



Developing Grade12 students Critical Reading and Metacognition in Thai language using the Displacement of Mae Chan Fault Situation-based learning Integrated with Metacognition

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ABSTRACT

The purposes of this research were: a) to explore the current state, problems, and needs of teachers in learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition for grade 12 students; b) to explore the current state, problems, and needs of grade 12 students for learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition for grade 12 students; c) to explore learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition suitable for the development of metacognitive thinking among students in grade 12; d) to develop high skills of metacognition in grade 12 students by using the displacement of Mae Chan fault situation-based learning integrated with metacognition. The writer analyzed the literature on the displacement of Mae Chan fault situation-based learning integrated with metacognition steps as follows: Step 1: Introduce the real-life context; Step 2: Understand the context; Step 3: Identify the problem and plan for an investigation; Step 4: Practice is constructing new knowledge; Step 5: Transfer knowledge to new contexts; Step 6: Summarize and reflect learning. The research methodology was Research and Development (R&D). The samples consisted of eighty-six teachers and one hundred sixty-five grade 12 students in their Second semester of the 2020 academic year. The data collection tools used were: a) A questionnaire on current conditions, problems, and needs of teachers and students regarding contextual learning management as a base for integrated education for teachers and student entrepreneurship; b) The teacher and student conversation questionnaires; c) IOC evaluation form; d) critical reading evaluation form; e) creative writing evaluation form; f) metacognition evaluation form. The researchers analyzed the quantitative data for average, standard deviation (SD), and T-test. The results showed as follows 1) Regarding the current state, problems, and needs of teachers in learning management by using the displacement of Mae Chan fault situation-based learning, integrated with metacognition for grade 12 Thai language students. An overview of teachers of the Mae Chan Wittayakom school expressed a high level of current state ($\mu = 4.20$, $\sigma = 0.774$), a high level of problems ($\mu = 4.24$, $\sigma = 0.768$), and a high level of needs ($\mu = 4.21$, $\sigma = 0.776$). In addition, the students expressed a high level of current state ($\mu = 4.38$, $\sigma = 0.676$), a high level of problems ($\mu = 4.30$, $\sigma = 0.650$), and a high level of needs ($\mu = 4.27$, $\sigma = 0.559$). 2) The result the IOC evaluation form using the displacement of Mae Chan fault situation-based learning integrated with metacognition for grade 12 students has a qualified index of Item-Objective Congruence (IOC) that in terms of suitability, correspondence, feasibility, and usefulness; is equal to 1.00, which is at an acceptable level. 3) Learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition for grade 12 students had the E1/E2 efficiency at 85.12/85.28, which was higher than the 80/80 threshold. 4) Learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition could develop Grade 12 students' critical reading, creative writing, and metacognition skills with a statistical significance at the 0.05 level in all lesson plans and overall, as well as promoting students' statistically significant at the 0.05 level.

Keywords: *Critical Reading, Metacognition, Thai language, Situation based Learning*

1. INTRODUCTION

The Twenty-First Century Is A Period Of Technology And Innovation That Has Progressed And Changed Our Society Drastically From The Past. Changing The Way That Children Communicate With Other Children, Awareness Of Information, And Sharing. Even The Children's Lifestyles Are Different From Their Parents' Period Of Time. Not Only Has Technology Advanced, But So Has Access To Fast And Limitless Information. It Is The Responsibility Of Teachers To Prepare Students For New Jobs And Careers That May Not Exist Today. Children Should Be Taught Essential Skills Such As Reading, Writing, Numeracy, Critical Thinking, Problem Solving, Creativity, And Innovation. In This Paper We Will Be Trying To Comprehend Several Facets Of Cultural Differences. Things Such As Cooperation In Teams, Communication Leadership, Information Literacy, Computer Technology, Career Information, Learning, And So On, So That We Can Better Prepare The Twenty-First Century's Next Generation Of Citizens. Furthermore, Teaching And Learning Should Change In This Period Too. From Classroom To Classroom With An Environment Conducive To Learning Without Limitations. Teaching Methods Have Shifted To A Model That Promotes Skills That Are Becoming Increasingly Important In The Twenty-First Century, Where Traditional Teaching Cannot Force Children To Develop These Skills. [1]

Nowadays, Many Scientific Discoveries Have Been Made Which Have Resulted In Rapid Social Change, And At Times, Have Rapidly Caused Problems, Requiring People In Society To Find Solutions For Critical Problems. Occupations Are Also Affected By The Change. The Labor Market In The Routine Work Sector Has Dwindled. As A Result, Society Has A Growing Need For People Who Can Create Valuable And Innovative Work. Depending On The Basic Knowledge That People Have, It May Not Be Sufficient To Create Something New; Therefore, The Ability To Constantly Learn New Things Is Required, And The Presence Of Metacognition Will Allow Us To Respond To These Changes. According To Research, People Who Have Metacognition Are Those Who Are Knowledgeable About Their Jobs, Know Their Own Learning Abilities, And Are Able To Exercise Self-Control In Their Learning Through Planning, Monitoring, And Evaluation. [2]. These People Will Be

Able To Think Critically And Make Sound Decisions When Solving Problems. [3]. As Well As Being Able To Continue To Learn New Things Throughout Their Lives. Students Who Are Metacognitive Have The Ability To Learn And Solve Problems. Furthermore, [4] Stated That Students Who Have Metacognition Are Able To Learn Science More Effectively And Efficiently Because Metacognition Reduces Learning Errors. The Process Of Managing Learning Through Situations Is A Concept That Aims For Learners To Develop Their Own Body Of Knowledge. It Is The Process Of Organizing Learning Around Questions Or Issues To Be Learned, Or Problems To Be Solved, By Allowing Students To Act Out Scenarios With Roles, Information, And Rules Of Play That Reflect Reality And Accurately Interact With The World Around Them, Specifically, Using Data That Is Similar To Real Information.

In Mae Chan District, An Interesting And Appropriate Situation For Learners To Learn Is The Displacement Of Mae Chan Fault Situation-Based Learning. The Mae Chan Fault Is A Large, Extremely Powerful Fault That Runs The Length Of Mae Chan Tang District, Always Ready To Release Destructive Energy. Catastrophic Property Damage Is A Risk At Any Given Time. Therefore, In Order To Create Knowledge And Understanding For The Students, They Passed Through Mae Chan District. To Give Learners An Opportunity To Become Aware Of Their Own Metacognitive Thinking Skills And To Develop Critical Thinking And Creative Writing Skills. Therefore, The Mae Chan Fault Situation Has Been Established As A Base For Integrating Metacognitive Thinking And To Develop Critical Reading, Creative Writing, And Metacognitive Thinking Among High School Students. However, There Has Not Been Any Research That Studies And Develops The Learning Management Process Using Situations As The Basis For Integrating Metacognitive Thinking And Critical Reading. Creative Writing And Metacognitive Thinking Are Contextual Learning Management Models Used As Bases For Integrating Entrepreneurial Education Of Grade 12 Students In Thailand. For These Reasons And Significance, The Researcher Developed A Situation-Based Learning Management Process To Integrate Metacognitive Thinking To Develop Critical Reading, Creative Writing, And Metacognitive Thinking, As Well As Basic Thai Language Subject For Grade 12 Students, The Researcher Used The Displacement Of Mae Chan Fault Situation-Based Learning For The

Integration Of Metacognitive Thinking, Namely: 1) Chiang Rai Province's Earthquake Situation And Earthquake Prevention. 2) The Previous Devastating Earthquake That Caused The Collapse Of Yonak Nak Phantha Sinhawat And Turned It Into A Swamp At Wiang Nong Lom. 3) The Application Of Scientific Knowledge And Geology Combined With The Beliefs Of The Local Villagers. For Example, The Story Of The Serpent Destroying The City Mae Chan Fault With Earthquake Power. 4) Identifying Different Names. Moreover, Learning Management Lacks Integration Of The Mae Chan Fault Situation-Based Learning For Integrating Metacognitive Thinking In Order To Develop Critical Reading Skills, Creative Writing Skills, And Metacognitive Thinking Skills. In The Area Where Students Live, They Enter Into Learning Arrangements To Promote Their Metacognitive Thinking Skills With The Local Community So That The Students Can Apply The Knowledge Gained As A Basis For Practicing Metacognitive Thinking In The Future. The Way That Students Learn To Use Situations As A Base For Integrating Metacognitive Thinking Is By Developing Critical Reading, Creative Writing, Metacognitive Thinking, And Fundamentals Of Thai Language For Grade 12 Students; Assisting Students In Developing Critical Thinking Skills, Love, And Self-Esteem; As Well As Knowing And Understanding The Mae Chan Fault Situation Through Learning And Practicing Earthquake Simulations From The Mae Chan Fault Until The Knowledge Gained Can Be Applied To Real-World Situations In The Future.

2. RESEARCH QUESTIONS

1) The Current State, Problems, And Needs in Using Mae Chan Fault Situation-Based Learning Integrated With Metacognition As An Integrated Base To Develop Critical Reading Skills, Creative Writing Skills, And Metacognitive Thinking Skills. What Is the Thai Language Subject for Grade 12 Students?

2) To Create an Appropriate Model for The Development Of Learning Management Based On The Mae Chan Fault Situation Metacognitive Thinking Is Used To Improve Critical Reading Skills And Abilities In Creative Writing. What Are the Characteristics of Metacognitive Thinking Abilities?

3) To Find the E1/E2 Efficiency of a Learning Management Model Using the Displacement of Mae Chan Fault Situation-Based Learning Integrated with Metacognition to Develop Critical Reading Skills, Creative Writing Skills, And Metacognitive Thinking Skills. Is It Higher Than The 80/80 Threshold?

3. RESEARCH OBJECTIVES

1) To explore the current state, problems, and needs in learning management by using the Mae Chan fault situation as an integrated base; and Metacognitive thinking to develop critical reading skills, creative writing skills, and metacognitive thinking skills in Thai language subject for Grade 12 students.

2) To study the development of learning management by using the Displacement of Mae Chan Fault Situation-based learning Integrated with Metacognition that is appropriate for the development of academic achievement and the development of critical reading skills, creative writing skills, and metacognitive thinking skills.

3) To study the effect of learning management using the Displacement of Mae Chan Fault Situation-based learning Integrated with Metacognition to develop critical reading skills, creative writing skills, and metacognitive thinking skills.

4. LITERATURE REVIEW

4.1 Situation-based learning management.

According to Sathiya Pantage's study of domestic research related to situation-based learning management, the students had consistent research results, and their average scores after school were higher than before (2020), and Warangkana Khao Aon (2017) [5] said Alisa Muang Phut's part (2019) [6] has suggested that situational learning management is the basis for effective learning. To be effective, learners must have fluency and satisfaction in learning by presenting a situation-based learning process with 6 steps consistent with what goddess of speech Rojanadit (2017)[7] has mentioned; 1) described as introductory and educational; 2) having to do with the study of actual learning situations; 3) Research and solve problems; 4) Increase expert knowledge through flexible capacity enhancement; 5) Participate in society; 6) Discuss and reach a decision; 7) Measuring and evaluating as a guide according to Khamanee (2009) [8], using situations as a learning base is the process by which teachers assist students in achieving their goals by allowing learners to interact with things in that situation using information that is similar to that of reality in role-playing situations. Students known as situational participants (participants) will interact with various events and people.

4.2 Metacognitive-based learning management.

A metacognitive-based learning approach can better improve the self-direction abilities of Year 2 Vocational students, [9], consistent with the effect of using video media to teach metacognition on the development of listening comprehension skills found that the learning outcome after school was significantly higher than before

at the .05 level, [10]. In addition, it is also consistent with the results of higher-achieving Grade 11 students' metacognition and learning achievement, as well as the development of metacognition and learning achievement in science through problem-based learning management. The students worked together to solve the problems and discuss the results after studying the simulations, fostering the development of metacognition, and scientific achievement. The results of the metacognition development practice revealed that students had more metacognition after learning management, [11], and were consistent with the outcomes of English reading pattern development and self-direction. There was discovered to be a teaching style and a learning management process. The high efficiency steps based on PPME principles are ideal, [12]

4.3 Creative writing skills.

From the study of the results for developing creative writing skills in Thai language courses and according to the syntactic teaching style, it was found that the improvement after school was significantly higher than before school at the .05 level, [13], and is consistent with the results of a study on creative writing abilities of Grade 10 students using the lotus blossom technique to link thinking. Though, after high school, statistically significantly more than before studying at the .05 level, [14]. It was also consistent with the results of the development of creative writing abilities of Grade 3 students by organizing syntactic learning activities, finding that the ability to develop a creative writing style of synectics was statistically significantly higher than before at the .05 level, [15]. In addition, from the results of the study of writing achievement by using the creative writing practice of Grade 4 students, it was found that the students had higher writing achievement than the students who used the writing exercises that the teacher set with the subject matter, statistically significant at the .01 level, [16]

4.4 Critical reading skills.

Results: Research on critical reading skills found that Development of English Literature Reading Skills Practice with the literary cycle to promote critical reading for Grade 10 students, the effectiveness of the reading reinforcement exercise was higher than that, [17]. It is consistent with the results of the study on the development of critical reading ability of Grade 12 students using the problem as a base. It was found that the critical reading ability of Grade 8 students after learning activities was higher than before learning activities with a statistical significance at the level of .05, [18], consistent with the results of a study of critical reading achievement of Grade 9 students who organized learning by scientific method. The achievement of critical reading after school is higher than before with statistical significance at the .05 level, [19], and also

consistent with the results of the development of critical reading ability of Grade 10 students by using the SQ5R teaching method. It was found that the critical reading ability of Grade 4 students after the activity was higher than before and the learning management was statistically significant

at the .05 level, [20]. As for the results of the development of critical reading abilities of Grade 11 students with the SQ4R learning activities, it was found that the students were able to read critically and were satisfied with the learning activities. Overall, at its highest level, [21]

4.5 Metacognitive thinking skills

Metacognitive thinking skills are skills that can be developed through daily experience and further enhanced. As a result of the research on the development of metacognitive ideas in learning management according to the theory of learning for creativity with intelligence, it was found that the students' metacognitive thoughts after learning through learning activities according to the theory of learning were statistically significantly higher than before at the .01 level, [22]. Consistent with the effect of the metaphysical strategy learning management on the ability to use metacognition strategies and mathematics learning achievement of the 3rd grade students, finding that students are more organized learning with strategies. Sirachit had an average score on metacognitive strategies higher than 60 percent, [23], in accordance with the research on learning activities to promote the intellectual careers of French learners and their metacognition. Learners learn how to assess their thoughts, organization of ideas, and to plan their learning. And doing more work and the attitude towards learning French is at the very best level.

5. RESEARCH METHOD

This research is research in each cycle of R&D; namely R1, R2, and R3. The researcher uses Mixed Method research which consists of the quantitative research method. (Quantitative Research) and qualitative research methods as follows:

R1D1 has been in operation since September 2020 to October 2020

R2D2 has been in operation since November 2020 to March 2021

R3D3 has been in operation since November 2021 to March 2022

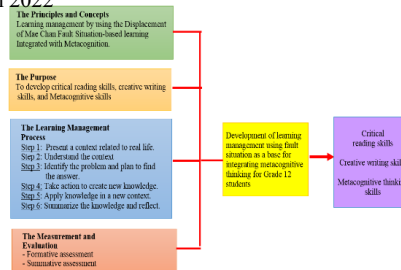


FIGURE 1. Research Framework

6. POPULATION AND SAMPLE

The population was the group of Grade 12 students at Maechan Wittayakhom school, under the Chiang Rai secondary educational service area office, with a total 165 students (5 classrooms), and 86 students of the Maechan Wittayakhom school teachers' group under the Chiang Rai secondary educational service area office.

The sample group was Grade 12 students at Maechan Wittayakhom school, affiliated with the Chiang Rai secondary education Service area office, which has 2 classrooms with 64 people and 86 teachers, which was obtained by selecting a specific (Purposive Sampling), which is a group in which the researcher is assigned to organize teaching activities in the second semester of the academic year 2020.

7. DATA COLLECTION

The researcher used Research and Development methodology (R&D) for 2 loops as follows:

Research 1: R1 Explore the current state, problems, and needs related to learning management using the displacement of the Mae Chan Fault Situation-based learning Integrated with Metacognition.

Development 1: D1 Develop learning management by using the Displacement of the Mae Chan Fault Situation-based learning Integrated with Metacognition.

Research 2: R2 D2 Study the effects of using learning management, learning management using the Displacement of the Mae Chan Fault Situation-based learning Integrated with Metacognition on the development of critical reading skills, creative writing skills, and learners' metacognitive thinking skills.

Development 2: D2 Improve learning management by using the Displacement of the Mae Chan Fault Situation-based learning Integrated with Metacognition for Grade 12 students.

8. DATA ANALYSIS

The researcher analyzed the quantitative data using both descriptive statistics; i.e. frequency, percentage, average (μ), and standard deviation (σ) to find the average and standard deviation. With the questionnaire information about the current condition state learning management problems and needs, using the Displacement of the Mae Chan Fault Situation-Based Learning Integrated with Metacognition used to improve critical reading skills, abilities in creative writing, and metacognitive thinking of the Thai language class for Grade 12 students.

9. RESEARCH RESULTS AND DISCUSSION

Current State, Problems, and Needs Related to Learning Management Using the Displacement of Mae Chan Fault Situation-Based Learning Integrated with Metacognition for Teachers at The Maechan Wittayakhom School. Table 1.

Table 1. The current state, problems, and needs of teachers in learning management using the Mae Chan fault situation as a base for integrating metacognitive thinking.

Verse	List	Average	Standard deviation	Interpretation
Current State				
1	You have an understanding of critical reading skills.	4.38	0.828	high
2	You have an understanding of creative writing skills.	4.34	0.835	high
3	You have an understanding of metacognitive thinking skills.	4.74	0.490	very high
4	Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition that is suitable for your school.	4.71	0.482	very high
5	Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition that is suitable for your students.	4.29	0.795	high
6	You were satisfied with the learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.23	0.792	high
7	Educational institutions are equipped with buildings and environments that support the development of learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.28	0.792	high
8	Educational institutions are equipped with media/material to support the development of learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.69	0.559	very high
9	Learners are ready for learning by using the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.16	0.824	high
Average		4.42	0.710	high
Problems				

10	The support from the educational institutions in the learning management by the displacement of Mae Chan fault situation-based learning integrated with metacognition from the educational institutions was insufficient.	4.70	0.487	very high
11	Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition is difficult in your classroom context.	4.23	0.792	high
12	Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition uses too many materials/devices	4.12	0.818	high
13	Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition / material is too complicated.	4.26	0.754	high
14	It took too long to manage learning using the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.76	0.432	very high
15	The results of the development of learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition are not worth the investment (resources, time, labor)	4.21	0.813	high
16	The learners have little potential and are not suitable for learning management based on the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.29	0.765	high
Average		4.36	0.694	high
Needs				
17	You want learning to be organized using the Mae Chan fault situation as a base for integrating metacognitive thinking in your classroom.	4.23	0.777	high
18	You'd like to develop knowledge and understanding of learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking for Grade 12 students.	4.74	0.439	very high

19	Your students want to learn by using the Mae Chan fault situation as a base for integrating metacognitive thinking.	4.73	0.445	very high
20	The development of learning management using the Mae Chan fault situation as a base for integration of metacognitive thinking is suitable for developing <u>critical reading skills</u> of learners.	4.24	0.766	high
21	The development of learning management using the Mae Chan fault situation as a base for integration of metacognitive thinking is suitable for developing <u>creative writing skills</u> of learners.	4.27	0.742	high
22	The development of learning management using the Mae Chan fault situation as a base for integration of metacognitive thinking is suitable for developing <u>metacognitive thinking skills</u> of learners.	4.17	0.829	high
23	The development of learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking to develop useful critical reading skills.	4.15	0.790	high
24	The development of learning management by using the Mae Chan fault situation as a base for integrating metacognition thinking should be continued.	4.77	0.425	very high
25	The development of learning management using the Mae Chan fault situation as a base for integrating metacognitive thinking deserves widespread dissemination.	4.15	0.847	high
Average		4.38	0.673	high

In this table, you will find the current state, problems, and needs of teachers in learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking. An overview of teachers expressed a high level of current state ($\mu = 4.42$, $\sigma = 0.710$), a high level of problems ($\mu = 4.36$, $\sigma = 0.694$), and a high level of needs ($\mu = 4.38$, $\sigma = 0.673$).

The current state, problems, and needs for learners about learning management using the displacement of Mae Chan Fault situation-based learning integrated with metacognition is as follows: Table 2.

Table 2. The current state, problems, and needs of students in learning management using the Mae Chan fault situation as a base for integrating metacognitive thinking.

Verse	List	Average	Standard deviation	Interpretation
Current State				
1	You have an understanding of critical reading skills.	4.41	0.690	high
2	You have an understanding of creative writing skills.	4.43	0.637	high
3	You have an understanding of metacognitive thinking skills.	4.21	0.785	high
4	Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition is suitable for your school.	4.27	0.790	high
5	Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition suitable for your students.	4.11	0.796	high
6	You were satisfied with the learning management by the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.23	0.770	high
7	Educational institutions are equipped with buildings and environments that support the development of learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.07	0.827	high
8	Educational institutions are equipped with media/material to support the development of learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition.	3.98	0.830	high
9	Learners are ready for learning by the displacement of Mae Chan fault situation-based learning integrated with metacognition.	4.15	0.843	high
Average		4.20	0.774	high
Problems				
10	Support from the educational institutions in learning management by using the Mae Chan fault situation as a base for the integration of metacognitive thinking from the educational institutions was insufficient.	4.19	0.847	high

11	Learning management using the Mae Chan fault situation as a base for integrating metacognitive thinking is difficult in your classroom context.	4.28	0.764	high
12	Learning management using the Mae Chan fault situation as a base for integration of metacognitive thinking uses too many materials/devices.	4.24	0.820	high
13	The use of metacognitive thinking/material is too complicated in learning management using the Mae Chan fault situation as an integrated base.	4.19	0.785	high
14	It took too long to manage learning using the Mae Chan fault situation as a base for integrating metacognitive thinking.	4.16	0.819	high
15	The results of the development of learning management using the Mae Chan fault situation as a base for integrating metacognitive thinking are not worth the investment (resources, time, labor)	4.33	0.626	high
16	The learners have too little potential and are not suitable for learning management based on the Mae Chan fault situation as a base for the integration of metacognitive thinking.	4.29	0.716	high
Average		4.24	0.768	high
Needs				
17	You want learning to be organized using the Mae Chan fault situation as a base for integrating metacognitive thinking in your classroom.	4.05	0.775	high
18	You'd like to develop knowledge and understanding of learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking for Grade 12 students.	4.13	0.828	high
19	Your students want to learn by using the Mae Chan fault situation as a base for integrating metacognitive thinking.	4.15	0.828	high
20	The development of learning management using the Mae Chan fault situation as a base for integration of metacognitive thinking is suitable for developing <u>critical reading skills</u> of learners.	4.37	0.743	high
21	The development of learning management using the Mae Chan fault situation as a base for integration of	4.50	0.514	very high

	metacognitive thinking is suitable for developing <u>creative writing skills</u> of learners.			
22	The development of learning management using the Mae Chan fault situation as a base for integration of metacognitive thinking is suitable for developing <u>metacognitive thinking skills</u> of learners.	4.29	0.765	high
23	The development of learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking to develop useful critical reading skills.	4.13	0.849	high
24	The development of learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking should be continued.	4.12	0.892	high
25	The development of learning management using the Mae Chan fault situation as a base for integrating metacognitive thinking deserves widespread dissemination.	4.21	0.792	high
Average		4.21	0.776	high

From the table, you will find the current state, problems, and needs of teachers in learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking. An overview of teachers expressed a high level of current state ($\mu = 4.20$, $\sigma = 0.774$), a high level of problems ($\mu = 4.24$, $\sigma = 0.768$), and a high level of needs ($\mu = 4.21$, $\sigma = 0.776$).

(3) Learning management by using the Mae Chan fault situation as a base for integrating metacognitive thinking that is suitable for developing critical reading skills, creative writing, and metacognitive thinking of **Table 3.** E 1 /E 2 efficiency of learning management by using the Mae Chan fault situation as a base for integrating the concept of metaphysics.

students in Grade 12 is worthwhile. It was found to have a qualified index of Item-Objective Congruence (IOC) in terms of suitability, correspondence, feasibility, and usefulness.

(4) Learning management by using the displacement of Mae Chan fault situation-based learning integrated with metacognition had the E1/E2 efficiency toward the development of critical reading skills, abilities in creative writing, and metacognitive thinking of Grade 12 students as follows: Table 3.

Learning Management Plan	Percentage of Points per Management Plan Learn (E1)	Percentage of Scores on Post-Unit Test (E2)
1	85.12	85.28
2	86.61	
3	84.09	

	$E_1 = 85.12$	$E_2 = 85.28$
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From the table, it can be found that E1 /E2 efficiency of learning management using Mae Chan fault situation as the base for integration of metacognitive thinking for Grade 12 students is equal to 85.12/85.28, which is

higher than the 80/80 threshold set by the researcher. Table 4.

Table 4. Critical Reading Skill Score of students in Grade 12, a learning management plan.

Learning Management Plan	Quantity	Average (μ)	Standard Deviation (σ)	T	DF	Sig (2-Tailed)
1	32	8.13	.976	47.116	31	.000*
2	32	8.31	.998	47.118	31	.000*
3	32	8.75	.842	48.756	31	.000*

From the table, it can be found that learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition could develop critical reading skills of Grade 12 learners

to be statistically significantly higher than the specified criteria at the 0.05 level in all learning management lesson plans. Table 5.

Table 5. Creative writing skills score of students in Grade 12, a learning management plan.

Learning Management Plan	Quantity	Average (μ)	Standard Deviation (σ)	T	DF	Sig (2-Tailed)
1	32	8.38	.942	50.301	31	.000*
2	32	8.31	.821	57.303	31	.000*
3	32	8.59	.911	53.372	31	.000*

From the table, it can be found that Learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition could develop creative writing skills of learners in Grade

12 to be higher than the specified criteria with statistical significance at the 0.05 level in all learning management lesson plans. Table 6.

Table 6. Metacognitive skill score of students in Grade 12, a learning management plan.

Learning Management Plan	Quantity	Average (μ)	Standard Deviation (σ)	T	DF	Sig (2-Tailed)
1	32	8.13	.976	47.116	31	.000*
2	32	8.31	.998	47.118	31	.000*
3	32	8.75	.842	58.756	31	.000*

From the table, it can be found that learning management using the displacement of Mae Chan fault situation-based learning integrated with metacognition could develop the metacognitive thinking skills of Grade 12 learners to be statistically significantly higher than the specified criteria at the 0.05 level in all learning management lesson plans.

10. CONCLUSION

The developing Grade 12 students critical reading, creative writing skills, and Metacognition in Thai language using the displacement of Mae Chan fault situation-based learning integrated with metacognition. This study demonstrates the origins of critical reading skill development, abilities in creative writing, and critical thinking Metaphysics of Grade 12 Thai students using the displacement of Mae Chan fault situation-based learning integrated with metacognition which is acceptably efficient and can develop learning management in the Mae Chan fault situation as a foundation for higher integration of metacognitive thinking. According to research, learning Thai language improves the quality of life. Learners can put their newly acquired knowledge to use in their daily lives. And, adding to this, the value of local wisdom, love, and compassion. Preserving one's own resources, traditions, culture, and local wisdom is an example of high-quality learning. It could also be used to protect against earthquake damage as well as having the capability of assisting and advising the general public, as well as realizing the value of local wisdom and cherishing resources, traditions, and culture as the foundation of one's self.

11. THE RESEARCH RECOMMENDATIONS

The displacement of Mae Chan fault situation-based learning integrated with metacognition was used in conducting research on developing critical reading and metacognitive thinking of Grade 12 students in Thai language. The efficiency was satisfactory, and the contextual learning management model could be used as a foundation for the integration of education for entrepreneurship of Thai language subjects for Grade 12 students, with a greater emphasis on critical reading skills, creative writing skills, and metacognitive thinking skills. The following are the researcher's recommendations:

12. SUGGESTIONS FOR IMPLEMENTATION

Thai language teachers should think about adapting learning management by using the Mae Chan

Fault situation as a foundation for integrating metacognitive thinking for Grade 12 students in their own locality and students appropriately.

2. There should be various learning resources in the Mae Chan fault situation as a base for integrating more and more metacognitive thinking as much as possible to be a learning center based on a variety of content, including: Knowledge of local occupations, local learning, and resources.

3. Learn from the real world and put it into practice until the result is successful.

13. SUGGESTIONS FOR FURTHER RESEARCH

1. Increase the number of samples to allow for more comprehensive research results.

2. Include additional qualitative research tools such as a behavioural observation form.

3. Include more scoring criteria and cover more ground

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