AUGMENTED REALITY ACTIVITY ON MATHEMATICS SUBJECT IN ADDITION AND SUBTRACTION OF NUMBERS UP TO A HUNDRED THOUSAND FOR LEARNING DISABILITIES PRIMARY 5 (GRADE5) STUDENTS

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ABSTRACT
This research aimed to use augmented reality games to teach five-grade math subjects effectively to students with learning disabilities .Examine students' academic achievements after learning difficulties. Moreover, assess the satisfaction of students with learning disabilities .The sample group comprised nine learning disability students at Wat Pathum Nayok school under the jurisdiction of the Primary Educational Service Area Office 2, Pathum Thani Province, using a specific sampling technique .The tools used to collect data include an augmented reality game activity in Mathematics in the addition and subtraction of numbers up to a hundred thousand for learning disability students, pretest-posttest, and student satisfaction from statistics used in data analysis, including percentage, mean, and standard deviation .The t-test for the Wilcoxon signed-rank test for the single sample critical value for W with a two-tailed alpha .05 .The results showed that augmented reality game activities in mathematics in addition and subtraction of numbers up to one hundred thousand for learning disability students performed E1/E 82.40/81.33 (after learning augmented reality game activities in mathematics . Learning achievement after studying was higher than before studying .The mean and standard deviations before class were 8.80 and 2.33 .T-test scores between before and after class were 20.68 .The scores significantly differed at the .05 level from the augmented reality game activity in Mathematics in Addition and subtraction of numbers up to a hundred thousand for learning disability. Students are satisfied with augmented reality game activities on Mathematics in Addition and subtraction of numbers up to one hundred thousand, which is at a high level, with an average of 4.51.

Keywords: augmented reality game, mathematics subject, addition, and subtraction of numbers up to a hundred thousand .Learning Disability

INTRODUCTION
Augmented Reality (A.R.) can potentially revolutionize the educational system for students with Learning Disabilities (L.D.). By providing individualized learning experiences tailored to each student's capabilities and progress, A.R. can simplify complex topics and enhance learning through various senses. Visual learning, which involves interacting with 3D models of historical items or scientific concepts, can be enhanced by A.R. Augmented Reality can also integrate real-world context, making learning more accessible for L.D. students who struggle with abstract ideas. Education has increasingly embraced techno pedagogy, utilizing ICT for active

teaching and learning. This study analyzes the impact of augmented reality training on physical education, focusing on spatial orientation. A quantitative study involving 140 high school students found significant links between dimensions, with motivation being the most significant deviation. Professors' grades were also found to be the lowest despite being significant. Overall, incorporating augmented Reality in teaching has successfully acquired spatially oriented knowledge for students in education (Moreno-Guerrero et al.; G., 2020). Learning through games can be valuable for students, as A.R. can transform educational content into engaging and enjoyable games. Accessibility features like text-to-speech and speech-to-text functionalities can make instructional information more accessible to L.D. students. Augmented Reality also increases student engagement, allowing for better material retention and comprehension. Teaching students with specific learning difficulties is complex, and incorporating augmented reality technology can help them acquire new information more effectively. This research investigates the effects of combining real and virtual elements on students' learning processes with specific learning difficulties. Results showed that augmented reality technology successfully aided the learning of students with specific learning challenges, and they were ready to use it due to its appeal.

Further research is needed to explore the emotional processes of students and the design processes of instructional materials supplemented by augmented Reality (Turan et al.; G., 2021). Augmented Reality platforms can track students' Development, providing real-time feedback to educators and parents. Collaborative and social learning can be fostered through A.R., allowing students with learning disabilities to collaborate on projects and discuss their points of view. Inclusivity can be achieved by fostering an educational environment where everyone can engage and learn together. This comprehensive literature review investigated the social validity of Augmented Reality (A.R., Virtual Reality ,V.R. and Mixed Reality)M.R.in the context of teaching social skills to students with autism spectrum disorder, ASD A.R. stands for Augmented Reality, V.R. for Virtual Reality, while M.R. refers to Mixed Reality .The studies centred on identifying emotions, developing relational skills, gaining social awareness, working together with others, and improving executive functioning .The findings indicated that AR/VR was effective in 63 %of the experiments, but in 10 %of the research, it was ineffective .It is possible that the effectiveness of the intervention could be improved by elevating the status of parents, teachers, and students as treatment agents and social skill pickers .The use of augmented Reality and Virtual Reality together has the potential to improve generalization and provide a practice environment for performance shortcomings (Mosher, M., & Carreon, A., 2021).

However, implementing A.R. in educational media for L.D. requires careful planning, teacher training, and creating appropriate A.R. content. By considering the unique requirements of each learner and personalizing A.R.'s experiences, A.R. can empower L.D. students, boost their confidence, and help them achieve academic success. Dyscalculia, a significant impact on students' understanding and excelling in mathematics, can manifest in various ways, particularly in fourth grade .These difficulties include difficulty understanding fundamental math concepts, spatial and time problems, memory tests, difficulties with mathematical symbols, sequencing problems, and difficulties in solving word problems .Students with dyscalculia may also experience frustration and anxiety, making it difficult for them to progress in the subject .Students with dyscalculia typically make slower progress in mathematics than their peers, requiring additional time and specific therapies .Multisensory teaching strategies can help students better understand mathematical ideas .Early diagnosis and support are crucial for improving students' confidence and ability to excel in mathematics .Individualized Education Programs. IEPs can be established to address individual needs and provide

accommodations, adjustments, and interventions .Students utilize A.R. applications to improve their learning experience, combining real-world resources with digital resources and enhancing their junior high school mathematics learning experience (Cai et al.; Y., 2020). Creating a supportive classroom environment is essential for students with dyscalculia .Encourage participation from all students, provide practice opportunities and praise accomplishments . Teachers, parents, and caregivers should exhibit tolerance and understanding when working with students with dyscalculia .Collaboration with educational experts and specialists in the field is essential to design practical techniques for providing support to fourth-grade students struggling with mathematics and learning difficulties. Children with special needs require adapted education considering individual requirements and intellectual characteristics (Okyere et al.; S., 2019).

The researcher has come to grasp the significance of such issues and is aware that the administration of education for children who have special needs must be adapted to the specific requirements of the children, considering both their capabilities and their requirements, to bring about the maximum number of positive outcomes .It must consider the distinctions that exist between individuals on the physical, emotional, social, and intellectual fronts .Currently, schools are better equipped to accommodate children with special needs, and these youngsters have a greater chance of attending classes with typically developing peers .Because he was able to spend more time in school with typical kids, both of you will have a better understanding of one another as a result.

THE STUDY

The researchers experimented according to the One Group Pretest-Posttest Design research pattern. The population used in this research was the five primary students in the Salarat network group under the Office of Pathum Thani primary educational service Area 2, Academic year 2022, comprising seven schools, seven classrooms, and 77 students. The sample group used in this research was the primary five students at Wat Pathum Nayok School. Salarat Network Group under the Pathum Thani Primary Educational Service Area Office, Area 2, for the Academic year 2022, comprised of 1 school, one classroom, and nine learning disability students, obtained through purposive sampling. The student's achievement in the mathematics subject of addition and subtraction of numbers up to a hundred thousand was lower than the specified criteria. Research tools used in this research. The researcher used research tools as follows: (1) teaching activity application based on an augmented reality game activity on the mathematics subject in addition to subtraction of numbers up to a hundred thousand for learning disability students at the fourth-grade level, there is a process for finding the quality of research tools, with an opinion questionnaire for experts on the quality of application for teaching activities based on an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand, (2) pretest-posttest from using the application of teaching activities according to the augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand, (3) assessment form for the satisfaction of an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred. The process for creating research tools is as follows: In *the first step*, application for teaching activities according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand; the researcher applied the conceptual framework of Thosporn Sangsawang (2013, p. 22–23), (a) comprising her manual and lesson plan for teachers to study and follow the objectives. The manual explains how to use the application in booklet form. Contains explanations, lesson plans, knowledge sheets, activity sheets, pretest-posttests, answers to the department's activities, and pretest-posttests quizzes. (b) The student handbook is the part that

tells students to proceed with their studies. Alternatively, assemble each activity according to the steps outlined in (c) content and media, an application for teaching activities according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabled primary five students., and (d) evaluation: Students self-assessed their knowledge before and after studying. The assessment form in the application is an exercise to choose the correct answer, fill in the blanks, match, Etc. The second step is an opinion questionnaire for experts on the quality of teaching activities application according to an augmented reality game activity on the mathematics subject of addition and subtraction of numbers up to a hundred thousand. The process for creating a questionnaire is application, research, and collecting data from research papers related to concepts, theories, and principles of an augmented reality game activity on the mathematics subject besides subtraction of numbers up to a hundred thousand for learning disabled primary five students. (e) analyze learning processes and elements and create questionnaires for constructing an open-ended questionnaire for the experts to express their opinions, and then take the results of the comments to find the value index of item objective congruence. Bring questions from three experts with educational or information technology experience to choose from and suggest improvements. To create a 5-level evaluation scale questionnaire, a score of +1 means that this question is consistent with the media design assessment process. In an augmented reality game activity in mathematics, besides subtracting numbers of up to a hundred thousand, a score of 0 means that this question is consistent with the media design assessment process. An augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand, with a score of -1, means that this question contradicts the assessment of media design according to the process of an augmented reality game activity on the mathematics subject in addition and subtraction of numbers up to a hundred thousand. Create a questionnaire with a rating scale of five levels according to the Likert criteria (Likert, R., 1932, p. 140) for the experts to consider giving weights most relevant to their opinions. Each level has the following meaning: 5 means having the highest opinion, 4 means having a high opinion, 3 means having an opinion at a moderate level, 2 means having an opinion at a Low level, and 1 means having the lowest opinion. The criteria for interpreting the values are as follows: 4.51–5.00 is most appropriate, 3.51–4.50 is very suitable, 2.51–3.50 is moderately suitable, 1.51–2.50 is low, and 1.00–1.50 is least suitable. submit a questionnaire that content-experienced experts have created. Three people considered making improvements to match the research subject in educational technology and the measurement and evaluation aspects. An augmented reality game activity on the mathematics subject in addition to subtraction of numbers of up to a hundred thousand by statistical Analysis, mean, and standard deviation. In *the third step*, Pre-study, and post-study tests, using the application of teaching activities according to a reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabled primary five students to the basic knowledge and measure skills after school in this research, the researcher has established a procedure for creating the test. There are steps to take, as follows. (a) study the documentation about the creation of the test by analyzing the specified content; (b) create pre-study and post-study tests by analyzing the content and behavioural purposes. Then, a 108-item, four-choice quiz was created that was assessed according to behavioural objectives. The exam will be classified as a pre-learning test. A 40-item parallel post-test, showing the acquisition of the exam (c) Bring the exam, which will create the pre-and post-test, to an expert to verify the correctness of the content using the IOC (Index of Item Objective Congruence) criteria. Scoring according to the following criteria: A score of +1 means that this test is consistent with the objectives of an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary five students' score of 0 means not sure that this test is consistent with the content according to objectives of

the application of teaching activities according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary five students.

Data collection in this research, data was collected by using an experimental model set according to the procedure in the test of the application of teaching activities according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary five students as follows :(1) Continued coordination with graduate studies is the next step for the researcher. Thanyaburi Branch of the Rajamangala University of Technology's Faculty of Industrial Education The preparation of a letter requesting cooperation to seek an experiment in the conduct of research and the utilization of the facility is required. I am writing to the director of Wat Pathum Nayok School, which is in the Sala Khru Subdistrict in the Nong Suea District of Pathum Thani Province. (2) Organize the location and the equipment. Within the context of this experiment, the Wat Pathum Nayok School, Sala Khru Subdistrict, and Nong Suea District of Pathum Thani Province are the venues that were utilized. In the sample group, nine children from primary five explained the aims of the research. The process of research: To determine the results of data gathering and evaluation, the researcher developed a new medium for pupils in the 5 grades. (3) Students with learning difficulties in primary five, you should design an application for teaching activities that is based on an augmented reality game activity on the subject of mathematics, specifically addition and subtraction of numbers up to one hundred thousand. The following are the stages that make up the curriculum analysis process: 1) Examine the goals that the curriculum aims to achieve. The Thai language learning group curriculum, Substance 1: Reading, Standard T. 1.1, which focuses on utilizing the reading process to generate knowledge and ideas for decision-making, was the curriculum that was considered for use in this learning management. Learn to read and find solutions to the challenges you face in life. As stated in the fundamental curriculum of the basic education system in the year 2551 B.E. 2) Behavioral Objectives, the researchers stated that they defined behavioural objectives by using Bloom's learning theory as a foundation. to determine the path that the student's development will take in each area, which includes knowledge, memory, which is the lowest level, comprehension, and the application of knowledge. In the application, It is possible to solve, verify, assess, and measure analysis, as well as decide what is incorrect or to make a choice based on clear criteria and rationale. Synthesis has the potential to bring about variety. to be assembled in a new form that is distinct from the original form that was utilized in student evaluations, 3) An examination of the students who are interested in learning should first analyze their needs, goals, and the fundamental information they possess. 4) Content design of teaching activities application based on an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary 5(Grade 5) students; the content of the lesson, which is designed according to the learning process map, an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary five students, practice listening or Reading, Chi, practice thinking, practice asking questions, and practice writing to present the course content as a tool. Students in the fifth grade will benefit from the application since it will assist them in managing their studies. Using Thinkable, a website that offers free application development services, the researchers created a teaching

activity application that was based on an augmented reality game activity on mathematics subjects such as addition and subtraction of numbers up to one hundred thousand. The application was designed for students with learning disabilities who were in the primary 5 (Grade 5) level. In addition, it possesses a comprehensive collection of development tools and applications for instructional activities that are based on an augmented reality gaming activity on mathematics topics such as addition and subtraction of numbers up to one hundred thousand for students with learning difficulties who are in the fifth grade. It provides students with the ability to learn about the subject matter without any limitations or limits. To determine the efficacy of the teaching activity application according to an augmented reality game activity on mathematics topics such as addition and subtraction of numbers up to one hundred thousand for students with learning disabilities who were in the primary 5 (Grade 5) level, the researcher carried out three experiments. These experiments determined the effectiveness of the application. Time and location were taken into consideration when carrying out these studies. In the fifth grade, children who were not involved in the trial took part in a relationship experiment that was one-to-one (1:1). There were three people from the strong group, three people from the medium group, and three people from the vulnerable group who took the test. I had never before sought to learn about this subject area. When the flaw is found, it is the imperfection that is brought to light with the discovery. For the sake of this investigation, we used a rather small group of individuals (1:10). The researcher deployed a teaching activity application that was based on an augmented reality gaming activity to assist students who were having difficulty studying. Several mathematical operations, including addition and subtraction of numbers up to one hundred thousand, were the primary objectives of the software. For the goal of experimenting with ten children who have difficulties learning, students from the primary level who were in the fifth grade were selected. From the strong group, medium group, and vulnerable group who were not the experimental group. When a bug is found, it will be used to improve and correct the content to be accurate. Then, the results from the experiment were used to determine the effectiveness of the teaching activity application according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary 5(Grade 5) students, Conducting large group experiments in the field, the researcher used the teaching activity application based on an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary five students.The results were then used to determine the effectiveness of the teaching activity application according to an augmented reality game activity on mathematics subjects in addition to subtraction of numbers up to a hundred thousand for learning disabilities primary five students Elementary school level 5 meets the criteria. Teaching was carried out by having students take a pre-study test consisting of twenty items and using the teaching activity application by an augmented reality game activity on the subject of mathematics, which included addition and subtraction of numbers up to one hundred thousand for students with learning disabilities in primary five. Following the completion of the experiment, the post-test was used to collect data. By having students complete a post-test consisting of twenty items and 15 surveys, we may determine how satisfied they are with the course. After conducting research on the application of teaching activities based on an augmented reality gaming activity on mathematics subjects such as addition and subtraction of numbers up to one hundred thousand for students with learning

difficulties who were in the fifth grade, the researcher then carried out a pre-study and a post-study quiz. Keep the information in the form of a score. The accurate answer is equal to one, and the incorrect answer is zero (using the Zero-One Method). Utilizing statistical tools, let us put the theory to the test. There was a recording of the data obtained from the satisfaction assessment questionnaire. There was an analysis of the findings using statistical approaches for pupils in primary five.

FINDINGS

an augmented reality game activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand, for students with learning disabilities and students with learning disabilities in primary 5 (Grade 5). According to an augmented reality game activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand for students with learning disabilities in primary 5 (Grade 5). The activities of the program are based on an augmented reality game activity on mathematical subjects. These activities include addition and subtraction of numbers up to one hundred thousand for students with learning difficulties who are in the fifth grade and reading fundamental Thai words in the fifth grade. The results of the test scores of the students in Grades 5 of 9 students, representing an average percentage of 82.40 and an average percentage of post-study test scores of 81.33, indicate that the teaching activity application according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary 5 (grade 5) students efficiency criterion is 80/80, i.e., E1/E2 is equal to 82.40/81.33. Because of this, this is predicated on the assumption.

Table 4.1 The purpose of this report is to provide a summary of the findings about the effectiveness of the teaching activity application within the context of an augmented reality gaming activity on the subject of mathematics, specifically the addition and subtraction of numbers up to one hundred thousand for children with learning difficulties who are in the primary 5 (Grade 5) level.

Total score list	Scores	*Mean*	Percentage	Criteria standard.	E1 /E2
Grades during class	50	41	82	80	82
Test scores after school	20	16	81	80	81

After using the application of teaching activities by an augmented reality game activity on the subject of mathematics concerning addition and subtraction of numbers up to one hundred thousand for students with learning disabilities in primary five, the average score is 8.80, and the standard deviation value is 2.33. This is the result of the students having learned through the application. Teaching activities based on an augmented reality gaming activity on mathematics topics such as addition and subtraction of numbers up to one hundred thousand for kids diagnosed with learning difficulties who are in the fifth grade. Students have higher grade point averages when they are in the third year of primary school and when they take the test after taking class. There was a standard deviation of 1.48, and the mean score was 16.27. A study of the t-test between before and after school revealed a value of 20.68. With a significance level of.05, there was a statistically significant difference.

Table 4.2 A comparison of the pre-study and post-study successes of students who were engaged in the application teaching activities according to an augmented reality gaming activity on the subject of mathematics, namely addition and subtraction of numbers up to one hundred thousand for children with learning difficulties who were in the fifth grade.

Test	Scores: Full	Scores	SD.	t
Sig.(2-tailed)				
Pretest	20	7.80	2.33	20.68	.00
Posttest	20	16.27	1.48	

Primary 5 (Grade 5) children with learning difficulties expressed their satisfaction with the teaching activity application since it was based on an augmented reality gaming activity on the subject of mathematics. The activity involved the addition and subtraction of integers up to one hundred thousand. Students totalling thirty people were found to have a high level of satisfaction, with an overall average of 4.51; the highest level of satisfaction was found in the ability to assist learners in studying content anywhere and at any time, with an average of 4.70; the item that the primary five (Grade 5) students had the lowest level of satisfaction was not found. The results of the assessment of the level of satisfaction that students with learning disabilities in primary 5 (Grade 5) have with the application of the teaching activity according to an augmented reality game activity on the subject of mathematics, which involves the addition and subtraction of numbers up to one hundred thousand for students with learned disabilities. There was a high level of satisfaction among students with learning difficulties in primary 5 (Grade 5) when it came to applying basic mathematics subjects such as addition and subtraction of numbers up to one hundred thousand. The satisfaction level was 4.51.

CONCLUSIONS

This research study on the Development of teaching activities application according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary 5(Grade 5) students, which has research objectives; 1) to develop and find the effectiveness of the teaching activity application according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary 5(Grade 5) students.,2) to compare the learning achievement of the students who learned with the teaching activity application according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary 5(Grade 5) students, and (3) to find students' satisfaction towards application for teaching activities based on an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities Primary 5(Grade 5) students. When conducting this study, the sample group consisted of pupils from Wat Pathum Nayok School who were in the fifth grade (primary 5). Under the district office Pathum Thani Primary Education Area, District 2, thirty individuals utilized a method of selecting a specific sample (Purposive Sampling). The experiment utilized several tools, including the teaching activity application by an augmented reality game activity on the subject of mathematics, which included addition and subtraction of numbers up to one hundred thousand for students with learning disabilities who were in the fifth grade. The pre-study test and the parallel exam were both administered. Multiple choice, with four different options, twenty questions each, and the student satisfaction assessment form with the teaching activity application by an augmented reality game activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand for students with learning disabilities who are in the fifth grade. It is possible to summarize the findings, analyze the findings, and provide recommendations for further research in the third year of primary school as follows: (1) Conduct an investigation into the issue of data collection at Wat Pathum Nayok

School, which is under the jurisdiction of the Pathum Thani Elementary Education Service Area Office, Region 2, to determine the reasons behind difficulties in learning There are kids in primary 5 (Grade 5) who struggle with reading fundamental Thai words, and the media that teachers utilize in educational institutions is not sufficient to help them. (2) To study the Thai language learning subject group curriculum by the Core Curriculum of Basic Education B.E. 2551, and (3) to study the concepts, principles, and theories related to the development of teaching activities application by an augmented reality game activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand for individuals with learning disabilities. students in the fifth grade (primary 5), (4) an examination of the content, structure, and rules established for the management of teaching and learning, (6) create the structure of the teaching activity application by an augmented reality gaming activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand for individuals with learning difficulties. (5) establish the primary objectives of the research. students in the fifth grade (primary 5), (7) Develop an application by the structure of the material that has been determined by sticking to the core curriculum for learning the augmented reality game activity on the subject of mathematics, which includes addition and subtraction of numbers up to one hundred thousand for individuals with learning difficulties Primary 5 (Grade 5) students, (8) create a test and the satisfaction assessment form of grade 5 students towards the teaching activity application according to an augmented reality game activity on the subject of mathematics consisting of addition and subtraction of numbers up to one hundred thousand for students with learning disabilities Primary 5 (Grade 5) students to use as a research tool, (9) Present the application that was developed by the researcher to the specialists so that they can evaluate it. To find the consistency between the content, language used, questions, teaching and learning activities to create and find the effectiveness of the tool with three measurement and evaluation experts, and then use it to improve and correct errors to be utterly correct as Experts recommend in all respects, (10) Bring the application to demonstrate how to use it with students in schools other than the sample group, to determine the performance of the application and make improvements until the efficiency is acceptable, (11) Bring the application to demonstrate how to use it with a sample group, namely primary 5(Grade 5) students at Wat Pathum Nayok School. Under the Office of Pathum Thani Primary Education Area 2, 30 people to determine the efficiency of the application, E1 / E2 was determined to equal 80/80. SD., an augmented reality gaming activity on mathematics themes in addition and subtraction of numbers up to one hundred thousand, was utilized to calculate the standard deviation. This activity was designed for individuals with learning difficulties. Using the mean and t-tests, we compared the pupils in Primary 5 (Grade 5). Analyze all of the data presented above and then summarize the conclusions of the research. Using the following objectives as a guide, the researcher provided a summary of the findings of the research: (1) The efficiency of the educational application of an augmented reality gaming activity on the subject of mathematics, namely the addition and subtraction of numbers up to one hundred thousand for individuals with learning difficulties Primary 5 (Grade 5) kids who were produced and developed with efficiency according to the 80/80 criterion, which means that the percentage of the score during the study was 82.40 (E1), and the percentage of score from the post-study test was equal to 81.33 (E2), were the students who were formed and developed. (2) A comparison of pre-study and post-study achievement scores revealed that the scores obtained by students with learning disabilities in primary 5 (Grade 5) after participating in an augmented reality game activity as part of a teaching activity application on the subject of mathematics, which included addition and subtraction of numbers up to one hundred thousand, were higher than the grades obtained before the semester. There was a high level of satisfaction among students in primary 5 (Grade 5), according to the findings of the study, which met the criteria for statistical significance at the.05 level. Discussion of the findings of the research on the

development of teaching activities application according to an augmented reality gaming activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand for children with learning difficulties who are in the fifth grade. Providing students with activities and tactics that correspond to them allows them to develop their capacity for independent learning as well as their capacity to work and produce ideas. Students can learn on their own by completing the learning activity sheet that corresponds to each field of study. The findings revealed that the pupils had a greater interest in studying and were more engaged in the process. Through the process of developing wisdom and self-awareness, teachers will assist in encouraging pupils to acquire knowledge and comprehension, as well as to think individually. This discussion is the result of the conversation (Sangsawang, T., 2015). The following is a list of the research team's objectives and hypotheses: (1) An application for teaching activities based on an augmented reality gaming activity on the subject of mathematics, including addition and subtraction of integers up to one hundred thousand for students with learning difficulties Activities that enable students in Primary 5 (Grade 5) to read words with rhymes and words with unvoiced consonants and vowels are the primary focus of instruction. The content of these activities is in line with the core curriculum. The year 2551 B.E. Based on the development of teaching activities application by an augmented reality game activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand, for students with learning disabilities who are in the fifth grade, the objective is to ensure that the application is effective by the 80/80 criteria. Students who have learning difficulties and who are learning through the use of teaching activities based on an augmented reality gaming activity on the subject of mathematics, including addition and subtraction of integers up to one hundred thousand Primary 5 (Grade 5) students, before using the teaching activity application by an augmented reality gaming activity on the subject of mathematics, including addition and subtraction of numbers up to one hundred thousand for students with learning difficulties Primary 5 (Grade 5) students are required to take pre-tests as part of the teaching and learning process. From a total of thirty pupils, has received an average score of twenty complete marks, which is equivalent to eight and a half. After finishing the pre-study test, the researcher applied the teaching activity application an augmented reality game activity on the subject of mathematics, specifically addition and subtraction of numbers up to one hundred thousand for students with learning disabilities who are in the primary 5 (Grade 5) level. This activity has been designed to be used in teaching and learning by providing students with activities to learn in which they are enthusiastic and more interested in learning. Following the recording of the results of the grades earned throughout the course, the results of the grades earned during the studies were taken into consideration to determine the average. The value of the percentage is 82.40 per cent. The students should take the test after class after they have learned through the application of teaching activities based on an augmented reality game activity on the subject of mathematics, which includes addition and subtraction of numbers up to one hundred thousand for students with learning disabilities who are in the primary 5 (Grade 5) level. It was found that the average post-test scores were 81.33%, indicating that learning through the teaching activities application according to an augmented reality game activity on Mathematics subject in addition and subtraction of numbers up to a hundred thousand for learning disabilities primary 5(Grade 5) students created by the researcher were as effective as 82.40/81.33. The efficiency is consistent with the research of teachers preparing along with students to challenge, motivate, encourage, advise, give advice, and seek the proper knowledge. According to the given criteria, the efficiency is by the 80/80 ratio. Suggested suggestions The researcher offers some recommendations for putting the findings of this study into practice, which are as follows: (1) It is necessary to get the essential equipment ready. In addition, an internet signal before every educational session (2) Students should get themselves ready by practising the skills necessary to use the application through the comprehensive instruction

manual for every phase of the learning activities. Suggestions for additional research to examine After reviewing and discussing the findings of the research, the researcher has come up with the following recommendations and proposals as a result of the findings: (2) should develop an application on reading fundamental Thai vocabulary, as well as other extra themes, such as reading diphthongs and leading letters; (3) should study more information on reading Thai words; and (4) should produce an application on doing so. reading the words of royalty to ensure that there is a continual In addition to organizing various learning approaches, such as TAI (Team Assisted Individualization) and STAD (Student Team Achievement Division), Development (3) should also design an application that teaches its users how to read basic Thai language. In this study, multimedia games should be used as instruments for critical thinking activities based on the Self-Regulated Learning (SRL) framework. These games should be supported by achievement tests and questionnaires through student-directed instructional design online, where the students' guide should make some input into their learning processes. showing that the SRL framework for problem-solving was effective for teaching and career training, the student's degree of pleasure in learning reached a high level, showing that the SRL framework was useful. Teaching styles, which include things like consistent focus, orientation, or intent, are what make up the overall pattern of different teaching behaviours. Based on the findings of this study, it can be inferred that a self-directed learner can be characterized as self-managing when the individual is participating in student-centred education. in the year 2020 (Thosporn Sangsawang).

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