

Volume 1 Issue 2 (2023) Pages 11-21

ISSN: xxxx-xxx (Online)

# JOURNAL OF ENTREPRENEUR, BUSINESS, AND MANAGEMENT

# THE ROLE OF INFORMATION TECHNOLOGY MEDIA, COMMUNICATION AND IT-BASED LEARNING PROCESSES DURING THE COVID-19 PANDEMIC

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# **Abstract**

The provision of media in a school is very influential on the learning achievement of students, because the media is very helpful in the learning process. Media that is currently starting to be promoted in every school is IT-based media, such as the internet, the use of LCD during the learning process, the use of e-books, computers / laptops and others. The need for media in the learning process is certainly not only for schools in urban areas where access is easier, but schools in remote areas are also necessary even though access is more difficult. This is an anticipation of the inequality of education in remote areas with education in big cities. The procurement of IT-based learning media, which in this case greatly affects the learning achievement of students needs to be held in every school, not only in city schools but even remote schools as an effort to eliminate public perceptions between students who go to school in the city and students who go to school in the village. In addition, the existence of IT-based learning in all schools, will minimize the inequality of education in remote areas and in cities.

**Keywords:** Media TIK, Proses Pembelajaran Perbasis IT, Covid 19, dan Prestasi Belajar .

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#### **INTRODUCTION**

The era of revolution 5.0 has an influence on all aspects of human life. This can be seen from the process that is in a system that affects each other between one person or certain group. Therefore he does not walk in a vacuum and empty because he needs each other. Similarly, the influence between education and socio-cultural development, including science and technology that occurs in the environment. The education system is influenced by changes that occur in society, on the contrary, education also affects and is even expected to direct changes in society to occur in a positive direction.

One of the major changes that has occurred in recent decades, is the advancement of information and communication technology, which is supported by the use of computers. With the advancement of information and communication technology, there has been an era of globalization that penetrates socio-cultural, political, economic aspects, including education. The development of information and communication technology has changed the patterns of communication and distribution of information without territorial boundaries, countries, or time and space.

To obtain the ideal state of a school and be able to integrate science and technology, it should be necessary for all educational institutions, especially policy makers, educators, and students in an effort to improve the ability to adopt and accept every development of information and communication technology in schools. The provision of facilities and infrastructure is another strength to help maximize the process of accelerating and utilizing information and communication technology.

According to Arif Budiman (2021: 45) stated that using learning media effectively and continuously will be able to affect student achievement in the classroom/school. This is because the advancement of science and technology has brought many benefits to develop a learning with a design or method that matches the wishes and tastes of students.

The problem of the use of ICT through learning media to improve student achievement and educational inequality that can be seen from the quality of students / the quality of graduates of each school produced between students who go to school in cities with students who go to school in areas far from urban areas are the main points of the problem. The inequality of education, for example by the procurement and utilization of sophisticated media or learning facilities that can help students in learning that really needs to be held not only in city schools, is the main topic of discussion. The IT-based learning process that must be applied in every school is not only in city schools with easier access and more complete infrastructure, but also in remote areas. This is expected to minimize the difference in quality or knowledge of each student who goes to school in the city with students who go to school in the village, so that the learning achievement of students can increase.



#### LITERATURE REVIEW

# A. Learning Communication Technology

The term communication comes from the Latin word *Communicare or Communis* which means equal or making common property. If we communicate with others, it means that we try to make what is conveyed to others belong to them.

Some definitions of communication are:

- 1. Communication is a symbol carrying activity that contains meanings / meanings that need to be understood together by the parties involved in communication activities (Astrid).
- 2. Communication is a behavioral activity or the activity of conveying messages or information about thoughts or feelings (Roben.J.G).
- 3. Communication is as the transfer of information and understanding from one person to another (Davis, 2019).
- 4. Communication is striving to hold equality with others (Schram, W)
- 5. Communication is the delivery and understanding of messages from one person to another, communication is a social process (PRT Module, Administrative Institute).

Hewitt (2018), Describe the purpose of using the specific communication process as follows:

- 1. Learn or teach something;
- Influencing a person's behavior;
- 3. Expressing feelings;
- 4. Describe one's own behavior or the behavior of others;
- 5. Relate to others;
- 6. Solve a problem;
- 7. Achieve a goal;
- 8. Lowering tensions and resolving conflicts; and
- 9. Stimulate interest in yourself or others

#### B. Understanding Learning and Learning Achievement of Students

According to Morgan in the book *Introduction to Psychology* (2018), quoted by M. Ngalim Purwanto (2019: 85) learning is any relatively sedentary change and behavior that occurs as a result of practice or experience. Meanwhile, according to Witherington in the book *Educational Psychology* suggests "learning is a change in personality that



expresses itself as a new pattern rather than a reaction in the form of skills, attitudes, habits, intelligence, or an understanding.

According to Muhibin Shah (2019: 94) Change and the ability to change are limitations and meanings contained in learning. Because of this new ability, man is freed from the stagnation of his function as a caliph on earth. In addition, with the ability to change through learning, humans can freely explore, choose, and make important decisions for their lives. In the book Integrated Learning Strategies (Israni Hardini, 2022) learning is basically talking about one's behavior changing as a result of experiences that come from the environment.

From some of the definitions of learning above, it can be concluded that learning is a process of thinking, changes in both attitudes, behaviors that can form knowledge, habits, intelligence, or will form an experience. Learning is very important, every human being needs and must learn because humans as caliphs on earth have the obligation to be able to develop, cultivate, build and explore this world. Without learning all that is impossible, man would not have and could not do anything without learning.

The stages in the learning process according to Jerome S. Bruner, quoted by Muhibin Shah (2021: 112) the learning process of students includes three phases including:

- 1. Information phase (stage of receiving material)
- 2. Transformation Phase (material conversion stage)
- 3. Evaluation Phase (material assessment stage)

The information phase, among the information obtained there is a completely new and stand-alone, some function to add, expand and deepen the knowledge previously possessed.

*In the transformation phase,* the information that has been obtained is analyzed, transformed and transformed into abstract or conceptual forms so that later in turn it can be used for broader things

In the evaluation phase, a learner will assess for himself to what extent knowledge (information that has been transformed earlier) can be used to understand other symptoms or solve problems faced.

Apart from what has been explained above regarding the definition of learning, the learning process and learning stages, there are several things that affect learning according to Muhibbin Shah (2019: 132) globally, factors that affect student learning can be distinguished into three types, namely:

- 1. Internal factors (factors from within learners)
- 2. External factors (factors from outside the learners)
- 3. Learning approach factors

Internal factors (factors in students) are the physical and spiritual conditions of students. This internal factor is further divided into two aspects, namely psychological and physiological aspects. The psychological aspect is an aspect that can affect the quantity and quality of student learning acquisition which includes intelligence, student attitudes, student talents, student interests, student motivation. While the physiological aspect is an aspect that can affect the enthusiasm and intensity of students in following the learning process.

External factors of students, in external factors of students include two types, namely factors from the social environment and non-social environmental factors which both have a great influence on students.

Learning approach factors, in this learning approach include strategies, methods and everything related to the learning process. This learning approach is a way or strategy used by students in supporting the effectiveness and efficiency of certain learning processes.

From some of the learning notions above, according to Ngalim Purwanto in his book "Educational Psychology" one of the factors that greatly affect the achievement, motivation and learning outcomes of students is the media or infrastructure that supports and helps facilitate the learning process.

According to Poerwadarmita (Murhani, 2020) suggests that "achievement" is the result achieved, done and done, the high and low of a value as a result achieved by someone. While Suryabrata (in Murhani, 20:2:3) that "Achievement" embodies the prowess of a human being and a nation.

From this opinion, it can be concluded that achievement is the result of a real activity in the form of abilities or abilities and values. For example, a person is said to succeed by learning that he gets the highest score in his group both quantitatively and qualitatively.

Sahabuddin (20, 19, 86) suggests that learning can be defined as a process of activities that cause new behavior or change old behavior so that a person is better able to solve problems and adapt to situations.

While the notion of learning is a change in behavior in positive values as a result of the experience itself.

Student achievement is an important indicator used to see or measure the success of the child's teaching and learning process has run well, smoothly and efficiently. Vice versa if learning achievement is low then it is an indication that the child's learning process is not good, not smooth and inefficient.

Soewondo (in Murhani, 2023) provides limits on learning achievement as follows: Learning achievement or learning outcomes at school is the level of success in students in learning learning materials at school given by educators, the results are



expressed in the form of grades or scores obtained from test results regarding the subject concerned.

The definition of learning achievement was also stated by Mudjijana (in darmawati, 2020) who said learning achievement is the result achieved by a student in the form of adding or improving the behavioral quality of the cognitive, affective and psychomotor shutter achieved through student activities in the teaching and learning process.

Learning achievement is a manifestation of talent, outstanding achievement ability reflects the superior talent of students. However, talented learners do not necessarily always achieve high achievements. This is due to factors that affect the learning achievement of students in addition to talents and interests as well as external factors in the form of facilities and infrastructure, and socioeconomic levels.

Furthermore, the understanding of learning achievement was put forward by Abdullah (in Nasir, 2020) as follows: Learning achievement as an indicator of quality in knowledge mastered by children. High and low learning achievement can be an indicator of more or less mastered by children in certain fields of study or activities.

From the various achievements above, it can be concluded that learning achievement is the result achieved after carrying out learning activities, these results are real skills that can be measured directly using learning outcome tests. Learning achievement is manifested in the form of numbers or values. This can be seen on the list of students' grades obtained after taking semester exams.

Furthermore, Slameto (in Darmawati, 2019) who proposed two techniques commonly used to see student achievement, namely techniques that are "Not tests" generally use interviews, questionnaires, observations, assessment scales and check lists, while there are two types of "Test Techniques", namely:

Oral Test is a test conducted by educators by asking oral questions and students giving oral answers as well. The Written Test is a test in the form of questions and answers submitted in writing, this test consists of two, namely: Essay Test and Objective Test (False correct test, Multiple choice test, matchmaking test, fill-in or complete test).

The above types of tests can be performed on formative assessment and summative assessment. Formative assessment is carried out to obtain feedback from teaching efforts that have been carried out by educators at the end of the lesson unit while summative assessment is directed to the success of students learning a teaching program, for example in quarters, semesters, or the end of schooling. Some of these things aim to get the achievement of student learning outcomes

The intellectual ability of students greatly determines the success of students in obtaining achievements. To find out whether someone is successful in learning, it is necessary to do an evaluation, the goal is to find out the achievements obtained by students after the teaching and learning process takes place.



The achievement can be interpreted as the results obtained because of the learning activities that have been carried out. However, many people assume that what is meant by learning is seeking knowledge and studying.

There is another more specific meaning that learning is absorbing knowledge. Learning is a change that occurs in human behavior. The process will not occur if there is no one to encourage the person concerned.

Learning achievement is inseparable from learning activities, because learning activities are a process, while achievement is the result of the learning process. Understanding the notion of learning achievement in general must point to the understanding of learning itself. For this reason, experts express different opinions according to their views. But from the different opinions we can find a point of similarity. In relation to learning achievement, Poerwanto (2019: 28) provides an understanding of learning achievement, namely "the results achieved by someone in learning efforts as stated in the report card."

# C. Learning Process Media

What is learning media? And how important does learning media play a role in the teaching and learning process? Learning utilizes the environment as a learning tool / medium in the teaching and learning process, then students will have a good understanding of the material obtained, so it is likely that by paying attention to the teaching tools / media, learning objectives will be achieved effectively and efficiently. Variation in learning by making the environment a fun learning medium will support lessons that are not boring and even make learning more effective.

In the teaching and learning process there are many factors that affect the achievement of learning objectives including educators, students, the environment, methods / techniques and learning media. In fact, what happens in learning often happens that the teaching process runs and takes place ineffectively. A lot of time, energy and costs are wasted while learning goals cannot be achieved and there is even noises in communication between teachers and students. The above is still often found in the learning process so far.

With the existence of learning media , oral and written traditions in the learning process can be enriched with various learning media. With the availability of learning media, educators can create various classroom situations, determine teaching methods to be used in different situations and create a healthy emotional climate among students. Even these learning tools/media can further help educators bring the outside world into the classroom. Thus abstract and foreign ideas become concrete and easily understood by students. If this learning tool / media can be used appropriately and professionally, the learning process will be able to run effectively.



#### D. IT-Based Learning Media

Information is defined as the result of processing data used for a purpose, so that the recipient will get stimuli to perform actions. Technology is the result of human engineering in the form of a set of tools that help humans in working.

So IT (*Information Technology*) can be interpreted as a set of tools that help in working with information and performing tasks related to informal processing and the process of conveying information from the sender to the receiver will be faster, wider spread, and longer storage. So it can be concluded that information technology is a combination of computer technology with communication technology. IT (*Information Technology*) deals with the processing of data into information and the process of distributing data / information within the boundaries of space and time. Information technology is the development of computer technology combined with telecommunications technology.

IT-based learning is learning that combines a learning process with the use of learning media. The media is technological, be it in the form of the internet, the use of video, LCD (infocus) and others. An IT-based learning process allows students to be able to explore, be creative, adapt to the times, and of course add insight and knowledge.

The importance of a medium in learning also confirms that the role of IT-based learning is also very important. Currently, almost all schools have introduced IT-based learning in their schools.

- a) More innovative and interactive learning systems;
- b) Able to cause a sense of pleasure during learning, so that it will increase the motivation to learn students;
- c) Able to combine text, images, audio, music, animation images or videos in a unity that supports each other so as to achieve learning objectives;
- d) Able to visualize abstract material;
- e) Storage media that is relatively easy and flexible;
- f) Bring hard-to-obtain or dangerous objects into the learning environment;
- g) Display objects that are too large into the class; and
- h) Display objects that cannot be seen directly.

### E. The influence of IT-based learning on learning achievement

IT-based learning, which is currently widely used in schools, especially in cities, has a huge influence on student achievement. The teaching and learning process that uses learning media will be able to facilitate the teaching and learning process, besides that



it makes the teaching and learning process more effective and efficient. The use of media, especially IT-based media, in addition to helping students in learning, also adds knowledge to students about how to use technology in learning. This allows students to keep up with the times.

# **RESULTS AND DISCUSSION**

In the law on national education, it is stated that national education is functioned to educate the nation's life and develop Indonesian people as a whole, which includes having faith and devotion to God Almighty and having noble ethics, having knowledge and skills, physical and spiritual health, a steady and independent personality and a sense of community and national responsibility. Such theoretical reviews must certainly be confronted with concrete reality. And concrete statements, especially global competition,

It seems to be according to the establishment of the "excellent school". (The fact of underdevelopment and underdevelopment in Indonesia's hinterlands is certainly a problem in itself as well.) According to Harsya Bachtiar (2019: 29), since the Dutch era, there has also been a distinction between schools with high and low quality education. In the 40s the Dutch government's education budget for village schools was 5 guilders/students. While for Dutch children's schools 45 guilders / students. Dutch school educators are graduates of Dutch higher education, while village school educators are graduates of educational schools such as SGB in the country. Without such distinctions, it is difficult for a nation to find highly capable people. Furthermore, Harsya (2019: 29) said that in a democratic country like America there is also a distinction, the quality of education." Schools for the Kennedy family and 400 elite families are listed on the Social Register, in contrast to schools for the community. Even egalitarian communist countries have different educational programs for the elite and ordinary people. Soviet or *Leningrad* universities, for example, had great libraries and larger budgets than other universities. It was at the Soviet University and Leningred that Soviet luminaries studied. If education is more evenly distributed, a superior nation will not be obtained. The advantages of excellent schools are seen in terms of adequate facilities such as air-conditioned classrooms, computer laboratories, biology, physics, and chemistry laboratories, music laboratories, swimming pools, tennis courts, basketball, volleyball and badminton courts as owned by schools in other big cities.

In contrast to schools located in remote areas whose access may not be easy so that it is the reason for schools located in remote areas do not have complete infrastructure, let alone to provide IT-based learning media. This problem seems to marginalize schools in remote areas. Even though both urban and village schools all certainly have the same goal. The role of the government in this case is very influential, where with its policies and evenly distributed budgets between schools in remote



areas and in urban areas, so that even though the school is located in a remote area but has the same infrastructure so that there is no difference in knowledge between students whose schools are in the city and students whose schools are in villages.

#### **CONCLUSION**

Basically, if this curriculum is implemented, the quality of education in Indonesia will progress, an example of the quality of the workforce of educators, schools, and potential students. If this equality can be realized in the world of education, many impacts will be felt from various fields, especially human resources, but we must not only focus on equity, we must be able to think ahead that with IT Indonesian education will be more advanced and developed because the lagging behind of information technology has been overcome, regardless of this, the adverse effects may be from IT will be felt by students whose schools are still lagging behind and does not support the means. The infrastructure and media that exist in the school, in addition, the inability of experts or educators who implement this curriculum because most educators do not care about the potential of students.

In schools that are located in remote areas with urban areas, there are always differences both from infrastructure, teaching methods and others. This has resulted in the assumption that urban schools are superior to schools in villages. From this, IT learning, which can now be felt not only in city schools but also in village schools, is expected to be able to help minimize the gap between students who come from city schools and from schools in villages. In other words, both from city schools and schools in the village students both have the ability and expertise in terms of technology, and what they know / information they get from school is not hampered by the media.

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