede (2016) investigated the

perceptions of native and non-native instructors working at a state university about the use of L1 as teaching strategy. The result of the study supported the use of L1 as a teaching strategy and showed that both native and non-native instructors used L1 for checking understanding, eliciting, explaining grammar, and translating vocabulary or sentences. To discover the theoretical and practical positions of English teachers in the use of the L1, Kayaoğlu (2012) administered questionnaire and interviewed English language instructors working at a state university. The result showed that a great majority of the teachers think that teachers should use L1 in their instructions and L1 is a facilitator in FL teaching. As the purpose of using L1, the participants stated that L1 is used for simplification of difficult topics, classroom management, and instructions. Similarly, Köylü (2010) aimed to seek answers why, how and, how much, EFL instructors switch to their L1 during L2 instruction. The study showed that there were 7 factors triggering EFL instructors code-switching. These factors were linguistic differences between L1 and L2, attitudes towards L1, modes of communication, vocabulary teaching, pedagogical tool to promote learners' comprehension, perceived comprehension of the learners, and clarification. Yıldız and Yeşilyurt (2017) investigated the issue from pre-service teachers' perspective. Majority of the pre-service teachers believed that L1 should be used in the process of FL teaching. Pre-service teachers expressed that L1 should be used for explaining new words, explaining grammar, giving instructions, checking understanding, providing feedback, joking and discussing classroom activities with students, and testing. Timuçin and Baytar (2015) investigated the instances of code-switching and their functions while teaching L2 at university setting. The findings showed that teachers used L1 for translation, to check understanding, directions, explaining grammar, classroom management and other reasons, respectively. In the same vein, in a secondary school setting, Sali (2014) probed into EFL teachers' views about the use of L1 in FL classes and aimed to find out the functions of L1 used by Turkish EFL teachers. The researcher categorized the functions of L1 as *academic*, *managerial*, and *social-cultural*. As for the academic functions of L1, the research showed that EFL teachers used L1 for teaching aspects of English, eliciting, reviewing, translating words and sentences, talking about learning, and checking understanding. As for the managerial reasons, teachers stated that they use L1 for giving instructions, managing discipline, monitoring, and drawing attention. Social/cultural functions of L1 was stated to be establishing rapport, talking about cultural expression, and praising.

All these studies contributed to the literature and shed light into how L1 is used in FL classrooms and how the use of L1 is perceived by L2 teachers and instructors. However, most of the previous studies were conducted at university setting with instructors (Balabakgil and Mede, 2016; De la Campa and Nassaji, 2009; Duff and Polio, 1990; Kayaoğlu, 2012; Köylü, 2010; Littlewood and Yu, 2011; Manara, 2007; Tang, 2002) or pre-service teachers (Macaro, 2001; Yıldız and Yeşilyurt, 2017). Moreover, most of the previous studies did not compare teachers' perception with their actual practices. As foreign language teaching at different context may have their unique characteristics, there seems to be a need in the literature about the perceptions and actual practices of in-service teachers' L1 use especially at primary school context. Therefore, this study attempts to reveal perceptions of English language teachers towards the use of L1 in primary school context. The current study also aims to compare teachers' perceptions with their actual classroom practices.

3. Methodology

Since the main aim of the current study is to find out EFL teachers' actual practices regarding their L1 use and compare it with their perceptions in Turkish primary school context, the study adopted mixed methods using both qualitative and quantitative data. One of the characteristics of qualitative study is "to explore a problem and develop a detailed

understanding of central phenomenon” (Creswell, 2012, p. 16). The present study employed qualitative data collection techniques to have in-depth knowledge about the perceptions of EFL teachers towards the use of L1. The quantitative data collection was also employed to gather information about the functions and amount of L1 use.

3.1. Setting and Participants

The current study was carried out in a public primary school in Eskişehir, Turkey. Before the data collection process, the school administration and English language teachers were informed about the study. Three English language teachers (T1, T2, T3) agreed to participate in the study. The primary school and teachers were selected for the study because these classes and teachers were familiar to student teachers observing the lesson, which minimized the interaction between the researcher, teacher and students. All the teachers were female and native Turkish speakers. Their age ranged from 26 to 35. Their teaching experience ranged from 2 to 11 years. The data of the current study were collected in 2015-2016 academic year and composed of 9 lesson hours of recordings. Each lesson was 45 minutes. The classes had about 25-30 students.

3.2. Instruments

In order to understand EFL teachers’ perceptions towards the use of L1 and their actual classroom practices, interviews and observations were conducted. According to Spradley (1980), observation is one of the most frequent data collection form and researcher should be able to adopt different roles in the process. This is why, in the observation process the researcher had non-participant observer role in which he collected data through semi-structured checklist and field notes without participating any activities. Each teacher was observed three lesson hours and all the lessons were audio recorded. The observation process was based on two criteria. The first one was that the lessons should cover the same topic. The second one was that the lessons should be observed for 2nd, 3rd, and 4th grades because grade difference may affect teachers’ L1 use. One week after the observation, the participants were interviewed for about 20 minutes in order to get their perception towards the use of L1. The individual in-depth interviews were conducted in Turkish or English depending on the teachers’ preferences. Ten open-ended questions (*see* appendix I) were asked to the participants. The semi-structured interviews were audio-recorded, transcribed and translated into English.

3.3. Data Analysis

In order to find out the amount of L1 used by the teachers, the recordings were listened over and over again by the researchers and all the utterances of teachers were transcribed. While determining the amount of L1 use, word count function of Microsoft Word was used. Following the previous literature (De la Campa and Nassaji, 2009; Rolin-Ianziti and Brownlie, 2002), the number of L1 words was extracted from the total number of words. Then, the percentage of L1 use was calculated for each grade and for each teacher. The number of L1 words, L2 words used by the teachers and their percentages are presented as a table.

The functions of L1 were defined as giving instruction, translation of unknown words, classroom management, checking understanding, eliciting, drawing attention, giving feedback, grammar instruction, and translation of sentences based on the previous literature. Each L1 utterances of the EFL teachers were independently classified by the two researchers. Then, the classifications made by the two researchers were compared. To provide reliability between the researchers, Cronbach’s Alpha was calculated and inter-rater reliability of the researchers was found to be .87. The different classifications made by the researchers were

reached on a consensus by discussing over them. As for the perceptions of the teachers towards the use of L1, some direct quotations from the interviews were given.

4. Results

In order to find out the amount of L1, all the L1 and L2 words used by the teachers were counted and the number of L1 words was extracted from the total number of words, and their percentages were calculated. As seen in table 1, the percentage of L1 used by the teachers ranged from 17% to 39%. The table shows that T1 used 145 (39%) L1 words and 228 (61%) L2 words while teaching to 2nd grade students. T2 used 157 (37%) L1 words and 263 (63%) L2 words while teaching to 2nd grade students. T3 used 63 (17%) L1 words and 312 (83%) L2 words while teaching to 2nd grade students. Therefore, looking at the percentages, T3 used less L1 than T1 and T2 while teaching to 2nd graders. Comparing all the percentages, it can be seen that T3 used less L1 compared to T1 and T2 while T1 used more L1 than T2 and T3. Comparing grade levels in terms of L1 use, 2nd grade was the group where L1 is used more than 3rd and 4th grade while 3rd grade was the group where L1 is used less than 2nd and 4th grade. In other words, while teaching to 2nd grade students, teachers used more L1 than that of 3rd and 4th grades.

Table 1. *The number of L1 and L2 words used by EFL teachers*

Grade	T1				T2				T3			
	L1	%	L2	%	L1	%	L2	%	L1	%	L2	%
2 nd	145	39	228	61	157	37	263	63	63	17	312	83
3 rd	84	23	275	77	93	19	389	79	67	14	412	86
4 th	194	28	492	72	187	26	524	74	183	31	415	69
TOTAL	423	30	995	71	437	27	1176	63	313	21	1139	79

Table 2 shows the purposes for which L1 was used by EFL teachers in the primary school context. As seen in table 2, L1 was used for 9 different functions and 263 times, but the frequencies of these functions were varied. EFL teachers mostly used L1 to give instructions. L1 is used in the function of giving instructions for 42 times, which constitutes 15.9% of all the functions of L1. As these EFL teachers were working with young learners, they might employ L1 to explain what the young learners need to do for carrying out classroom activities. The second most frequent function for which the EFL teachers switched to L1 was found to be giving the meaning of unknown vocabulary. The teachers used L1 for providing the young learners with Turkish equivalents of English words. Translating unknown words constitutes 14.8% of all the functions of L1. Following the unknown words, the next most frequent function of L1 was found to be classroom management. As young learners have short concentration span and might get bored easily, they may create discipline problems. In order to deal with discipline problems, EFL teachers switched to L1 in their FL instruction. The use of L1 for checking understanding was the 4th most frequent function found in the data. Checking understanding or comprehension constitutes about 12% of all the functions of L1. EFL teachers switched to L1 when they wanted to ensure their students' comprehension. EFL teachers switched to L1 for the purposes of eliciting, drawing attention of the students, giving feedback, grammar instruction, and translation of sentences. Grammar instruction or translating sentences was the less frequently used functions of L1. The result also showed that among these three EFL teachers, T3 switched to L1 for fewer functions ($n=69$) while T1 and T2 used L1 for similar number of functions ($n=.98$, $n=96$).

Table 2. The functions of L1 used by EFL teachers

Functions of L1	T1	T2	T3	TOTAL	%
1. Giving instruction	15	18	9	42	15.9
2. Unknown vocabulary	18	10	11	39	14.8
3. Classroom management	16	5	13	34	12.9
4. Checking understanding	9	16	5	31	11.7
5. Eliciting	12	14	3	29	11.0
6. Drawing attention	5	9	10	24	9.1
7. giving feedback	7	9	7	23	8.7
8. Grammar instruction	11	8	4	23	8.7
9. Translation of sentences	5	7	7	19	7.2
TOTAL	98	96	69	263	100

Table 3. Functional categories and example of L1 used by the EFL teachers

Functions of L1	Example
Giving instruction	T: Listen and repeat the colors T: Şimdi, dinleyip tekrar edeceğiz. (Now, we are going to listen and then repeat)
Unknown vocabulary	T: Repeat after me! scared, scared. T: Yani korkmuş. (means scared.)
Classroom management	T: Ali ben ders anlatırken yerimizde oturuyoruz değil mi? (Ali, while I am teaching, you should sit down.)
Checking understanding	T: what time is it? it is quarter past ten. it is quarter to ten. çeyrek varsa to kullanıyoruz. Çeyrek geçiyorsa past kullanıyoruz. Anladık mı? (we are going to use 'to' if the time is quarter to ten. Did you understand?)
Eliciting	T: What color is it? T: it is neydi? (it is what was it)
Drawing attention	T: Do you like swimming? Cevabı? Herkes buraya baksın. Burası önemli (The answer is... Everybody, look at here! This part is important.)
giving feedback	T: Yes, I like swimming. or No, I don't like swimming T: How do you feel? S: I feel tired. T: Harika. (wonderful)
Grammar instruction	T: What time is it? it is quarter past ten. it is quarter to ten. Çeyrek varsa to kullanıyoruz. Çeyrek geçiyorsa past kullanıyoruz. (we are going to use 'to' if the time is quarter to ten. We are going to use 'past' if the time is quarter past ten.)
Translation of sentences	T: What do you like doing? yani ne yapmayı seversin? (which means what do you like doing).

The interview conducted with the three EFL teachers showed that EFL teachers' perceptions towards the use of L1 varied considerably. T2 and T3 stated that they switched to L1 in their instructions but they are completely opposed to it. On the other hand, T1 was in favor of using L1 and believed that L1 is necessary in teaching the TL. All the teachers stated that they use L1 if the students do not understand the topic. However, using L1 in teaching

L2 was not a desired situation for the teachers. The following comments were made by one of the teachers:

“I try a lot of methods and after that, if I still see the unclear look in their eyes, I explain a few words in Turkish there. But apart from that, I prefer to speak English as much as possible until the end of the lesson”. (T1)

“I do not have good feelings about English teachers’ using Turkish during class. Because students should be exposed to (target) language. So much as the child is exposed to (target) language the more s/he will have input/knowledge and s/he will feel her/himself comfortable at that environment”. (T1)

Looking at the excerpt above, T1 stated that she used L1 as a final pedagogical tool. After trying many different methodologies, if the students did not understand the topic, the teachers employed L1 as a final alternative. EFL teachers also stated that they switch to L1 when they need to talk about extracurricular issues such as making fun, giving information about exams, motivating students or classroom management. The following comments were made by the teachers:

“If I joke with the students during the lesson or talk to them during the break time, I speak in Turkish. Besides, our job is not just teaching. There's also behavior education in our job. When I interfere with their attitudes or if I want to talk about something, for example, we have to talk nearly for 5 minutes”. (T3)

“Grades 2 do not know any English at all and they are incredibly afraid of English classes. I mean, they think, ‘If I can't make it, if I can't talk, if the teacher gets mad at me...’ That's why I use Turkish in order that their motivation does not fall. I used Turkish a lot especially in the 2nd grade this year.” (T2)

All the teachers stated that they switch to Turkish when they teach grammar. However, looking at table 2, the function of grammar teaching was found to be one of the least preferred functions of L1. The reason of this inconsistency might be students’ proficiency levels. In other words, the students were young learners and their textbook did not include many grammar topics. The views of the teachers were as follow:

“...because I try to use English when I am making my explanations for example, when I explain some grammatical structures. If they find it too hard, I sometimes switch to Turkish, but I do not want them to ask me their simple questions in Turkish”. (T1)

“I especially use Turkish while I am teaching grammar. For the others, it cannot be done in Turkish in the first place. Speaking, reading, I mean these are basic skills. Of course, grammar is also a basic skill, however, the others cannot be established if they are done in Turkish. It deviates from (our) main aim. But I use Turkish to teach grammar in a way”. (T2)

Actual classroom practices of the EFL teachers showed that the most preferred function of L1 was giving instruction. The EFL teachers also stated that they switch to L1 when they were giving instruction. With regard to using L1 for giving instruction, the perceptions of the teachers complied with their actual practices. The following opinions were stated by the teachers:

“Actually, I do not want my students to speak in Turkish. I do not like it very much. Because I use Turkish when I am giving instructions or while I am trying to explain some grammar points. (T3)

“While introducing, explaining what we are going to do, for example the structure, sentence or dialogue they have learnt, I gave (give) the instructions in Turkish of where and how to use it.” (T2)

Interview data revealed that the EFL teachers had positive attitude towards the use of L1 in their classes but they also stated that L1 should be used in judicious amounts. They accepted that classroom is the only place where students can expose to L2. However, the actual classroom practices of the students varied considerably in terms of L1 use. Therefore, it can be concluded that although these EFL teachers worked in the similar context, their perception towards the use of L1 and the amount of L1 changed considerably. The following statement was made by one of the teachers:

“Children do not have any other opportunity, I mean, outside the classroom, where they can use English again?! They do not use it in any way. The more it is spoken in the classroom, the more they listen to and speak, the better it is for them”. (T3)

5. Discussion and Conclusion

The present study attempted to shed light into the use of L1 in Turkish EFL classes. In particular, it focused on the amount and the functions of L1 used by primary school EFL teachers in Turkish context. Moreover, it also aimed to investigate EFL teachers’ perceptions towards the use of L1 and compare it with their actual classroom practices. The findings revealed that the three Turkish EFL teachers used comparable amount of L1 in their classes, ranging from 21% to 30% of all classroom instruction. Nonetheless, there were considerable differences between some of the teachers’ classes in terms of L1 use, ranging from 14% to 39%. Although there were not similar studies to make direct comparison, the findings of this study were mostly in line with the previous findings. De la Campa and Nassaji (2009) revealed an average of 11.3% L1 use in German-as-a-foreign-language university context. Duff and Polio (1990) found that L1 use ranged from 0% to 90% in L2 classes with average of 32.1%. In self-evaluation, Edstrom (2006) used L1 ranging from 17% to 42%. Therefore, the amount of L1 use found in this study is comparable to the averages found in the previous studies.

The current study seemed to indicate that Turkish EFL teachers were inclined to use more L1 in lower grades. In this context, Butzkamm (2003) stated that “with growing proficiency in the foreign language, the use of MT (mother tongue) becomes largely redundant” (p. 36). Similarly, Cole (1998) noted that L1 is most useful at low proficiency. Antón and DiCamilla (1999) expressed the necessity of L1 use with low L2 proficiency learners. The high amount of L1 use especially in young learners’ L2 classes might be due to their low proficiency level. Therefore, it can be concluded that, L1 use is necessary and useful in facilitating the teaching learning process especially at the beginner levels

Apart from the amount of L1, the current study concentrated on the functions of L1. The finding revealed that EFL teachers used Turkish in 9 different functions. The most frequently used function of L1 was found to be giving instruction, followed by translation of unknown words, classroom management, checking understanding, eliciting, drawing attention, giving feedback, grammar instruction, and translation of sentences, respectively. The result regarding the functions of L1 was mostly in line with the results of previous studies. For example, Polio and Duff (1994) identified a number of different functions of L1 such as classroom administration, vocabulary, grammar instruction, classroom management etc. Littlewood and Yu (2011) showed that teachers’ purposes for using L1 were establishing social relations, checking understanding, explaining grammar, giving the meaning of unknown words, and classroom management. Similarly, De la Campa and Nassaji (2009)

investigated the functions of L1 use in German-as-a-foreign-language classes and found that instructors used L1 for translation, giving activity instructions, personal comment, administrative issues, and elicitation. In Turkish context, Sali (2014) found the major functions of L1 as explaining aspects of English, eliciting, giving instructions, reviewing, managing discipline, establishing rapport, and translating words and sentences. Similarly, Tang (2002) revealed that Chinese instructors use L1 for explaining abstract or culturally specific words and giving instructions. In Indonesian university EFL context, Manara (2007) noted that L1 is mostly used by instructors for explaining grammar, emphasizing important points, establishing rapport, and giving feedback. Consequently, research indicated that teachers used L1 in various functions. It is used to perform the goals and procedures for carrying out classroom activities, translating culturally specific words, managing discipline problems, and checking understanding.

The findings also showed that EFL teachers' perceptions towards the use of L1 comply with their actual practices with minor differences. Interview data demonstrated that the EFL teachers had positive attitude towards the use of L1 but they also expressed that L1 should be used in judicious amounts. Previous studies also suggested judicious amount of L1 use in L2 classes (Balabakgil and Mede 2016; Butzkamm, 2003; Köylü, 2018; Macaro, 2001, 2005; Swain and Lapkin, 2000). The EFL teachers accepted that classroom is the only place where students can expose to L2 and they wanted to maximize the use of TL in their classes. Therefore, it can be concluded that EFL teachers have the perception that the use of L1 in L2 classes is necessary but undesired, which was also in line with the findings of Edstrom (2006) and Macaro (2005).

6. Implications and Limitations

The use of L1 in L2 classes may seem a subjective issue and judicious or appropriate amount of L1 use cannot be determined universally because it is related to teachers' experience, students' proficiency level, the skills that are taught, and students' need to communicate with their teachers. Therefore, extensive use L1 in a class may be more justifiable than another class. Depending on students' needs and proficiency levels, teachers can benefit from the use of L1, rather than prohibiting its use in their L2 instruction. However, EFL teachers should maximize the use of TL in their classes and encourage their students to use the TL as much as possible.

Another consideration might be that language teachers should evaluate themselves, their responsibilities, and their objectives for language learning process. In other words, they should raise their awareness in this regard, which might be helpful in preventing inconsistencies between their perceptions and actual classroom practices. One way of creating awareness in L1 use would be though asking teachers to video-tape their class and evaluate the amount and the purpose of L1 use. Such an activity could provide an opportunity to evaluate themselves.

The current study has some limitations. First of all, the sample size of the study is limited to only three EFL teachers. Therefore, these results cannot be generalized. Second, the data of the study was collected by observation of three EFL teachers covering the same units. If the data collection of the study had been skill-based, different results would have been acquired. Further studies are suggested to take into consideration different skills such as reading, speaking, listening, or grammar.

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Appendix I

The questions asked during the interviews

- 1- How long have you been teaching?
- 2- What do you think about students' speaking Turkish in foreign language lessons?
- 3- What about your students?
- 4- What do you think about English Language Teachers' use of L1 in their classes?
Why?
- 5- Do you use L1 in your classes?
- 6- To what extent do you use L1 in your classes? Why?
- 7- In which cases do you think it is necessary to use L1? Why?
- 8- Is there any special topics that require the use of L1? Which cases? Can you exemplify it?
- 9- Is there any skill (speaking, reading, writing, listening, grammar) that you use more L1? Which one? Why? Can you exemplify it?
- 10- What are the advantages and disadvantages of using L1 in FL classes?




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ANALYSIS OF PRE-SERVICE TEACHERS' LEARNING STYLES ACCORDING TO VERMUNT LEARNING STYLE MODEL

Research Article

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Abstract

This study aims to identify the learning styles of pre-service teachers who had pedagogical formation education according to Vermunt Learning Style Model and to examine the learning styles of pre-service teachers considering their demographics such as gender and age. The study was carried out with 442 pre-service teachers who attended the certificate program of pedagogical formation education delivered at Karamanoğlu Mehmetbey University Education Faculty in 2017-2018 academic year. "Vermunt Learning Styles Inventory" was used to identify the learning styles of pre-service teachers participated in the study. The findings reveal that pre-service teachers predominantly had "deep processing" and "intake of knowledge" learning styles, and the differences in learning styles according to gender and age variables were significant. While there are a great number of studies on learning styles, limited studies on Vermunt Learning Style appear in the literature. It is considered that arranging educational environments and learning experiences according to the learning styles of individuals would increase the success and efficiency in education. It is anticipated that this study is essential in this regard and contributes to the literature and raises awareness among educators and students.

Keywords: learning styles, Vermunt learning style model, pre-service teachers

1. Introduction

Every individual realizes a variety of learning by interacting with the people around since birth. Learning is as important as the basic physiological needs for individuals to survive (Maslow, 1943a, 1943b, 1954). Because no living being can live for a long time without learning how to benefit from the surrounding to supply with the basic needs. It is seen that living creatures constantly realize various learning and most of their behaviors are learned behaviors in order to survive, to be effective in adapting to the environment and to meet their needs in a wide range of environments (Senemoğlu, 2012). In this context, the concept of learning needs to be re-defined and explained to reveal how the behaviors of living beings emerge and why they behave so.

Various studies were conducted on how learning occurs in line with this need and different ideas, arguments, definitions and explanations of learning emerge from ancient times to the present (Şentürk & Zeybek, 2019). Scientists, on the one hand, conduct studies on what is learning and provide definitions in this direction, on the other hand, they try to explore and explain the ways that individuals prefer in the learning process.

While learning is defined as "permanent changes in the behavior of the organism through repetition or experience" (Curzon, 2004; Dembo, 1994; Mayer, 1982; Senemoğlu, 2012, Terry, 2009), in particular today, it is stated that learning cannot be explained only by

behavior change in line with contemporary theories and constructivist conceptions and involves complex processes that include various factors along with behavior change. For instance, whilst, Schunk (2012, p.2) defines learning as “a process involving the acquisition and development of knowledge, skills, strategies, beliefs, attitudes and behaviors”. Slavin (2006) states that learning is “a set of changes in the individual as a result of experiences”. In another definition, learning is considered “a process that can be realized individually or collaboratively in formal or informal environments, which may vary according to the individual and context” (Robinson, Molenda & Rezabek, 2008). The definition of learning is shaped in line with the findings or theories emerged as a result of the studies conducted for learning. Cognitive learning theories, for example, describe learning as the mental processes that individuals embrace to understand the world, and define learning as changes in the mental structure of individuals (Jonassen, 1991; Senemoğlu, 2012). According to another learning theory, brain-based learning theory, learning is related to brain cells and the learning process is considered as a biochemical change in the individual by indicating that new axon strands are formed in the neurons in the brain and that each learning experience means the formation of new synaptic bonds (Bonomo, 2017; Given, 2002; Paul, 2019). In this respect, as the studies on learning continue, different definitions and perspectives on learning will continue to emerge in the literature.

Students participating in the education process come to the education environment with individual characteristics (Kurt & Ekici, 2013). Students who come to the educational environment with their individual characteristics may differ from each other in terms of their many features. Some of these differences can be stated as age, gender, interest, ability, preliminary learning, readiness, physical, mental and emotional development levels, and motivation (Eddy, 2012; Fer & Cırık, 2007; Kuzgun & Deryakulu, 2004). Another of these differences is the learning styles defined as the ways individuals prefer to realise learning. Scientists studying on learning styles proposed various definitions of learning styles. For instance, whilst McCarthy (1987) describes the learning style as “preferences of individuals in the perception and processing of information”, Grasha (1996) defines the learning style as “the ability to combine skills and learning experiences in the process of acquiring knowledge”. According to Kolb (1981), the learning style is “the method that individuals prefer personally in the process of receiving and processing information”. According to Dunn and Dunn (1993), each individual’s learning style is unique like the fingerprint. In this context, the learning style is that each student uses different and unique ways as they prepare, learn and remember new and difficult information. Vermunt (1992), whose learning styles scale used in this study, defines it as “processing strategies that include an awareness of the goals and objectives of the learning activities practiced to determine what has been learned, regulatory strategies for monitoring learning, mental learning models that include the individual’s perceptions of the learning process and learning orientations defined as personal goals, intentions and expectations based on past learning experience”.

A great number of teachers conduct the lesson in accordance with their own learning style and consider that their students have learned in this way. Although some students in the classroom learn according to the teacher’s learning style, this may cause to ignore other students. For instance, a teacher with an aural learning style often handles the lesson according to the aural learning style. Although this method is beneficial for students who find the aural learning style appropriate for themselves, there may be a handicap for students with visual and tactile learning styles. Therefore, teachers should plan and conduct the lesson considering the learning profiles of all students (Tomlinson, 2001). In the 21st century, the progressive education movement based on pragmatism, which takes into account the individual differences of students and embraces a student-centered conceptions of education,

and the constructivist learning-teaching approach that emerged in line with this philosophy become widespread. Learning-teaching processes and educational environments are organized according to these conceptions. The curricula have been designed in line with the constructivist approach since 2005 in Turkey and updated from time to time. In this context, it is essential to explore the individual differences of students and especially their preferred ways/methods of learning, in other words, their learning styles.

It can be said that identifying the learning styles of individuals is crucial both for individuals and educator in this century, in which learning to learn and lifelong learning gained importance. Because an individual who is aware of their learning style can arrange the learning experiences accordingly and the teacher who is aware of their students' learning styles can arrange the teaching processes accordingly. In this case, effective, efficient and permanent learning is ensured. Vermunt (1992) developed an inventory of learning styles in order to reveal the ways in which higher education students perform learning activities in 1992 and proposed Vermunt Learning Styles Model in this direction. Later, this model was revised and finalized by taking the opinions of scholars in various congresses (Vermunt, 1994). The aim of the inventory is to determine how students in higher education perceive their own learning in their learning processes (Vermunt, 2005). The relevant literature indicates that Vermunt's Learning Styles Inventory is used by researchers in countries such as Netherlands, Finland, Cyprus, United States, Brazil, Argentina, Indonesia and Srilanka (Vermunt & Vermetten, 2004). However, although a lot of studies carried out with a variety of learning styles model appear in Turkey, studies with Vermunt Learning Styles seem to be extremely limited. In this regard, this study is considered to make significant contributions to the relevant literature.

1.1. Aim of the Study

The main purpose of this study is to identify learning styles of pre-service teachers who receive pedagogical formation education in an education faculty, considering the Vermunt Learning Styles Model and to examine the learning styles of pre-service teachers in terms of gender and age variables. In this context, the following questions were sought in the study:

1. What is the distribution of learning styles of pre-service teachers?
2. Do the pre-service teachers' learning styles differ significantly according to gender and age?

2. Methodology

In this part of the study, information about the research model of the study, participants, data collection instruments, data collection process and data analysis are given.

2.1. Research Model

The survey model was used in this study. The survey model is an approach that aims to describe, illustrate and explain the past and present situation, current cases, groups, objects and features. The case, an individual or an object as the subject of the study is tried to be described in its own conditions and as it is in the survey model (Büyüköztürk, Çakmak, Akgün, Karadeniz, Demirel, 2014). It was examined whether the learning styles of pre-service teachers who had pedagogical formation education showed statistically significant difference according to Vermunt Learning Styles in terms of gender and age variables.

2.2. Participants

The study was carried out with 442 pre-service teachers who attended the pedagogical formation certificate program conducted in Karamanoğlu Mehmetbey University Education

Faculty in 2017-2018 academic year. 66.5% of the pre-service teachers who participated in the study on a voluntary basis were female ($n = 294$) and 33.5% ($n = 148$) were male. In addition, 50.5% ($n = 223$) of the participants were in the 20-25 age range, 29% ($n = 128$) were in the 26-30 age range, and 20.5% ($n = 91$) of the 31-35 age range.

2.3. Data Collection Instruments

“Vermunt Learning Styles Inventory, which was introduced by Jan D. Vermunt (1994) and adapted to Turkish by Tektaş (2010), was used in the study. The scale consists of a total of 120 items, all of which are 5-point Likert type. The scale consists of two parts. Part A was formed as “Study Activities” and part B as “Study Motives and Views on Studying”. There are two dimensions in each section and various sub-dimensions in each dimension (Tektaş, 2010). For the sake of clarity, the parts, dimensions and sub-dimensions of the scale are presented visually in Figure 1.

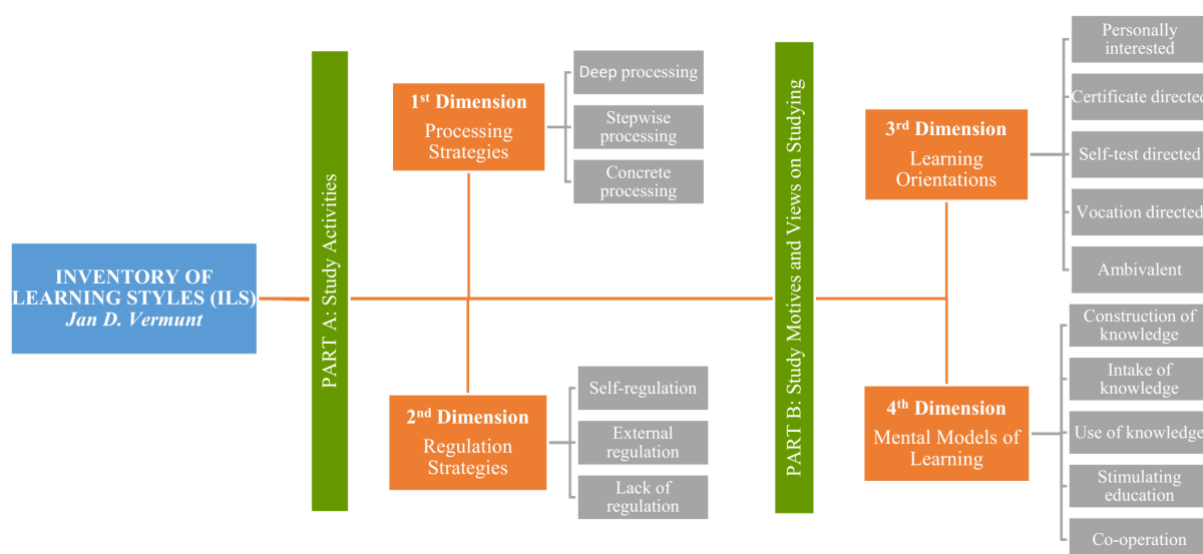


Figure 1. Dimension and sub-dimensions of learning styles inventory

The internal consistency coefficients between the sub-dimensions of the inventory ranged between .69 - .84 in processing strategies, .60 - .83 in regulation strategies, .44 - .70 in learning orientations, and .73 - .87 in mental models of learning dimensions. Furthermore, the results of the confirmatory factor analysis applied to the scale are $\chi^2 / sd = 1477.72 / 15.08$; GFI = .82; AGFI = .75; CFI = .91; RMSEA = .13 (Tektaş, 2010). In line with these values, it can be stated that the confirmatory factor values of the scale are quite good.

2.4. Data Collection Process

Required permissions were obtained from the Dean of Education Faculty of Karamanoglu Mehmetbey University to collect the data. Then, the researchers applied the scales to the pre-service teachers face-to-face. The pre-service teachers were informed about the purpose of the study, the features of the scale in order to apply the scale without any problem. In addition, it was ensured that the responses given in the scale would not be used for any purposes other than the scope of the study. The implementation of the scale was completed approximately in four weeks. The pre-service teachers participated in the study on a voluntary basis.

2.5. Data Analysis

The data were analyzed using SPSS 20.0 statistical package program. First of all, normality test was applied to determine whether the data showed normal distribution and it

was observed that the data did not show normal distribution ($K-S_{(\text{Learning styles})} = 0.056$, $p < 0.05$). Therefore, it was decided to use non-parametric tests for data analysis. In this respect, the data were analyzed by using descriptive statistical techniques and chi-square test.

3. Findings

The findings revealed in line with the aim and sub-objectives of the study are given in this section. Descriptive statistics and chi-square test results related to the distribution of learning styles of pre-service teachers are discussed below.

Table 1. *Descriptive statistics and Kruskal Wallis-H test results of pre-service teachers' learning style scores*

PART A: Study Activities						
<i>Processing Strategies</i>	n	%	\bar{x}	sd	Minimum	Maximum
Deep processing	169	38.2	36.040	7.473	15.00	55.00
Stepwise processing	70	15.8	35.855	7.599	13.00	55.00
Concrete processing	126	28.5	15.348	3.452	7.00	25.00
<i>Regulation Strategies</i>						
Self-regulation	43	9.7	33.004	6.459	18.00	52.00
External regulation	9	2.0	17.217	3.921	8.00	28.00
Lack of regulation	25	5.7	34.692	6.988	17.00	52.00
Total	442	100				
$\chi^2 = 262.416$, $sd = 5$, $p = .000$						
PART B: Study Motives and Views on Studying						
<i>Learning Orientations</i>	n	%	\bar{x}	sd	Minimum	Maximum
Personally interested	72	16.3	16.502	3.420	7.00	25.00
Certificate directed	44	10.0	16.556	3.732	7.00	25.00
Self-test directed	62	14.0	15.393	3.808	5.00	25.00
Vocation directed	48	10.9	17.221	3.677	7.00	25.00
Ambivalent	40	9.0	16.312	3.928	6.00	25.00
<i>Mental Models of Learning</i>						
Construction of knowledge	44	10.0	27.633	5.504	13.00	45.00
Intake of knowledge	39	8.8	27.764	5.290	11.00	44.00
Use of knowledge	21	4.8	19.384	3.926	9.00	29.00
Stimulating education	40	9.0	25.868	5.520	9.00	40.00
Co-operation	32	7.2	25.009	5.016	13.00	40.00
Total	442	100				
$\chi^2 = 41.937$, $sd = 9$, $p = .000$						

Table 1 shows the percentage, frequency, mean and standard deviation values of the pre-service teachers' learning styles. As a result of the chi-square test conducted for one variable in order to identify whether there is a significant differences between the learning styles scores of the pre-service teachers for Part A of the scale (Study Activities), it was found that the difference between the learning styles scores of the pre-service teachers is statistically significant [$\chi^2_{(5)} = 262.416$, $p < .05$]. The findings reveal that while the pre-service teachers participated in the study had the most "deep processing" learning style for Part A of the scale, this is followed by "stepwise processing", "lack of regulation" and "self-regulation".

In addition, it was found that pre-service teacher had the least “concrete processing” and “external regulation” learning styles.

As a result of the chi-square test for one variable in order to identify whether there is a significant difference between the learning styles scores of the pre-service teachers for Part B of the scale (Part B: Study Motives and Views on Studying), it was found that the difference between learning styles of pre-service teachers is statistically significant [$\chi^2(9) = 41.937$, $p < .05$]. The findings reveal that while the pre-service teachers participated in the study had the most “intake of knowledge”, this is followed by “construction of knowledge”, “stimulating education”, “co-operation” and “use of knowledge” learning styles in the context of reasons for work and opinions about the work in part B. In addition, it was identified that pre-service teachers had the least “self-test directed” learning style, which was followed by “ambivalent”, “personally interested”, “certificate directed” and “vocation directed”. The chi-square test results related to the distribution of pre-service teachers’ learning styles according to gender variable are given in Table 2. below.

Table 2. The chi-square test results of the distribution of pre-service teachers’ learning style scores according to gender

PART A: Study Activities							
Gender	Processing Strategies			Regulation Strategies			Total
	Deep processing	Stepwise processing	Concrete processing	Self-regulation	External regulation	Lack of regulation	
Female	n	119	40	76	39	7	294
	%	40.5	13.6	25.9	13.3	2.4	4.4
Male	n	50	30	50	4	2	148
	%	33.8	20.3	33.8	2.7	1.4	8.1
Total	n	169	70	126	43	9	442
	%	38.2	15.8	28.5	9.7	2.0	5.7

$\chi^2 = 20.255$, $sd = 5$, $p = .001$

PART B: Study Motives and Views on Studying												
Gender	Learning Orientations					Mental Models of Learning					Total	
	Personally interested	Certificate directed	Self-test directed	Vocation directed	Ambivalent	Construction of knowledge	Intake of knowledge	Use of knowledge	Stimulating education	Co-operation		
Female	n	55	30	46	35	22	27	31	11	20	17	294
	%	18.7	10.2	15.6	11.9	7.5	9.2	10.5	3.7	6.8	5.8	100
Male	n	17	14	16	13	18	17	8	10	20	15	148
	%	11.5	9.5	10.8	8.8	12.2	11.5	5.4	6.8	13.5	10.1	100
Total	n	72	44	62	48	40	44	39	21	40	32	442
	%	16.3	10.0	14.0	10.9	9.0	10.0	8.8	4.8	9.0	7.2	100

$\chi^2 = 20.941$, $sd = 9$, $p = .013$

Table 2 shows the chi-square test results related to the distribution of pre-service teachers’ learning style scores according to gender variable. As a result of the chi-square test for one variable in order to identify whether there is a significant difference between the learning styles scores of the pre-service teachers for Part A of the scale according to gender variable, it

was found that the difference between learning styles is statistically significant [$\chi^2(5) = 20.255$, $p < .05$]. The findings reveal that while female pre-service teachers had the most “*deep processing*” learning style, male pre-service teachers had the most “*deep processing*” and “*concrete processing*” learning styles for the part A: Study activities.

As a result of the chi-square test for one variable in order to identify whether there is a significant difference between the learning styles scores of the pre-service teachers for Part B of the scale (Part B: Study Motives and Views on Studying), according to the gender variable, it was found that the difference between learning styles was statistically significant [$\chi^2(9) = 20.941$, $p < .05$]. The findings reveal that while female pre-service teachers had the most “*personally interested*” learning style, male pre-service teachers had the most “*stimulating education*” learning style. The chi-square test results related to the distribution of the learning styles of the pre-service teachers according to the age variable, which is another variable, are given in Table 3.

Table 3. Chi-square test results related to the distribution of pre-service teachers' learning style scores according to their age

PART A: Study Activities								
Age	Processing Strategies			Regulation Strategies			Total	
	Deep processing	Stepwise processing	Concrete processing	Self-regulation	External regulation	Lack of regulation		
20-25	n	71	40	56	37	4	15	223
	%	31.8	17.9	25.1	16.6	1.8	6.7	100
26-30	n	53	21	44	2	3	5	128
	%	41.4	16.4	34.4	1.6	2.3	3.9	100
31-35	n	45	9	26	4	2	5	91
	%	49.5	9.9	28.6	4.4	2.2	5.5	100
Total	n	169	70	126	43	9	25	442
	%	38.2	15.8	28.5	9.7	2.0	5.7	100

$\chi^2 = 34.360$, $sd = 10$, $p = .000$

PART B: Study Motives and Views on Studying												
Age	Learning Orientations					Mental Models of Learning						Total
	Personally interested	Certificate directed	Self-test directed	Vocation directed	Ambivalent	Construction of knowledge	Intake of knowledge	Use of knowledge	Stimulating education	Co-operation		
20-25	n	22	27	32	21	22	29	23	13	22	12	223
	%	9.9	12.1	14.3	9.4	9.9	13.0	10.3	5.8	9.9	5.4	100
26-30	n	27	8	15	17	12	10	9	7	10	13	128
	%	21.1	6.2	11.7	13.3	9.4	7.8	7.0	5.5	7.8	10.2	100
31-35	n	23	9	15	10	6	5	7	1	8	7	91
	%	25.3	9.9	16.5	11.0	6.6	5.5	7.7	1.1	8.8	7.7	100
Total	n	72	44	62	48	40	44	39	21	40	32	442
	%	16.3	10.0	14.0	10.9	9.0	10.0	8.8	4.8	9.0	7.2	100

$\chi^2 = 29.448$, $sd = 18$, $p = .043$

Table 3 shows the chi-square test results related to the distribution of pre-service teachers' learning styles scores according to their age. As a result of the chi-square test for one variable in order to identify whether there is a significant difference between the learning styles scores of the pre-service teachers for Part A of the scale according to age variable, it was found that the difference between learning styles is statistically significant [$\chi^2_{(10)} = 34.360, p < .05$]. The findings reveal that pre-service teachers of all ages (20-25, 26-30 and 31-35) had the most “*deep processing*” learning style.

Similarly, as a result of the chi-square test for one variable in order to identify whether there is a significant difference between the learning styles scores of the pre-service teachers for Part B of the scale (Part B: Study Motives and Views on Studying), according to the age variable, it was found that the difference between learning styles was statistically significant [$\chi^2_{(18)} = 29.448, p < .05$]. The findings reveal that pre-service teachers in the 20-25 age group had the most “*self-test directed*” learning style, while pre-service teachers in the 26-30 and 31-35 age groups had the most “*personal interest*” learning style.

4. Discussion, Conclusion and Suggestions

It was revealed that the difference between the learning styles scores of the pre-service teachers for study activities part of the scale was statistically significant within the scope of the study. Looking in detail, it was identified that the pre-service teachers had the “*deep processing*” learning style the most, followed by “*stepwise processing*”, “*lack of regulation*” and “*self-regulation*” learning styles. It can be said that these preference frequencies for learning styles are generally positive. Because it is consistent that one of the learning styles required for a qualified higher education is “*deep processing*” and that the individuals attending higher education should have “*self-regulation*” learning styles rather than “*external regulation*”.

This finding of the study is partly consistent with some of the study findings in the literature. Considering the findings of the study of Gülpınar (2014) conducted with pre-clinical medical students, the students frequently used the most “*deep processing*”, “*stepwise processing*”, and “*concrete processing*” strategies among cognitive processing strategies, while “*self-regulation*”, “*external regulation*” and “*lack of regulation*” among metacognitive strategies were the most frequently used strategies. As a result of the study conducted by Topal, Sarıkaya, Baştürk and Büke (2015) with the students of medical faculties, while the first-year students use “*deep processing*”, “*self-regulation*” and “*external regulation*” strategies, the second-year students use “*concrete processing*”, and “*lack of regulation*”, and the third-year students use “*deep processing*” and “*external processing*” strategies more than others.

It was revealed that the difference between the learning styles scores of the pre-service teachers for study motives and views on studying part of the scale was statistically significant. According to the findings, it was revealed that the pre-service teachers had the most “*intake of knowledge*” learning style, followed by “*construction of knowledge*”, “*stimulating education*”, “*co-operation*” and “*use of knowledge*” learning styles within the scope of the study. In addition, the participants had the least “*self-test directed*”, “*ambivalent*”, “*personally interested*”, “*certificate directed*” and “*vocation directed*” learning styles. Similarly, the study findings of Topal, Sarıkaya, Baştürk and Büke (2015) indicate that the learning model of the students in general were “*acquisition of knowledge*”. The fact that knowledge-oriented learning styles are more common than others can be explained by the intense content of higher education programs, focusing on the acquisition of content rather than the acquisition of learning strategies, assessing mostly knowledge acquisition in exams and the perspectives of the educators on knowledge, learning and teaching. It was

considered that the structure and implementation of the education programs are important in forming the learning styles and strategies. According to the study of Levinsohn (2007) in which students' learning styles and their approaches to learning were compared, some of the students had mostly "*result-oriented*" and sometimes "*undecided*" approaches for their education. These students asked mostly questions such as "*Will there be questions about this topic in the exam?*" and "*Should I take this course again to improve my grade?*". Some of the students approached to the subject mostly "vocation oriented. These students mostly had thoughts such as "*What will I do when I graduate from this department?*".

It was found that the difference between the learning styles scores of the pre-service teachers for the study activities part of the scale was statistically significant according to gender variable. The findings revealed that while female pre-service teachers had the most "*deep processing*" learning style, male pre-service teachers had the most "*deep processing*" and "*concrete processing*" learning styles. The difference between learning styles scores of the pre-service teachers for the study motives and views on studying part of the scale was found to be statistically significant according to gender variable. The findings revealed that while female pre-service teachers had the most "*personally interested*" learning style, male pre-service teachers had the most "*stimulating education*" learning style. As a result of the study of Deniz and Can (2018) conducted with pre-service physical education teachers, it was revealed that study motives and views on studying of participants did not vary significantly according to gender variable.

It was revealed that the difference between the learning styles scores of pre-service teachers for the study activities part of the scale was statistically significant according to the age variable. The findings indicated that pre-service teachers of all ages (20-25, 26-30 and 31-35) had the most "*deep processing*" learning style. The study of Kalaca (2004) conducted with medical students in pre-clinical (grades 1-3) and clinical term (grades 4-6) indicated that there was an increase in the preference of "*concrete*" strategies among the students in these two semesters, even it was not significant, however, their preferences of "*deep processing*" and "*self-regulation*" did not vary significantly. In the study of Gülpınar (2014), it was observed that the difference in the distribution of preference frequencies related to learning strategies by years was not significant except for "*stepwise processing*" and "*external regulation*".

The difference between the learning styles scores of pre-service teachers for the study motives and views on studying part of the scale was found to be statistically significant according to the age variable. The findings indicated that pre-service teachers in the 20-25 age group had the most self-test directed learning style and those in the 26-30 and 31-35 age groups had the most "*personally interested*" learning style within the scope of the study activities and views on studying part of the scale. As a result of the study conducted by Deniz and Can (2018), it was found that the study activities and study motives of the pre-service teachers did not change significantly depending on the age variable.

Learning is the most important feature that distinguishes individuals from other beings. Every individual learns, but not at the same pace and level. Learning conditions of an individual do not match others as learning is unique to the individual like fingerprints (Babadoğan, 2000). Variation of learning from individual to individual is due to individual differences (Felder and Brent, 2005). Learning styles are one of the individual difference formed by age, ability, intelligence, motivation, and socio-cultural factors that affect learning (Mariani, 1996). Researchers in the education field agree that students have different ways of learning. Although approaches to learning styles differ, there is a common consensus that learning styles have an impact on learning.

Fer (2014) states that taking into account the learning styles in teaching enriches the course, and improves the curriculum, teaching methods, assessment methods and guidance to the students. Since the individual learn in their own ways, learning takes place more permanently and easily (Bilasa, 2014). Students can learn and succeed faster in a learning-teaching process that is relevant to their own learning style. On the other hand, ignoring the fact that students have different learning styles and only students who prone to this type of learning can be successful, other students may experience learning difficulties in the case of uniform teaching. Hein and Budny (2000), in a meta-analysis study on the findings of different studies, identified that the harmony between the learning styles of the students and their learning activities increased their academic achievement. As a result of the study conducted by Yazıcılar and Güven (2009), it was found that teaching activities prepared in accordance with the learning styles of the students increased the academic achievement and retention levels of the students.

Being aware of individuals' learning styles enables to identify their strengths and weaknesses during learning, take measures to develop their weaknesses and bring together ideal individuals to work together and observe diversity in the classroom. It also contributes to the preparation of learning environments and educational programs that will positively affect students' success, interests and motivation (Cassidy, 2004). Studies show that students' positive attitudes towards teaching increase significantly when they learn with their preferred learning style and a positive improvement emerges in their classroom behaviors (Veznedaroğlu & Özgür, 2005). When educating pre-service teachers who will play an important role in higher education and especially in the education of future generations, it is considered that being aware of qualifications of the students including learning styles and taking them into account during the education process would facilitate identifying appropriate learning strategies.

Information about individuals' learning styles may provide a sound basis for making changes to the learning and teaching process and improve teaching practices. It is considered important to be aware of learning styles in setting goals, selecting appropriate strategies and monitoring progress. One of the basic professional responsibilities of educators is to maximize the learning opportunities of their students. Being aware of students' learning styles can also be beneficial to encourage them to improve their learning and enable students to adopt the most appropriate learning strategy from a wide range of options. However, it is noteworthy that students should be divided into major classes in terms of their learning styles. Learning styles should not lead to labeling of students knowingly or unintentionally. In addition, as Dunn (1996) states, learning style preferences of an individual should not be perceived as invariant structures, but as preferences that can vary over time according to their personality and the characteristics of the learning environment.

It is stated that different learning environments, teaching methods, measurement and assessment methods and factors such as motivation affect students' learning styles. Therefore, the effect of factors such as learning environment, quality and duration of learning and teaching process and culture as well as affective factors such as self-efficacy, attitude, anxiety and motivation can be explored in the preference of learning styles. Distribution of students' learning styles according to different faculty, departments and class levels can be investigated. Thus, different aspects of learning styles can be revealed and explained further. It is well-known that thinking and learning cannot be considered separately. Exploring the relationship between thinking styles and learning styles can be an important research topic. In addition, experimental studies can be conducted by arranging different learning environments in line with different learning styles and planning different activities. However, there may be an issue that makes research difficult. It is considered that a wide variety and complex

learning styles have been proposed to date and the lack of common synthesis makes it difficult to conduct studies in this area.

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ANALYSIS OF THE ATTITUDES AND THE READINESS OF MAKER TEACHERS TOWARDS E-LEARNING, WITH USE OF SEVERAL VARIABLES

Research Article

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ANALYSIS OF THE ATTITUDES AND THE READINESS OF MAKER TEACHERS TOWARDS E-LEARNING, WITH USE OF SEVERAL VARIABLES

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Abstract

The purpose of this study is to determine maker teachers' attitudes towards e-learning, as well as their levels of readiness to implement it. Their attitudes and level of readiness will be evaluated by the use of several demographic variables. 104 maker teachers of different ages, who had different professional experiences; has participated in the study. "*The Personal Information Form*" made up of 11 questions; a 5 point likert scale survey made up of 20 questions titled "*Scale Survey about General Attitudes Towards E-Learning*"; and a 7 point likert scale survey made up of 33 questions, titled "*Scale Survey about Level of Readiness for E-Learning*"; were used as data gathering instruments. Descriptive (*f*, %, *M*) and procedural analyses (t-test, ANOVA) were made, with the help of the SPSS program. The results of these analyses demonstrate that in general, maker teachers have a positive attitude towards e-learning, and that they have a high level of readiness for e-learning.

Keywords: Maker teacher, e-learning, attitude, readiness

1. Introduction

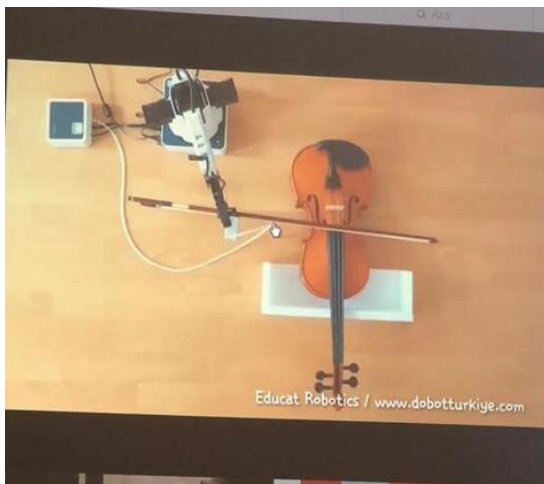
The constant development of science and technology, which become more and more integrated with our everyday lives, causes a rise in the need to train qualified individuals, who are able to benefit from these developments efficiently. Wagner (2017) argues that current and future generations need to have skills and abilities such as critical thinking, problem solving, entrepreneurship, taking initiative, utilizing verbal-written communication skills efficiently, information analysis and evaluation, curiosity, imagination; and many more, to be able to track scientific and technologic developments, and use them to their advantage. These skills can only develop through the use of efficient education procedures, and content. Scientists, educators, program developers, and many others who work on these procedures; highlight the importance of science, technology, mathematics, and engineering; and emphasize the current and future need for a teaching procedure integrating these concepts with one another. In this context, the aim to implement the aforementioned basic skills in future generations, once again revealed the importance of education reforms. The Science, technology, engineering, and mathematics (FeTeMM for short in Turkish, STEM in English) approach, has been suggested to be a core development in pioneering education reform movements (Aytekin, 2018).

One of these education reform movements is the maker movement, which emerged as a result of the integration of the do-it-yourself approach, with technology (Akıncı ve Tüzün, 2016). Making robots, designing objects and constructing them, making 3-D designs, making products

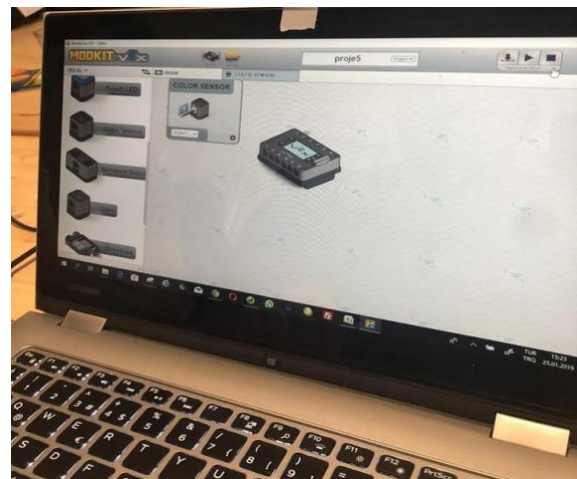
with the use of 3-D printers, making tools with electric circuits, and modeling airplanes; reflect the spirit of maker education, which is based on production. The maker spirit involves

- Sharing over competition
- Ability over money and
- Experience over intense memorization (Makers Türkiye, 2015).

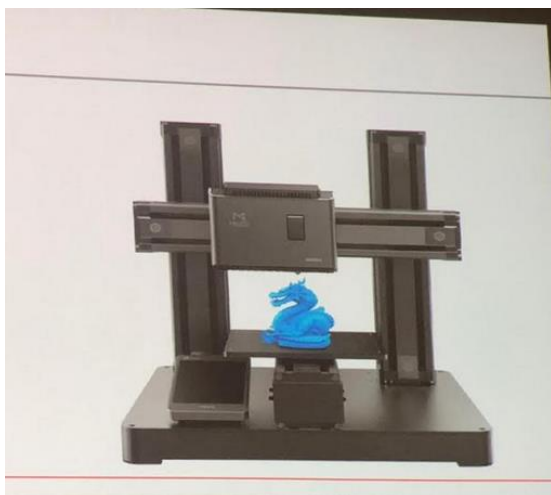
The maker movement is made up of curious people (e.g. repairmen, engineers, teachers, artists, etc.) interested in making creative designs, and producing helpful products while also having fun. The maker movement concerns getting the youth interested in fields such as science, technology, mathematics, engineering and art; while also developing their creativity, through the do-it-yourself approach (Davee, Regalla ve Chang, 2015). The maker movement is concerned with many different actions; such as learning, designing, supporting, participating, playing, using tools, doing, giving, sharing; and many more (Hatch, 2013).



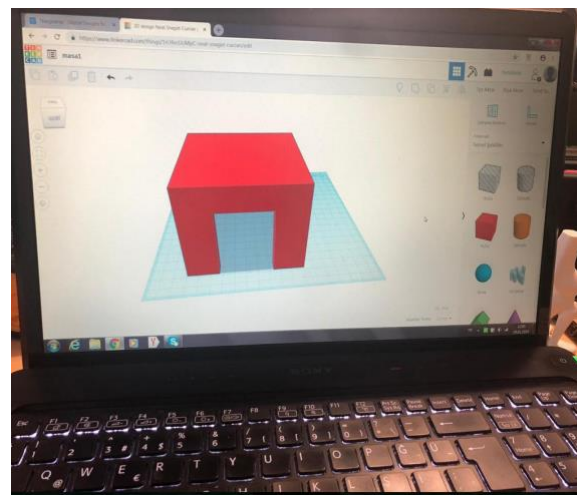
Teaching robot



Designing with a program (Modkit)



3-D printer



3-D object design

As this movement is concerned with production more than consumption; it encompasses nearly every aspect of production (robotics, woodwork, mechanical operations, textile - design,

cooking etc.), it will be one of the in-demand professions of the future. Above are some examples which could be done through the do-it-yourself method.

This movement causes individuals to ask questions such as "how was this made", "how is this used" "in which new ways can it be used", and "how can it be repaired"; and thus results in the improvement of their curiosity, and their knowledge about technology. Individuals who have the maker spirit have many skills and abilities such as problem solving, critical thinking, questioning, noticing, sharing, and collaborating (Dixon ve Martin, 2014; Kalil, 2013). Teachers play a vital role in the education of students who will make their own designs, and who will possess the skills listed above. Teachers will implement the maker programs designed for children, and therefore they should be the first ones to be trained as makers, and who should be given the maker spirit. When designing with the maker spirit, teachers can design products of a great variety, and they can use e-learning environments while doing so.

E-learning, which is a segment of distance-learning; is a method through which people receive (or upload) the designated content online, electronically, regardless of time and place, through the use of the internet (Zhang ve Nunamaker, 2003). E-learning is the computer network technology used to provide learners with educational experiential information, with the purpose of teaching (Welsh, Wanberg, Brown and Simmering, 2003); and in this way, it constitutes a learning environment where instant delivery and correction is possible (Sanderson, 2002) through the use of the internet and other digital technologies (Hortor, 2001). E-learning provides interactive and rich learning environments where teaching strategies, methods, and techniques are used, in integration with technology, in a way that is appropriate to the subject matter, generally with the use of the internet and computers. E-learning encompasses many computer-based and web-based learning applications, and can be both synchronous, and asynchronous (Gülbahar, 2002).

Even though e-learning has certain disadvantages such as removing the physical interactions between students and between teachers and students, and the fact that content creation and updating is a costly and time-consuming process (Aytaç, 2003); it has many advantages regarding the learning environment, for both learners and education planners. E-learning provides the opportunity to learn everywhere, without any limitation to location (Aytaç, 2003); the speed, the place and the time of education is designated by the learners (Yücel, 2006); the content is available for multiple use of the learners; the use of things such as discussion groups and e-mail/chat segments ensures a multi-faceted way of communication and access (Dikbaş, 2006). Therefore, students in e-learning processes, are able to acquire many different skills in this rich learning environment, with the technologic devices, applications, methods, and techniques that are available to them (Khan, 2001). The learners need to have access to e-learning environments and their facilities so that they can benefit from them in the best way, and the effective use of teachers who utilize these environments in their education and training processes. The readiness of teachers in using these environments, and their general attitudes towards the concept; are thought to be deciding factors in whether the teachers utilize these environments, or avoid doing so.

When we look at the literature in the field, we see that studies, conducted mostly with students, are numerous and varied. In their study which they conducted with information communication experts and educators, Bhuasiri and friends (*Bhuasiri ve arkadaşları*) (2012) discovered that learner characteristics along with the quality of the groundwork and the system; are the most important factors in defining the success of an e-learning system. Many others have conducted relevant research; Şentürk (2016) on the attitudes of teachers towards e-learning; Sun, Tsai, Fingar, Chen and Yeh (2008) on student evaluations and their defining factors; Mahdizadeh,

Biemans and Mulder on the reasons as to why educators use e-learning; Yoo, Han and Huang (2012), on the effect that internal and external motivators have on e-learning; Çobanoğlu, Ateş, İliç and Yılmaz (2009) on BÖTE preservice teachers' opinions about e-learning; Haznedar (2012) on the attitudes of college students towards e-learning; and Çetin (2018) on the attitudes of high school students towards e-learning.

As is evident from the studies reported here; there have been a very limited number of studies conducted with teachers. Teachers tasked with certain duties need to receive maker education to improve. It has been observed that teachers who do not receive this education, have trouble adjusting to changes and innovations that cross their path, in their career. This study has been conducted to determine the level of readiness of the teachers who receive this education, to implement the maker approach; as well as their general attitudes about it. No other study chronicling the readiness of maker teachers to implement the maker approach, and their attitudes about maker education; has been found. Therefore, this study, demonstrating the readiness of maker teachers, who possess the do-it-yourself spirit, to implement the maker approach, and their attitudes about maker education in general; will be a roof for future studies which scientists will conduct in this important field of our time, and will create a perspective emphasizing the importance of teachers in e-learning applications, as well as the maker movement.

1.2. Purpose of study

The purpose of this study is to demonstrate the general attitudes of maker teachers towards e-learning, their level of readiness to implement it, and the factors which have an effect on this level. To that affect, the questions below have been researched.

1. What are the general attitudes of maker teachers towards e-learning?
2. At what level is maker teachers' readiness to implement e-learning?
3. How do the general attitudes and readiness of maker teachers towards distance learning change according to certain demographic variables (sex, age, professional experience etc.)?

2. Method

This study, chronicling the general attitudes of maker teachers towards e-learning, and their readiness to implement it; has been done in the descriptive survey model, which is a form of quantitative research. The descriptive survey model is helpful in collecting data from a large number of subjects, fast. This research model, seeking to describe certain qualities and conditions of groups and individuals (Kaptan, 1998) helps to present a past or current condition, as it is (Karasar, 2005).

2.1. Sampling

A total of 104 maker teachers has participated in the study. Demographic information regarding these teachers has been given in Table 1.

Table 1. Demographic characteristics of the participants (n=104)

Characteristic	<i>f</i>	%
<i>Sex</i>		
Male	52	50
Female	52	50
<i>Age</i>		
20 – 25	10	9.6
26 – 30	55	52.9
31 – 35	16	15.4
36 and older	23	22.1
<i>Professional experience</i>		
0 – 5 years	60	57.7
6 – 10 years	25	24
11 and more	19	18.3

52 male, and 52 female maker teachers participated in the study. In terms of age; we can see that 10 teachers were between the ages of 20-25, that 55 teachers were between the ages of 26-30, 16 teachers were between the ages of 31-35, and that 23 teachers were 36 years old, or older. In terms of professional experience, we can see that 60 teachers had 0-5 years of experience, that 25 had 6-10 years of experience, and that 9 had professional experience amounting to, or more than 11 years.

2.2. Data Collection Tools

3 data collection tools have been used in the study. These tools were; the personal information form, The Scale Survey about General Attitudes Towards E-Learning, and The Scale Survey about Level of Readiness for E-Learning

2.2.1. Personal Information Form

The personal information form has been put together by the researcher, and is made up of a total of 11 questions, which seek to reveal personal information of the participants, as well as their experiences with the maker movement.

2.2.2. Scale Survey about General Attitudes Towards E-Learning

The Scale Survey about General Attitudes Towards E-Learning, which has been created by Haznedar and Baran (2012), is made up of a total of 20 points in the 5-point Likert scale (1- Completely agree, 5 - Completely disagree). This scale survey has been implemented to reveal the general attitudes of participants towards e-learning. It has two sub-dimensions; prone to e-learning (10 points) and avoiding e-learning (10 points). The first sub-dimension has a Cronbach's alpha reliability coefficient of .93, while the second has a reliability coefficient of .84 Points in the sub-dimensions are demonstrated in Table 1.

Table 2. General attitudes about e-learning scale survey sub-dimensions and their points

Sub-Dimension	Number of Points	Points (point number)
Prone to e-learning	10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Avoiding e-learning	10	11, 12, 13, 14, 15, 16, 17, 18, 19, 20

2.2.3. Scale Survey about Level of Readiness for E-Learning

The Scale Survey about Level of Readiness for E-Learning, developed by Demir (2015), is made up of a total of 33 points in the 7-point Likert Scale (1 - Doesn't suit me at all, 7 - Completely suits me). This survey has been put together to reveal the participants' readiness for e-learning; and is made up of a total of 6 sub-dimensions; namely, computer self-efficacy (5 points), internet self-efficacy (4 points), online communication self-efficacy (5 points), self-confidence (8 points), learner control (4 points) motivation for e-learning (6 points) The Cronbach's alpha reliability coefficients of these sub-dimensions vary between .84 and .95. Table 2 demonstrates the points in each sub-scale.

Table 3. Sub-dimensions of the scale survey about level of readiness for e-learning, and the points they contain

Sub-Dimensions	Number of Points	Points (point number)
Computer self-efficacy	5	1, 2, 3, 4, 5
Internet self-efficacy	4	6, 7, 8, 9
Online communication self-efficacy	5	10, 11, 12, 13, 14
Self confidence	8	15, 16, 17, 18, 19, 20, 21, 22
Learner control	4	23, 24, 25, 26
Motivation for e-learning	7	27, 28, 29, 30, 31, 32, 33

2.3. Data Collection Process

The data was collected in the spring term of the 2018-2019 academic year. Maker teachers were contacted through the internet and the data about the teachers was collected through the use of an internet survey.

2.4. Data Analysis

The data collected through the internet, was transferred into the SPSS data set. Afterwards, data cleaning took place, and analyses were done regarding the extreme points, and missing data. Later, coefficients of kurtosis and skewness were calculated to see if the variables passed the normality hypothesis test. There are not any extreme points in the set of data, and the kurtosis and skewness coefficients vary between [-2, +2]. Descriptive statistics (f , %, M) and procedural statistics (t-test, ANOVA) techniques were used in the analysis of the data.

3. Findings

The findings of the study have been evaluated under three headings.

3.1. The experiences of maker teachers, about the maker movement

When we look at the daily time maker teachers spend on the computer; we see that 7 teachers spend less than 30 minutes, that 17 teachers spend 30 minutes - 1 hour, that 26 teachers spend 1-2 hours, that 34 teachers spend 2-4 hours and that 20 teachers spend more than 4 hours. 86 teachers out of all the participants (%82.7) think that e-learning is beneficial 17 (% 16.3) of them think that it is partially adequate, and 1 of them thinks that e-learning is inadequate. When we asked the teachers how many programming languages they were familiar with; 13 (%12.5) said that they did not know any, 9 (%8.7) said that they only knew one, 13 (%12.5) said that they knew two, 15 (%14.4) said that they knew three, 13 (%12.5) said that they knew four, 6 (%5.8) said that they knew five, 2 said they knew 6, and 1 said that they knew 7. 32 teachers did not give any answers indicating whether or not they knew programming languages. When we look at how long the teachers have spent involved in the maker movement we see; that 48 (%47.1) of them only recently joined this education movement, and have been involved for less than a year, that 22 (%21.2) of them have been involved for 1-2 years, that 23 (%22.1) of them have been involved for 2-4 years, and that 10 (%9.6) of them have been in this movement for over 4 years. 69 (%66.3) teachers received maker education, while 34 (%32.7) did not. 1 has not indicated whether or not they have received maker education.

3.2. Attitudes of maker teachers towards e-learning

When we evaluate the answers that the maker teachers have given regarding points about their attitudes towards e-learning, we can see that the attitudes vary between $\bar{X} = 4.55$ and $\bar{X} = 1.64$. The answers given by the teachers to the points about attitude, and their averages, have been given in Table 3. The point in which the teachers gave answers with the highest average in general, was "*E-learning makes learning easier*" while the one with the lowest average was "*I feel as though I will have more problems when I take classes by e-learning*". The 10 points in the first dimension are positive, while the 10 points in the second dimension are negative. When we look at the frequency distribution of the answers given to each point; we can see that most teachers answered, "completely agree", and "agree" for the first 10 points, while most of them answered "disagree" and "completely disagree" for the last 10 points. When we consider the fact that the last 10 points are negative, the participants' negative answers to these points indicate

that they have a positive outlook. Therefore, it can be said that the teachers have a generally positive attitude towards e-learning.

Table 4. Attitudes of maker teachers towards e-learning

Points	\bar{X}	1		2		3		4		5	
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Dimension I – Proneness to e-learning											
E-learning makes learning easier.	4,55	-	-	-	-	5	4.8	37	35.6	62	59.6
I am interested in e-learning.	4,28	-	-	-	-	10	9.6	55	52.9	39	37.5
I would like to learn something in an e-learning environment.	4,42	-	-	3	2.9	8	7.7	35	33.7	58	55.8
E-learning increases productivity in learning.	4,38	1	1	1	1	13	12.5	32	30.8	57	54.8
E-learning increases motivation.	4,42	-	-	1	1	11	10.6	35	33.7	57	54.8
E-learning is fun.	4,21	1	1	2	1.9	16	15.4	40	38.5	45	43.3
E-learning increases success.	4,25	-	-	1	1	10	9.6	55	52.9	38	36.5
E-learning should be more common.	4,50	-	-	1	1	8	7.7	33	31.7	62	59.6
I like working at my own pace through e-learning.	4,24	-	-	1	1	9	8.7	58	55.8	36	34.6
I track the developments in the field of e-learning.	4,05	-	-	1	1	18	17.3	60	57.7	25	24
Dimension II – Avoiding e-learning											
I feel as though I will have more problems when I take classes by e-learning.	3,21	9	8.7	25	24	15	14.4	45	43.3	10	9.6
E-learning doesn't fit into the way I study.	1,95	50	48.1	30	28.8	9	8.7	9	8.7	9	8.7
I do not think I will receive adequate support from teachers in e-learning.	2,54	15	14.4	43	41.3	26	25	15	14.4	5	4.8
The thought of learning via e-learning makes me feel bad.	1,80	55	52.9	27	26	12	11.5	8	7.7	2	1.9
Healthy and fair evaluations are not possible with e-learning.	1,98	51	49	24	23.1	13	12.5	12	11.5	4	3.8
The lack of face-to-face interaction in e-learning bothers me.	2,70	14	13.5	29	27.8	40	38.5	16	15.4	5	4.8
I do not like to learn in an e-learning environment.	2,35	30	28.8	40	38.5	12	11.5	12	11.5	10	9.6
I do not think e-learning will be beneficial.	2,06	52	50	21	20.2	11	10.6	13	12.5	7	6.7
E-learning is unnecessary.	1,64	65	62.5	23	22.1	6	5.8	8	7.7	2	1.9
E-learning hinders socialization.	2,13	47	45.2	21	20.2	16	15.4	15	14.4	5	4.8

There are two sub-dimensions of the scale which measures teachers' attitudes towards e-learning. The averages of the attitude points, the standard deviations and min-max points of these sub-dimensions; and of the scale survey as a whole, have been given in Table 4. The general attitudes towards e-learning, and the total e-learning about the sub-dimensions, have been given in Figure 1, while averages have been given in Figure 2.

Table 5. Descriptive findings about the scale survey in general, as well as its sub-dimensions

Dimensions	Max - Min	\bar{X}	Ss
I. Proneness to e-learning	25 – 50	43.29	4.85
II. Avoiding e-learning	10 – 50	37.63	8.58
General attitudes about e-learning	44 - 100	80.93	11.50

The total of the points regarding the maker teachers' general attitudes towards e-learning is $\bar{X} = 80.93$ and the average of these points is $\bar{X} = 4.04$. This average demonstrates that teachers generally hold e-learning in high regard. When the points for the attitudes to sub-dimensions to e-learning were calculated; it was seen that the total of the points regarding proneness to e-learning was $\bar{X} = 43.28$, and the average of these points were $\bar{X} = 4.33$; whereas the total of the points regarding avoiding e-learning was $\bar{X} = 37.63$, and the average of these points were $\bar{X} = 3.76$.

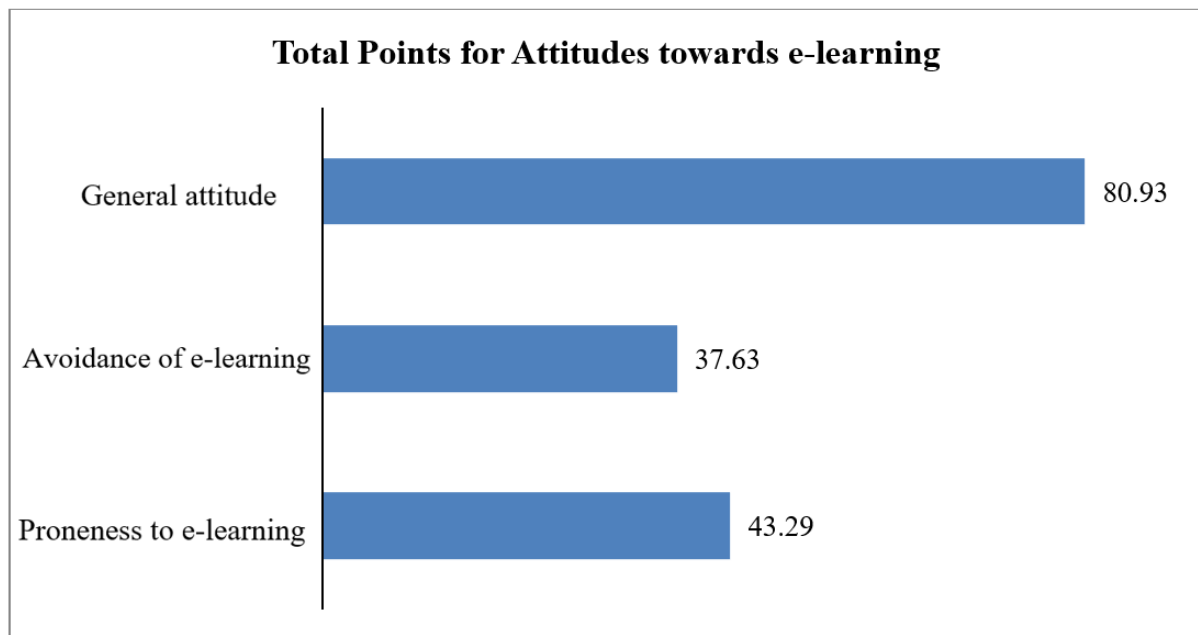


Figure 1. Total points regarding the general attitude scale survey and its sub-dimensions

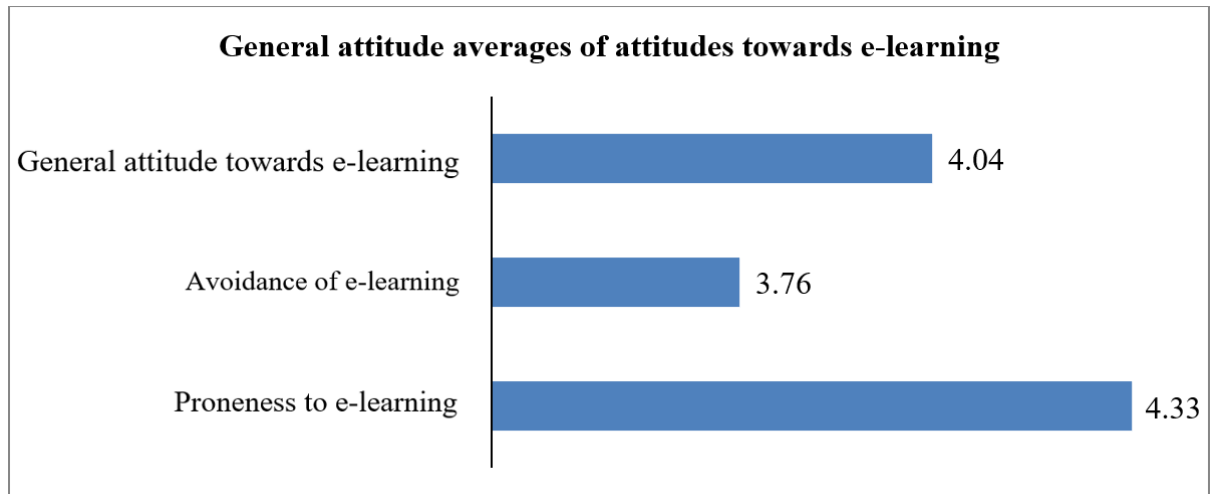


Figure 2. Average points regarding the general attitude scale survey and its sub-dimensions

There are 10 points in total, under proneness to e-learning, which is the first sub-dimension of the scale survey for general attitudes towards e-learning. When we look at the average of the points falling under this sub-dimension, we see that it is between $\bar{X} = 4.55$ and $\bar{X} = 4.05$. The point in which the teachers gave answers with the highest average, was "E-learning makes learning easier" while the one with the lowest average was "I track the developments in the field of e-learning". The point averages under this sub-dimension, have been given in Figure 3.

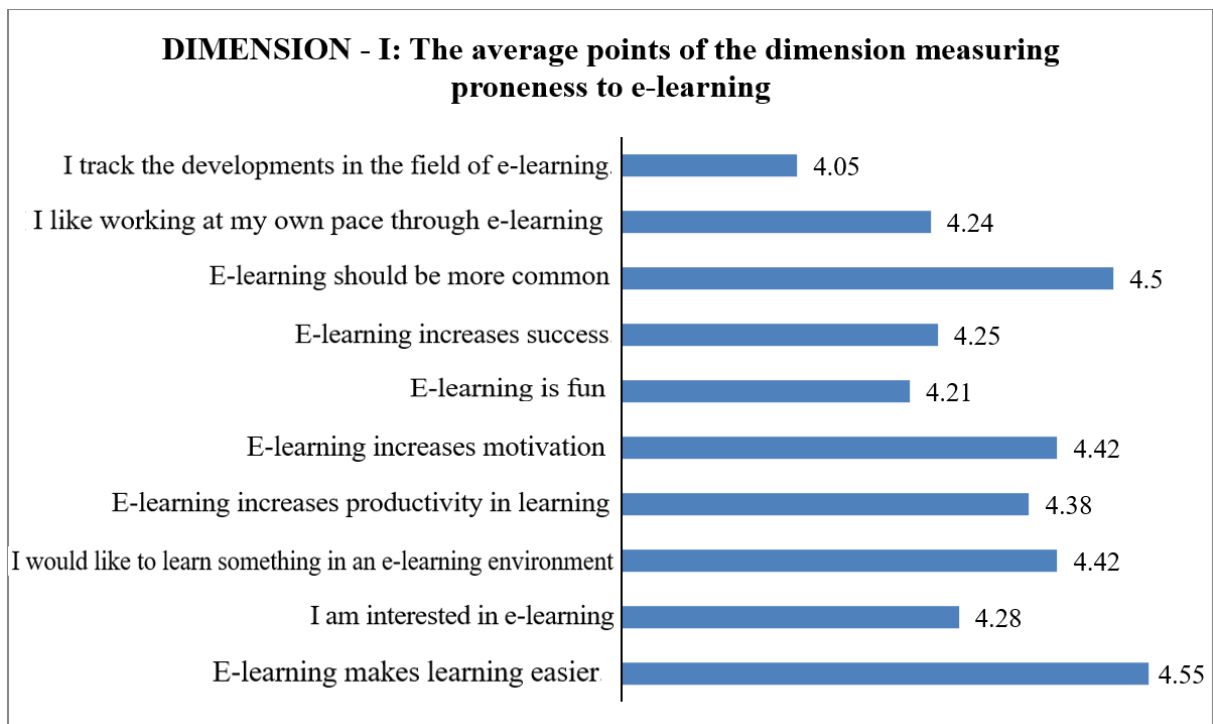


Figure 3. Point averages under the sub-dimension measuring proneness to e-learning

There are 10 points in total, under avoiding e-learning, which is the second sub-dimension of the scale survey for general attitudes towards e-learning. When we look at the average of the points falling under this sub-dimension, we see that it is between $\bar{X} = 3.21$ and $\bar{X} = 1.64$. The

point in which the teachers gave answers with the highest average, was "I feel as though I will have more problems when I take classes by e-learning." while the one with the lowest average was "E-learning is unnecessary". The point averages of the points under this sub-dimension, have been given in Figure 4.

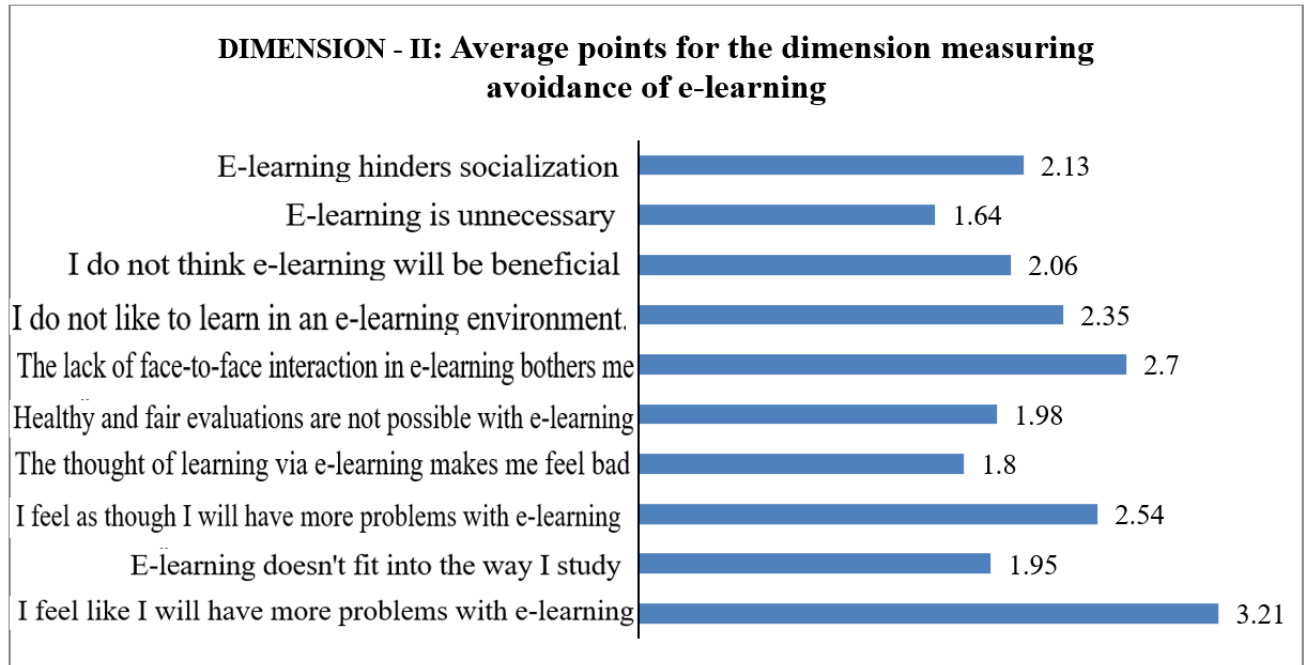


Figure 4. Point averages under the sub-dimension measuring the avoidance of e-learning

A t-test analysis was made, to determine if the attitudes of maker teachers towards e-learning differentiated according to gender. There is no statistical difference between male and female teachers for both of the sub-dimensions [*proneness to e-learning*, $t(102) = 0.624$, $p = 0.534$; *avoiding e-learning*, $t(102) = -1.587$, $p = 0.116$].

A one-way analysis of variance (ANOVA) was made, to determine if the attitudes of maker teachers towards e-learning differentiated according to age. There is a significant statistical difference in the attitudes of teachers under the sub-dimension measuring their proneness to e-learning, [$F(3, 100) = 3.280$, $p < 0.05$]. The Post-Hoc analysis, made to reveal the source of the difference, demonstrates that the teachers belonging to the 20-15 age group have the highest proneness level to e-learning, while the teachers belonging to the 31-35 age group have the lowest proneness, and the lowest contribution points. The difference between these two groups is especially significant. That being said, there is no significant difference to the average points regarding the sub-dimension of avoidance to e-learning [$F(3, 100) = 2.184$, $p = 0.095$], according to age.

A one-way analysis of variance (ANOVA) was made to determine whether or not the attitudes of maker teachers towards e-learning differed according to levels of professional seniority (experience). There is no statistical difference between male and female teachers for neither of the sub-dimensions [*proneness to e-learning*, $t(101) = 0.418$, $p = 0.660$; *avoiding e-learning*, $t(101) = 1.786$, $p = 0.173$].

3.3. Maker Teachers' Readiness for E-learning

When we evaluate the answers that the maker teachers have given regarding points about their readiness for e-learning, we can see that the attitudes vary between $\bar{X} = 5.97$ and $\bar{X} = 5.63$. The answers given by the teachers to the points about their readiness, and their averages, have been given in Table 5. The point in which the teachers gave answers with the highest average in general, was "*I believe I am responsible for what I learn*" while the one with the lowest average was "*I can handle problems that come up while using the computer*". There is a total of 33 points in the scale survey, and all of them are written in positive sentences. When we look at the frequency distribution of the answers given by the teachers in the survey, we can see that the answers have piled around "completely suits me" and "suits me". Generally speaking, we can say that teachers have an approximately high level of readiness to e-learning. There are six sub-dimensions of the scale survey about readiness for e-learning. The averages of the readiness points, the standard deviations and min-max points of these sub-dimensions; and of the scale survey as a whole, have been given in Table 6. Additionally, the total of the points of the sub-dimensions of this survey, as well as the survey in general, have been given in Figure 5, while their averages have been given in Figure 6.

Table 6. Descriptive findings regarding the scale survey measuring the levels of readiness for e-learning.

Dimensions	Max - Min	\bar{X}	Ss
I. Computer self-efficacy (competence)	10 – 35	28.80	4.23
II. Internet self-efficacy (competence)	10 – 28	23.50	3.59
III. Online communication self-efficacy (competence)	13 – 35	29.01	4.37
IV. Self confidence	32 – 56	46.53	5.74
V. Learner control	12 – 28	23.33	3.26
VI. Motivation for e-learning	15 – 49	40.36	5.23
General readiness for e-learning	109 - 231	191.56	23.03

The average of the points regarding maker teachers' levels of general readiness is $\bar{X} = 191.56$, $Ss = 23.03$; which shows that the teachers' answers were generally focused around "suits me". These findings suggest that the general level of readiness of maker teachers for e-learning is approximately high.

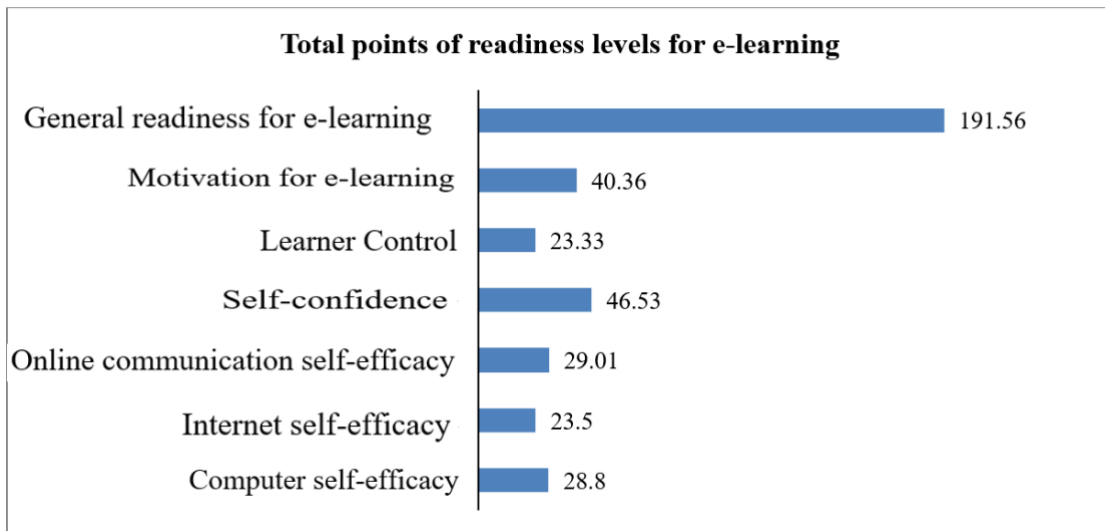


Figure 5. Total points of the scale survey measuring maker teachers' general readiness levels; and its sub-dimensions

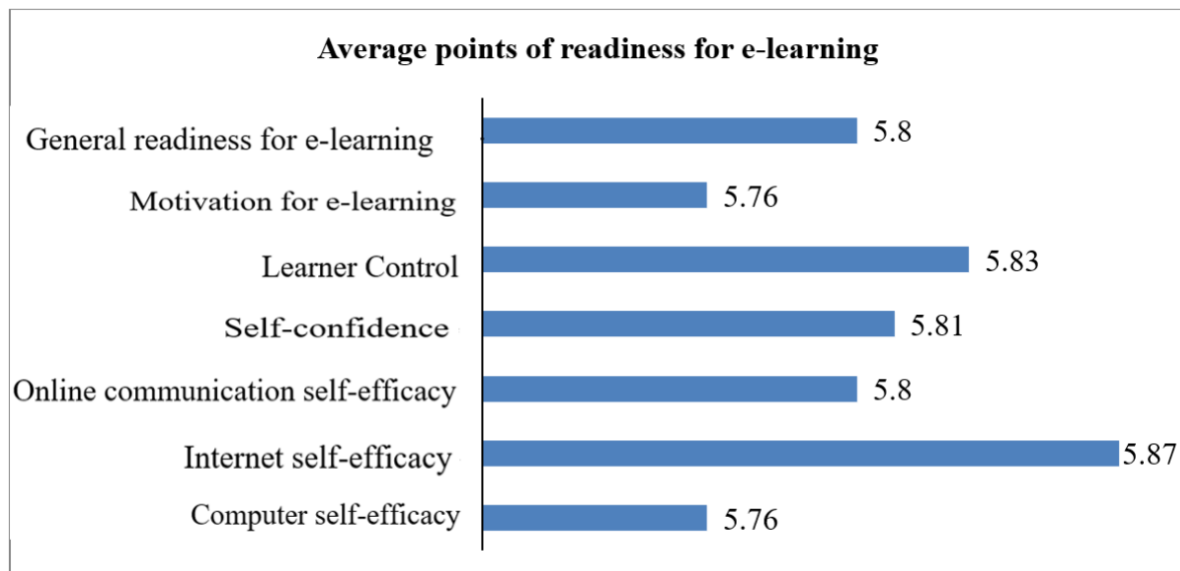


Figure 6. Average points of the scale survey measuring maker teachers' general readiness levels; and its sub-dimensions

When the total points and average points for the sub-dimensions of their readiness for e-learning were calculated; it was seen that the total points related to the computer self-efficacy sub-dimension is $\bar{X} = 28.80$, and that the average is $\bar{X} = 5.76$; the total points related to the internet self-efficacy sub-dimension is $\bar{X} = 23.50$ and the average is $\bar{X} = 5.87$; the total points related to the online communication self-efficacy sub-dimension is $\bar{X} = 29.01$, and the average is $\bar{X} = 5.8$; the total points related to the self-confidence sub-dimension is $\bar{X} = 46.53$, and the average is $\bar{X} = 5.81$; the total points related to the learner control sub-dimension is $\bar{X} = 23.33$, and the average is $\bar{X} = 5.83$; and the total points related to the motivation towards e-learning is $\bar{X} = 40.36$, and the average is $\bar{X} = 5.76$.

Table 7. *Readiness of maker teachers for e-learning*

Points	\bar{X}	1		2		3		4		5		6		7	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%
Dimension I – Computer self-efficacy (competence)															
1. I am comfortable with the use of Windows operating systems.	5,82	-	-	1	1	-	-	4	3.8	33	31.7	40	38.5	26	25
2. I can view the contents of an electronic document (audio, music, text etc.)	5,87	-	-	1	1	-	-	8	7.7	27	26	35	33.7	33	31.7
3. I can handle problems that come up while using the computer	5,63	-	-	1	1	1	1	11	10.6	35	33.7	30	28.8	26	25
4. I am comfortable in the use of Office programs (word, excel, power point, outlook etc.)	5,82	-	-	1	1	1	1	6	5.8	32	30.8	32	30.8	32	30.8
5. I can use application software (editing, design etc.) comfortably if I am in a need to do so.	5,67	-	-	2	1.9	3	2.9	6	5.8	31	29.8	36	34.6	26	25
Dimension II – Internet self-efficacy (competence)															
6. I am comfortable in the use of Web browsers (Internet Explorer, Google Chrome etc.)	5,82	-	-	2	1.9	-	-	4	3.8	33	31.7	35	33.7	30	28.8
7. I am comfortable in the use of search engines (Google, Yandex etc.)	5,91	-	-	-	-	2	1.9	5	4.8	33	31.7	24	23.1	40	38.5
8. I can download a file from the internet to my computer.	5,87	1	1	-	-	1	1	10	9.6	21	20.2	36	34.6	35	33.7
9. I can easily find information I look for online.	5,90	-	-	-	-	-	-	7	6.7	29	27.9	35	33.7	33	31.7
Dimension III –Online communication self-efficacy (competence)															
10. I am comfortable with the use of internet tools (e-mail, forums, skype etc.) to communicate with people more effectively.	5,92	-	-	2	1.9	-	-	3	2.9	29	27.9	35	33.7	35	33.7
11. I can easily ask questions on an online forum.	5,86	1	1	1	1	-	-	8	7.7	27	26	30	28.8	37	35.6
12. I am comfortable in expressing myself in writing (conveying emotions, humor, etc.)	5,80	-	-	-	-	-	-	8	7.7	33	31.7	35	33.7	28	26.9
13. I can ask for help via internet tools (forums, social networks, e-mail etc.), and find answers I need.	5,71	1	1	-	-	1	1	9	8.7	32	30.8	33	31.7	28	26.9
14. I am comfortable with auditory or visual communication through the internet (Skype, Google Hangout, Google Talk etc.)	5,73	-	-	2	1.9	1	1	8	7.7	30	28.8	34	32.7	29	27.9

Table 8. *Readiness of maker teachers for e-learning (Continued)*

Points	\bar{X}	1		2		3		4		5		6		7	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%
Dimension IV –Self confidence															
15) I determine my learning-related shortcomings.	5,91	-	-	-	-	2	1.9	5	4.8	24	23.1	42	40.4	31	29.8
16) I determine my own learning objectives.	5,84	-	-	1	1	-	-	8	7.7	26	25	40	38.5	29	27.9
17) I construct a study plan for myself when I am learning something.	5,77	-	-	-	-	-	-	8	7.7	32	30.8	40	38.5	24	23.1
18) I stick to my study plan completely when I am learning something.	5,66	-	-	1	1	1	1	8	7.7	33	31.7	40	38.5	21	20.2
19) I re-arrange my study plan when circumstances change.	5,70	-	-	-	-	1	1	12	11.5	30	28.8	35	33.7	26	25
20) I determine the appropriate resources and tools for my learning process.	5,77	-	-	-	-	1	1	6	5.8	30	28.8	46	44.2	21	20.2
21) I believe I am responsible for what I learn.	5,97	-	-	-	-	-	-	7	6.7	24	23.1	38	36.5	35	33.7
22) I keep my motivation (to learn) high, until I have reached my goal.	5,91	-	-	-	-	2	1.9	5	4.8	25	24	40	38.5	32	30.8
Dimension V –Learner Control															
23) I am in charge of the learning process when I learn about a subject on the internet.	5,82	-	-	1	1	1	1	5	4.8	30	28.8	39	37.5	28	26.9
24) I decide how much I am going to focus on the learning materials on the internet.	5,82	-	-	1	1	-	-	7	6.7	27	26	43	41.3	26	25
25) I decide when I will study the material on the internet.	5,78	-	-	-	-	2	1.9	8	7.7	28	26.9	39	37.5	27	26
26) I decide in which order I will study the material on the internet.	5,92	-	-	-	-	1	1	7	6.7	25	24	37	35.6	34	32.7

Table 9. *Readiness of maker teachers for e-learning (Continued)*

Points	\bar{X}	1		2		3		4		5		6		7	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%
Dimension VI – Motivation towards e-learning															
27) I am highly willing to take classes on the internet.	5,71	-	-	1	1	1	1	5	4.8	35	33.7	40	38.5	22	21.2
28) I am interested in taking classes on the internet.	5,72	-	-	1	1	-	-	4	3.8	37	35.6	42	40.4	20	19.2
29) Taking classes on the internet is an effective method to learn.	5,80	-	-	1	1	-	-	7	6.7	31	29.8	37	35.6	28	26.9
30) I think it will be fun to take classes on the internet.	5,80	-	-	1	1	-	-	5	4.8	33	31.7	39	37.5	26	25
31) I am confident that I would be able to learn on the internet.	5,77	-	-	-	-	2	1.9	8	7.7	25	24	46	44.2	23	22.1
32) I would like to share my thoughts and opinions with other people when I take classes on the internet.	5,79	1	1	-	-	-	-	6	5.8	31	29.8	40	38.5	26	25
33) I learn from my mistakes when I take classes on the internet.	5,78	-	-	1	1	1	1	5	4.8	29	27.9	45	43.3	23	22.1

There is a total of four points in the first sub-dimension of 'readiness for e-learning', which is computer self-efficacy. When we look at the average of the points falling under this sub-dimension, we see that it is between $\bar{X} = 5.87$ and $\bar{X} = 5.67$. The point in which the teachers gave answers with the highest average, was "I am comfortable with the use of Windows operating systems." while the one with the lowest average was "I can use application software (editing, design etc.) comfortably if I am in a need to do so." The point averages of the points under this sub-dimension, have been given in Figure 7.

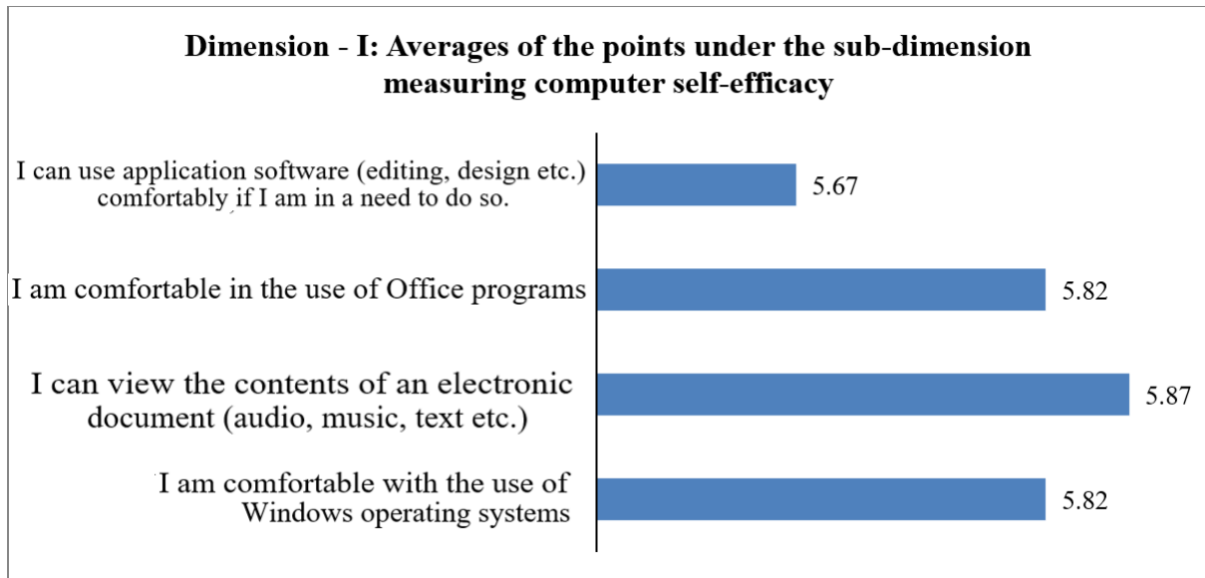


Figure 7. Averages of the points under the sub-dimension measuring computer self-efficacy

There is a total of ten points in the second sub-dimension measuring readiness for e-learning, which is internet self-efficacy. When we look at the averages of the points falling under this sub-dimension, we see that they are between $\bar{X} = 5.91$ and $\bar{X} = 5.82$. The point in which the teachers gave answers with the highest average, was "I am comfortable in the use of search engines (Google, Yandex etc.)" while the one with the lowest average was "I am comfortable in the use of Web browsers (Internet Explorer, Google Chrome etc.)". The point averages of the points under this sub-dimension, have been given in Figure 8.

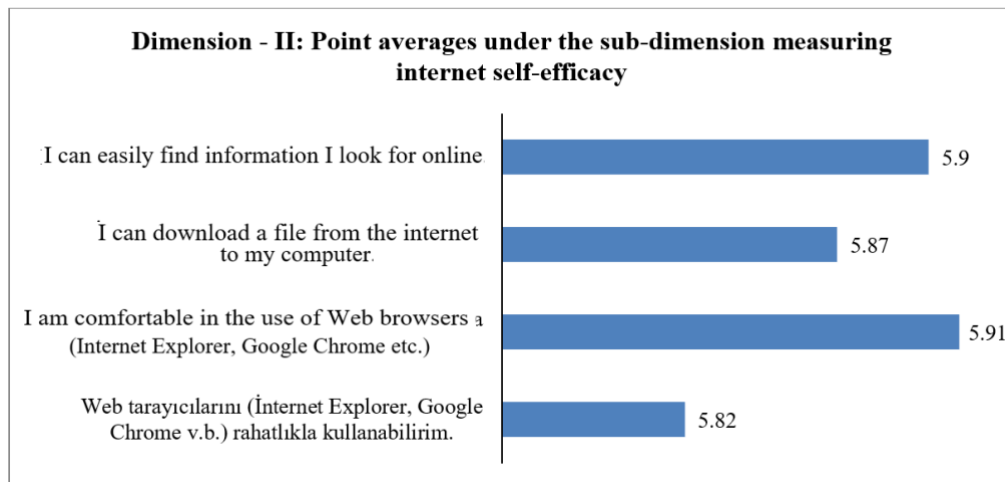


Figure 8. Point averages under the sub-dimension measuring internet self-efficacy

There is a total of ten points in the third sub-dimension measuring readiness for e-learning, which is online communication self-efficacy. When we look at the average of the points falling under this sub-dimension, we see that it is between $\bar{X} = 5.92$ and $\bar{X} = 5.71$. The point in which the teachers gave answers with the highest average, was "*I am comfortable with the use of internet tools (e-mail, forums, skype etc.) to communicate with people more effectively.*" while the one with the lowest average was "*I can ask for help via internet tools (forums, social networks, e-mail etc.), and find answers I need.*" The point averages of the points under this sub-dimension, have been given in Figure 9.

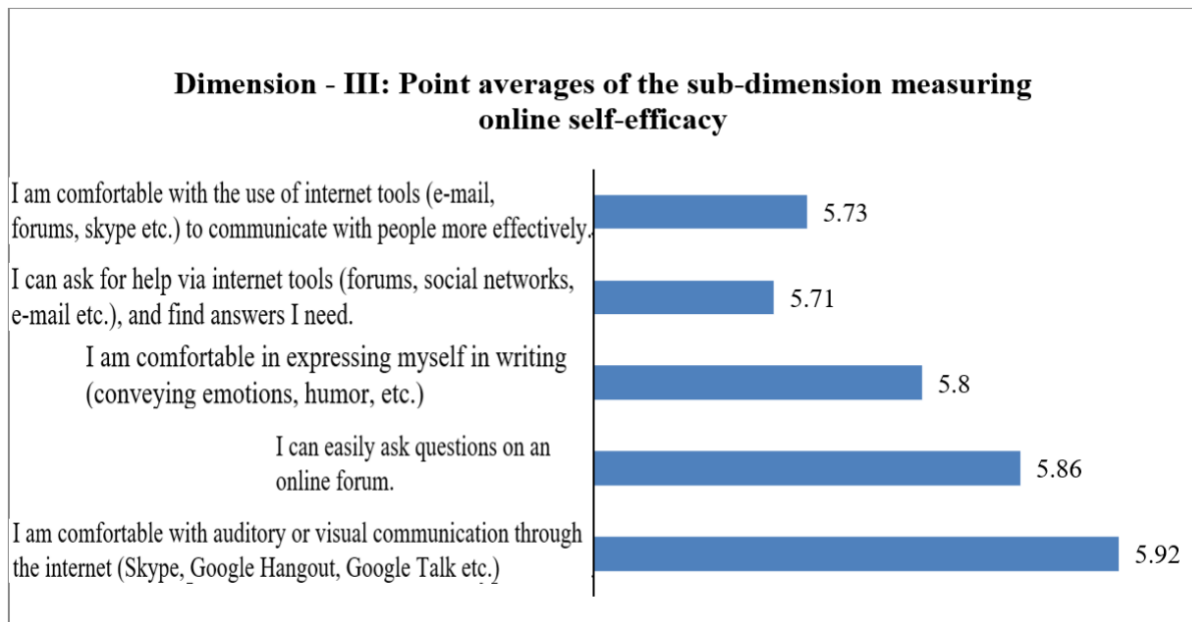


Figure 9. Point averages under the sub-dimension measuring online communication self-efficacy

There is a total of ten points in the fourth sub-dimension measuring readiness for e-learning, which is self-confidence. When we look at the averages of the points falling under this sub-dimension, we see that they are between $\bar{X} = 5.97$ and $\bar{X} = 5.66$. The point in which the teachers gave answers with the highest average, was "*I believe I am responsible for what I learn.*" while the one with the lowest average was "*I stick to my study plan completely when I am learning something.*". The point averages of the points under this sub-dimension, have been given in Figure 10.

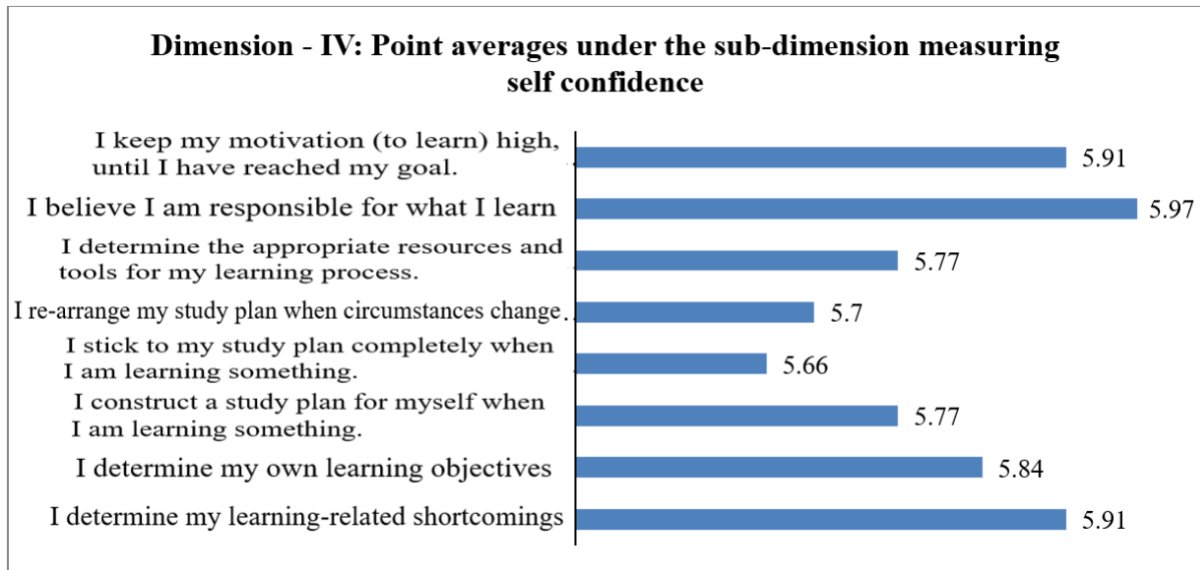


Figure 10. Point averages under the sub-dimension measuring self confidence

There is a total of four points in the fifth sub-dimension measuring readiness for e-learning, which is learner control. When we look at the averages of the points falling under this sub-dimension, we see that they are between $\bar{X} = 5.92$ and $\bar{X} = 5.78$. The point in which the teachers gave answers with the highest average, was "I decide in which order I will study the material on the internet" while the one with the lowest average was "I decide how much I am going to focus on the learning materials on the internet." The point averages of the points under this sub-dimension, have been given in Figure 11.

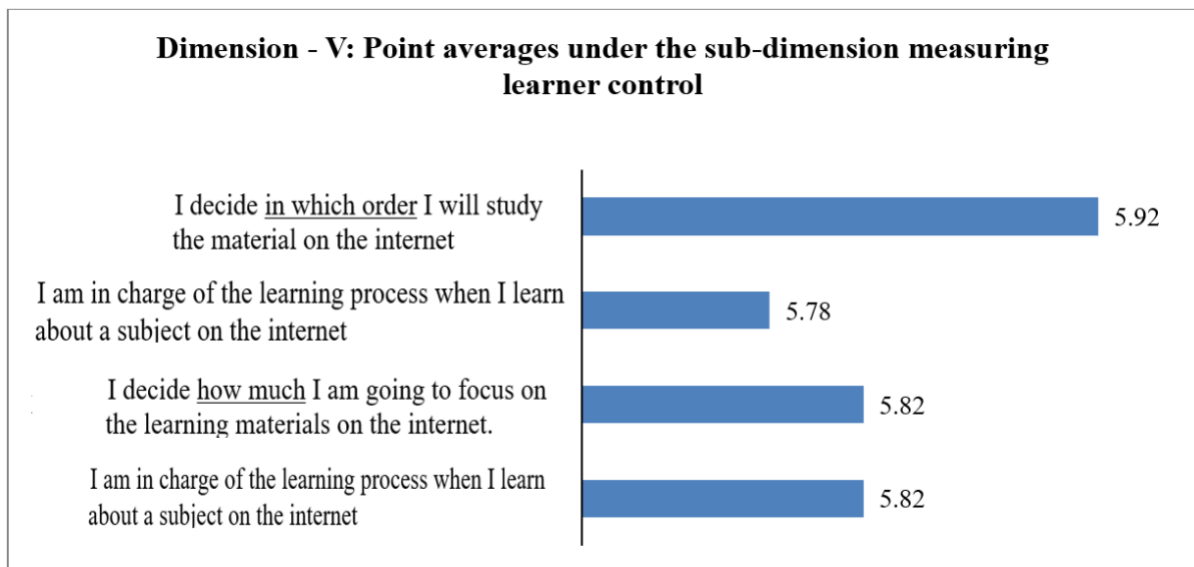


Figure 11. Point averages under the sub-dimension measuring learner control

There is a total of seven points in the sixth sub-dimension measuring readiness for e-learning, which is motivation towards e-learning. When we look at the averages of the points falling under this sub-dimension, we see that they are between $\bar{X} = 5.8$ and $\bar{X} = 5.71$. The point in which the teachers gave answers with the highest average, was "I think it will be fun to take classes on the internet." while the one with the lowest average was "I am highly willing to take

classes on the internet.". The point averages of the points under this sub-dimension, have been given in Figure 12.

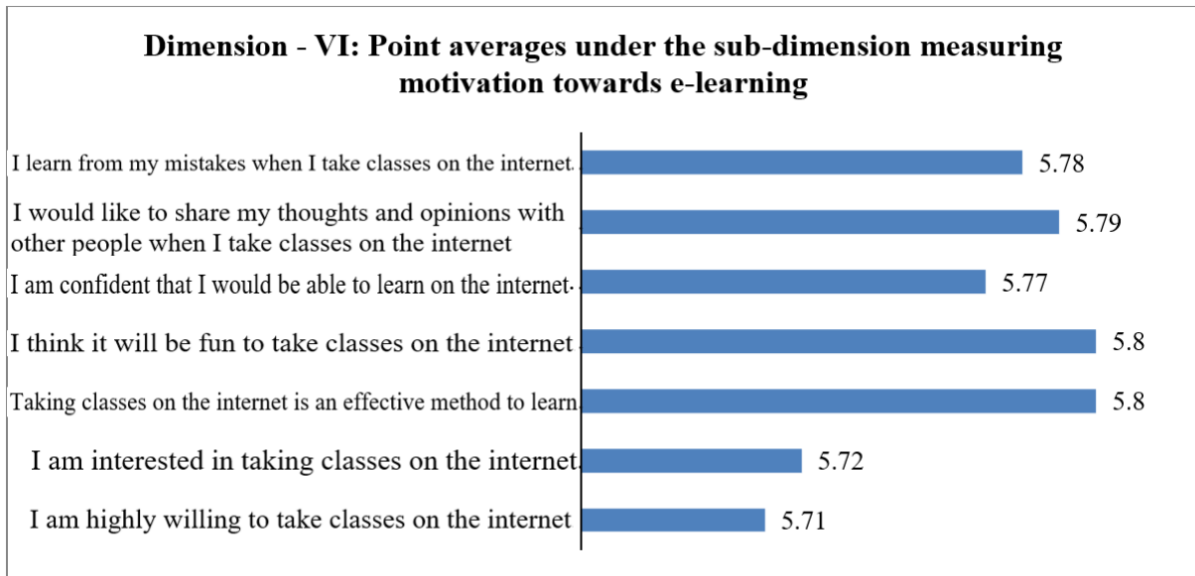


Figure 12. Point averages under the sub-dimension measuring motivation towards e-learning

A t-test analysis was made, to determine if the readiness of maker teachers for e-learning differentiated according to gender. There is a statistical difference between male and female teachers for the sub-dimensions; *self-confidence* [$t(102) = -2.011, p = 0.047$], and *learner control* [$t(102) = -2.044, p = 0.044$], favoring the females. No other gender-related statistical difference was observed [*computer self-efficacy*, $t(102) = 0.786, p = 0.433$; *internet self-efficacy*, $t(102) = -1.650, p = 0.102$; *online communication self-efficacy*, $t(102) = -1.349, p = 0.180$; *motivation towards e-learning*, $t(102) = -0.112, p = 0.911$].

A one-way analysis of variance (ANOVA) was made, to determine if the readiness of maker teachers for e-learning differentiated according to age. It was determined that age has no effect on readiness in any sub-dimensions [*computer self-efficacy*, $F(3, 100) = 1.965, p = 0.124$; *internet self-efficacy*, $F(3, 100) = 0.742, p = 0.529$; *online communication self-efficacy*, $F(3, 100) = 0.293, p = 0.830$; *self-confidence*, $F(3, 100) = 2.081, p = 0.107$; *learner control*, $F(3, 100) = 1.849, p = 0.143$; *motivation towards e-learning*, $F(3, 100) = 1.879, p = 0.138$].

A one-way analysis of variance (ANOVA) was made to determine whether or not the readiness of maker teachers for e-learning differed according to levels of professional seniority (experience). It was determined that professional seniority has no effect on readiness, on any of its sub-dimensions [*computer self-efficacy*, $F(2, 101) = 0.004, p = 0.997$; *internet self-efficacy*, $F(2, 101) = 0.196, p = 0.822$; *online communication self-efficacy*, $F(2, 101) = 0.424, p = 0.655$; *self-confidence*, $F(2, 101) = 1.491, p = 0.230$; *learner control*, $F(2, 101) = 1.914, p = 0.153$; *motivation towards e-learning*, $F(2, 101) = 0.560, p = 0.573$].

4. Conclusion and Discussion

This study aims to exert the attitudes of 104 maker teachers; from all different ages, who work in different regions of Turkey, and who have different levels of professional seniority; towards e-learning, as well as their levels of readiness for it. The study also seeks to point out any effects that gender, age, and professional seniority may have on these attitudes, and levels of readiness. It has been concluded that most of maker teachers spend more than 2 hours-per-day on the computer, that they find e-learning to be useful, and that they are familiar with two or more programming languages. Furthermore, almost half of the maker teachers have expressed that they have only recently joined the maker movement.

It can be said that maker teachers, and teachers in general, have a positive outlook on e-learning. There are two sub-dimensions of the scale which measures teachers' attitudes towards e-learning. The total of points for proneness to e-learning ($\bar{X} = 43.29$), is higher than the total of points for the avoidance of e-learning ($\bar{X} = 37.63$). This is because the points in this scale are reversed, and that teachers' answers to the points in this sub-dimension leaned towards "I do not agree". The total being low in this dimension, indicates that teachers do not have a tendency to avoid e-learning (as the points are reversed). Therefore, it can be said that maker teachers have a positive attitude towards e-learning, that they feel close to it, and that they do not have a tendency to avoid it. When we look through the points in the attitude scale, one by one, we see that the point stating that e-learning makes learning easier has the highest average ($\bar{X} = 4.55$), while the one stating that e-learning is unnecessary has the lowest average ($\bar{X} = 1.64$). Most of the teachers have answered that they "completely disagree" or "disagree", to the statement proclaiming e-learning to be unnecessary. This finding suggests that teachers mostly think that e-learning is necessary.

The literature in the field contains findings that both coincide with the findings of this study, and contradict with it. In the study evaluating the attitudes of branch teachers towards e-learning, Şentürk (2016), states that the points measuring the proneness of the teachers towards e-learning ($\bar{X} = 3.69$) was lower than the points for the teachers' avoidance of e-learning ($\bar{X} = 3.76$); and that most teachers answered close to "indecisive" to points under the sub-dimension measuring proneness, while they answered "I agree" to points under the sub-dimension measuring avoidance. Mohammadi, Hosseini and Fami (2011), have reported that instructors have a positive attitude towards e-learning. Behera (2012) has reported that university professors have a neutral attitude towards e-learning; saying they were indecisive in leaning either way.

When we look at the total points measuring readiness towards e-learning, we see that generally, the points measuring the readiness for e-learning is $\bar{X} = 191.56$. The scale survey measuring readiness for e-learning has sub-dimensions. When we look at the averages of these points under these sub-dimensions, we see that they are between $\bar{X} = 46.53$ ile $\bar{X} = 23.33$, and that the general readiness average is $\bar{X} = 191.56$. Furthermore, when we look at the averages of the points falling under this readiness scale-survey, we see that they are between $\bar{X} = 5.97$ and $\bar{X} = 5.63$. Generally speaking, we can say that teachers have an approximately high level of readiness to e-learning, and therefore that maker teachers are generally ready for e-learning. The main reasons why maker teachers are ready for e-learning could be due to the fact; that they are involved in the maker movement, and therefore use the internet and open access sources more regularly; that they spend time on the internet; and that they have a need to access information for their own designs within the maker movement, not relying on a certain time or place.

In the study, the sub-dimensions with the highest readiness point average is internet self-efficacy ($\bar{X} = 5.87$) while the lowest is the sub-dimension measuring motivation for e-learning. The findings which were established through different kinds of sampling, in the literature in this area, have both similarities and differences with our own study. One of the studies, of which the findings suggest a similarity with this one, was done by Demir (2015). Demir (2015), found that teacher candidates had the highest readiness level in terms of internet self-efficacy ($\bar{X} = 6.31$), whereas they had the lowest readiness level in terms of motivation for e-learning ($\bar{X} = 4.53$); in the study conducted with teacher candidates belonging to different fields. Furthermore, in a study of which the findings were partially similar to our own; Hung and ark.

(2010) reported that the sub-dimension with the highest participant average was internet self-efficacy ($\bar{X} = 4.37$), whereas the one with the lowest participant average was readiness for e-learning ($\bar{X} = 3.60$). In another study, Çiğdem and Yıldırım (2014) have expressed that the sub-dimension with the highest average was motivation for e-learning ($\bar{X} = 4.46$), whereas the one with the lowest was computer self-efficacy ($\bar{X} = 3.56$).

Procedural statistics techniques were used (t-test and ANOVA) in order to determine how the readiness of teachers for e-learning was affected by demographic variables; gender, age, and professional seniority. The t-test analysis results of unrelated groups where male and female teachers were compared, suggest that gender does not have a significant effect on teachers' attitudes towards e-learning. These results indicate that male and female teachers have a similar attitude towards e-learning. Likewise, Behera (2012) has stated that gender does not have an effect on attitudes towards e-learning. In another study conducted with teachers, Şentürk (2016) observed that there is a significant difference between the attitudes of male and female teachers towards e-learning, and that this difference was in favor of male teachers.

On the other hand, gender does cause a significant statistical difference in the sub-dimensions measuring readiness for e-learning, this time in favor of female teachers. That being said, no other difference due to gender is observed in the rest of the sub-dimensions. These findings which show that female teachers have higher points in the sub-dimensions of self-confidence and learner control, suggest that they are more confident about e-learning as opposed to male teachers, and that they feel more ready about controlling learners. The male and female teachers indicate similar levels of readiness in the other sub-dimensions measuring readiness. Sakal (2017), after a study conducted with university students, has stated that gender only had a significant effect in the online communication self-efficacy sub-dimension; and that the male students had much higher points measuring readiness, than female students.

When we look at the effect age has on attitudes towards e-learning, we see that it is significant in the sub-dimension measuring proneness to e-learning. However, we also see that age has no effect in the sub-dimension measuring avoidance of e-learning. There is a significant statistical difference in the attitudes of teachers belonging to the 20 - 21 age group, and the ones belonging to the 31 - 35 age group. These findings suggest that young teachers are more prone to e-learning; but that there is no difference between younger and older teachers in regard to their avoidance of e-learning. Age has no effect on the levels of readiness of teachers towards e-learning, either. The younger and older teachers have close levels of readiness for e-learning, meaning that young-age or old-age does not affect their readiness.

When we look at how professional seniority affects maker teachers' attitudes towards e-learning, we see that it has no significant affect. There is no significant difference between the attitudes towards e-learning, in teachers who have just started their careers, or in teachers who have more experience in the field. Similarly, professional seniority has no significant effect on the readiness of maker teachers, either. There is no significant difference between the readiness for e-learning, in teachers who have just started their careers, or in teachers who have more experience in the field.

5. Suggestions

The suggestions below have been made in light of the findings of this study:

1. This study was conducted with a previously determined number of maker teachers, and it constitutes a basis for future studies. A similar study with a wider sampling should be

conducted, and a general understanding about maker teachers' attitudes towards e-learning, and their readiness for it, should be put forth.

2. This is a quantitative study outlining the general attitudes of teachers. Teachers' understanding, comprehension, application, attitude and practice of the subject should be put forward with qualitative studies which should be conducted with smaller groups; and which involve observations and re-enactments of sample situations with maker teachers who use e-learning platforms.

3. This study has looked into the effects of the variable factors; gender, age, and professional seniority. In later studies, researchers can evaluate the effects of different and more diverse variables (e.g. how much time they have been using e-learning, how much time they have been involved in the maker movement etc.)

4. It has been observed that younger teachers' attitudes towards e-learning is more positive than older teachers. The reasons for this phenomenon should be outlined with future, qualitative studies; and older teachers should be assisted with in-house training about e-learning, if necessary.

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/ _Noviyenty, L., Astuti, M., Fakhruddin, & Morganna, R (2020). Tertiary EFL Students' Morphological Awareness of English. International Online Journal of Education and Teaching (IOJET), X(X). p-p. Annotated link of the article. _ _ TERTIARY EFL STUDENTS' MORPHOLOGICAL AWARENESS OF ENGLISH (Research article, a descriptive quantitative study) Leffi Noviyenty / State Islamic Institute of Curup, Bengkulu, Indonesia leffinoviyenty@gmail.com Mutiara Astuti / State Islamic Institute of Curup, Bengkulu, Indonesia anmutiara4@gmail.com Fakhruddin / State Islamic Institute of Curup, Bengkulu, Indonesia fakhruddinzidan@gmail.com Ruly Morganna / State Islamic Institute of Curup, Bengkulu, Indonesia rulymorganna@gmail.com Correspondence (rulymorganna@gmail.com) Biodata(s): No more than 40 words for each author. Leffi Noviyenty is an assistant Professor of English education.

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lingua franca, intercultural English communication, intercultural language learning, interlanguage analysis, and second language acquisition. Note: For the experimental studies which require ethical board approval, conducted on animals or people in all the disciplines (including social science), the ethical board approval must be obtained and presented in the study with the related information. Copyright by Informascope. Material published and so copyrighted may not be published elsewhere without the written permission of IOJET.

TERTIARY EFL STUDENTS' MORPHOLOGICAL AWARENESS OF ENGLISH Leffi Noviyenty leffinoviyenty@gmail.com Mutiara Astuti anmutiara4@gmail.com Fakhruddin fakhruddin@zidan@gmail.com Ruly Morganna rulymorganna@gmail.com Abstract Morphological awareness is regarded as a significant predictor of vocabulary acquisition, reading comprehension, and the advancement of various literary competences.

Thus, the present study sought to investigate tertiary EFL students' morphological awareness of English in terms of morphological identification and morphological structure awareness. By making use of the total sampling technique, 51 tertiary EFL students from one of the universities in Bengkulu, Indonesia, were involved as the participants. Their English morphological awareness was assessed using a valid and reliable test already developed by a previous researcher. The results indicated that their English morphological awareness was moderate.

Such condition became a positive potential which might contribute to consolidate them in the process of English vocabulary acquisition, in dealing with reading comprehension, and in fulfilling various English literary needs. This study recommends that both deductive and inductive English morphological interventions be given to tertiary EFL students in tandem with adequate practices that can continuously train their English morphological awareness. Keywords: EFL morphological awareness, morphological identification, morphological structure 1. Introduction Morphological awareness is a visual processing ability to analyze morphemic features in order to be able to construct meaning (Ke & Xiao, 2015).

The ability as such refers to a metalinguistic ability to understand, reflect on, and manipulate morphemic properties wherein this ability allows one to develop words into more complex and detailed forms (Hamavandi, Rezai, & Mazdayasna, 2017; Kuo, Ramirez, de Marin, Kim, & Unal-Gezer, 2017; Wolter & Gibson, 2015). The properties of morphology in common extend to roots, affixes, inflection, derivation, compound words, blends, and phrasal words (Carstairs-Mccarthy, 2002; Harley, 2006). The metalinguistic ability in terms of morphological awareness also aligns with deliberate awareness of

morphemic constituents (Vaknin-Nusbaum & Raveh, 2019).

For learners who learn English as the other language, the case of morphological awareness development to some extent is determined by the degree of L1 and L2 similarity. A study conducted by Xue and Jiang (2017) revealed that in the context of EFL learners, if the morphological features of L1 and L2 and the bilingual speakers' proficiency between their L1 and L2 have adequate similarities, their morphological awareness can be a unique predictor of their reading skill for both languages. The aforesaid study implies that sufficient similarities in the aspects of proficiency and linguistic forms between L1 and L2 become the bridge of morphological awareness improvement.

Morphological awareness is correlated with reading comprehension ability (Ke & Xiao, 2015). It becomes **an important predictor of reading comprehension** (Tighe & Binder, 2015) so that students with good morphological awareness can improve their reading comprehension in an effective way (Vaknin-Nusbaum, Sarid, Raveh, & Nevo, 2016). Otherwise, the lack of morphological awareness is related to the lack of comprehension in reading (MacKay, Levesque, & Deacon, 2017).

A study conducted by Deacon, Holliman, Dobson, and Harrison (2018) indicated that morphological awareness independently contributes to students' literary ability in terms of word reading, the accuracy of reading, and reading comprehension. With adequate morphological awareness, learners will be assisted in dealing with extensive reading activities (Y. Zhang & Li, 2016). In addition, morphological awareness is also associated with writing skill. A study conducted by McCutchen and Stull, (2015) informed that morphological awareness affects students' writing skill in the aspects of both spelling accuracy and word production.

Besides being associated with reading comprehension, morphological awareness also influences vocabulary acquisition (Bae & Joshi, 2017; Sparks & Deacon, 2015). The study undertaken by Gottardo, Mirza, Koh, Ferreira, and Javier (2018) showed that morphological awareness alongside the knowledge of syntax positively contribute to the acquisition of vocabularies in depth. The improvement of morphological awareness positively aids the extent and depth of ESL vocabularies, and it can also equip learners with detailed understanding of word features alongside the related words and phrases (Haomin & Bilü, 2017), lexical inference (Zhang, Koda, & Leong, 2016), and word spelling (Wilson-Fowler & Apel, 2015; Zhao, Joshi, Dixon, & Chen, 2017).

In the context of teaching and learning, drawing upon prior studies, the efforts made to improve students' morphological awareness have been carried out in both deductive

and inductive ways. In a deductive way, in the context of foreign language learning, the study conducted by Leonet, Cenoz, and Gorter (2020) revealed that translanguaging pedagogy, teaching morphology across languages, has a significantly positive effect on students' foreign language morphological awareness. The foregoing study indicates that students' first language knowledge and competence can be good modes that help students understand foreign language morphological rules better.

In line with the foregoing, learning from the study conducted by Kim et al. (2015), morphological awareness is influenced by both instruction and cross-language transfer. In this sense, bilingual education has a positive impact on the improvement of learners' morphological awareness by means of a cross-language transfer. Bilingual education also enhances students' sensitivity to the structure of language features (Kuo et al., 2017).

Morphological instructions potentially develop students' morphological awareness so that students are able to effectively extract meanings from texts (Vaknin-Nusbaum & Raveh, 2019). The study undertaken by Amirjalili and Jabbari (2018) revealed that morphological instructions can effectively improve EFL students' morphological awareness and reading comprehension. This study recommended that morphological instructions be applied in EFL classrooms **for the sake of** improving students' English literacy.

Good, Lance, and Rainey (2015; and Wolter and Gibson (2015) also revealed that direct morphological instructions designed to enhance morphological awareness have a significantly positive impact on the improvement of literary skills. Zhang (2016) recommended that morphological instructions be applied in order to develop bilingual students' reading skill. According to the study conducted by Kraut (2015), drawing upon the data solicited from ESL learners, it is found out that L2 learners' morphological awareness does not necessarily affect their automatic morphological decomposition.

The aforesaid study recommended that non-native English learners need to be deliberately provided with morphological exposures and also to be trained to compose as well as decompose English morphological families in practices in order that they can improve their automatic morphological decomposition that can assist them in dealing with efficient and speed reading. In addition, teaching students sufficient knowledge vis-a-vis morphology and inductive reasoning can improve students' morphological awareness (Yeh, Joshi, & Ji, 2015).

A study conducted by Lin, Cheng, and Wang (2018) with respect to morphological awareness interventions amid Chinese bilingual speakers who **use English as the** other

language, in teaching compound structures to bilingual learners, the teacher is expected to teach students to identify the compound head and to understand how it works in meaning making towards the entire words. In addition, the teacher is also suggested to teach students the compound structure similarities between the two languages. The aforementioned studies highlight the importance of implicit or deductive teaching of morphological awareness to help develop students' vocabulary acquisition, reading comprehension, and literary developments.

In an inductive way of teaching and learning, the study conducted by Reynolds (2019) suggested that a variety of word formations can be acquired through extensive reading. In this sense, morphological awareness can be enhanced by means of incidental learning. However, this study also suggests that if more complex varieties of word formations are expected to be acquired, direct morphological instructions that deliberately expose learners with the explanations of morphemic parts are needed. In addition, learning vocabularies in context will improve students' morphological awareness.

As the foregoing, students will acquire morphological knowledge, word definitions, the usages of words, and other necessary knowledge such as synonyms and antonyms of words (Spencer et al., 2015). In this regard, learning vocabularies in context refers to part of incidental learning or the so-called inductive learning. Anchored in a range of studies above that prove the paramount importance and the pivotal roles of morphological awareness in vocabulary acquisition, reading comprehension, writing skill, and other literary needs, the present study is proposed to assess EFL tertiary students' morphological awareness in terms of morphemic identification and morphemic structure. Two research questions are formulated as follows: 1.

How is tertiary EFL students' morphological awareness of English in terms of morphemic identification? 2. How is tertiary EFL students' morphological awareness of English in terms of morphemic structure? 2. Method This study applied a descriptive quantitative method to measure tertiary EFL students' morphological awareness of English. The morphological awareness examined in the present study was comprised of analytical and structural aspects of morphology. The rationale beyond the application of this study method was because this study sought to solicit rigorous data that could be generalized, and the data could also be the source of developing English morphology teaching materials in order to meet EFL students' needs. This study was conducted in one of the universities in Bengkulu, Indonesia. 2.1.

Participants The participants of this study were the first-year tertiary EFL students who were going to take an English morphology subject in the following year. 51 tertiary

students were engaged, and they were collected using a total sampling technique. They aged between 18-20 years old. Resting upon the proficiency test of college students' enrolment, the participants of this study were categorized as pre-intermediate to intermediate English students. 2.2. Technique of collecting data The data were collected using an English morphology test adopted from an instrument constructed by Farsi (2008).

A part of his study measured tertiary students' English morphological awareness in the analytical and structural components. The two components aligned with the aspects measured by the present study. In addition, the participants' conditions in his study also had a range of similarities compared to those of the present study, wherein they were the first-year college students and non-native English users. They used English as a foreign language. The range of participants' ages was also adequately similar. Hence, adopting a test already constructed and used by Farsi (2008) was ideal. This test was assigned to measure tertiary students in reflecting on and manipulating English morphemic constituents.

The framework of this test was comprised of the analyses and structures of word formations which were further called the morphological identification and morphological structure tests. 2.2.1. English morphological identification test This test was deployed to measure tertiary EFL students' English morphological awareness in terms of analyzing and breaking down English words into smaller meanings. The test consisted of 15 items. In this test, tertiary EFL students were provided with a variety of complex English words which were free from contexts, and they were demanded to segment the morphemic constituents of those words into the morphemes that represented the smallest meaning each. Both validity and reliability of this test had already been verified by Farsi (2008) so that this test was ready to be used by other researchers who studied similar cases. 2.2.2.

English morphological structure test The function of this test was to measure tertiary EFL students' English morphological awareness in terms of synthesizing morphemes to form new meanings. This test subsumed 15 items. All items were displayed in the form of incomplete sentences. The students were further asked to modify words needed to complete the English sentences in an accurate way. Each item was preceded by a sentence example having the same concept but modifying a different word. In detail, this test examined students' knowledge with regard to word structures, the connections between words and within words, and word parts.

Both validity and reliability of this test had already been verified by Farsi (2008) so that this test was ready to be used by other researchers who studied similar cases. 2.3.

Technique of data analysis The data were analyzed using descriptive statistic calculations to obtain the percentages of tertiary students' English morphological awareness. The following formula was deployed to analyze the data: $X = R / (T \times n) \times 100 \%$ Note: x = The percentage of each kind of the tests R = Total number of correct answers T = Number of samples n = Number of items The mean score was further calculated resting upon the total score of the two kinds of test. $M = (?%) / N$ Note: M : Mean ?% : Total percentage of overall scores N : Number of samples The next step was to determine the levels of students' morphological awareness.

The following tabulated scales are the five point scales adopted from Nurgiyantoro's (2010) classification. Table 1. Nurgiyantoro's (2010) score classification

No	Score Percentages	Interpretation
_1	_90 %-100%	_Very good
_2	_75%-89%	_Good
_3	_60%-74%	_enough
_4	_40%-59%	_Less/low
_5	_0%-40%	_Poor / very low

Results and Discussion The following presentation provides a quantitative description of tertiary EFL students' morphological awareness of English in terms of morphological identification and morphological structure awareness. 3.1.

Tertiary EFL students' morphological identification awareness of English Resting upon the data gained from the morphological identification test containing 15 items that measure students' ability to analyze and break down English words into smaller meanings, the results are obtained as presented in the following diagram. / Diagram 1. The results of tertiary EFL students' morphological identification awareness test Diagram 1 displays the condition of the overall data. Subsequently, from the statistical calculations, the total of correct answers gained was 542, and that of incorrect answers was 223. The percentage of the correct answers gained was 70.84%. 3.2.

Tertiary EFL students' morphological awareness of English Anchored in the data garnered from the morphological structure test comprising 15 items that measure students' ability to synthesize English morphemes to form new meanings, the results are obtained as presented in the following diagram. / Diagram 2. The results of tertiary EFL students' morphological structure awareness test Diagram 2 displays the condition of the overall data. Subsequently, from the statistical calculations, the total of correct answers gained was 515, and that of incorrect answers was 250. The percentage of the correct answers gained was 67.32%.

The next stage undertaken was to classify the level of tertiary EFL students' morphological awareness of English based upon Nurgiyantoro's (2010) classification. The following diagram highlights the distribution of data based on the related percentages. / Diagram 3. The level of students' morphological awareness of English Diagram 3 indicates that the classification of tertiary EFL students' morphological

identification and morphological structure awareness was in enough category because Nurgiyantoro (2010) elucidated that if the scores emerge in the percentage from 64% to 74%, the scores represent an "enough" category. The result of students' morphological identification awareness was 70.84%, and that of students' morphological structure awareness was 67.32%.

It means that students' morphological awareness level was enough in terms of both morphological identification and morphological structure awareness. The results of the present study indicate that tertiary EFL students have sufficiently been capable of analyzing as well as breaking down English words into smaller meanings and synthesizing English morphemes to form new meanings (Carlisle, 2000; Farsi, 2008). This efficacy will moderately consolidate tertiary EFL students in the process of vocabulary acquisition (Bae & Joshi, 2017; Gottardo et al., 2018; Haomin & Bilü, 2017; Sparks & Deacon, 2015; Wilson-Fowler & Apel, 2015; Zhang et al.,

2016), in coping with reading comprehension, and various literary needs (Ke & Xiao, 2015; Tighe & Binder, 2015; Vaknin-Nusbaum et al., 2016). However, the moderate level of English morphological awareness owned by tertiary EFL students in this study merely lies as the temporary English morphological potential which can increase or perhaps decrease dependent upon the further English morphological interventions that will be given to students.

The researchers recommend that their English morphological potential be improved by provisioning both deductive and inductive interventions alongside adequate practices that continuously train their English morphological awareness. As an implication for the context of English education in Indonesia, considering the scientific consensus which internationally positions English as the world lingua franca whose users are multicultural people in the world (Baker, 2016; Deniz, Özkan, & Bayyurt, 2016; Fang, 2017; Ishikawa, 2016; Kirkpatrick, 2018; Kusumaningputri & Widodo, 2018; J. Liu & Fang, 2017; K. L.

Liu, 2019; Matsuura, Rilling, Chiba, Kim, & Rini, 2016; Mauranen, 2018; Rahatlou, Fazilatfar, & Allami, 2018; Sherman, 2018; Si, 2018; Sung, 2017) and the nature of Indonesian people, including students, that is multicultural in situ (Hamied, 2012; Morganna, Sumardi, & Tarjana, 2018a, 2018b, 2020; Sukyadi, 2015), the natural English interactions that Indonesian English students take part in will always be across cultures, and such interactions willy-nilly call for their English linguistic competences which meet the adequate extent of English fluency and accuracy. English morphological awareness is a part of the aforesaid linguistic competences. Thus, the English morphological awareness of Indonesian students has to meet both fluent and accurate degrees.

In this regard, English **teaching and learning processes** undertaken in the classrooms have to assist students in learning English morphology in both deductive and inductive ways. Deductive English morphological interventions can improve students' English morphological awareness in terms of accuracy (Amirjalili & Jabbari, 2018; Good et al., 2015; Kim et al., 2015; Kraut, 2015; Kuo et al., 2017; Leonet et al., 2020; Lin et al., 2018; Vaknin-Nusbaum & Raveh, 2019; Wolter & Gibson, 2015; Yeh et al., 2015; D. Zhang, 2016).

Subsequently, inductive English morphological interventions can improve their English morphological awareness in terms of fluency (Reynolds, 2019; Spencer et al., 2015). The present study really supports English teachers to teach students English morphology deductively and inductively. 4. Conclusion The present study reveals that tertiary EFL students' morphological awareness of English is moderate. This condition becomes a positive potential which may contribute to consolidate them in the process of English vocabulary acquisition, in dealing with reading comprehension, and in fulfilling various English literary needs.

Nonetheless, such morphological potential can **either increase or decrease** dependent upon the English morphological interventions that will further be given to them. This study recommends that both deductive and inductive English morphological interventions be given to them in tandem with adequate practices that can continuously train their English morphological awareness. Further studies are expected to address the practices of English morphological interventions in the contexts of Indonesian EFL students.

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TERTIARY EFL STUDENTS' MORPHOLOGICAL AWARENESS OF ENGLISH

Research Article

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TERTIARY EFL STUDENTS' MORPHOLOGICAL AWARENESS OF ENGLISH

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Abstract

Morphological awareness is regarded as a significant predictor of vocabulary acquisition, reading comprehension, and the advancement of various literary competences. Thus, the present study sought to investigate tertiary EFL students' morphological awareness of English in terms of morphological identification and morphological structure awareness. By making use of the total sampling technique, 51 tertiary EFL students from one of the universities in Bengkulu, Indonesia, were involved as the participants. Their English morphological awareness was assessed using a valid and reliable test already developed by a previous researcher. The results indicated that their English morphological awareness was moderate. Such condition became a positive potential which might contribute to consolidate them in the process of English vocabulary acquisition, in dealing with reading comprehension, and in fulfilling various English literary needs. This study recommends that both deductive and inductive English morphological interventions be given to tertiary EFL students in tandem with adequate practices that can continuously train their English morphological awareness.

Keywords: EFL morphological awareness, morphological identification, morphological structure

1. Introduction

Morphological awareness is a visual processing ability to analyze morphemic features in order to be able to construct meaning (Ke & Xiao, 2015). The ability as such refers to a metalinguistic ability to understand, reflect on, and manipulate morphemic properties wherein this ability allows one to develop words into more complex and detailed forms (Hamavandi, Rezai, & Mazdayasna, 2017; Kuo, Ramirez, de Marin, Kim, & Unal-Gezer, 2017; Wolter & Gibson, 2015). The properties of morphology in common extend to roots, affixes, inflection, derivation, compound words, blends, and phrasal words (Carstairs-Mccarthy, 2002; Harley, 2006). The metalinguistic ability in terms of morphological awareness also aligns with deliberate awareness of morphemic constituents (Vaknin-Nusbaum & Raveh, 2019).

For learners who learn English as the other language, the case of morphological awareness development to some extent is determined by the degree of L1 and L2 similarity. A study conducted by Xue and Jiang (2017) revealed that in the context of EFL learners, if the morphological features of L1 and L2 and the bilingual speakers' proficiency between their L1 and L2 have adequate similarities, their morphological awareness can be a unique predictor of their reading skill for both languages. The aforesaid study implies that sufficient similarities in the aspects of proficiency and linguistic forms between L1 and L2 become the bridge of morphological awareness improvement.

Morphological awareness is correlated with reading comprehension ability (Ke & Xiao, 2015). It becomes an important predictor of reading comprehension (Tighe & Binder, 2015) so that students with good morphological awareness can improve their reading comprehension in an effective way (Vaknin-Nusbaum, Sarid, Raveh, & Nevo, 2016). Otherwise, the lack of morphological awareness is related to the lack of comprehension in reading (MacKay, Levesque, & Deacon, 2017). A study conducted by Deacon, Holliman, Dobson, and Harrison (2018) indicated that morphological awareness independently contributes to students' literary ability in terms of word reading, the accuracy of reading, and reading comprehension. With adequate morphological awareness, learners will be assisted in dealing with extensive reading activities (Y. Zhang & Li, 2016). In addition, morphological awareness is also associated with writing skill. A study conducted by McCutchen and Stull, (2015) informed that morphological awareness affects students' writing skill in the aspects of both spelling accuracy and word production.

Besides being associated with reading comprehension, morphological awareness also influences vocabulary acquisition (Bae & Joshi, 2017; Sparks & Deacon, 2015). The study undertaken by Gottardo, Mirza, Koh, Ferreira, and Javier (2018) showed that morphological awareness alongside the knowledge of syntax positively contribute to the acquisition of vocabularies in depth. The improvement of morphological awareness positively aids the extent and depth of ESL vocabularies, and it can also equip learners with detailed understanding of word features alongside the related words and phrases (Haomin & Bilü, 2017), lexical inference (Zhang, Koda, & Leong, 2016), and word spelling (Wilson-Fowler & Apel, 2015; Zhao, Joshi, Dixon, & Chen, 2017).

In the context of teaching and learning, drawing upon prior studies, the efforts made to improve students' morphological awareness have been carried out in both deductive and inductive ways. In a deductive way, in the context of foreign language learning, the study conducted by Leonet, Cenoz, and Gorter (2020) revealed that translanguaging pedagogy, teaching morphology across languages, has a significantly positive effect on students' foreign language morphological awareness. The foregoing study indicates that students' first language knowledge and competence can be good modes that help students understand foreign language morphological rules better. In line with the foregoing, learning from the study conducted by Kim et al. (2015), morphological awareness is influenced by both instruction and cross-language transfer. In this sense, bilingual education has a positive impact on the improvement of learners' morphological awareness by means of a cross-language transfer. Bilingual education also enhances students' sensitivity to the structure of language features (Kuo et al., 2017).

Morphological instructions potentially develop students' morphological awareness so that students are able to effectively extract meanings from texts (Vaknin-Nusbaum & Raveh, 2019). The study undertaken by Amirjalili and Jabbari (2018) revealed that morphological instructions can effectively improve EFL students' morphological awareness and reading comprehension. This study recommended that morphological instructions be applied in EFL

classrooms for the sake of improving students' English literacy. Good, Lance, and Rainey (2015; and Wolter and Gibson (2015) also revealed that direct morphological instructions designed to enhance morphological awareness have a significantly positive impact on the improvement of literary skills. Zhang (2016) recommended that morphological instructions be applied in order to develop bilingual students' reading skill.

According to the study conducted by Kraut (2015), drawing upon the data solicited from ESL learners, it is found out that L2 learners' morphological awareness does not necessarily affect their automatic morphological decomposition. The aforesaid study recommended that non-native English learners need to be deliberately provided with morphological exposures and also to be trained to compose as well as decompose English morphological families in practices in order that they can improve their automatic morphological decomposition that can assist them in dealing with efficient and speed reading. In addition, teaching students sufficient knowledge *vis-a-vis* morphology and inductive reasoning can improve students' morphological awareness (Yeh, Joshi, & Ji, 2015).

A study conducted by Lin, Cheng, and Wang (2018) with respect to morphological awareness interventions amid Chinese bilingual speakers who use English as the other language, in teaching compound structures to bilingual learners, the teacher is expected to teach students to identify the compound head and to understand how it works in meaning making towards the entire words. In addition, the teacher is also suggested to teach students the compound structure similarities between the two languages. The aforementioned studies highlight the importance of implicit or deductive teaching of morphological awareness to help develop students' vocabulary acquisition, reading comprehension, and literary developments.

In an inductive way of teaching and learning, the study conducted by Reynolds (2019) suggested that a variety of word formations can be acquired through extensive reading. In this sense, morphological awareness can be enhanced by means of incidental learning. However, this study also suggests that if more complex varieties of word formations are expected to be acquired, direct morphological instructions that deliberately expose learners with the explanations of morphemic parts are needed. In addition, learning vocabularies in context will improve students' morphological awareness. As the foregoing, students will acquire morphological knowledge, word definitions, the usages of words, and other necessary knowledge such as synonyms and antonyms of words (Spencer et al., 2015). In this regard, learning vocabularies in context refers to part of incidental learning or the so-called inductive learning.

Anchored in a range of studies above that prove the paramount importance and the pivotal roles of morphological awareness in vocabulary acquisition, reading comprehension, writing skill, and other literary needs, the present study is proposed to assess EFL tertiary students' morphological awareness in terms of morphemic identification and morphemic structure. Two research questions are formulated as follows:

1. How is tertiary EFL students' morphological awareness of English in terms of morphemic identification?
2. How is tertiary EFL students' morphological awareness of English in terms of morphemic structure?

2. Method

This study applied a descriptive quantitative method to measure tertiary EFL students' morphological awareness of English. The morphological awareness examined in the present study was comprised of analytical and structural aspects of morphology. The rationale

beyond the application of this study method was because this study sought to solicit rigorous data that could be generalized, and the data could also be the source of developing English morphology teaching materials in order to meet EFL students' needs. This study was conducted in one of the universities in Bengkulu, Indonesia.

2.1. Participants

The participants of this study were the first-year tertiary EFL students who were going to take an English morphology subject in the following year. 51 tertiary students were engaged, and they were collected using a total sampling technique. They aged between 18-20 years old. Resting upon the proficiency test of college students' enrolment, the participants of this study were categorized as pre-intermediate to intermediate English students.

2.2. Technique of Collecting Data

The data were collected using an English morphology test adopted from an instrument constructed by Farsi (2008). A part of his study measured tertiary students' English morphological awareness in the analytical and structural components. The two components aligned with the aspects measured by the present study. In addition, the participants' conditions in his study also had a range of similarities compared to those of the present study, wherein they were the first-year college students and non-native English users. They used English as a foreign language. The range of participants' ages was also adequately similar. Hence, adopting a test already constructed and used by Farsi (2008) was ideal. This test was assigned to measure tertiary students in reflecting on and manipulating English morphemic constituents. The framework of this test was comprised of the analyses and structures of word formations which were further called the morphological identification and morphological structure tests.

2.2.1. English morphological identification test

This test was deployed to measure tertiary EFL students' English morphological awareness in terms of analyzing and breaking down English words into smaller meanings. The test consisted of 15 items. In this test, tertiary EFL students were provided with a variety of complex English words which were free from contexts, and they were demanded to segment the morphemic constituents of those words into the morphemes that represented the smallest meaning each. Both validity and reliability of this test had already been verified by Farsi (2008) so that this test was ready to be used by other researchers who studied similar cases.

2.2.2. English morphological structure test

The function of this test was to measure tertiary EFL students' English morphological awareness in terms of synthesizing morphemes to form new meanings. This test subsumed 15 items. All items were displayed in the form of incomplete sentences. The students were further asked to modify words needed to complete the English sentences in an accurate way. Each item was preceded by a sentence example having the same concept but modifying a different word. In detail, this test examined students' knowledge with regard to word structures, the connections between words and within words, and word parts. Both validity and reliability of this test had already been verified by Farsi (2008) so that this test was ready to be used by other researchers who studied similar cases.

2.3. Technique of Data Analysis

The data were analyzed using descriptive statistic calculations to obtain the percentages of tertiary students' English morphological awareness. The following formula was deployed to analyze the data:

$$X = R / (T \times n) \times 100 \%$$

Note:

x = The percentage of each kind of the tests

R = Total number of correct answers

T = Number of samples

n = Number of items

The mean score was further calculated resting upon the total score of the two kinds of test.

$$M = (\sum\%) / N$$

Note:

M : Mean

$\sum\%$: Total percentage of overall scores

N : Number of samples

The next step was to determine the levels of students' morphological awareness. The following tabulated scales are the five point scales adopted from Nurgiyantoro's (2010) classification.

Table 1. *Nurgiyantoro's (2010) score classification*

No	Score Percentages	Interpretation
1	90 %-100%	Very good
2	75%-89%	Good
3	60%-74%	enough
4	40%-59%	Less/low
5	0%-40%	Poor / very low

3. Results and Discussion

The following presentation provides a quantitative description of tertiary EFL students' morphological awareness of English in terms of morphological identification and morphological structure awareness.

3.1. Tertiary EFL Students' Morphological Identification Awareness of English

Resting upon the data gained from the morphological identification test containing 15 items that measure students' ability to analyze and break down English words into smaller meanings, the results are obtained as presented in the following diagram.

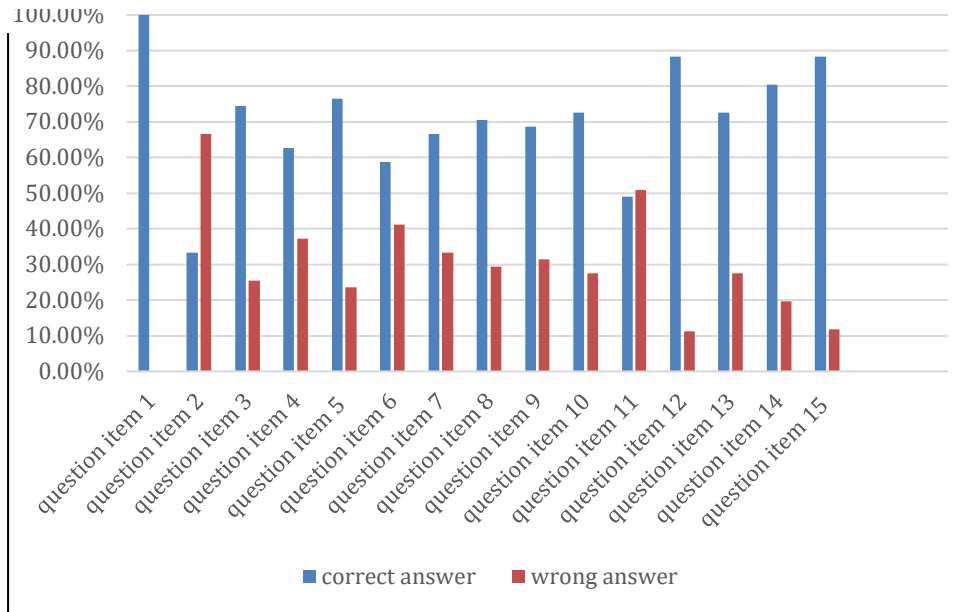


Diagram 1. The results of tertiary EFL students' morphological identification awareness test

Diagram 1 displays the condition of the overall data. Subsequently, from the statistical calculations, the total of correct answers gained was 542, and that of incorrect answers was 223. The percentage of the correct answers gained was 70.84%.

3.2. Tertiary EFL students' morphological awareness of English

Anchored in the data garnered from the morphological structure test comprising 15 items that measure students' ability to synthesize English morphemes to form new meanings, the results are obtained as presented in the following diagram.

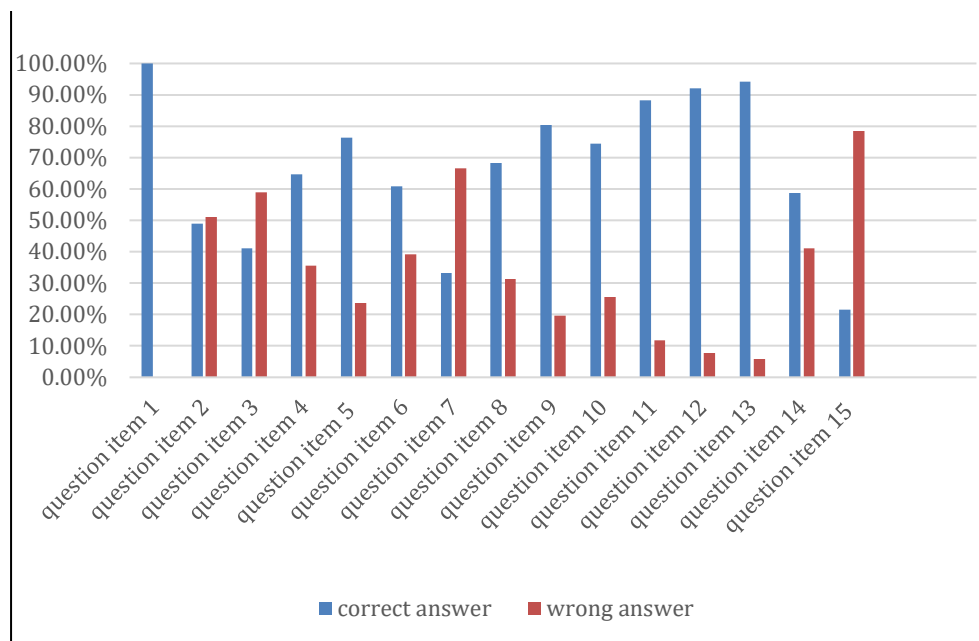


Diagram 2. The results of tertiary EFL students' morphological structure awareness test

Diagram 2 displays the condition of the overall data. Subsequently, from the statistical calculations, the total of correct answers gained was 515, and that of incorrect answers was 250. The percentage of the correct answers gained was 67.32%.

The next stage undertaken was to classify the level of tertiary EFL students' morphological awareness of English based upon Nurgiyantoro's (2010) classification. The following diagram highlights the distribution of data based on the related percentages.

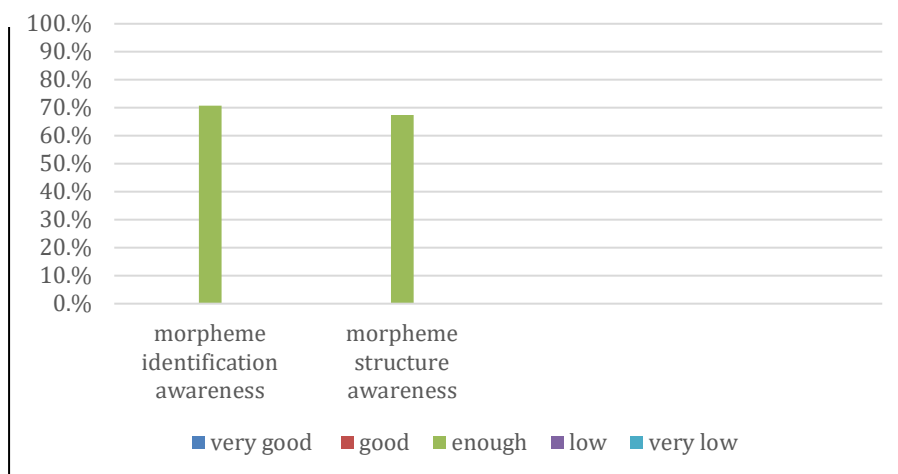


Diagram 3. The level of students' morphological awareness of English

Diagram 3 indicates that the classification of tertiary EFL students' morphological identification and morphological structure awareness was in enough category because Nurgiyantoro (2010) elucidated that if the scores emerge in the percentage from 64% to 74%, the scores represent an "enough" category. The result of students' morphological identification awareness was 70.84%, and that of students' morphological structure awareness was 67.32%. It means that students' morphological awareness level was enough in terms of both morphological identification and morphological structure awareness.

The results of the present study indicate that tertiary EFL students have sufficiently been capable of analyzing as well as breaking down English words into smaller meanings and synthesizing English morphemes to form new meanings (Carlisle, 2000; Farsi, 2008). This efficacy will moderately consolidate tertiary EFL students in the process of vocabulary acquisition (Bae & Joshi, 2017; Gottardo et al., 2018; Haomin & Bilü, 2017; Sparks & Deacon, 2015; Wilson-Fowler & Apel, 2015; Zhang et al., 2016), in coping with reading comprehension, and various literary needs (Ke & Xiao, 2015; Tighe & Binder, 2015; Vaknin-Nusbaum et al., 2016). However, the moderate level of English morphological awareness owned by tertiary EFL students in this study merely lies as the temporary English morphological potential which can increase or perhaps decrease dependent upon the further English morphological interventions that will be given to students. The researchers recommend that their English morphological potential be improved by provisioning both deductive and inductive interventions alongside adequate practices that continuously train their English morphological awareness.

As an implication for the context of English education in Indonesia, considering the scientific consensus which internationally positions English as the world lingua franca whose users are multicultural people in the world (Baker, 2016; Deniz, Özkan, & Bayyurt, 2016; Fang, 2017; Ishikawa, 2016; Kirkpatrick, 2018; Kusumaningputri & Widodo, 2018; J. Liu & Fang, 2017; K. L. Liu, 2019; Matsuura, Rilling, Chiba, Kim, & Rini, 2016; Mauranen, 2018; Rahatlou, Fazilatfar, & Allami, 2018; Sherman, 2018; Si, 2018; Sung, 2017) and the nature

of Indonesian people, including students, that is multicultural *in situ* (Hamied, 2012; Morganna, Sumardi, & Tarjana, 2018a, 2018b, 2020; Sukyadi, 2015), the natural English interactions that Indonesian English students take part in will always be across cultures, and such interactions willy-nilly call for their English linguistic competences which meet the adequate extent of English fluency and accuracy. English morphological awareness is a part of the aforesaid linguistic competences. Thus, the English morphological awareness of Indonesian students has to meet both fluent and accurate degrees. In this regard, English teaching and learning processes undertaken in the classrooms have to assist students in learning English morphology in both deductive and inductive ways. Deductive English morphological interventions can improve students' English morphological awareness in terms of accuracy (Amirjalili & Jabbari, 2018; Good et al., 2015; Kim et al., 2015; Kraut, 2015; Kuo et al., 2017; Leonet et al., 2020; Lin et al., 2018; Vaknin-Nusbaum & Raveh, 2019; Wolter & Gibson, 2015; Yeh et al., 2015; D. Zhang, 2016). Subsequently, inductive English morphological interventions can improve their English morphological awareness in terms of fluency (Reynolds, 2019; Spencer et al., 2015). The present study really supports English teachers to teach students English morphology deductively and inductively.

4. Conclusion

The present study reveals that tertiary EFL students' morphological awareness of English is moderate. This condition becomes a positive potential which may contribute to consolidate them in the process of English vocabulary acquisition, in dealing with reading comprehension, and in fulfilling various English literary needs. Nonetheless, such morphological potential can either increase or decrease dependent upon the English morphological interventions that will further be given to them. This study recommends that both deductive and inductive English morphological interventions be given to them in tandem with adequate practices that can continuously train their English morphological awareness.

Further studies are expected to address the practices of English morphological interventions in the contexts of Indonesian EFL students.

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