



## IMPLEMENTATION OF TECHNOLOGY-BASED INTEGRATED LEARNING (ICT) IN PRIMARY SCHOOLS

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### Abstract

The thematic learning model began to be discussed by education experts in 1999. Thematic learning which refers to KBK and KTSP has been implemented since 2005. According to Fogarty, there are 10 types of thematic models, but only 3 have been studied by Indonesian education experts, namely the spider web type thematic learning model, the integrated type thematic learning model and the connectedness model thematic learning model. Thematic learning is a teaching and learning approach that involves several subjects in one theme to provide meaningful experiences for students. Meaningful experience means that children understand the concepts they have learned through direct experience and connect them with other concepts they already understand. To implement thematic learning in elementary schools, there are several components that need to be discussed first, such as methods, assessment, media, learning steps and the role of the teacher. After that, we will discuss the steps for preparing thematic learning as well as examples of the thematic matrix, syllabus and lesson plans.

**Keywords :** Learning, Integrated, Technology

### Introduction

According to (Maryanto, 1999: 3) in the Journal (Yulieth-Rafael, 2020) Integrated learning is a learning model that tries to combine several subjects. One of them is combining subject matter or sub-subject matter or fields of study, information like this is also called curriculum, or teaching across fields of study. Integrated learning is also a learning model which can be said to be a learning approach that involves several fields of study to provide meaningful experiences to students. It is said that integrated learning is meaningful, meaning that students will understand the concepts they are learning through direct experience and connecting it with other concepts that they already understand. According to (Azizah et al., 2021) Thematic learning is integrated learning that uses themes to link several subjects so that it can provide meaningful experiences for students. Thematic learning places more emphasis on student involvement in the learning process actively in the learning process, so that students can gain direct experience and be trained to discover for themselves the various knowledge they learn. Through direct student experience, students will understand the concepts they learn and connect them with other concepts they already understand. This is because learning must be meaningful in the child's orientation and development. Conceptual connections between the subjects studied will form a scheme, so that students will gain completeness and completeness of knowledge. Apart from that, the application of thematic learning in elementary school will

really help students in forming their knowledge because it is in accordance with the development stage of elementary school students who still see everything as a whole (holistic). The development of information and communication technology is rapidly spreading to all aspects and levels of human social life. We can see that Android users are not only limited to adults, children and primitive groups are also using this technology. At school, not only teachers, students are also addicted to this futuristic device. Unlimited places and times, people everywhere use information technology devices. This is both an opportunity and a challenge for the world of education. Unfortunately, these facilities have not been maximized to support the teaching and learning process in the classroom. Government policy, through the refinement and implementation of the 2013 curriculum in schools, means that schools no longer have any reason to reject the use of ICT in learning. All learning activities must be integrated with ICT... including at the elementary school level. Classroom management is designed in such a way that it accommodates classical, group, pair and individual work. The application of thematic learning using ICT media shows that students are actively learning, increasing students' interest in learning, students' insights are becoming more open, and of course students are becoming more familiar with ICT tools. Teachers must be able to make maximum use of ICT or ICT in implementing learning activities carried out in class. Student-centered learning strategies and methods are very appropriate in developing students' knowledge and skills. Etymologically, learning consists of two words, namely media and learning. The word media comes from Latin which means the introduction of a message from the source of the message to the recipient of the message (Heinich, 2002). Learning is an interaction between students, students and teachers, and students and learning resources in a learning environment (Ministry of Education and Culture, 2014). So learning media is anything that bridges interactions between students, students and teachers and students and learning resources, so that messages in the form of information or knowledge can be received by students. Learning media is also referred to as a teaching and learning process aid that can be used to stimulate students' thoughts, feelings, attention and abilities or skills so that they can encourage an effective learning process. In this way, learning material that is difficult to convey to students can be overcome by learning media. According to(Yulieth-Rafael, 2020) In the learning process, there are five main components that are interrelated. The following is a brief explanation of the five components:

1. Communication  
Effective communication between teachers and students is very important in the learning process. This includes conveying information, clarification, and providing feedback.
2. Teacher/Lecturer  
The role of teachers or lecturers in guiding and accompanying students in the learning process is very vital. They are responsible for delivering material, facilitating discussions, and managing overall learning
3. Student  
Students as learning subjects have an active role in constructing knowledge. They need to be involved in the learning process through discussions, questions and answers, and various other learning activities
4. Materials/Teaching Materials  
The material or teaching materials presented must be relevant, interesting, and appropriate to the student's level of understanding. The use of various learning resources such as journals, books and other learning media can also support the learning process
5. Time and Place  
The learning process can take place whenever and wherever needed. Organizing flexible learning can support the success of the learning process

In the beginning, learning media only functioned as a tool for teachers to teach in the form of visual aids. In line with the development of Science and Technology in the field of education. Currently, the use of learning tools or media is increasingly widespread and interactive with the support of Information and Communication Technology (ICT). In relation to ICT, ICT-based learning media is very relevant to current developments related to the Era of Revolution 4.0 which requires students to be sensitive to information openness. According to(Miftah, nd)The functions of learning media are as follows: (1) Changing the emphasis of formal education, which means using learning media that was previously abstract to concrete, learning that was previously theoretical becomes functionally practical (2) Generating learning motivation, in this case media becomes extrinsic motivation for students, because the use of learning media becomes more interesting and focuses students' attention (3) Providing clarity, so that students' knowledge and experiences can be clearer and easier to understand, the media can clarify this (4) Providing learning stimulation, especially students' curiosity. The power of curiosity needs to be stimulated

so that a sense of curiosity always arises which must be fulfilled through the provision of media. Technology is developing very rapidly, especially in the field of software, one of which is Microsoft Office. Increasing the quality of education will have an impact on increasing human resources in a country as well as increasing the workforce. A country will progress if it has quality resources, therefore improving the quality of education must be one of the focuses of a country. The role of teachers is very large, especially in preparing generations to face free competition which results in quality resources. Teachers have a very important position and strategy in developing the potential of students. Teachers need to always improve professionalism and learning as well as work efficiency and effectiveness towards achieving optimal results. From the description above, learning media has a very influential function in achieving learning goals. So, in using media, teachers must be able to use various types of media as best as possible, including conducting experiments or practice in front of the class so that students can more easily understand the learning material presented by the teacher. In other words, the material must be designed more systematically and psychologically. Apart from being fun, learning must be able to provide an enjoyable experience and meet students' individual needs. The criteria for good learning media to be used in elementary schools are child friendly, the message conveyed is clear and does not give rise to double meanings, can focus students' attention, and can motivate students to learn. According to (Rohman & Susilo, 2019) in the Journal (Hanannika & Sukartono, 2022) Thematic learning is a learning process that is full of meaning and has a multi-curriculum insight, namely learning that has the insight of mastery of two main things consisting of mastery of teaching materials that are more meaningful for students' lives and development of the ability to think maturely and act maturely so that they can be independent in solving life's problems. . Thematic learning is integrated learning that emphasizes student involvement in learning. Students are actively involved in the learning and empowerment process in solving problems, so that they can foster creativity according to their potential and tendencies which are different from one another. At the same time, by implementing thematic learning, students can learn and play with high creativity. This is because in thematic learning, learning does not merely encourage students to know (learning to know), but also learning to do (learning to do), to be (learning to be), and to live together (learning to live together).

### Research Methodology

Research method according to Sugiyono (2007) in the Journal (Darna & Herlina, 2018) is "scientific methods for obtaining valid data, with the aim of finding, developing and proving certain knowledge so that it can in turn be used to understand, solve and anticipate problems. In this study, researchers took a sample of elementary school students and teachers concerned with this research. Researchers took the school environment as the context for ICT-based thematic learning research in elementary schools. And researchers also input data through the facilities and infrastructure available in elementary schools and then take scores from research on facilities and infrastructure. Then, for the process of implementing ICT-based thematic learning, researchers took the criteria for whether they were Good, Adequate, or Poor regarding the abilities of elementary school students. And the final method is determining student learning outcomes using ICT-based thematic learning, and taking final data on research that has been carried out.

### Result & Discussion

The use of learning media can capture an object that is rare for students regarding learning material and the learning process can be improved so that no more students choose which subjects they like. With the presence of learning media in each learning process, it can increase students' positive attitudes in interested in all available subjects. The use of learning media also has a big influence on students, learning makes it easier to understand the purpose and intent of the learning material, and students can also develop curiosity and gain more real knowledge of the conditions when the lesson is carried out. (Moto, 2019). As the years go by, all aspects of life also develop, both in the social, cultural, economic, artistic and Information and Communication Technology (ICT) fields. Developments in the ICT sector are the most rapid developments in the current era. Reported in Wikipedia, ICT covers two aspects, namely information technology and communication technology. Information technology includes everything related to processes, use as a tool, manipulation and management of information. Meanwhile, communication technology is everything related to the use of tools to process and transfer data from one device to another. (Huda, 2020). According to (Widianto, 2021) Utilization of offline ICT media can be in the form of Computer Based Learning (CBL). Meanwhile, the use of online ICT media can be in the form of online learning or web based learning, and distance learning (network based learning) or integrated systems.. The use of Information

and Communication Technology in the world of education is increasingly widespread. Several schools and universities have planned the development of Information and Communication Technology in learning for students as a guarantee of educational quality. The teaching and learning process uses a lot of media such as laptops, computers, LCD projectors, audio visuals and is supported by internet/hostspot areas, digital libraries (e-libraries), digital books (e-books), digital learning (elearning), which can be freely accessible with students' computers/laptops.(Febriani et al., 2023). Using technology in learning expands students' knowledge and motivates them to learn how to use technology. The use of technology in the learning process can increase students' active participation. Technological developments along with the phenomenon of globalization have resulted in the acceleration of the exchange and dissemination of information. At the very least, the integration of technology in learning shows adaptation to current scientific advances. Using technology-based learning media is a challenge that is not easy. In using this media, consideration of several techniques is required to ensure its use is optimal and in accordance with learning objectives(Putra & Pratama, 2023).

## Conclusion

The implementation of technology-based integrated learning (ICT) in elementary schools is an innovative step in the world of education which aims to improve the quality of learning and facilitate students in accessing wider and more diversified learning resources. ICT-based integrated learning changes the role of students from passive recipients of information to active users of technology. The implementation of ICT-based integrated learning can also help teachers reduce workload, by utilizing the facilities and infrastructure provided by ICT.

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