The Hybrid Teaching Management System on Art Education Subjects in Haizhou Senior Middle School of Fuxin City

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Abstract

This quantitative research study aims to investigate the management system for online teaching of art subjects with collaborative learning techniques for students at Haizhou Senior Middle School of Fuxin City. The data collection tool used was a questionnaire with a rating scale of 38 items divided into three aspects, namely 15 items on presentation content, 14 items on design process techniques, and 9 items on attitude. The score was based on a 5-point Likert scale, and basic statistics such as percentage, mean, and standard deviation were used to analyze the data.

The findings of this study suggest that:

1.The educational results of teaching and learning in art education in elementary school, assessed based on behavioral objectives and accurate content, can be used to develop an online teaching management system in art education with collaborative learning techniques.

2.The online learning management system in art education with collaborative learning techniques developed for level 6 students using the methods presented in this study can ensure sufficient quality for implementing an online learning management system. The developed art education course is practical and effective.

Keywords: The Hybrid Teaching Management System, Art Education Subjects, Haizhou Senior Middle School

Introduction

The COVID-19 pandemic hit China and the world hard at the beginning of 2020. In response to the crisis, the Ministry of Education issued guidance on organizing and managing online teaching in colleges and universities during epidemic prevention and control. This required universities to make full use of online MOOCs and high-quality teaching resources to ensure the progress and quality of teaching during the epidemic prevention and control period, and to achieve "continuous teaching and suspension of classes". Colleges and universities across the country launched the largest online education campaign to date, with educational content, tools, and platforms pouring in like a flood. Online teaching quality evaluation has become an essential part of the online education service guarantee. The traditional offline teaching quality evaluation system is no longer applicable to this new form of online teaching.

Therefore, a new teaching quality evaluation system should be established with the change of teaching form. Thanks to the rapid development of information technology and the in-depth application of big data, cloud computing, and mobile Internet, various online platforms can provide rich educational big data. However, selecting meaningful data from a vast database and analyzing the data to evaluate teaching quality remains an urgent problem to be solved. The use of education data can help improve the quality of education, promote education fairness, individual learning, optimize the allocation of resources, and assist in scientific decision-making for education. This not only has great significance for online teaching management during the outbreak but also provides perfect security support for the rapid development of online teaching. Teachers, students, and schools must adapt to this new form of education, and online teaching quality evaluation is an essential step in ensuring that quality education is delivered to students. (Chai-Arayalert, S., Boonsawaeng, W., Warintarawej, P., Saetang, W., & Thadadech, 2022)

The National Education Act of Thailand, B.E. 2542, as amended by B.E. 2545 and 2010, prioritizes the development of individuals through education that emphasizes balance and believes in the capacity of everyone to learn and grow. To this end, the Ministry of Education has adopted the 2008 Basic Education Core Curriculum as the main framework for education in the country, with the goal of fostering learners who are intelligent, capable, and able to lead fulfilling lives. The management of education is guided by principles, aims, and learning standards, and the Ministry has established 8 subject groups to guide learning, with the first group focusing on foundational skills such as problem-solving and critical thinking. The Thai language is an important component of this first subject group and serves as a means of communication and a symbol of cultural identity. The Ministry aims to ensure that learners achieve proficiency in reading and writing Thai language, with the goal of promoting effective communication and self-improvement. (Chuan Charoen's eyes, 2022) These goals align with the Office of Basic Education Commission's (OBEC) policy of prioritizing skills development in students, particularly in the areas of literacy. OBEC has set important goals, including the development of reading and writing skills in the first grade and the achievement of fluency in reading by the second grade. Overall, the aim is to raise the level of Thai language learning achievements to a higher level.

On December 4, 1996, His Majesty King Bhumibol Adulyadej delivered a speech at the Dusitalai Hall, Chitralada Park on the occasion of his birthday, emphasizing the importance of education and the declining use of Thai language among Thai people due to modern schooling practices. He stressed the need for all Thai people to learn and master the Thai language as it is the identity of the nation's wisdom and a vital tool for communication. In a speech given by Her Royal Highness Princess Maha Chakri Sirindhorn on managing Thai language learning for the Thai Language Teachers Association of Thailand at the Ambassador Hotel in Bangkok, she highlighted the significance of reading, writing, and basic numeracy skills for everyday life. (Nartthanarung, A., Songkram, N., Thangsittichok, S., & Chutithammanan, L, 2023) Her Majesty Queen Sirikit, the Queen Mother, also emphasized the importance of education and the promotion of literacy skills among the Thai people. These speeches align with the National Education Act (No. 4) B.E. 2562, which focuses on quality development as a guideline for driving the curriculum and learning management. The Office of the Basic Education Commission (OBEC) has a policy to follow up on student literacy solutions, aiming to promote and develop students' reading and writing fluency to improve their achievement in learning the Thai language. (Naree Yajeno, & Wichai Naphapong, 2023).

Objective

1. The objective is to create an online teaching and learning management system that focuses on art subjects and utilizes collaborative learning techniques for students enrolled in Haizhou Senior Middle School of Fuxin City.

2. The aim is to evaluate the efficacy of the online teaching and learning management system, which emphasizes art subjects and employs collaborative learning techniques, for students at Haizhou Senior Middle School of Fuxin City.

Literature Review

Online Instructional Management

In contemporary academic and educational research, online learning has become a significant topic of discussion. With the advent of the 21st century, both teachers and learners can access knowledge from anywhere and at any time. (Chanunan, S., Prachanban, P., Kornpuang, A., & Kaewurai, W, 2023) However, managing online learning effectively remains a challenging issue, particularly when it comes to managing online learning for children at the basic education level. Teachers must be cautious in creating teaching materials and managing student behavior during online learning. Additionally, they must educate students on safe internet usage. Thus, employing a systematic design and development approach in teaching planning and design can enhance the efficacy of online learning. (Ratchapakdee, P., Chamnankit, P., & Wonganusit, V, 2023)

Since December 2019, and continuing into 2021 and beyond, Thailand and many countries around the world have faced a crisis due to the outbreak of a new strain of virus, COVID-19, which has caused fear and damage both economically and socially. This crisis has had a huge impact on the education system worldwide, as schools and universities, which are sources of knowledge and training for students, were temporarily closed to curb the spread of the virus. Many schools have adapted by utilizing technology to organize online teaching and learning. While attempts were made to use technology in teaching and learning earlier, it was not taken seriously until the outbreak of the COVID-19 crisis, which has accelerated the use of technology in education. Schools and educational institutions have adapted to lead the way by using Information and Communication Technology (ICT) in teaching and learning to stay up-to-date.
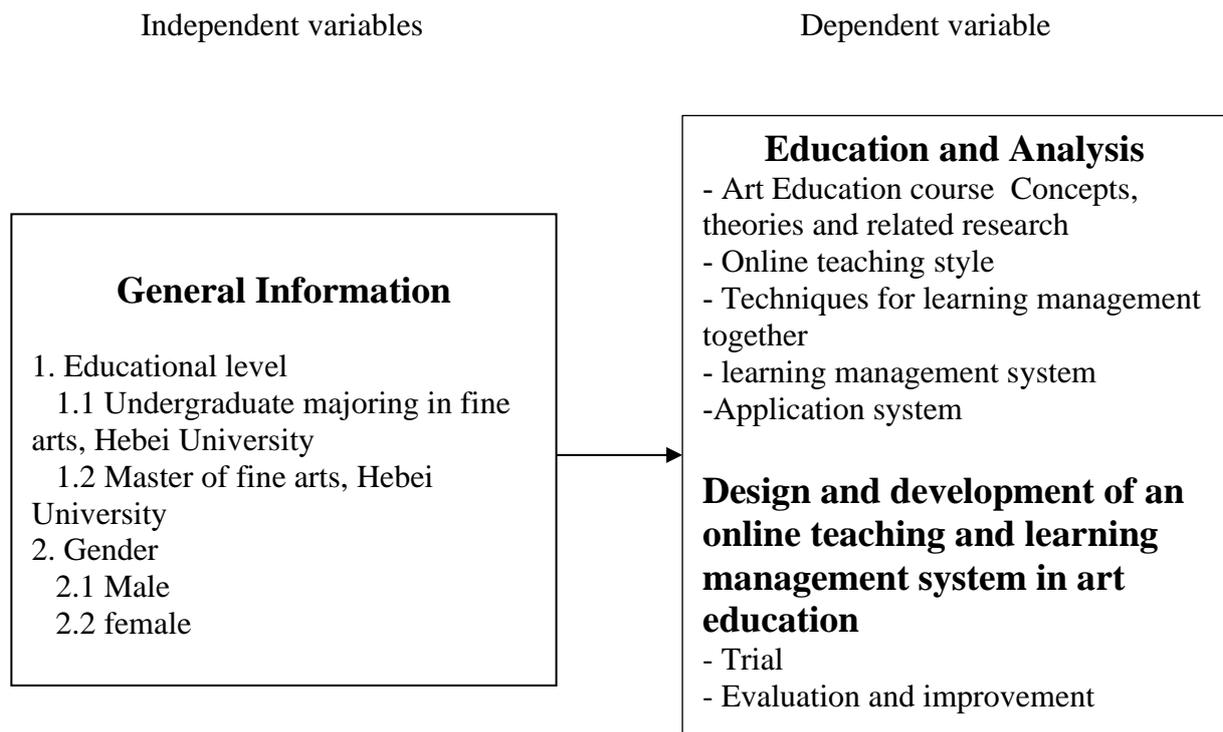
The adoption of online learning models has many dimensions and should be applied according to the context. The outbreak of the Covid-19 virus has resulted in a new lifestyle called the "New Normal", which is a different way of life that has been rapidly and severely affected, causing a transition to a new way of living. This new way of life includes different ways of thinking, learning methods, communication methods, practices, and management. (Sittioum, R., Chaisomtakul, P., & Wilaikul, S, 2023) In Thailand, preparations began to support the outbreak of the Covid-19 virus in February 2020, just before the end of the semester. The government declared a state of emergency in March 2020, (Tubtimtong Korbuakaew, Krirkkiat Korbuakaew, & Somkiat Korbuakaew, 2023) followed by an announcement to postpone the start of the semester from May 16 to July 1, 2020, to reduce the severity of the Covid-19 epidemic in educational institutions. In the first phase, education was arranged using a gradual waiver of the use of school buildings or educational institutions. The teaching model was conducted both online through distance learning television (DLTV) and offline in the classroom, using a blended approach or learning at home with family, depending

on the suitability and context of each school. Social distancing is also necessary in everyday life.

The authors reviewed literature on the challenges of teaching and learning during the COVID-19 epidemic and the adoption of new learning models in response to the situation. They discussed the concept of the "New Normal," which refers to the new lifestyle and learning methods that have emerged as a result of the pandemic. The authors also reviewed the use of Information and Communication Technology (ICT) in education and the various dimensions of online learning models. The literature review provides a theoretical basis for the authors' research on the experience of a school in Bangkok that implemented fully online learning during the pandemic.

Conceptual Framework

This study focuses on the implementation of a Hybrid Teaching Management System in the context of Art Education subjects at Haizhou Senior Middle School in Fuxin City. The conceptual framework for this research is based on the theory of Online Instructional Management. The specifics of this framework are detailed as follows.

Independent variables   Dependent variable

General Information

1. Educational level
   1.1 Undergraduate majoring in fine arts, Hebei University
   1.2 Master of fine arts, Hebei University
2. Gender
   2.1 Male
   2.2 female

Education and Analysis
- Art Education course Concepts, theories and related research
- Online teaching style
- Techniques for learning management together
- learning management system
-Application system

Design and development of an online teaching and learning management system in art education
- Trial
- Evaluation and improvement

Figure 1: Conceptual Framework

Research Methodology

Population and Sample
The study utilized a sample of high school students from Haizhou Senior Middle School in Fuxin City. In the first semester of the academic year 2021, a total of 55 students were enrolled in the study. These students constituted the research sample, which was drawn from the population of high school students at the school.

How to Create Research Tools
Develop a quality assessment form for an online platform for managing art courses, which utilizes collaborative learning techniques for students. The form should include a rating scale as well as an open-ended section at the end, to gather opinions and suggestions. The Likert method should be employed, with scores ranging across 5 levels. The scale should be adapted from the concept proposed by Phongsak Phakamach (2012).

The process of creating a questionnaire to gather the opinions of art teachers in secondary education regarding an online teaching management system for art subjects with collaborative learning techniques for students at the secondary level involved several steps, which are outlined below:

1. The researcher began by studying various sources of data, including documents, books, journals, research studies, and existing questionnaires, in order to gain an understanding of how to create an effective questionnaire.

2. Based on this research, a 38-item checklist questionnaire was created, covering three main aspects: 15 items on content presentation, 14 items on design process techniques, and 9 items on attitude. Each item was rated using a 5-level Likert scale, as recommended Phongsak Phakamach (2012).

3. The completed questionnaire was reviewed by experts to ensure its content accuracy. The researcher also consulted educational measurement textbooks to include questions about emotions, as advised by the experts.

4. A trial version of the questionnaire was then distributed to 30 art teachers who had previously taught this content. Their feedback was used to make any necessary adjustments to the questionnaire.

5. The alpha coefficient of Cronbach was calculated using the returned questionnaires, and the overall confidence value of the questionnaire was found to be 0.9576.

6. The finalized questionnaire was published for use in further data collection.

7. An achievement test was also developed and published to supplement the questionnaire in gathering information.

Data Analysis
1. Calculate the fundamental statistical measures, including percentage, arithmetic mean, and standard deviation, for test scores in each unit and achievement scores after learning.

2. Evaluate the effectiveness of the online teaching and learning management system in art subjects, using collaborative learning techniques for high school students, by determining the percentage of the average score.

   - Evaluate the effectiveness of the online teaching and learning management system in art subjects for secondary school students, using collaborative learning techniques, by analyzing the efficiency index.

- Conduct a comparative analysis of learning achievement before and after learning, using t-test statistics for dependent samples.

- Analyze expert opinions on the online art teaching management system with collaborative learning techniques for students, by calculating the mean $\overline{X}$ and standard deviation (S.D.) and comparing them to the predetermined assessment criteria using a 5-point rating scale.

- Analyze the quality of the online teaching and learning management system in art subjects for secondary school students, using content analysis to examine the interview form.

Research Findings

Objective 1: The study demonstrated that the developed online teaching and learning management system in art, utilizing collaborative learning techniques, for level 6 students aligns with the 2008 core curriculum of basic education for the art subject group. The proposed methodology ensures sufficient quality for practical implementation of the developed art education online learning management system for level 6 students.

An illustrative example of the online teaching management system for art education, using collaborative learning techniques for level 6 students, is presented in the following table:

Table: Example of Online Teaching Management System for Art Education with Collaborative Learning Techniques for Level 6 Students.
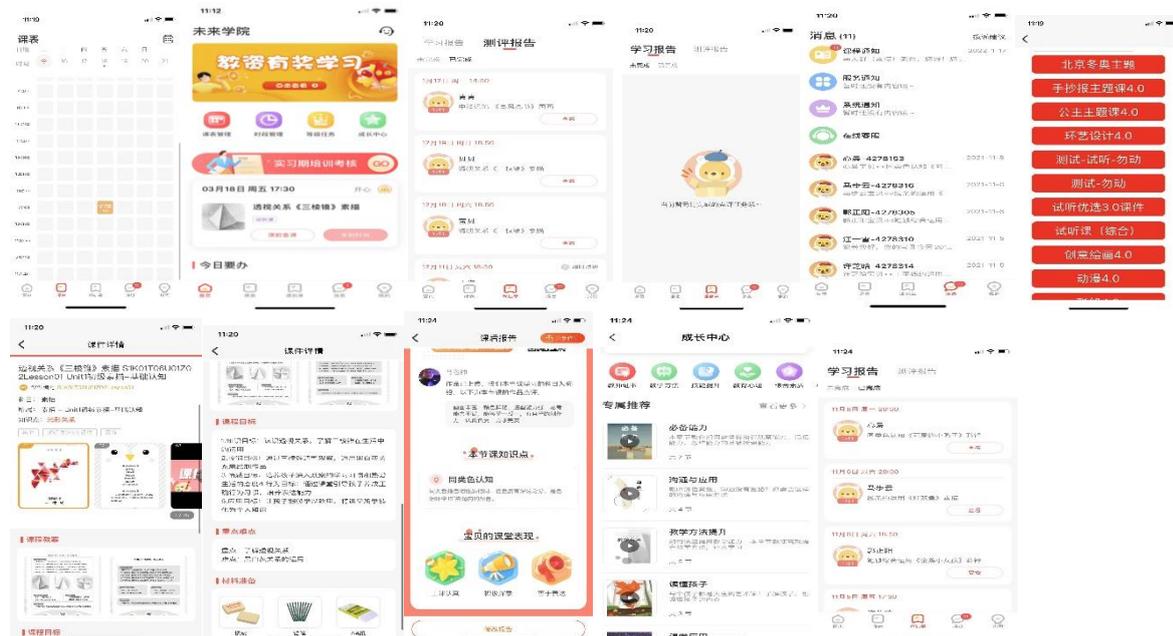

Figure 2: The image displays the video of the lesson and the pre- and post-class test.

Part 1: **General Characteristics of the Respondents**

The analysis presents an overview of the general characteristics of the respondents, classified by gender.

Table 1 Shows the data by gender. (N=55).

Sex	Number (person)	Percentage
Man	26	47.50
Female	29	52.50
Together	55	100

Table 1 displays the data categorized by gender. The findings indicate that the majority of the respondents were female, with a count of 29 individuals, accounting for 52.50% of the total. Meanwhile, there were 26 male respondents, accounting for 47.50% of the total.

Table 2 Presents the results of the analysis on the content of the presentation towards the teaching and learning management system in art education. The analysis includes an overall assessment as well as an assessment for each aspect, specifically, the use of a joint learning management technique for grade 6 students.

List	$\overline{X}$	S.D.	Assessment Criteria
1. The content of the presentation			
1.1 The amount of content in each lesson.	4.20	0.75	a lot
1.2 Correspondence between content and purpose.	4.80	0.40	the most
1.3 The suitability of the content and the level of the learners.	4.20	0.75	a lot
1.4 Clarity and accuracy in describing the content.	4.40	0.80	a lot
1.5 The order of content is continuous, making it easy to read and understand.	4.00	0.89	a lot
1.6 Lessons are difficult to suit the level of learners.	3.60	0.49	a lot
1.7 Content is useful to learners and can be applied.	3.80	0.45	a lot
1.8 The format of the presentation of the content is interesting.	3.60	0.79	a lot
1.9 Students can learn content from lessons together more conveniently and quickly.	4.40	0.80	a lot
1.10 Consistency between the test and the content.	3.80	1.17	a lot
1.11 Appropriateness of the test to the content.	3.80	0.75	a lot
1.12 Number of questions of the test.	3.80	1.17	a lot

List	$\overline{X}$	S.D.	Assessment Criteria
1.13 Appropriateness of questions.	3.60	0.49	a lot
1.14 Reporting the results of each questionnaire.	4.60	0.80	the most
1.15 Clarity of commands in the test.	4.20	1.17	a lot
2. Technical design process			
2.1 Lesson usage explanations are clear and easy to understand.	3.60	0.80	a lot
2.2 Collaborative learning formats in lessons are easy to use.	4.60	0.49	the most
2.3 The menu ordering is appropriate.	3.80	0.75	a lot
2.4 Format size and the color of the letters is clear.	4.20	0.75	a lot
2.5 Images / tables / videos can convey meaning.	4.00	0.89	a lot
2.6 The screen design is appropriate and comfortable on the eyes.	3.40	1.20	moderate
2.7 The graphics and colors in the lesson design are appropriate.	3.40	0.80	moderate
2.8 Learners interact with lessons appropriately.	4.20	0.75	a lot
2.9 There is an appropriate control over the order of learning.	3.80	0.98	a lot
2.10 You can choose different topics as needed from the lesson.	4.00	1.10	a lot
2.11 The language used in the menu commands is clear and easy to understand.	4.20	0.75	a lot
2.12 Convenience in linking information within the lesson.	4.40	0.80	a lot
2.13 Data download speed.	4.40	0.49	a lot
2.14 Content using language that is easy to understand and clearly conveys the meaning.	4.40	0.49	a lot
3. Attitude			
3.1 Lessons are interesting and motivate to learn.	4.25	0.83	a lot
3.2 Lessons can be learned anytime and anywhere as needed.	4.80	0.40	the most
3.3 Lessons make learners both knowledgeable and enjoyable.	3.80	0.75	a lot

List	$\overline{\text{X}}$	S.D.	Assessment Criteria
3.4 Learners are satisfied with the lessons developed and can be used in teaching and learning.	4.00	1.10	a lot
3.5 After completing the lesson, learners have more knowledge and understanding of art education.	4.40	0.49	a lot
3.6 Students want to learn by providing online teaching and learning in art education with collaborative learning techniques in other content.	4.40	0.80	a lot
3.7 Lesson-based learning is more interesting than conventional classroom learning.	4.20	0.75	a lot
3.8 Lessons are linked to other resources to provide a diverse and appropriate exchange of learning resources.	4.40	0.80	a lot
3.9 The management of online teaching and learning in art education with collaborative learning techniques can increase learners' learning achievements.	4.80	0.40	the most
3.10 Characteristics of online teaching and learning management in art education with collaborative learning techniques as a whole.	4.60	0.49	the most
Total	**4.12**	**0.76**	**a lot**

The analysis presented in Table 2 indicates that the development of an online teaching and learning management system in art education, utilizing collaborative learning management techniques for Prathomsuksa 6 students, received a high overall rating ($\overline{\text{X}}$=4.12, SD=0.76) with a positive assessment across all aspects. Specifically, the content aspect of the presentation ($\overline{\text{X}}$=4.05, SD=0.78) accounted for 81.06%, the design process technical aspect ($\overline{\text{X}}$=4.03, SD=0.79) accounted for 80.57%, and the attitude aspect ($\overline{\text{X}}$=4.34, SD=0.69) accounted for 87.30%, respectively.

Conclusion

In the research study on "Online Instructional Management System in Art Education with Collaborative Learning Techniques for Level 6 Students," the elements of online teaching and learning were identified as critical components for effective teaching and learning. These elements need to be designed to align with the actual situation and can be adapted to suit the needs of the students. However, the readiness of these components should be evaluated, including a strengths and weaknesses analysis of their use to ensure that the online teaching approach is appropriate.

It should be noted that the success of online teaching and learning does not solely rely on ICT and communication channels. The preparedness of both learners and teachers is equally important in adjusting their perspectives, concepts, and teaching methods to keep pace with changes. The online teaching management system in art education, utilizing collaborative learning techniques for level 6 students, as presented in this study, can ensure sufficient quality for practical implementation of this learning system and can serve as a model for other basic education institutions to better apply and develop the competencies of art education learners. This could result in the creation of an innovative education organization and digital learning suitable for the further development of the nation's education.

Discussion

The research study aimed to develop an online teaching and learning management system in art education with collaborative learning techniques for level 6 students. The following key points can be discussed based on the study results.

1. The system of online teaching and learning in art education with collaborative learning techniques developed for level 6 students with average scores higher than the specified standards. Because the researcher developed the teaching and learning management system systematically from the study and data analysis using the modeling process. The content design for art education is based on a collaborative learning process through a learning management system. Which has been reviewed by content experts and revised the flowchart writing after that, it has been verified by experts in designing and producing computer programs. Then, they are tested with a sample group to assess quality and efficiency and then use the results to improve. Which is a method for producing media and learning models according to the process of research and development (R&D) and the creation of content and interaction in art education courses. This is consistent with the methods more (Sathakat Tanchai, 2023). Online teaching management system in art education with collaborative learning techniques. For the developed level 6 students, the researcher studied the conceptual framework developed from the ideas of Ghazal, (Kewarin Chantansuksilp, & Monthip Saenkanung, 2023) in the design of the LMS according to the following steps: 1) Analysis of course content. 2) Designing learning models based on collaborative learning principles: 2.1) Identifying learning problems to be analyzed. 2.2) Collecting and processing data. 2.3) Developing possible solutions. 2.4) Put the problem-solving approach to the test and 2.5) Choose the best learning style to use to find the answer; 3) Determine joint activities and process knowledge; and 4) A test to determine the effectiveness of the learning model based on learning achievement scores and end-of-chapter exercise scores. In accordance with the system development model of Prateep Suwanro, Arthit Intarasit, Phakhwanriyaphan, & Sunaree Suwanro (2023) and Ntapat Worapongpat (2023) and He Zi Yun & Ntapat Worapongpat (2023) An online art education teaching management

system with collaborative learning techniques for level 6 students developed to support learning management and to verify that learners achieve academic results. Learning that is defined in terms of content, research, knowledge processing, discussion, critical thinking. and finding a common conclusion This is consistent with research by Natdanai Nirut Metheekul & Attakarn Thongdaengchuea (2023) which found that a good system development model must enable learners to actually learn even in self-paced situations.

2. The results of the test to determine the efficiency of the online teaching and learning management system in art education with collaborative learning techniques for level 6 students developed with an efficiency equal to 81.91/83.41, meaning that this system causes students to have a learning process equal to 81.91% and (Ntapat Worapongpat, 2023) the efficiency of learning or the effectiveness of teaching media in changing learners' behavior was 83.41%. It can help students to change their behavior in learning progress in Thai language more. To the development of collaborative learning styles Teaching and learning that integrates problem-solving tools to enhance teamwork skills and interactive web development as well. It is also consistent with the research by Phaniew, S., Junpeng, P., Chinjunthuk, S., & Suwannatrai, P. (2023) that discussed online teaching and learning under the COVID-19 pandemic: concepts and applications of teaching and learning. It is also consistent with the research of Churut, S., Sranamkam, T., & Kangpheng, S (2023). Who discussed the development of the teaching and learning management system. Develop a model of teaching and learning management using collaborative learning techniques ICT Management Guidelines for Educational Innovation Development. The development of reading and writing skills and the use of the LMS system in effective teaching and learning can enhance learners' learning achievements.

Suggestion

Suggestions for Application

The research study provides important guidance for elementary education during the Covid-19 crisis. Based on the analysis of the data, the following suggestions are provided to improve the effectiveness and efficiency of online teaching and learning management system in art education with collaborative learning techniques for level 6 students:

1. Ensure that the content of the lesson aligns with the learning objectives.

2. Clearly communicate the learning objectives and processes to the learners.

3. Design a structure and plan a good learning access path with periodic reviews of academic achievement.

4. Establish a system to verify that the learners have achieved the required learning outcomes, including creating a follow-up system or providing occasional notifications.

5. Allow learners to learn through non-linear, active, and blended learning methods to improve their understanding of the content.

6. Develop analytical and critical thinking skills by including relevant case studies that can be applied in practice.

7. Provide regular practice exercises with immediate feedback.

8. Record access data and knowledge processing results through a knowledge-processing model that aligns with established learning measures.

9. Ensure standard use of the online platform on various communication devices, including computers, notebooks, tablets, and smartphones.

10. Select appropriate software related to course content to increase learning potential effectively.

Suggestions for Future Research

1. To ensure the standardization of learning materials, it is recommended to test this system or platform with learners from other educational institutions at the same level. This will provide valuable quantitative and qualitative insights for improving the elements used in the learning materials.

2. Research and development of this system or platform should be conducted to create additional standard learning media. This will not only improve the effectiveness of the learning management system, but also enhance learners' academic achievements.

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