



Evaluation of the Use of Information and Communication Technology Case Study at SLB N Boyolali

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Abstract

This study aims to review the use of ICT in learning at SLB N Boyolali, with all educators in the school as respondents. This study uses a qualitative descriptive method with a case study approach, and examines the use of ICT using strategic management theory by David (2011). Data collection techniques used in this study were observation and interviews. The data analysis used was Creswell's analysis and interpretation technique. The results of the study show that ICT in learning in terms of strategic planning, implementation, and evaluation have not been fully utilized by all educators and not all students get the same learning experience. This is due to the lack of understanding of educators in utilizing information and communication technology is still very limited.

Keywords: *Information and Communication Technology; Case Study; Special School*

Introduction

The use and utilization of information and communication technology (ICT) has been conducted by all levels of society in the world. It is undeniable that ICT has become an integral part of people's lives. In Indonesia, the use of ICT has also developed and has begun to be applied in the field of education. The use of ICT in education has an impact on changes in learning patterns. The existence of ICT will help teachers in facing global demands to replace traditional learning with technology-based teaching and learning tools and facilities (Ghavifekr & Rosdy: 2015). Husain (2014) explains that changes in learning patterns are considered urgently needed to reform a conventional learning system which is considered obsolete and irrelevant to the dynamics of the times that are developing more rapidly and intensively triggered by the development of science and technology. Yakub (2014) explained that basically as an effort to improve the quality of education in Indonesia, a learning process based on information and communication technology is needed, so that the quality of Indonesian education does not lag behind other countries.

The use of ICT in education in Indonesia has also received support from the Ministry of Education, Culture, Research and Technology. In the strategic plan of the Ministry of Education, Culture, Research and Technology of Indonesia for 2014-2019, information and communication technology is one of the priority agendas that every educational institution is required to provide and give 21st century skills, one of which is the use of technology. The strategic plan also explains that there are programs to

increase the utilization of technology and information, as well as communication in education. Some implementation indicator of the program is increasing the number of educational units that utilize ICT for e-learning; and increasing the number of human resources with ICT competencies for e-learning. According to Mukaromah (2020), teachers are the spearhead of the use of ICT in education because teachers interact directly with students. Teachers are required to be technologically literate which is in line with the demands of 21st century educationsuch as getting easier to find learning resources, having more options for using and utilizing ICT, increasing role of media and multimedia in learning activities (Norhayati & Jayanti: 2020; Amin: 2013).

The indicators in the strategic plan explain that each educational unit should ideally be able to utilize ICT in the learning process and improve the ability of educators to use ICT. The use of technology and information in learning such as the use of multimedia presentations, the use of the internet, the use of e-mail and websites, as well as the use of social networks in the learning system have an effect on supporting a quality learning process (Munadi, 2013; Yakub, 2014). Based on the explanation above, the use of information and communication technology in learning must be applied in various educational units. One of them is the Special School. The use of information and communication technology has begun to be applied in learning in schools, one of which is the Special School. Ayuingtias (2019) explained that the introduction of ICT for students with special needs is also important so that there is no gap between regular students and students with special needs. The Training and Development Agency for School (2009), states that information and communication technology for learning children with special needs must be able to be used as assistive technology in practice questions, as learning aids and must be adapted to the characteristics of students.

The objectives of implementing ICT in learning according to Sharma, et al (2016) are implementing the principles of lifelong learning, increasing the variety of educational methods/media, promoting equal opportunities to obtain education and information, developing systems for collecting and disseminating educational information, introducing technological literacy for students, and developing distance education with national content. The application of ICT in special schools is inseparable and becomes part of the strategic management used by schools. The application of ICT in learning in schools can be assessed for its success by assessing the strategic management that has been conducted by schools especially on the application of ICT in the learning process. Management education is made by increasing the capacity of human resources in the field of information technology, expansion of skills and knowledge, planning, operation, maintenance and monitoring, making deficits improve these capabilities will produce useful right output (Nitayadnya: 2014).

One of the special schools in Central Java is SLB N Boyolali. In this case, researchers are interested in knowing and assessing the use of ICT in learning by using the strategic management method by David (2011). According to David (2011), strategic management can be defined as the art and science of the formulation, application, and evaluation of various decisions that enable the company to achieve its goals. According to Siagian (2004), strategic management is the process of formulating and implementing plans and activities related to vital, passive, and sustainable matters for an organization as a whole. According to Wahyudi (1996), one of the benefits of strategic management in education is that strategy-making activities will enhance the ability of education to prevent arising problems in the future.

Research Method

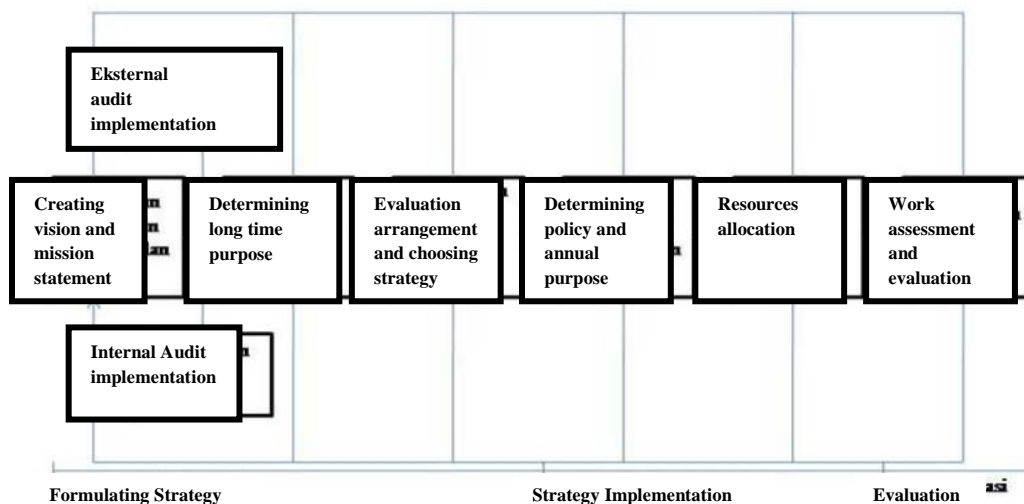
This type of research is a qualitative approach with a case study method. Creswell (2015) explains that case study research is research using a qualitative approach with the aim of exploring real life, contemporary limited systems (cases) or various limited systems (various cases), through detailed and in-depth data collection involving various sources of information and report it descriptively.

This research was conducted in August 2020. The school that is the object of this research is SLB N Boyolali. The subjects in this research are class teachers and school principals. This study uses data collection techniques with observation and interview methods. Meanwhile, the data analysis used in this research is Creswell's analysis and interpretation technique.

Result and Discussion

Based on the results of observations and interviews conducted, it was found that the use of information and communication technology in SLB N Boyolali was not applied in every class and level of education. In addition, based on the results of observations and interviews, it is explained that the use of information and communication technology in learning has not been going well because educators do not fully understand information and communication technology. Evaluation of strategic management on the application of information and communication technology in SLB N Boyolali used an adaptation of David's (2011) model theory.

David (2011), explains that the strategic management process consists of three stages as follows: strategic planning, strategy implementation, and strategy evaluation. At the planning stage, it is conducted by reviewing the school's vision and mission, as well as planning in the learning process. The stages of implementing the strategy are conducted by reviewing the implementation of learning. Meanwhile, at the evaluation stage, it is conducted by reviewing the suitability between planning and implementation by looking at the weaknesses or deficiencies obtained. The strategic management process according to David (2011) can be described in the following chart:



The implementation of David's (2011) Strategic Management model based on the management function in the application of information and communication technology in SLB N Boyolali is as follows:

a. The Stage of Strategic Planning (Planning and Organizing)

Every educational institution, in this case special schools, must have its own vision and mission. The vision of SLB N Boyolali is "The realization of optimal services for Children with Special Needs so that they are independent and play a role in the life of society and the nation". While the missions of SLB N Boyolali are:

- 1) Improving the quality of special education services.
- 2) Expanding learning opportunities and skills.
- 3) Educating and training students according to their talents and abilities.
- 4) Providing skills according to the child's ability.
- 5) Establishing a sense of unity and oneness among school residents.
- 6) Forming noble character as a provision for the continuity of the next education.

Based on the vision and mission of the SLB N Boyolali, the application of information and communication technology is still explicitly stated. In addition, based on the results of interviews, the use of information and communication technology has not been included in all educators in the lesson plans. In lesson planning, the majority of educators still use conventional learning methods, such as lecture and discussion methods without involving information and communication technology.

The conventional learning process that is still applied by teachers tends to be less attractive to students so that students are less active in participating in learning and even many students are not focused or sleepy causing student learning outcomes to be less than optimal (Suwastarini, et al: 2015). Supposedly, learning in the 21st century refers to the Strategic Plan of the Indonesian Ministry of Education, Culture, Research, and Technology for 2014-2019. The strategic plan states that information and communication technology is one of the priority agendas that every educational institution is required to provide and provide 21st century skills. One of them is the use of technology.

b. Strategy Implementation Stage (Actuating)

At the implementation stage or in relation to education, specifically in the learning process, the use of information and communication technology has begun but is not optimal and it is only limited to the use of learning videos and *power points*. Its use is limited only to certain types of impairment such as the deaf. In addition, in its application it also adjusts to the ability of educators. Not all educators can use information and communication technology. Azis (2016) explains that the lack of understanding of educators on the use of information and communication technology is the main obstacle to using technology in the learning process. Educators must have the ability in the field of technology so that they can use it for the learning process in the classroom (Asmawati, 2014; Virnes, 2007).

Implementation of the learning process using information and communication technology encountered obstacles. Relevant research by Upitasaki (2020) explains that the main obstacles in using ICT in learning are that teachers feel less confident in integrating ICT, inadequate competencies, and lack of access to resources. Another obstacle according to Sawitri, et al (2019) is the unavailability of human resources to utilize ICT in the learning process because teachers still do not consider the importance of the role of ICT in improving the quality of learning.

c. Strategy Evaluation Stage (Controlling)

At the evaluation stage, planning and implementation of learning by applying information and communication technology has not run optimally. The main factor inhibiting the application of information and communication technology in learning is the lack of understanding of educators on information and communication technology so that educators have not been able to operate information and communication technology in learning by adjusting to the type of disability of students Upitasaki (2020). The main factor is that the use of information and communication technology is still very minimally applied in learning. Besides that, only students with the type of hearing impairment who can get the opportunity to get learning using information and communication technology because educators

do not know how to apply information and communication technology in learning for students with other types of disabilities.

Educators' understanding of information and communication technology is still very limited to technology to facilitate communication. Therefore, educators have not been able to operate information and communication technology in learning. In fact, there are many programs in the 2015-2019 Strategy Plan of Ministry of Education and Culture to increase the utilization of technology and information as well as communication in education with program indicators such as increasing the number of educational units that utilize ICT for *e-learning*; and increasing the number of human resources with ICT competencies for *e-learning*. This is also supported in Permendiknas Number 16 of 2007 concerning Academic Qualification Standards and Educator Competencies which states that an educator must have the ability to utilize information and communication technology for self development. Research conducted by Ghavifekr & Rosdy (2015) found that the use of ICT in learning has great effectiveness for teachers and students. The main factor in the success of ICT based teaching and learning is that there must be good preparation from teachers, readiness of tools, and supporting facilities.

According to Balmeo (2014), information and communication technology that is applied to children with special needs is technology that is used as a learning aid, assistive technology in practice questions, and can be adapted to the characteristics of students. Learning aids or media for children with special needs are often referred to as assistive technology (Humairok & Wisyastono, 2020). Yakub (2014) added that the use of information and communication technology in the learning process can be conducted to develop strategies, learning methods that are more interesting, innovative and effective. However, based on the results of research, the use of information and communication technology in learning at SLB N Boyolali is still rarely used and cannot be developed more attractively and cannot be adapted to the characteristics of each student.

Conclusion

Utilization of information and communication technology in learning at SLB N Boyolali experienced several obstacles. Based on the results of a review using the David (2011) method, planning for the application of information and communication technology is still explicitly applied. There is no specific statement that explains how schools use information and communication technology in learning. In practice, schools are still trying to use information and communication technology but not all educators and all students can use it. The main factor causing the less optimal application of information and communication technology in schools is the understanding and ability of educators who are still low. Therefore, researchers provide alternative solutions in the form of development programs for educators such as training programs, FGD, programs to take part in technology utilization seminars, and visiting expert programs (lecturers). Based on this solution, it is expected that educators can utilize information technology in learning.

References

- Amin, S. N. (2013). An effective use of ICT for education and learning by drawing on worldwide knowledge, research and experience: ICT as agent for education (A Literature review). *Scholarly Journal of Education*, Vol.2, No. 4, pp. 38-45. ISSN 2315-6155. [http:// www.scholarly-journals.com](http://www.scholarly-journals.com).
- Asmawati. (2014). *Pengelolaan Kegiatan Pengembangan Anak Usia Dini*. Jakarta: Universitas Terbuka.

- Ayuningtyas, S. &. (2020). Pendampingan dan Pengenalan Teknologi Berbasis Internet kepada Anak Berkebutuhan Khusus di SLB C Budi Daya, Jakarta Timur. *Jurnal Komunitas: Jurnal Pengabdian Kepada Masyarakat*, Vol. 3, No. 1, pp. 51-59. ISSN: 2621-6434.
- Azis, W. A. (2016). Analisis Kualitatif Pemanfaatan Komputer dalam Proses Pembelajaran Anak Usia Dini. *Tunas Siliwangi* , Vol.2, No.2.
- Balmeo, M., dkk. (2014). Integrating Technology in Teaching Students with Special Learning Needs in the SPED Schools in Baguio City. *The IAFOR Journal of Education*, Vol II, Issue II.
- Creswell, J. W. (2014). *Penelitian Kualitatif dan Desain Riset*. Yogyakarta: Pustaka Pelajar.
- Daryanto, dkk. (2013). *Pendidik belum memahami sepenuhnya mengenai teknologi informasi dan komunikasi*. . Yogyakarta: Gava Media.
- David, F. R. (2011). *Strategic Management: Concepts and Cases*. Florence: Francis Marion University.
- Erwin Sawitri, d. (2019). Hambatan dan Tantangan Pembelajaran Berbasis Teknologi Informasi dan Komunikasi. *Prosiding Seminar Nasional Pendidikan Program Pascasarjana Universitas PGRI Palembang*, (pp. 202-213). Palembang.
- Herawan, E., dan Nani Hartini. (2012). *Manajemen Pendidikan*. Bandung: Alfabeta.
- Humairok. U, W. (2020). Analisis Perbandingan teknologi Pendidikan Anak Berkebutuhan Khusus di Negara Indonesia dan Negara-Negara Eropa (Finlandia, Jerman, Inggris, Belanda). *Biology Education Science & Technology*, Vol. 3, No. 1. pp. 32-38. ISSN: 2654-4652.
- Husain, C. (2014). Pemanfaatan Teknologi Informasi dan Komunikasi dalam Pembelajaran di SMA Muhammadiyah Tarakan. *Jurnal Kebijakan dan Pengembangan Pendidikan* , Volume 2, Nomer 2, 184-192.
- Kementerian Pendidikan dan Kebudayaan Indonesia. (2015). *Rencana Strategis Kementerian Pendidikan dan Kebudayaan Tahun 2015-2019*.
- Mukaromah, E. (2020). Pemanfaatan Teknologi Informasi dan Komunikasi dalam Meningkatkan Gairah Belajar Siswa. *Indonesian Journal of Education Management & Administration Review*, Vol.4, No, 1.
- Munadi, Y. (2013). *Media Pembelajaran; Sebuah Pendekatan Baru*. Jakarta: Referensi.
- Ni Nyoman Suwastarini, D. (2015). Pengaruh Implementasi Pembelajaran Berbasis Media Teknologi Informasi dan Komunikasi Terhadap Motivasi dan Hasil Belajar Matematika Siswa SDLB B (Tunarungu) Pada SLB B Negeri PTN Jimbaran. *e-Journal Program Pascasarjana Universitas Pendidikan Ganesha*, Volume 5, No 1.
- Nitayadnya, I. W. (2014). Pemanfaatan teknologi Informasi Dalam Pembelajaran dan Penelitian Bahasa dan Sastra. *Multilingual*, Vol. 13, No. 1. pp. 1-10.
- Permendiknas No. 16 Tahun 2007. (2007). *Tentang Standar Kualifikasi Akademik dan Kompetensi Guru*.
- Rosdy, S. G. (2015). Teaching and Learning with Technology: Effectiveness of ICT Integration in Schools. *International Journal of Research in Education and Science*, Vol. 1, No. 2. ISSN: 2148-9955.
- Sharma, d. (2016). Important of ICT in Education. *International Journal of Advance Research in Science and Engineering*, Vol. 5, No. 8. ISSN: 2319-8354.

- Sheryl Jayanti, N. (2020). Pemanfaatan Teknologi untuk Mendukung Kegiatan Belajar Mengajar Secara Mandiri (Studi Kasus Penggunaan Poadcast oleh Mahasiswa di Kota Palangkaraya). *Jurnal Humaniora Teknologi*, Volume 6, Nomor 1, ISSN: 2443-1842.
- Siagian, S. (2004). *Manajemen Strategik*. Jakarta: Bumi Aksara.
- Training and Development Agency for School. (2009). *Including Pupils with SEN and/or Disabilities in Primary ICT*. Manchester: TDA.
- Upitasari, R. (2020). Hambatan Penggunaan TIK Dalam Pembelajaran. *Lentera: Jurnal Diklat Keagamaan Padang*, Vol. 4, No. 2.
- Virnes, M., dkk. (2007). Technology in Finnish Special Education - Toward Inclusion and Harmonized School Days. *Informatics in Education*, Vol.6, No.1, 103-114.
- Wahyudi, A. S. (1996). *Manajemen Strategik: Pengantar Proses Berfikir Strategik*. Yogyakarta: Binarupa Aksara.
- Yakub dan Hisbanarto. (2014). *Sistem Informasi Manajemen Pendidikan*. Yogyakarta: Graha Ilmu

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