

# The Optimization School Based Management by Applying Information Technology and Communication (ICT)

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**Abstract**— This article was supposed to how to optimize “school based management” by applying it into information technology and communication (ICT). According to United Nations, the defiance of education in this sophisticated 21th century is evolving knowledge-based society which has own: 1.ICT and media literacy skills, 2.Critical thinking, 3.Effective communication skills, and 4.cooperate collaborative skills. “School based management” comes to be the new management of education paradigm in a provide. “school based management” (MBS) is a concept which offer the autonomy to the school for determining school’s policy it increasing the quality, efficiency and equitable education to accommodate society’s desire, to create the cooperative between school,society,and government [1]. The existence of this “school based management” perhaps can evolve and apply ICT as the demands of this current era and the quality which school support capacities involved inside it.”School based management” or MBS,it offers solutions to increase the quality of education.By applying it,hoped the transformation from the old module to be the new one realized.one of the rule which could be increasing the quality of education is,adopting ICT into school management process. The sophisticated technology reserve more opportunities to develop educational management and process in the school.ICT has a big potential to transform all the aspects and utilize it to reach any had purposed.ICT has bring the new big change in human life.

**Keywords**— *School based management, information technology and communication (ICT)*

## I. INTRODUCTION

The development of technology informatics and communication influences the innovation of education in the entire world. Several countries have reach completing the application of technology informatics and communication either in plan or in teaching itself. Indonesia, as a country keeping its effort to become a developed country involves as an active member and doing constructive rules in treating technology informatics and communication in academic sector. Benefiting and using technology informatics and communication in academic sector based on experiences and comparisons to several developed countries which are already using this kind of technology in their academics and sophisticating its method, which resulting that academic could

bring lot of advantages in developing a country. UN with its UNESCO recommending four basic of academic sector, which are: 1. Learning to know, 2. Learning to do, 3. learning to live together, 4. learning to be [2]. While the threat of academic in this 21 century, according to the UN is developing knowledge-based society which has: 1. ICT and media literacy skills, 2. Critical thinking, 3. Effective communication skills, 4. Collaborative skills in team work [3]. In head book of high school, explained that benefiting ICT has to applied in : 1. Managing academic sector through automatic information management system and on ICT, 2. System in managing curriculum and supply academic or media in interactive teaching process, interest and innovative academic sources of self-learning. In this case, using ICT as a threat of the 21st century threatening itself, and an effort in developing management academic and learning process which supposed to facilitate the operators or the member of academic for evolving academic quality.

Separating academic sector in school supposed to the whole headmasters and teacher to have a big responsibility to evolving the quality way of teaching for developing the quality of its result. The way of the academic will be, based on the way of teacher to teach. It because the government are not responsible to give an academic method in school unlike the headmasters and teacher. The government just facilitates academic activity which need by the school [4]. The autonomy which given by the government to the school is a care from them in evolving the quality of academic. This autonomy demanding conducive management approach in school in order to accommodating society’s desire and managing their wish for supporting the development system in school. In this case, MBS always shows itself up to be a new alternative paradigm in academic management. MBS is a concept that provide the autonomy to the school for determining its policy in term of evolving its quality, efficiency, and academic distribution for accommodating society’s desire and cooperating between school, society and government[1]. The existence of school based management give the chance for the school to evolve and apply ICT in related school. In the other word, ICT provide a solution model to improve academic quality.

By applying this MBS, it was supposed to achieve the transformation from the old pattern to the new one. One of many rules to increase the quality of education is adopting informatics communication and technology (ICT) in management school processes. This sophisticated technology provides big opportunities to develop management education and teaching progress in the school. ICT has a huge potential for transforming all the aspects of education in school and use it to reach the goals of learning. ICT has a big impact and bring lot of changing in human life. The rapid change in developing technology in the last two decade, convincing the way of thought and society's perspective which they demanded to work efficiently. Latest invention in modern knowledge and innovation in technology telecommunication and informatics, create lot of individuals to become modern society based on modern knowledge.

The problem in education quality is not particular or individual itself, but its related and influence each other. Because the quality of output influenced by the quality of input and process. Generally, the components that have a big impact in education are: 1. The intention and motivation of student in learning, 2. Lack of skill from the teacher and not competent for using ICT, 3. Lack of facility based on ICT in teaching rules, 4. Education funds, 5. Inefficient and ineffective way of teaching. Using ICT is an effective way and strategic to solve those problem[5]. In school level, applying ICT could bring big impact in cultural teaching and context of learning. And at least, there were four significant component for building the way of learning based on ICT in school. First, student demanded to learn by them self with some relevant approach until it can instruct, motivating, and self-sufficient in learning. Second, Teachers optimally can evolve their knowledge and creativity, facilitate their teaching, and give mutual comprehension that needed by the student. Third, provided infrastructure that support the way of teaching based on ICT. Fourth, creative administrator and management in providing infrastructure and facilitating the way of teaching. In term of increasing the quality of managing the education which it could result the good grade of output and outcome needed academic investigation in applying ICT in management based on school (MBS). Therefore, the author would like to describe those problems in this writing under the title "Applying informatics communication and technology (ICT) in management based on school (MBS)".

## II. MAIN TOPIC OF INVESTIGATION

Increasing the quality of some school could be recognized by viewing how success that school in effective and efficient their way of teaching and learning. One of success indicators knows by achieving the minimum criteria key work which is completing standard process. Applying ICT in school is a penetration that could increase the quality of education. Some important component that would build cultural learning based on ICT in school strongly determined by several factors, they are: Students / Pupils, Teachers, infrastructure, and school management. General problem that virtually faced by the school is how to increase school's quality, how successful the implementation of learning process till it become effective and efficient, and how it become standard process. Therefore, this

study focused on applying informatics communication technology (ICT) in management based school (MBS).

### A. Definition of Management Based School (MBS))

The definition of Management Based School it took from English language. And exists for the first time in United States when society asked the relevant between educations with the latest technology[6]. Some definitions of Management Based according to some expert are:

Pricilla Wohlstetter and Albert Mohrman define MBS as a political approach redesign the organization for giving a policy and power to the entire participant in school in local level for advancing other school. Meanings of the entire participants are the Headmaster, teacher, student, and society[6].

Ahmad Barizi define MBS is a school alternative for decentralization in academic sector considered the autonomy in school level, societies participating without ignoring policy of national academic[7]. And according to E. Mulyasa: MBS is an educational reform that to the school to provide better and sufficient education for the student. The autonomy in management is a potential of school to increase quality of staff, and offer participate to the related group, and increase society's knowledge about education[1]. From all the experts opinions above, it conclude that MBS is a strategy to advance education by transferring important decision, and giving the authority from the government to individual educator in school. MBS made the Headmaster, teacher, student and parents enable to do a big control in academic process by giving them a responsibility to decide budget estimation, personnel and curriculum. First, confirm that you have the correct template for your paper size. This template has been tailored for output on the A4 paper size. If you are using US letter-sized paper, please close this file and download the file "MSW\_USltr\_format".

### B. Characteristic MBS

For the school that would apply MBS should know the characteristic of MBS that contrast from other. They are[8]:

- A. Big autonomy of the headmaster.
- B. High participation from societies and parents.
- C. High, dynamic and professional teamwork.

From "MPMBS, concept and implementation's guidebook which produced by national department of education, character of MPMBS could recognized by education system. This based on the definition that school is a system decomposition of MPMBS characteristic based on input, process and output.

#### 1) Educational input, are:

- a. Have an obvious policies, purposes and goals.
- b. Provide resources.
- c. Competent and dedicated staff
- d. Have higher achievement target.

e. Focused on customer.

2) Process, there are several character :

- a. PMB with high level effectiveness.
- b. Strong school leadership.
- c. Comfort school's environment.
- d. Effective schools management.
- e. School has a caliber culture.
- f. School has a cohesive, brilliant and dynamic team work.

3) Estimated Output:

School's output is school's achievement that reached by learning process and management in school. Generally, output in school clarified into two part which one of it is academic achievement such a final grade, scientific work competition, way of thought (rational, critical, inductive, deductive and scientific). And in second part is output non-academic such wondering a new thing, self-conception or a pride, honesty, team work, tolerance, discipline, and etc. characteristic MBS could known by how school optimizing school organization performance, way of teaching process, management human resources, management administration resources. And if accord to national education department, some functions that could decentralized to schools are[9]:

1) Planning and evaluating school's program.

Schools are given the authority to plan anything based on its need. It also has an authority to evaluate especially internal evaluation.

2) Management curriculum.

School could develop what is inside the curriculum but forbidden to change it which evolve by the central government. School also has a freedom to develop local curriculum.

3) Teaching and learning process.

School has a freedom to choose their strategy, method, effective teaching and learning technique related with its characteristic lesson, student's characteristic student, teacher characteristic, and provided resources.

4) Management work force.

Management work force started from analyze needs plan recruitment, development, achievement and sanction, work relations and work force evaluation in school which it could handle by all teacher in school except government employees because of their bureaucracy handled by government.

5) Management finance and definitely all the finance handled by the school. And school should give a freedom to profit an income, it because of their finance could be independent and not related with the government all the time.

6) Student services.

Student services started from new student acceptance, evolvment, guidance, supervisor, serving field for continuing school program or for entering future's job and managing the alumni for decentralization.

7) Relationship between school and society.

The essential relationship between school and society is to improve sympathy, ownership and support for society, especially moral and financial support which has decentralized. And what needed now is improving intensity and extension itself.

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### III. STEPS OF MBS:

Generally, the implementation of MBS could be successful if it follows the steps below[9]:

1. School has the autonomy about 4 things, and they own the autonomy in authority and policy, developing knowledge and creativity continuously, information access to the whole sector, and giving an achievement for every successful sector.
2. Roles and active society, in finance, and decision process in curriculum. And also contributing the environment for school because both of these sectors related each other.
3. The headmaster of the school has to be an inspiratory for developing and building the school. In MBS, the headmaster plays role in designer, motivator and facilitator. However, the headmaster is a leader that has an authority for it. Therefore, the rule of elimination for a headmaster based on their managerial skills and not based on their hierarchy anymore.
4. Democratic decision making among active school's life. Before make a decision, the headmaster should evolve democratic and involve other aspiration. Costumer that should served by headmaster is student and their parents, society and teacher. Headmaster should not serve their master who have a higher degree than them and ignore the real people who really need to be served.
5. Guidelines from academic department for advancing academic process to be more efficient and effective. The guidelines containing rules of freedom for a school to create its own curriculum and should not contain forced

rules from academic department. Meaning that, it should not have to show the way for where school will go but it guiding its headmaster to create their own.

6. Obligated for a school to have transparency and accountability for its annually accountability report. Accountability as a school's responsibility among its stakeholder. Therefore, school should step in the right way, in transparency, democratic, and extroverted in every involved sector.
7. MBS determinations should accompanied through reach school's performance and increasing student's learning specifically. For emphasizing that MBS cannot increase student learning's performance but has a potential for it. Therefore, MBS should keep effort to increase student's learning achievement.
8. Implementation started with socialization from MBS concept, identification each roles of institutional development capacity building holding training for a new role, implementation for a new learning process, evaluation on field's implementation and for a new repair.

And for operated school, it has, at least 6 steps to do. Those are: 1) self-assessment; 2) formularizing vision, mission, and goal; 3) planning; 4) implementation; 5) evaluation; 6) reporting [10]. And each steps explained below:

#### 1. Self-assessment

Self-assessment is a first step for school that wants or will apply MBS. This activity started with brainstorming attended by the headmaster, teachers, whole staff, and school's committee. Leader of the meeting is the headmaster. And for triggering, meeting started with a question: should we increase the quality? What is our school's condition in latest quality? Why our school's quality is not good enough? These activities purposed to:

- a) Knows schools condition in every aspects, achieved progress, problem faced and weakness.
- b) Self-awareness about education till appears a commitment to improve its quality.
- c) Formulating point of departure for elementary school that intended to self-development especially in quality. This point of departure has an important role in evolving quality; they do not start from blank but from their own condition.

#### 2. Formularizing vision, mission and goal.

For a new built school, formulizing vision, mission and goals is the first step to do for determining the way of school will be by its founders. In case of government school, the headmaster and teachers are the representation from the government as the founder of that school, and together with student's parents and public society determine the way of school will go for its future based on national constitution no. 23, 2003.

#### 3. Planning

Planning in school level is the activity supposed to answer, what have to do and how to do it to reach the determined goals included the finance that planned before. In the other word, planning is an activity that determines what job to do, about it procedure and what method have to use to reach the goals.

Planning of a school precise preparation about whole thing to do in the future and what should be explained, and how big quantitative and qualitative will do, how, when, and how big approximated finance per each, what result supposed to catch.

#### 4. Implementation.

Basically, this step is answering how management function reach institution's goals, with teamwork and provided resources could pass as effective and efficient as it can. Implementation also has a meaning a process to make plan realistic. In MBS, each role should be main attention.

##### a) Roles of headmaster.

In manger position, the headmaster has a responsibility for reaching managerial function. And as a planner, the headmaster should identify and formalize work result, and it methods. Headmaster's roles in these functions are: determining goals and standards, stipulating rules and job procedure in school, making a plan, and forecasting the future.

##### b) Roles of teachers and school's staff.

Basically, the roles that teacher have is not too different as the headmasters have, just each scope are different, and teacher has smaller that headmaster (micro). This scope contained: managing learning process depending on study group, every teacher should understand school's vision and mission, planning the way of learning, applying democratic leading, treating the students based on their policy and building a good relationship and good communication through another teacher, headmaster, student, society and parents. They are also monitoring students' development, and evaluating every student improvement, this supposed to know, how good students and how they are evolving during learning. And giving an achievement to the students could advancing them, motivating and supporting them to be more diligent than before.

##### c) Roles of parents and society.

A role of parents and society has already known by a soft main function for developing students skills. Treating a students' life to be more confident, self-sufficient for every trouble that they faced, and school being their formal institution, structured, and measured to do academic function.

##### d) Roles of student.

Students are the main subject and primary consumer (prime beneficiary) of all efforts undertaken by the organizers of the education unit with the management involved. In its position to be the subject of that educational purpose, their wishes and hopes, their motivation and their commitment to involvement are important. One way to accommodate their interest is listening their aspiration.

e) Evaluation.

Evaluation is one of the important stages in MBS to know the progress or results achieved by the school in implementing its functions according to the plans that have been made by each school. Evaluation at this stage is a general evaluation, concerning the management of all fields in the unit of education is the technical field of educative (implementation of curriculum/learning process with all aspects), field of labor, field of finance, field Infrastructure and administration of school management. Despite of all this, the educative technical field should be the main highlight with a focus on the achievement of results (student learning achievement).

f) Reporting.

This reporting is interpreted as granting or submitting the written and official information to various stakeholders (stakeholders), about the management activities of the Education Unit and the results achieved within a certain period of time Based on the plans and rules set forth as a form of accountability for the duties and functions carried out by the Education unit. Reporting activity is actually a continuation of the evaluation activity in the form of formal evaluation of the results of the parties as accountability for anything that the school has done and its results. However, that not all of evaluation results are entered into the report (depending on the urgency). There are evaluation results that the utilization is internal (for the circles of the school itself), there are those for external interest (outside parties), even each stake holder may require a different report focus. Thus, it is clear that the school orientation is preferable in quality improvement. While the school based Management (SBM) was applied in the form of school based Quality Improvement Management (MPMBS) which is generally a large framework of the management model that provides greater autonomy to the school, providing Flexibility to the school, as well as encouraging the citizens of the school and community to improve the quality of education in the framework of national education policy.

3. Information, technology and informatics (ICT).

ICT involved in learning process through academic sector. In ICT development, there were 5 frictions: (1) From training to appearance, (2) from the classroom to where and at any time, (3) from paper to "on line ", (4) physical facilities to the Working Network facility, (5) from cycle time to real time. Communication as an educational medium is done using communication media such as telephone, computer, Internet, e-mail, and so on. The teachers and students are not only conducted through face-to-face relationships but also done using these mediums. Teachers can provide services without having to be directly faced with the students. Similarly, students can obtain information in a wide scope from various sources through cyber space or virtual space using computers or the Internet. One form of ICT products is the fastest growing Internet at the end of the 20th century and the 21st century was mined. His presence has provided considerable impact on the lives of mankind in various aspects and dimensions. In this latest period, the internet revolutions in the whole states in every human life sector. The existence of the Internet at present is already a necessity of modern human being in the face of various challenges of global development. This

condition will certainly impact the pattern and patterns of human life as a whole. In this regard, every person or nation who wants to be sustainable in the face of global challenges needs to improve his/her quality to adapt to the demands that develop. ICT has changed the face of learning differently with traditional learning processes characterized by face-to-face interaction between teachers and students both in class and outside the classroom. In the future, the flow of information will increase through global Internet networks around the world and demand that anyone adapt to that tendency if they don't want to be outdated. With such conditions, education, especially the process of rapid or slow learning cannot be separated from the existence of computers and Internet as a primary tool. The development of ICT has influenced various aspects of human life that require performance and their activities to be effective and efficient.

1) Role ICT in academic

ICT utilization in education cannot be separated from the educational activity itself. Information and communication technology is believed to be one of the strategic ways to solve problems in education, namely the improvement of quality and expansion of learning opportunities. While the development of ICT use in education through three stages, they are [2]: (1) Use of tools in the form of audio and visual aids in the classroom to convey learning materials; (2) Use of programmatic materials in accordance with the device used; (3) The use of computer in education both software (software) and hardware (hardware).

Information and communication technology is formed from components of hardware components, software and Brain ware. In the utilization of ICT, there is a number of requirements that must be met, such as the high cost of invest and the existence of skilled human resources and proficient in managing and developing ICT.

Education is a long-term investment, and therefore investment facilities and educational infrastructure should be calculated based on the power of education outcomes for the future. This approach is associated with the situation in a particular school at all levels, especially high school level associated with the growth of ICT in the school system [6]. But keep in mind that use of ICT will not replace school or teacher, but it serves to further improve the process and outcome of education.

a) Reducing the digital divide

According to Kwarto Adimphrana the use of ICT in education can be categorized into 4 (four) groups, those are [11]:

b) ICT as the warehouse of knowledge

in this group ICT, used as a reference to the latest science, knowledge Management, a diverse network of experts in the field of science, networking among educational institutions, the center of teaching materials, rides Curriculum development, and the competency comparison community.

c) ICT as a learning tool,

in this group there are at least 3 ICT functions that can be utilized daily in the learning process, namely (1) ICT as a teacher's aids include: Animation events, student testing equipment, sources, student performance evaluation, case simulation, visual aids, and communication media among teachers. Then (2) ICT as a teacher-student interaction tool that includes: teacher-student communication, Study group collaboration, and integrated classroom management. While (3) ICT as student aids include: Interactive books, self-study, practice, Learning, illustration, lesson simulation, student work tools, and communication media among students.

c) ICT as a learning facility

in this group of ICT can be used as: electronic referers, virtual classes, multimedia applications, multimedia theatre classes, remote classes, school electronics boards, multi-intelligent teaching Tools, Internet corner, and cooperating collaboration Communication (school internet). ICT as a learning infrastructure, in this group ICT supports both technically and applicative learning-both mid-and broad-scale including: a variety of distribution channel technologies, application and software variety, language Programming, database systems, personal computers, digital tools, operating systems, network and data communication systems, and information technology infrastructure (transmission Media).

In addition, also added ICT function in education as in the Blue print ICT for education, is as follows:

e) ICT as competency standard

at basic level in multimedia presentation, document incompetence, tabulation calculation, electronic file management, effective communication, group collaboration, reference finding, data management, managing needs Publications, as well as personal records. At an advanced level in multimedia animation, development simple application, Internet site development, data manipulation and information, a variety of integrated group collaboration, communication collaboration and integrated cooperating, network development Inter Institutions, data analysis, network access management, manage programs, cyber-class maintenance, and modeling applications.

f) ICT as supporting education administration

in the core process are: Student management, teacher management, class management, and material management. In the supporting process are: school administration, Human resources, finance and accounting, as well as facility management.

ICT as a school management tool, is a school executive management information system, decision support system, expert system, school based management Information System, financial aspects, educational aspects, service quality aspects, and Institutional growth aspect.

2) ICT application at school

The application of ICT in schools should require the right approach with the objectives, background and conditions, and

ability of the school. Each ICT approach is included in its vision, objectives, development planning, required facilities, learning methods and evaluation systems[2].

The concept and model of ICT-based school is a manifestation of the improvement of school quality that emphasized on the development of facilities, preparation of teaching materials and the implementation of curriculum, textbook development, improvement of the service of teachers, Improvement of teacher coaching, as well as developing models of school management development and implementation.

3) ICT implementation of school management and administration.

The ICT implementation of school management and administration can improve the effectiveness of management and improve academic performance of educational personnel, as well as the development of educators and students competence. Technology and communication applied to the school will contribute to the improvement of management and administration processes, teaching materials development, independence in learning, to motivate students to develop the profession Innovation in evaluation and monitoring of learning outcomes.

In the guidance of the school principal of secondary education, it is explained that the integration of ICT in school management can provide the components of the school, including:

- a. benefits for the government: (i) assisting in the availability of accurate database and efficient information flows about profiles and maps of education in the Indonesia, (ii) Accelerate the equality of achievement of national education standards, (iii) Assist control Implementation of education.
- b. Benefits for the school: (i) The school's work is improving its management and operational systems, (ii) assisting the school about distribution of school profile information and student learning outcomes to parents and other stakeholders, (iii) helping schools provide the most up-to-date and relevant information resources for teachers and students.
- c. Benefits for Teachers: (i) opening opportunities for teachers to develop ICT-based teaching materials, attracting, innovative and stimulating students' curiosity, (ii) assisting teachers to infiltrate learning plans including the provision of multimedia learning resources Comprehensive and up-to-date, (iii) Facilitate teachers to monitor student learning progress, (iv) facilitate teachers to compile reports and communicate with parents, (v) Assist teachers in assessment of learning outcomes based on authentic assessment.
- d. Benefits for Parents: (i) Monitoring the activity and learning outcomes of children in school, (ii) see the duties of the school given to the child so that parents can participate in children's learning activities, (iii) see various school programs amazing Can be attended by

students, (iv) being an interactive medium between schools, teachers and parents, and (v) assisting in the monitoring of the education process directly.

- e. Benefits for Students: (i) helping students to skillfully use ICT in his or her life, (ii) help students to view and study learning materials per meeting, (iii) help students to work on the duties and tests provided by the teacher Online, (iv) Helping students build collaborative work, (v) Motivating students to develop the knowledge and skills necessary as they progress in the fields of science and technology.
- f. Benefits for school committees: (i) Facilitate committee administrators to monitor and evaluate school education programs, (ii) Facilitate committee administrators to communicate with educators and education at school, (iii) Facilitate managers Committee to engage in drafting and designing a school management development program and improving the quality of learning.

#### 4) Learning plan based on ICT

The authentic proof of the occurrence of ICT-based learning can be drawn from the Syllabus and Learning Plan (SLP) compiled and the implementation is applied by each teacher of study teachers in school. SLP integrating ICT in learning can be compiled through 2 (two) approaches: idealistic approaches and pragmatic approaches. The Idealist approach can be initiated by determining the topic, then determining the learning objectives you want to achieve; and determining learning activities by utilizing ICT (such as modules, audio programs, VCD/DVD, CD-ROM, on-line learning materials on the Internet, or other synchronous and asynchronous communication tools) that are relevant to achieve learning objectives. Approach Pragmatic can be initiated by identifying the ICT (such as books, modules, audio programs, VCD/DVD, CD-room, on-line learning materials on the Internet, or other synchronous and asynchronous communication tools) that exist or may be possible or use, Then choose which topics can be supported by the existence of the ICT, and end up planning the relevant learning strategies to achieve basic competencies and indicators of learning outcomes from the learning topic.

The strategies that can be chosen in accordance with both approaches are strategies: resources-based learning, Case/problem-based learning (problem-based learning/daily case), Simulation-based learning, and Collaborative-based Learning (collaborative learning).

#### 5) Implementation learning based on ICT

The learning process both in the classroom and out of class, of course, required an active, dynamic and interactive role among educators and learners. The learning and learning atmosphere requires fun and not boring conditions. Student-centered 21st century learning is different from teacher-centered traditional learning; In the sense that they both have different approaches to content, instruction, classroom environments, assessments, and technology. Therefore conditioning the role of educators and learners in ICT-based learning needs to be understood and managed properly.

According to Jonassen quoted by Norton et al, to support the process of integration of ICT in learning, the management of schools, teachers and students must understand the 9 (nine) Principles of ICT integration in learning, those are: (1) Active: Allows students to Actively involved by the learning process that is interesting and meaningful, (2) Constructive: Allows students to incorporate new ideas into the knowledge that has been previously possessed to meet the meaning or wanting of ignorance and doubt that has been Is in her mind, (3) collaborative: allowing students in a cooperating group or community, sharing ideas, suggestions or experiences, advising and giving input to fellow members of the group, (4) enthusiastic: allowing students to be able to Actively and enthusiastically strive to achieve the desired objectives, (5) Dialogical: Enable the learning process inherent is a social process and dialogical where students benefit from the communication process both in the or outside school, (6) Contextual: Allowing learning situations to be directed at a meaningful learning process (real-world) through a "problem-based or case-based learning" approach, (7) Reflective: Allows students to be aware of what he or she has Learn and ponder what he has learned as part of the learning process itself, (8) Multisensory: Enabling learning can be conveyed to a variety of learning modalities (Multisensory), whether audio, visual, or kinesthetic, ( 9) High Order Thinking Skills training: It is possible to practice high level thinking skills (such as problem solving, decision making, etc.) and indirectly also increase "ICT & Media Literacy"

#### IV. CONCLUSION

Learning is a system that is conditioned in the process of planning, implementing, and evaluating learning. Learning is conducted between learners, educators, learning resources, and learning environments so students learn effectively and efficiently. Related to the use of ICT in learning, it can be concluded that the application of ICT in schools are aspects that are integrated in education through the utilization of ICT facilities in school, and supported by the HR school Have competence in the field of ICT. Development of the concept and model of ICT-based school is expected to improve the quality of the school in the process of learning teaching, development, preparation of teaching materials and the implementation of the curriculum of source development Learning, improving the service and improving the competency of teachers, and the automation system of management and administration of schools.

ICT-based learning systems are influenced by factors such as: teacher factors, students ' teaching factors, learning resources, and learning environment. The influence factor is explained as follows: Teacher is a very decisive component in the implementation of the implementation of ICT-based learning. The role is emphasized on the ability to design and arrangement of various resources and facilities for students to use. In this case the teacher plays as a facilitator.

Students, the ability to be possessed by students in ICT-based learning, include: (1) knowledge in operating the hardware, (2) the ability to operate the software used, (3) An understanding of the Operation and security regulations in the

use of hardware and software, (4) knowledge of the action to be taken in the event of emerging problems.

Learning resources, management of ICT-based learning resources is an important factor in maximizing the effectiveness of learning. ICT's supporting facilities in schools can provide support to learners to do learning anywhere and anytime the learning environment, from this dimension, there are two factors that can influence the learning process, which is a factor Organization of classes and factors ' social-psychotics climate. Class organizations or so-called classroom management in ICT-based learning can be done individually/classify or in groups. The classical learning is aimed at all students in the classroom by obtaining the same learning materials and time.

Some factors to note in the management of ICT-based learning are: (1) take certain steps to avoid boredom among Participant learners. (2) Make sure students use learning time with enough and interested in learning. (3) Help learners solve problems in following learning using the software provided. (4) Show the requirements of the topics being studied and related to other topics. (5) Do 39 monitoring in general and specifically to see the achievement of learners. (6) Motivate and give learners encouragement during the learning process. (7) Ensure that each student has the

opportunity to use the computer and related software. (8) Ensure disciplinary measures are taken in group activity and make sure each group performs the task in accordance with the prescribed procedures in order to obtain interesting learning outcomes.

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