

Application of Information Technology at School to Create Competitive Advantages on Disruption Era

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Abstract: The existence of information technology that continues to grow and move exponentially has an influence on the system of educational institutions to increasingly compete to provide better quality of education than among its competitors. The context in which educational institutions currently serve educational service users who are familiar with the "internet of things", should have taken schools as educational institutions to think about and offer a far better quality of education by paying attention to various aspects. The purpose of this paper will explain how the role of information technology as part of the competitive advantage of schools as an educational institution amidst the proliferation of new educational institutions both physically and substitute. The research method used in this paper is a literature study. The results of the study show that by using the reference of the five forces of competition, educational institutions can analyze the position of development and self-readiness in determining the competitive advantage that will be carried out. Next the school can optimize the school's internal resources. This starts with building qualified teachers who are able to update with technology. Furthermore, the school is aware of the potential of information technology as an asset but also challenges in providing quality education for students. This can be started by building adequate infrastructure, so that the application of information technology as a competitive advantage can be implemented within the scope of the support system and the process of learning activities.

1 INTRODUCTION

In the era of technological advancement like nowadays, the community is facilitated very easily in carrying out their activities. The mobilization and dynamics of the activities carried out are indirectly influenced by technological progress whether in the family, work, or other community activities. Technology is present in the community as part of tools to facilitate, accelerate and provide services in accordance with the needs needed by the community. As an example of the form of ease felt by the community in the last few years located in the area of gadget and the internet, which can facilitate the community in meeting their needs such as in the scope of transportation, shopping for clothing and food. When observed all these things only depend on typing skills supported by adequate gadgets or technology and the internet. This internet of things is a feature of people's lives today so that almost every activity carried out by the community is not

separated from the internet and the technology used in it

This significant technological development has an impact or influence in various areas of service or community work areas today. Naylor (2017) explains that in the current era there is a revolution of technology which includes the combination of interrelated technologies. Thus the existence of a change from one part of the technology will affect other technology systems and of course this affects the community as users. Thus it can be interpreted that the technological revolution in the last few years has been able to provide opportunities for every organization to advance by using perspectives that provide opportunities and better quality because of the technology in it. Changes caused by the advancement of technology, also become an opportunity for organizations to compete healthy and smart in displaying products or services they have. The area of change that is influenced by technological progress is not only applicable to

business organizations but also must be understood by educational organizations namely schools. Schools as formal education institutions should be sensitive to change. Fattah (2004) explains the nature of change that can be understood as a different situation, and can be related to structure, people and technology. These three components are dynamic as a factor of changes in the scope of educational institutions.

Therefore, it is related to the scope of change in an organizational management system, so that technological progress that occurs exponentially also needs to be a concern of the school as one of the educational institutions. Why is that? Because schools become one of the institutions that have a great opportunity to educate future generations to have the competencies and skills of students needed in the future. Schools must be aware that in the midst of a technological era that is so fast, the school should also think about how to provide better educational quality to students. In this case schools as educational institutions should think about the concept of competitive advantage in the era of technological progress. One implication is using technology as a support service and facilities used in classrooms. This study will discuss the application of technology as part of the school's competitive advantage in realizing a better quality of education. Next in this paper will also be explained about what should be done by the school in addressing this disruption era in maximizing the quality and quality of education.

2 RESEARCH METHODS

The method used in this study is literature study. Literature study is a method that is by looking for relevant theories based on problems or phenomena that occur.

3 RESULT AND DISCUSSION

The existence of schools and technology are the two things that are closely related in creating competitive advantage. Both components can be interconnected and have a positive influence to improve the quality of education both in the scope of input, the process to the output produced. Therefore, the existence of these two components must support each other. Schools as educational institutions can determine the type of information technology that will be used so that it can help sustain the performance of a school in the field of services to the wider community or to

students through the learning process in the classroom.

Rochaety, et al (2005) explained that a school as an educational institution requires components to run educational operations such as teachers, students, facilities, organizational structures, and areas of cost which all of them can be operated to carry out quality education practices. Of course, it is supported by the existence of a system or information technology which consists of hardware, soft-ware and brain ware. Therefore, schools basically have the capital to control some of these components and optimize them so that they can have competitive advantage with the surrounding educational institutions. The first step that will be taken in designing competitive advantage of educational institutions is by knowing what is a factor of disruption both in the scope of education management and its implementation. One of them is the existence of an "internet of things" a new breakthrough in various fields that emphasizes the rapid movement. Naylor (2017) explained that one of the key elements of the connected world is the sensor chip, called telematics so that it can provide direct feedback to the data center which is then better known for the presence of new breakthroughs, namely Wifi. Through this, we can get a clearer picture of how technological progress is accelerating and bringing about change. Therefore it is important for schools to use the opportunity to read the opportunities of advancing information technology that moves very quickly.

Underlying that technology is an important role in educational institutions in the current era of distractors, it is important for schools as educational institutions to be able to do the following:

a. Establish five competitive forces

In creating competitive advantage in educational institutions it is important for schools to see and determine the five competitive forces that will be used. Thus it can be a first step for schools to identify the use of information technology which is also used similarly by educational institutions that are in the vicinity. Michael Porter, 1995 in the book of education management provides a visualization of the five forces of competition that can also be contextualized within the scope of education. Rochaety, et al (2005) describes five competitive forces as follows.

Based on the picture of the five strengths above, there are several things that can be considered by policy makers in educational institutions, namely schools. First, schools can pay attention in terms of competition with existing educational institutions.

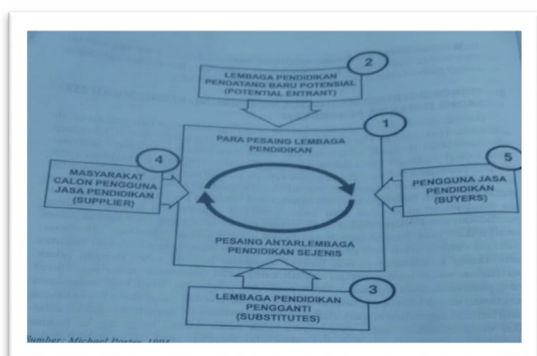


Figure 1: Five competitive forces

In this case the school in this time of distraction can be more creative in creating and offering affordable quality education by combining speed due to the application of technology in it until finally the school can offer the best quality education. Thus technology is present as a support for the school system both in terms of administration and learning process. The second thing that needs to be emphasized is the existence of threats from newcomer educational institutions. In the current era the concept of distance learning has become part of the education process, therefore it is important for schools to see opportunities in using technology as part of providing innovative educational services.

The third of the five competitive forces is also emphasized by educational institutions that offer substitute education services. In the current era many substitute educational institutions offer ease of learning. Support from technology that facilitates the transfer of files to replace the learning process in the form of teaching materials, e'books, reference books that are of course offered at a lower price so that this can be a part thought by schools to use information technology as part of the solution to anticipate threats from substitute education institution. This can be done with the school using a data based system or learning portal so that students can be facilitated in accessing learning materials or sources. Next the fourth and fifth things from the strength of competition emphasize the community as providers and users of education services. In an era where everything uses the internet, it becomes a challenge and an opportunity for schools to continue to provide quality education services.

b. Optimizing internal school resources

In realizing competitive advantage in the education sector, one of the things that schools can do is to implement an internal system of educational institutions that is increasingly solid and optimal. This begins with applying the knowledge, technology and abilities of the teacher's pedagogy in teaching. In the era of technology, as now, it is very

important for schools to be able to ensure that the human resources they possess have been able to use technology as part of their daily activities at school. Aljufri (2011, p. 28) describes three groups of use of information technology in the scope of education.

These three things are :

"Groups that use computers to deliver teaching material. The use of the second group is to distribute teaching materials through the internet network. The use of the third group is as a medium of communication with experts, resource persons or other students, so that students get feedback from lecturers, experts or other sources. "

Based on the explanation above, it can be understood that being a hope in applying technology in this case the computer does not only stop to convey learning material but to the stage of communication in learning. Furthermore, it is important for a teacher to be able to develop his competence in the field of technology applications so that it can lead to a meaningful learning process for students. Maloy et al., (2011) explained that there are five technological steps in a computer that can change the teaching and learning process for teachers and students. Among them are "visual learning, accessing and assessing information, collaboration and engagement, feedback and creativity". Based on these five things it can be understood that technology such as computers can be a tool that can help the learning process become meaningful. Information technology used in learning can influence the approach used by teachers in student-oriented teaching, thus the learning process in the classroom can have an effect on students in understanding learning. Of course a teacher still plays an important role in holding authority in the classroom and guiding students to follow the learning series so that through directing and mentoring teachers and information technology that is used can provide space for students and schools in their scope to provide quality education services for students and users of education services. Furthermore, in optimizing the internal components that are owned, the school can also maximize facilities or infrastructure so that it can support the effectiveness of learning that can contribute to realizing the quality of affordable and quality education.

4 CONCLUSION

Through the discussion that has been done above, the following conclusions can be drawn:

1. Technological developments bring influence in the life of society at large and influence organizations including schools as one of the educational organizations.
2. Schools and information technology are the two things that are interconnected to realize competitive advantage in providing quality education services.
3. In realizing competitive advantage the school must establish five competitive forces. As a first step for schools to identify the use of information technology which is also used similarly by other educational institutions. Thus the school can develop creativity and methods in using information technology as part of providing quality education services.
4. Optimizing the role of the teacher as an internal component of the school is an important part so that the teacher can optimize the learning process with information technology.

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