Analysis of Digital Learning Models-based MOOCs in Practical Courses to Motivate Students to Learn in Higher Education

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ARTICLE INFO	ABSTRACT
	This study aims to analyze the need for developing digital knowledge models using MOOCs in practical courses to increase a literacy provocation in advanced education. This disquisition is a type of quantitative descriptive. The population taken in this study were all undergraduate and postgraduate scholars at a state Islamic university in Curup. The slice fashion used is a probability slice with a total sample of 502 scholars from 18 study programs. The system used for data collection is a questionnaire. The instrument used in this study is a questionnaire on the need for developing a digital knowledge model using MOOCs in practical courses to increase a provocation to learn in advanced education. The results of this study indicate that the instrument used is valid and reliable. The study results also stated that the scholars in this university agreed to develop a digital knowledge model using MOOCs in practical courses with a chance of 75,35%.

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1. INTRODUCTION

The role of technology is much greater in the digital era than the previous generation, resulting in the current generation having a high level of technology (Hashim, 2018). To engage students in learning in the digital age, teachers must find new ways to incorporate information and knowledge acquired outside the classroom in their digital lives into classroom lessons and discussions (Pagliaro, 2019). Digital-based education in Indonesia is starting to develop in the form of startups or applications that contain similar content that students need at school. Various startups such as Quipper Video, Zenius and Ruang Guru have emerged as digital education developers in Indonesia (Efendi, 2019). Various digital media-based learning innovations encourage more effective and efficient learning. The use of digital technology in learning allows students to have real-life learning experiences and interact with others without meeting face-to-face. Educational reformers point out that the emergence of digital technology as a new technology will dramatically change what people learn, how they learn and where they learn (Hidayat & Khotimah, 2019). The choice of learning model is very important. The selection of the learning model used can affect the mastery of the subjects taught and student learning outcomes (Khoiroh et al., 2017). One of the learning models that are currently developing is the digital learning model.

Massive Open Online Courses (MOOCs) are online courses with unlimited participants hosted by professors or other professionals (Wulf et al., 2014). MOOCs have become an important feature of higher education discourse in recent years (Lindsey et al., 2015). MOOC first appeared on the higher education horizon in 2008, coinciding with the launch of Connectivism and Connected Knowledge (CCK08) supported by George Siemens and Stephen Downes (Risdianto et al., 2021). MOOCs is a new approach to distance education, rooted in the open educational resources (OER) movement that is growing in popularity around the world. MOOCs are online courses that anyone, anywhere, can take, often for free. The MOOC consists of short videos related to the mission (Pilli & Admiraal, 2020). In addition, MOOC provides an interactive user forum, quizzes that help build a community for students and teachers to deliver e-learning content via the Internet to almost anyone who wants to take courses without attendance restrictions (Risdianto et al., 2021). Here are some of MOOC's unique features: First, open enrollment at MOOC offers free or low-cost learning opportunities. Second, the advanced information and communication technology (ICT) integrated in the MOOC has the potential to facilitate personalized learning. Third, MOOCs provide a good platform to promote interaction and cooperation among students with similar interests (Xiong & Suen, 2018). Along with this uniqueness, MOOCs have revolutionized the field of education in a short time, opening up new educational opportunities and new business models that allow thousands of students to access them (Lian et al., 2021). However, the complex, innovative and adaptive nature of MOOC poses particular challenges for monitoring and evaluation, where any assessment strategy must follow a systems approach (Jordan, 2014).

Motivation has several definitions, ranging from "an individual's desire to act in a certain way", "the reasons why individuals behave in certain ways in certain situations", "the ability to direct behavior is embedded in the emotional control system", the potential "can manifest in cognition, emotion , and/or behavior" (Irvine, 2018). More complexly, motivation describes why someone decides to do something, how long someone is willing to maintain an activity, and how strongly they will continue that activity (Daumiller et al., 2020). The process of motivation is shown as follows.
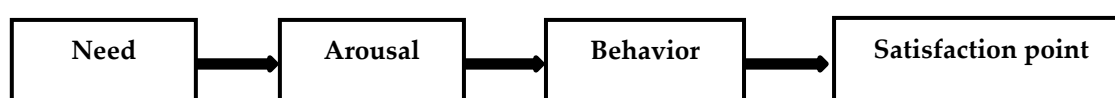

Figure 1. Motivation Process

In short, the motivational process shows that every individual has some need that he or she wants to fulfill. This need drives the individual to behave in a certain direction; Individuals need to be stimulated to activate motivational activities. These forces represent material and spiritual impulses. Attractive individuals act to satisfy their needs and ultimately reach a point of satisfaction (Turabik & Baskan, 2015). There are terms continuous motivation and autonomous motivation (Ristianti, 2017; Rozak at al., 2018). Continuity motivation is defined as motivation to pursue educational activities in different contexts, in the absence of external pressure and when alternatives are available. Similarly, self-motivation is defined as engaging in activities out of a sense of self-interest, for the benefits and satisfactions that arise from the activity itself, or from the results associated with it, and in the absence of externally referenced anomalies (Hagger & Chatzisarantis, 2016).

Higher Education is an educational institution that prepares students to become members of the community who have academic competence and skills (Suryana, 2018). Currently, many universities have implemented e-learning in the teaching and learning process (Muhammad, 2017). This means that universities have started to implement digital learning models. Similar to IAIN Curup. Departing from research conducted by (Merlizah, 2020), to support the learning process at IAIN Curup, lecturers also involve students to open pages related to courses. Therefore, this research was conducted with the aim of analyzing the needs of students in developing digital learning models in other forms, in this case we will develop MOOCs-based.

2. METHODS

This research is a type of quantitative descriptive research. The population taken in this study were all undergraduate and postgraduate students at IAIN Curup. The sampling technique used is probability sampling with a total sample of 502 students from 18 study programs. The method used for data collection is a questionnaire. The instrument used in this study is a questionnaire on the need for developing digital learning models using MOOCs in practical courses to increase motivation to learn in higher education. This research was conducted at IAIN Curup, Rejang Lebong Regency, Bengkulu Province, in June-September 2021. In this study, The questionnaire was compiled using a modified Likert scale with 4 answer options, namely Strongly Agree, Agree, Disagree, and Strongly Disagree. The questionnaire was tested for validity and reliability with the following conditions:

Reliable : if greater than value (>)$r_{hitung} r_{tabel} r_{hitung} r_{tabel}$

Unreliable : if less than value (<)$r_{hitung} r_{tabel} r_{hitung} r_{tabel}$

(Risdianto, Yanto, Kristiawan, et al., 2021)

Analysis of the results of the needs questionnaire was carried out quantitatively using the following formula.

$$p = \frac{n}{N} \times 100\%$$

(1)

Where P is the percentage of the results of the needs questionnaire analysis, n is the total score of the assessment, and N is the maximum possible score. For the Likert scale, the score interpretation model can be seen in table 1.

Table 1. Likert Scale Interpretation

Percentage (%)	Category
0% - 25%	Strongly Disagree
26% - 50%	Do not agree
51% - 75%	Agree
76% - 100%	Strongly agree

3.   FINDINGS AND DISCUSSION

The questionnaire used in this study is a questionnaire on the needs of college students with 4 answer choices. The number of statement items is 21 statement items. The assessment uses a Likert scale with the maximum score of the questionnaire items is 4 and the minimum is 1. The statement items used in the questionnaire are tested for validity and reliability to determine whether the instrument is suitable for use to obtain the data needed by researchers or not. For the results of the calculation of the validity of the data can be seen in table 2.

Table 2. Case Processing Summary

		N	**%**
Cases	Valid	502	100.0
	Excluded	0	0.0
	Total	502	100.0

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In table 2 it is known that there are 502 respondents who answered the statement (N) was valid. There is no data excluded (Exclude). A total of 502 data (N) were processed or 100% of the data were processed.

In more detail can be seen in table 3.

Table 3. Validity Test Results on Each Statement Item

No Item	r_{count}	r_{table}	Criteria
1	0.579009	0.088	Valid
2	0.437066	0.088	Valid
3	0.457438	0.088	Valid
4	0.58366	0.088	Valid
5	0.668046	0.088	Valid
6	0.580433	0.088	Valid
7	0.582388	0.088	Valid
8	0.651629	0.088	Valid
9	0.662778	0.088	Valid
10	0.334338	0.088	Valid
11	0.632696	0.088	Valid
12	0.712188	0.088	Valid
13	0.686043	0.088	Valid
14	0.731812	0.088	Valid
15	0.552381	0.088	Valid
16	0.684134	0.088	Valid
17	0.643432	0.088	Valid
18	0.696192	0.088	Valid
19	0.654616	0.088	Valid
20	0.637687	0.088	Valid
21	0.62708	0.088	Valid

Table 3 shows that all statement items are valid, as evidenced by the r_{count} value of each statement item which is greater than the r table value.

The results of the calculation of data reliability can be seen in table 4.

Table 4. Reliability Statistics

Cronbach's Alpha	N of Items
0.913	21

Table 4 Reliability Statistics, shows the results of the calculation of data reliability with 21 statement items using the Cronbach alpha method, a score of 0.913 is obtained. Then this value (0.913) is compared with the table of r product moment values or called the r table. Using the distribution of the r table for = 0.05, the value = 0.088, then compared with Cronbach's Alpha value of 0.913. In accordance with the rule that if $r_{count} > r_{table}$ then the data is said to be reliable. For the data obtained in this study, r arithmetic is greater than r table (0.913> 0.088) so that the data in this study is said to be reliable (Fathurrochman et al., 2019)(Ristianti, 2018)(Ristianti et al., 2019)(Telaumbanua et al., 2020)(Risdianto, Wachidi, et al., 2021).

To find out the percentage of the need for developing digital learning models using MOOCs in practical courses at universities, it can be seen in table 5.

Table 5. Percentage of IAIN Student Needs for Curup on the Learning Model to be Developed

Respondent	Total Score (n)	Maximum Score (N)	Percentage $P = x\ 100\ \frac{n}{N}\ \%$	Category
502 IAIN Curup students	31,776	42.168	75.35%	Agree

Table 5 provides information that IAIN Curup students agree to develop a digital learning model using MOOCs in practical courses to increase learning motivation in higher education. This is indicated by the large percentage obtained of 75.35% from the maximum percentage of 100%. And according to the Likert scale interpretation table for data with a percentage of 50%-75%, it is categorized as agree.

For more details on the number of respondents in each category, see Figure 2.
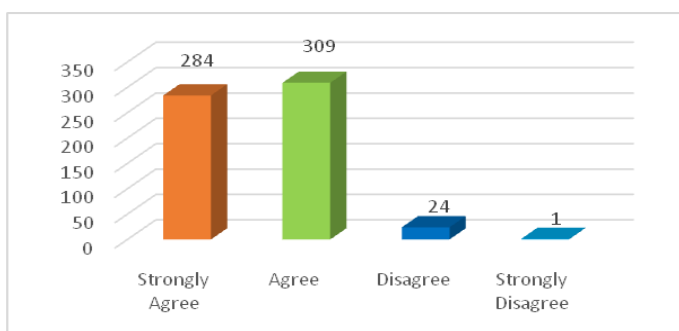

Figure 2. Graph of Number of Respondents in Each Category

The picture above shows that most respondents fall into the agree on category with 309 respondents, then followed by 284 respondents who fall into the strongly agree category, the remaining 24 respondents are categorized as disagreeing and 1 person strongly disagree. Based on these results, further steps are needed to develop MOOCs at IAIN Curup.

There are several previous studies that also discuss the use of digital technology in learning. This is one of the efforts that can be made in the teaching and learning process during a pandemic like what is happening now, where learning cannot be done directly. In research conducted by Jayul & Irwanto (2020)In this study, an online learning model was used with the portal Schoology method

and vlogs. In other words, the method has a video application, which can be used to demonstrate movements in the psychomotor domain (practical). In other research conducted by Herlina & Suherman (2020), the results of his research show that PJOK learning (practical in nature) has the potential to be developed amid the covid-19 pandemic through a distance learning model with a collaborative approach. Other research was also conducted by Dyah Purnama Sari & Sutapa (2020). In this research, it is said that distance learning can be done by utilizing digital technology or platforms that have been widely developed for use in learning, the application that is considered the easiest for students to use in Google Classroom.

4.   CONCLUSION

The instrument used to collect data in this study has 21 statement items, all of which are valid. The instrument used is also reliable based on calculations using the Cronbach Alpha method. This is indicated by the data obtained in this study, namely r arithmetic greater than r table (0.913> 0.088), so it is said to be reliable. In this study, the results showed that IAIN Cur students used MOOC approval for the development of digital learning models in practical courses at universities. This is indicated by the percentage obtained of 75.35% of the maximum percentage of 100%. And according to the Likert scale interpretation table for data with a percentage of 50%-75%, it is categorized as agree. Based on these results, further steps are needed to develop MOOCs at IAIN Curup. The disadvantage of this study is that it only uses one type of instrument so further research can use more varied instruments.

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