Thematic Learning System as the Most Effective Method to Activate Students: A Systematic Literature Review

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Abstract

Learning is a part of student life, but not all students enjoy learning. Long texts and uninteresting content make students lose interest. We suggest changing the conventional learning method to a new way by using the thematic learning system as a learning tool to overcome this problem. Several kinds of literature have used learning system technology to help students learn new concepts. By combining digital and physical environments, learning activities can be more enjoyable. This article wants to evaluate the effectiveness and results of using the learning system for educational purposes by conducting a Systematic Literature Review (SLR). The relationship between conventional learning and thematic learning systems is also considered. Based on our research, we can conclude that using a thematic learning system as a learning tool helps students learn better and be active in thematic subjects. Learning method by combining Google meeting features, learning materials and learning evaluations. Therefore, the thematic learning system can be used to concretely study the structure of abstract concepts. In addition, students find the thematic learning system interesting, which motivates them to learn more. Students can also easily remember information because the experience is more interesting. In general, thematic learning systems are more effective than learning media. Because students can more easily understand the material reproduced in learning and practice, further research and development will make thematic learning systems a more promising learning tool in the future.
Keywords: Thematic Learning System; education; students; systematic literature review.

Introduction

Conventional teaching and learning methods for primary school education. Important for the success of a learning process is a good balance between passive and active, namely listening, absorbing, discussing, and being active. In terms of detailed planning, this means: 1) A proper shift between theory input, individual work or group work, 2) The use of experimental learning and learning by doing, 3) A proper shift between listening and sitting alone. -a movement started. In this context, we refer to the SAVI model as a suitable method for fast learning processes (Amin and Yok 2015; Ghunu 2022; Khalid et al. 2010; Saundarajan et al. 2020; Woschank and Pacher 2020). Schools can also learn a lot from the pandemic by using COVID-19 as a reference to see education in the future. Education in Ethiopia relies on conventional face-to-face teaching and learning as the only means of providing (Aremua et al. 2021; Azimjanova 2022; Cheng, Hwang, and Chen 2019; Jaya, Nathan, and Ammini 2019; Mengistie 2021).

On the other hand, 1. Technology has become so important. Technological advances designed in parallel with learning materials result in the belief that integrating Technology in learning can bring about a new era in education 2. The Thematic Learning System is one of the promising technologies used in various aspects of education 3. The Thematic Learning System can improve education with a richly immersive and interactive experience in various disciplines ranging from science and engineering to foreign languages and social sciences 4. Today, system-based learning tools are more affordable and widely available. The challenge is finding ways

to use technology in the learning process (Fajar, Nurcahyo, and Sriratnasari 2018; Hu et al. 2021; Wu et al. 2018).

The learning system is an integrated and interconnected application between learning one another. The learning system is an organized combination consisting of human elements, materials, facilities, equipment, and procedures to achieve goals (Weay and Masood 2015). Furthermore, according to Tuli(Tuli and Mantri 2020) the learning system is an organized and interacting combination of human elements, materials, facilities, equipment, and procedures to achieve goals. Then, according to Abdulrahaman et al (2020), the notion of a learning system is an organization that combines the interaction of people, facility materials, equipment, and procedures to achieve goals. This learning system is a learning system that uses an integrated thematic approach as an integrated material and learning activity. This approach begins by determining the theme then develops into sub-themes

by showing their relevance to the related subjects. In this connection, the theme can bind learning activities, both in certain subjects and across subjects. This learning system is called an Android-based thematic learning system which is a learning system in integrated learning presented on an Android basis (Hasyim Asy'ari,1 Zahruddin 2020).

Trimurtini and Ahmadi (2019) revealed that the android-based application has advantages. The application is made to assist teachers in analyzing student learning styles and identifying students who are easy to learn to transfer knowledge in school. The android application system can motivate students to be more active in learning. Mobile devices are very interesting for students. Those who have a high curiosity about technological developments will be eager to learn. However, the solution still has weaknesses, including system development only in learning mathematics. Saputra, Yonanda, and Yuliati (2020) mentions that android-based applications have the advantage that they can be developed to help teachers improve student understanding in learning and identify easy-to-use mobile learning to assist students in learning in elementary schools. However, the weakness in this research is only in the form of Sundanese script in elementary schools and does not cover the whole learning but is only applied to certain areas.

In the era of the current generation, students will benefit from the combination of technology and innovation used as a learning system in the classroom, such as conventional and e-learning. The advantages and disadvantages in the thematic learning system, according to Sirait(Sirait, Ansari, and Simbolon 2019) are a) students are more interested in learning the material, b) students, c more easily accept the material) students longer remember the material. While the shortcomings of the thematic learning system are 1) teachers must understand the technology used to present the learning process, 2) teachers are more extra in preparing learning materials, and 3) teachers must be able to carry out thematic learning taught to students. The method can be a major consideration to start using the thematic learning system as a learning tool to help students. This section of the article is structured as follows: first, the researcher discusses the research methodology in section 2, followed by the results of the systematic literature review (SLR), in section 3. In section 4, the researcher discusses the impact of the outcomes on the future learning paradigm. Finally, the researcher concludes the researcher's work with suggestions for further research in section 5.

METHOD

The methodology used in this study is a systematic literature review or SLR. First, the researcher designs a research question and then collects some data related to this question from journals, proceedings, and literature reviews. This article uses
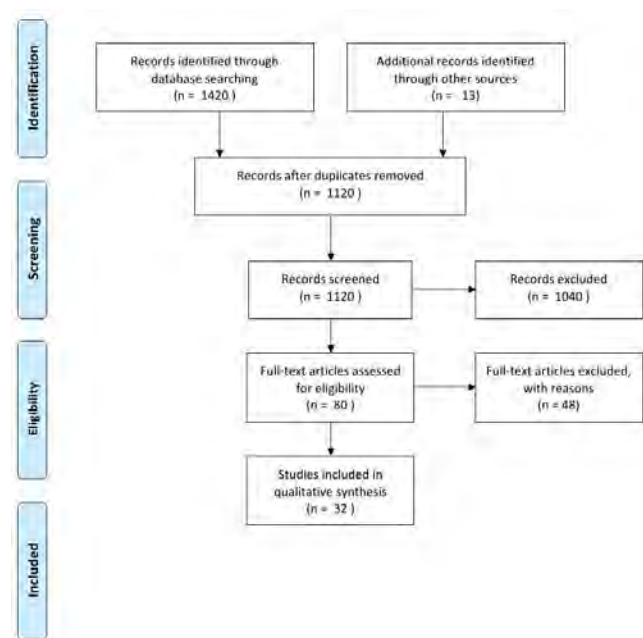

Fig. 1: PRISMA Flowchart

the PRISMA checklist methodology to help us evaluate the articles used in this study. Using PRISMA, researchers can use the literature obtained as a basis for reporting systematic reviews, especially evaluation of interventions. The steps of our research can be seen in the Figure 1.

This systematic review is intended to determine the possibilities and capabilities of the thematic learning system as a learning tool for students to learn. Researchers have designed the following research questions:

- RQ1 In what subjects and in what grade is the Thematic Learning System suitable as a learning tool?
- RQ2 Can the Thematic Learning System improve student learning performance compared to teaching traditional media?

The main filter criteria in research are research articles that study English, including conference proceedings, journals and literature reviews that have a domain in applying thematic learning systems for education and learning. Other filter criteria used in this process are duplicate articles, full-text articles, when and where the paper was published. All filter criteria help the researcher select the main study. The research findings will be discussed in the results and discussion section.

FINDINGS

Based on research conducted by the author. The author found 26.566 articles using the search strings "Thematic Learning System," "Thematic Learning System and Education and Student*," and "Thematic Learning System and Application*

and Future and Learning" on Google Scholar. After assessing 80 eligible articles and excluding irrelevant articles, 32 articles were used for this systematic review because of their correlation and usefulness related to our topic.

Results of Individual Studies

The author has conducted research and will carry out data extraction to answer the research questions previously mentioned. The purpose of data extraction is to obtain the results of a systematic literature review based on research questions.

RQ1: In what subjects and in what class is the Thematic Learning System suitable as a means of learning?

Based on the researcher's findings, there are no specific subjects or classes or special students who can use the thematic learning system to help them learn. Other researchers conducted several experiments for several groups of students of different ages. For convenience, the following table analyzes the age of students who have used the thematic learning system for their learning activities based on references:

From Table 1, it can be concluded that the application of the thematic learning system as a learning tool can be used by ages 4 to 12 years and several subjects. Although many articles are used as references, the implementation is mostly done for high elementary school students for thematic subjects. In one article, the use of the thematic learning system in kindergarten students in art activities 2. Some children learn general knowledge while playing with toys, such as craft skills using learning media 3. So the thematic learning system is a suitable learning tool for kindergarten students even though they may be unfamiliar with technology and still need help from parents or teachers. At the elementary level, thematic is one of the subjects that is indispensable by using the thematic learning system (22)(Forcina and Falcone 2021), (23)(Vagg et al. 2020)n=136, (24)(Fajaryati et al. 2016), (25)(Arvanitis et al.

2009), (26)(Alfina 2020), (27)(Syarifah and Handayani 2019), (28)(Nae 2020), (29)(Taufikin et al. 2021), (30)(Ucus 2015). Students can learn and understand subjects more easily using a thematic learning system. For example, teachers can guide students when children learn science using a thematic learning system to show and visualize objects. Based on this literature, thematic learning systems can be useful learning tools to help students from 4 to 12 years of age and any subject to learn. The articles used in Table 1 are 14 articles because they relate to the number one research question.

RQ3: Can The Thematic Learning System improve student learning performance compared with conventional learning systems?

The purpose of this research question is to select the most relevant journals to get more evidence that The Thematic Learning System improves students' learning performance. In recent years, the Indonesian government has implemented initiatives to improve the quality and effectiveness of the teaching and learning process(Hanafi et al. 2021). Therefore, there are online learning programs created to realize this initiative. This initiative motivated previous research that textbooks and conventional classroom methods have not motivated students and resulted in poor learning outcomes(Forcina and Falcone 2021). This study concludes that learning using the Thematic Learning System can improve student achievement compared to conventional methods alone. Furthermore, other studies(Wahyuni and Ananda 2021) have shown that student achievement can be significantly improved when learning online compared to conventional teaching materials. The main reason is the conventional method of learning materials by remembering many irrelevant facts. Next, the researcher will analyze several journals based on our reference papers in Table 2.

From Table 2, most students using the Thematic Learning System learn better than conventional methods. The Thematic

Table 1.: Target and Subject Group

Group Target	Subject	Number Of Articles	Study Identification
Kindergarten (4-5 years)	Arts General Knowledge	5	(17)(Lazăr 2015), (18)(Mangen Et Al. 2019), (19)(Hallberg, Hirsto, And Kaasinen 2020), (20)(Bai Et Al. 2021), (21)(Mackenzie, Bower, And Owaineh 2020)
Primary School (6-12 years)	Science Social Studies Cultural Arts and Crafts Mathematics Sports Physical Education and Health Indonesian	9	(22)(Forcina and Falcone 2021), (23)(Vagg Et Al. 2020)n=136, (24)(Fajaryati Et Al. 2016), (25)(Arvanitis Et Al. 2009), (26)(Alfina 2020), (27)(Syarifah And Handayani 2019), (28)(Nae 2020), (29)(Taufikin Et Al. 2021), (30)(Ucus 2015)

Table 2: Characteristics shown by the Thematic Learning System improve student achievement compared to conventional methods

Title	Authors	Characteristic
Introducing an Open-Source Course Management System (Moodle) for Blended learning on infectious diseases and microbiology: A pre-post observational study	David Lebeaux , Eve Jablon, Cécile Flahault, Fanny Lanternier, Jean-Paul Viard, Barbara Pacé, Jean-Luc Mainardi, Cédric Lemogne	**This research used Moodle (an open-source management system) to introduce blended learning on Infectious Diseases and Microbiology through interactive quizzes and sessions of online-based continuous assessment. This pre-post observational study assessed changes in students' attendance and student as well as teacher satisfaction(Lebeaux et al. 2021)possibly because of a lack of interactivity. We used Moodle (an open-source course manage- ment system.**
Pandemic information support lifecycle: Evidence from the evolution of mobile apps during COVID-19	Pankush Kalgotra, Ashish Gupta, Ramesh Sharda	**Information support needed during a pandemic crisis. Adapting phases from the pandemic crisis management lifecycle, we propose five different overlapping phases of our proposed Pandemic Information Support Lifecycle (PISL): awareness information support, preventive care information support, active information support, confidence-building information support and evaluation information support(Kalgotra, Gupta, and Sharda 2021).**
A systematic mapping review of context-aware analysis and its approach to mobile learning and ubiquitous learning processes	Paola Vallejo-Correa, Julián Monsalve-Pulido, Marta Tabares-Betancur	**This paper presents a Systematic Mapping Review that focuses on context-aware analysis and its approach to learning processes in mobile learning (m-learning) and ubiquitous learning (u-learning). Furthermore, the study identifies variables that have been used in the past decade for context-awareness analytics and that have been applied to those learning processes. Especially at systems' adaptations to learning styles and student-specific characteristics(Vallejo-Correa, Monsalve-Pulido, and Tabares-Betancur 2021)it was observed that the continuous upgrades in mobile device's technology have increased and demonstrated their great potential in various learning environments. Besides, it has motivated researchers to apply more innovative computational techniques regarding context-aware and a set of variables that have been used at different virtual learning proposals. This paper presents a Systematic Mapping Review that focuses on context-aware analysis and its approach to learning processes in mobile learning (m-learning.**
The development of an activity-based learning model using educational mobile application to enhance discipline of elementary school students	Sasitorn Lijanporn, Jintavee Khlaisang	**The purpose of this research is to develop the activity-based learning model using educational mobile application to enhance discipline of elementary school students. The model was developed based on the review of literature and the experts' interview. Then, it was tested by 30 elementary school students, followed by the approval from the experts. Data analysis indicated that there was statistical difference between pre and post test scores at .05 level of significant. The results of this study showed that the model should consist of five components along with the four steps as detailed in the article(Lijanporn and Khlaisang 2015).**
Investigation of Technological Tools used in Education System in Oman	Dinesh Kumar SainiMohammed Rashid Salim Al-Mamri	**The issue of tech-nological tools in education system in Oman is explored using secondary data further analysis is carried out toexplore the factors that affecting technology adaptation in education and tofind meaningful solutions to improvethe usage technological tools in education system. This study exhibits how to exploit present day innovative techniques for learning and teaching in schools and universities. The papers aim to identify the difficulties thathinder the employment of modern technologies infield of education in Oman.(Saini and Salim Al-Mamri 2019)**

Title	Authors	Characteristic
A Web Application Supported Learning Environment for Enhancing Classroom Teaching and Learning Experiences	Salahli M.A.,Yildirim E., Gasimzadeh T., Alasgarova F.,d Guliyev A.	**The aim of this study is to develop a mobile application for the Scratch programming language in order to develop programming skills of the students from secondary schools. The mobile application has been developed to solve two problems related to teaching Scratch programming language. The first problem related to educational aspects of the Scratch programming commonly used in secondary schools. The second problem is that Scratch does not have mobile applications for its learning.(Salahli et al. 2017)**

Learning System has great potential to improve student achievement. The method allows students to interact with the google meeting feature and provide learning materials that include complete material(Kahan, McKenzie, and Khatri 2019)but little is known about these schools' support of PA. School websites offer public windows through which they can share information about their programs, policies, and values. Thus, during spring 2018, we completed a quantitative content analysis of specific information about PA on the websites of a representative sample of U.S. charter elementary schools (n = 759. The Thematic Learning System also makes it easier for teachers to deliver content and learning outcomes, detection of cognitive, affective and psychomotor skills can affect students' abilities(Ain 2017). The Thematic Learning System allows students to be more active in the learning process because it increases their basic knowledge and motivation(Nikitas, Wang, and Knamiller 2019).

DISCUSSION

Implementing the thematic learning system is because this product has advantages. The thematic learning system is integrated into the learning process. A google meet feature, thematic learning materials, and student worksheets. Implementation of technological developments can create a more effective and efficient educational process. So it is necessary to implement technological advances in education with the development of technology in education. Therefore, the development of science and technology increasingly encourages renewal efforts in using technological results in the learning process. Disadvantages of integrative thematic learning system products, among others, are limited to only six themes and one semester of learning. The google meet feature still uses the internet network(Stevenson and Hedberg 2017)school leaders and systems have grappled with in recent years. Design/methodology/approach: Drawing on findings from a range of case studies and literature reviews, the present time is examined as an opportunity to explore more pedagogically informed uses of mobile devices, and "app smashing" is suggested as an approach that moves the learner beyond the underlying limitations of constraining the learning to individual apps. Findings: Findings include the benefits and limitations of mobile devices for learning in current education institutions. The paper also highlights several contexts where "app smashing" has been achieved and identifies the implications for educators across all educational contexts moving forward. Research limitations/implications: While educators and learners alike continue to wrestle with understanding and meaningfully using a growing number of tools, platforms and ecosystems, more recent paradigms such as cloud computing now point to "device agnosticism" and "convergence" as the new normal (Garner et al., 2005; Prince, 2011.

The research above shows that the Thematic Learning System can be a learning tool that can help students learn better. The data can be seen from the positive responses of teachers after they tried to use it as a learning system. Another reason is that the Thematic Learning System mainly attracts students' attention because this technology can provide material on thematic concepts compared to conventional learning systems. As mentioned above, most of the students reacted positively to the use of the Thematic Learning System, and it also improved student learning performance. The curriculum can be adapted to apply because of the Thematic Learning System in the learning process(Asrial et al. 2019). This Thematic Learning System can support thematic subject matter and expand the online learning paradigm. The Thematic Learning System also motivates students to advance their study routines. It also shows great potential and many benefits in the field of education. This method allows technological developments to continue developing and producing devices that are increasingly affordable and easy to use. It is hoped that the Thematic Learning System will gain greater relevance in the teaching and learning process(Kabudi, Pappas, and Olsen 2021).

CONCLUSIONS

In conclusion, the Thematic Learning System is an effective tool for students to use as a learning tool today. However, there are some limitations in that direction. For example, students cannot understand the generalization of concepts only by using the Thematic Learning System. The content of the Thematic Learning System can also be misinformed or inaccurate.

However, there are more advantages to implementing the Thematic Learning System in education and learning. Students can be highly motivated and show great improvement after using Thematic Learning System to help them learn. The Thematic Learning System makes it easier for teachers to carry out learning processes.

Several review articles stated that the development of the Thematic Learning System should consider the pedagogical aspect between the user and the application to provide an easy learning experience. The Thematic Learning System makes it easy for teachers to add or update the content. The Thematic Learning System Toolkit is also an important concern to be developed to be easy to use and carry. There are many considerations for developing Thematic Learning System, such as cost-effectiveness, maximum potential, and suitability for all ages, especially students. The researcher suggests developing a Thematic Learning System for thematic subjects for further research based on the analysis. By using this approach, students can be actively involved in the classroom and the learning process independently in online learning.

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