

Ability Of Learning Management Of Graduate Students According The STS Approach

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ABSTRACT

The research aims to: (1) study of the ability to manage learning according to the STS Approach concept of graduate students. (2) Comparison of the ability of learning management according to the STS Approach concept of graduate students. The target group is Master degree students, there are 16 students in the Curriculum and Instruction academic year 2021. The instruments used in the research were (1) Methods of learning management according to the STS Approach. (2) Test of analytical thinking ability according to the STS Approach. The data was analyzed by means of average, standard deviation, paired samples T-Test, independent t-test and One-Way ANOVA. The result of the research found that (1) graduate students had a statistically significantly higher level of post-learning management than pre-learning at .05. (2) Graduate students demonstrated the development of their ability to manage all aspects of learning. The most important aspects were Creating Learning Management that student centered learning (CLM) and Action Learning Management according to major (AM), while on the ability to Create Instructional Media (CIM) and Measurement and Evaluation (ME) is at a high level. when considering students with or without teaching experience, found that the ability to manage learning according to the STS Approach concept was not different.

Keywords: Ability, Learning Management, Graduate Students, STS Approach.

Background and Significance of the Problem

United Nations Educational, Scientific and Cultural Organization (UNESCO) and the operation of Thailand supports the implementation of education goals according to goal 4 to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. To achieve results in 2030. Focusing on the importance to the development of people from early childhood, basic education and vocational education including lifelong education to develop all learners with skills necessary for life. To employment, respect and good understanding between cultures, acceptance of cultural and racial diversity, as well as the creation of social values and behaviors that

emphasize the solidarity of the people and building socially responsible citizens and know how to fix problems and can face social pressure conditions, have the skills and knowledge needed for the new century. Including calling for countries dedicated efforts towards achieving unachievable educational goals and push for educational management for global citizenship which is the heart of the education of the future. (Ministry of Education[MOE], 2021, p.14)

The Office of the National Economic and Social Development Council (NESDC, 2018, p.33) defines national strategic issues for human resource development and capacity building. Role transformation “Teacher” to become a new era teacher by adjusting the role of “Teacher” to “Coach” or “Learning director” acting as a

stimulus inspire introduce how to learn and how to organize knowledge creation, design activities and create learning innovations for learners and to be a researcher to develop learning processes for learners achievements, as well as adjusting the production system and developing teachers. There is a system for developing teachers potential and ability continuously and create a network to develop teachers to exchange knowledge with each other, including the development of teachers with teaching expertise to systematically create new generations of teachers and measure performance from student development directly.

Thai government gazette announces the criteria and methods for assessment of professional ability in teachers, no.2 (2021) Khurusapha (KSP, 2021, p.20). In Article 7 Professional Ability of Teachers (b) performance and conduct according to the teaching profession standard, which is learning management, ability (1) being able to formulate learning plans and lead to real results (2) being able to create a classroom management atmosphere for learners to learn Khurusapha (KSP, 2021, p.3). Which indicates that teachers are important for the development of global citizens for a role in building a quality society. Therefore, the production of teachers to create human resources are defined in the professional organization of teachers, especially the professional performance of teachers that will directly affect both negative and positive students. Likewise, a study by Lazarides, Viljaranta, Aunola, and Nurmi (2018, p. 247) found that teacher ability is importance to student learning, because of the ability of high-level teachers can help create society and develop the learning of learners who want to be successful both academically and in real life. Similarly, Yu, Kreijkes, and Salmela-Aro, (2022, p. 2) found that the teaching practices of teachers highly ability and ready to teach, will help develop the abilities, skills, intelligence of the learners and helping learners to grow their mindsets.

Pedretti and Forbes (2000) and Yager and Akcay (2008) summarized the STS Approach as the aim of the NSTA (The National Science Teacher Association) in 1990 that the STS Approach is the concept of teaching and learning science in the context of experience and focus on problems related to actual science and technology instead of teaching that starts with concepts and processes, which is to promote learners know how to analyze and apply concepts and processes. As for Yörük (2009), concluded that the STS Approach concept is necessary for national development related to education reform. A society that can survive depends on both the individual and the knowledge that can make a good society. Carin (1997) and Chokchai Yuenyang (2009) presented a method organize learning according to the STS Approach in a consistent direction that this learning focuses on problem solving. There are 5 steps of learning activities as follows: (1) Identification of social issue stage, this stage is the identification of a social issue. (2) dentification of potential solution stage, allows students to examine their ability to find answers to that social issue. From the learners who perceive social issues due to science and technology or others. (3) Need for knowledge stage is that the learners will study various knowledge related to that problem. (4) Decision – making stage at this stage, learners will use the knowledge they have learned to review solutions to problems. (5) Socialization stage is a social process that reflects the learners to review concepts their own that are shown to solve that problem by presenting or implementing that is designed in the decision-making process in society allow the learners to exchange ideas or examine their own ideas to be most appropriate.

Therefore, this study aims to find out whether the ability development of graduate students with a learning management approach according to the STS Approach, that focuses on action, practice, and ability to connect and integrate both the content and real-life situations

in society to help learners have a sustainable understanding. Because learners have solved or designed learning from the reflection of the needs of the real problem. In addition, learners have researched, examined with the correct information and evidence according to the STS Approach learning process in order to create students with the most value to society at all levels.

Ability of Learning Management and Science-Technology-Society Approach (STS Approach)

The ability to manage learning in accordance with the Science, Technology and Society approach (STS Approach) is a concept that offers professional teacher learning. This section outlines the supporting relationship between the STS Approach learning approach and the learning management abilities of graduate students. Ability of Learning Management refers to the organization of the learning process that considers the best interests of the learners by allowing the learners to participate in the learning activities as much as possible. Learners learn from real experiences, have used their own ideas and practiced as well as interacting with various people or learning resources until they can build their own knowledge and can apply knowledge to life. The teacher is the planner with the learners by providing an atmosphere that is conducive to learning, stimulating, challenging, encouraging and helping to solve problems and directing the correct way to seek knowledge for individual learners. (Saowaluck Rattanawit, 2016, p.2)

The ability to manage learning is to organize the atmosphere, activities, media, situations. Allowing the learners to learn to their full potential. Teachers must know the learners and cover all aspects and be able to analyze data to be used as a basis for designing or planning learning in accordance with learners with a variety of techniques and methods. Give the learners opportunity to make decisions on the subject

matter that they are good at and interested in being useful to the learners. Emphasis on participation in thinking and practicality. (Phetchaburi Rajabhat University, 2017, p. 6-7) As for teacher ability means that the teachers have skills, knowledge, and understanding of learning management that will clearly result in changes in the learners, which requires both basic data analysis in all aspects of learners and knowing how to choose a learning management method motivation and inspiration in making the learners to learn important by themselves (Self-concept of ability). Therefore, if a teacher has the ability to manage quality learning, that is will affect the quality of the students as well. (Lazarides, Viljaranta, Aunola, , & Nurmi, 2018) The ability of teachers in learning management is skills, knowledge and expertise. Characteristics of being a teacher in learning management in the subject taught that must cover the disciplines, techniques, methods, arts of teaching, learning atmosphere environment and assessment results according to the Teachers Council of Thailand, which is the main The Teachers Council of Thailand for overseeing the standards of teaching professions to be in accordance with international. Characteristics in Article 7, professional competence of teachers, consisting of (A) professional knowledge and experience according to the standards of teaching professions: (1) teacher profession (4) academic use of digital technology for education (5) major subjects as determined by the Teachers Council of Thailand Board. Aspects (B) performance and self-practice (1) learning management (2) relationship with learner's parents and community (3) teacher performance and professional ethics. (Ratchakitcha, p. 20-21)

The STS Approach is a learning management approach that integrates science, technology and society. Main feature is that the learners will learn science in the context of real experience or learn about science related problems, technology or problems arising from

real life based on society according to the STS Approach. Students will learn through phenomena or cases that occur in society. (Primastuti & Atun, 2018) Learning activities according to the STS Approach learning approach, each learner can create of knowledge according to constructivist theory. And science learning that has been surveyed, examined, searched for knowledge, skills, developed a new teaching system that is different from the original, that focuses on lecturing. (Aikenhead, 1988) This approach allows learners to practice research, testing and observation. In addition, this conceptual education will apply or practice experiences both within and outside schools related to science, technology, society or integrate with other fields that are essential for social development. (Yörük, 2009) That is an open perspective to uses scientific and technological processes to solve social or real-life problems. To reflect the needs real necessity. (David, Hessa, Benjamin, & Sovacool, 2020) The STS Approach focuses on divergent thinking, problem-solving, decision-making, criticism, disagreement, and rational argumentation. Implementing practical applications in life and solving social problems. (Carin, 1997), (Devi & Aznam, 2019), (Ermine, 2008), (Kim & Roth, 2008), (Solomon & Aikenhead, 1994), (Yörük, N., Morgi. I, & Seçken. N, 2010, p. 1418), including Chantaranima and Yuenyong (2014) Each has a consistent approach to learning management. Principles for developing learning management abilities of graduate students to create quality teachers according to teaching professional standards and benefit learners, consisting of 5 learning steps as follows: (1) Identification of social issue stage (2) Identification of potential solution stage (3) Need for knowledge stage (4) Decision – making stage and Reflect (5) Socialization stage. That aims to create ability characteristics according to the criteria and methods for testing and assessing professional competence of teachers (No. 2) B.E.

2021 in the Government Gazette (The Teachers Council of Thailand, 2022, p. 21), which consists of 4 factors: (1) Creating Learning Management that student centered learning (CLM). (2) Create Instructional Media (CIM). (3) Measurement and Evaluation (ME). (4) Action Learning Management according to major (AM) according to the branch subjects according to the STS Approach.

Research methodology

The research target group consisted of 16 graduate students in the field of Curriculum and Instruction, 2nd year of subjects 177728, Curriculum and Instruction, innovations. The research instrument was a 5-step STS Approach method of learning management as follows: (1) Identification of social issue stage (2) Identification of potential solution stage (3) Need for knowledge stage (4) Decision – making stage and Reflect (5) Socialization stage. Quality checks by 3 experts to check content validity, language used and to find index of Item Objective Congruence (IOC) to assess the suitability and consistency of learning management methods. The consistency index is between 0.50-1.00. (Yuth Kaiwan, 2009, p. 61) Overall, the consistency index was 0.95. The instrument used for data collection was the 4-dimensional STS Approach model of learning management competency measure. as follows: (1) CLM, (2) CIM, (3) ME, (4) AM. Quality audited by 3 experts to verify content validity, language used and index of Item Objective Congruence (IOC) to assess the suitability and conformity of the measurements. The conformity index was between 0.50-1.00 and the overall consistency index was 0.91. The reliability was then divided by dividing the Cronbach's Alpha coefficient equal to 0.85. (Srisa-ard, 2010, p. 117) Tested pre learning with measure the STS Approach Learning Management Ability Test, then conducted the 5-step STS Approach learning management and tested post learning with

measure the STS Approach Learning Abilities Scale. again Then analyze the data as follows: tested pre-learning with measure the STS Approach Learning management ability Test, then conducted the 5-step STS Approach learning management and tested post learning with measure the STS Approach learning abilities again. Then analyze the data as follows:

(1) Comparison of the ability of learning management according to the STS Approach of graduate students pre and post learning. Data were analyzed using mean, standard deviation, using paired samples T-Test.

(2) Analyzing the ability of learning management according to the STS Approach concept of graduate students in the field of Curriculum and Instruction by calculating the mean and standard deviation. The mean values can be interpreted as follows: 4.51- 5.00 means ability at the highest level, 3.51- 4.50 means ability at high level, 2.51- 3.50 means ability at

moderate, 1.51- 2.50 means have the ability and 1.00- 1.50 mean having the lowest level of ability.

(3) Comparison of learning management abilities according to the STS Approach concept of graduate students, who have teaching experience and those with no teaching experience. Data were analyzed using mean, standard deviation, and t-test, Independent.

(4) Comparison of the ability of learning management according to the STS Approach of graduate students, in each branch. Classified by graduation with a bachelor's degree in education and other fields are not education fields by One-way ANOVA analysis.

Research results

1. Comparison of the learning management ability according to the STS Approach of graduate students before and after learning. Data were analyzed by using mean, standard deviation and t-test (Paired Samples T-Test), details as shown in Table 1.

Table 1 shows the ability of learning management according to the STS Approach of graduate students pre and post learning.

experimental group	n	\bar{x}	S.D	t	p
Pre learning	16	24.39	1.99	9.61*	.000
Post learning	16	28.81	068		

$p^* \leq .05$

Table 1 found that the mean result of development of learning management ability according to the STS Approach of graduate students post learning was 28.81, higher than the average pre learning, 24.39. When analyzed the difference between pre learning and post learning by the T-Test statistic, the t-value was 9.61 and the p-value $\leq .05$, indicating that graduate students that has been learned according to the STS Approach. The ability to manage learning was significantly higher at .05.

2. The results of the study on the ability of learning management according to the STS Approach of graduate students found that there were overall graduate students at a high level. When considering each aspect, it was found that the ability at the highest level was CLM and AM. The high level was CIM and ME, details as in Table 2

Table 2 shows the learning management abilities according to the STS Approach concept of graduate students in the field of curricula and Instruction.

The ability to manage learning of graduate students	\bar{x}	S.D.	Level
1. Creating Learning Management that student centered learning (CLM)	4.61	0.19	Highest
2. Create Instructional Media (CIM)	4.18	0.46	High
3. Measurement and Evaluation (ME)	3.92	0.50	High
4. Action learning management according to Major (AM)	4.85	0.23	Highest
Total	4.39	0.35	High

3. Comparison of the ability of learning management according to the STS Approach of graduate students pre-learning, during-learning and post-learning. Details as in Table 3

Table 3 The ability of learning management according to the STS Approach of graduate students pre-learning, during-learning and post-learning.

The ability to manage learning of graduate students	Pre-learning %	During-learning %	Post-learning %	Total %	Level
1. Creating Learning Management that student centered learning (CLM)					
1.1 Elements of a learning management plan.	83.33	85.94	97.92	89.06	High
1.2 Identify learning theories and learning techniques that support.	81.25	87.50	93.75	87.50	High
1.3 Activities of learning management in complete steps according to STS Approach.	85.42	89.06	97.92	90.80	Highest
1.4 Activities of learning management focusing on student roles.	85.42	89.06	89.06	87.85	High
1.5 Correspondence of the composition with the group of disciplines.	85.42	89.06	97.92	90.80	Highest
2. Create Instructional Media (CIM)					
2.1 Consistency with the subject taught/objectives/learning results	77.08	84.38	97.92	86.46	High
2.2 Diversity of instructional media	91.67	98.44	100.00	96.70	Highest
2.3 Possibility/worthiness	90.63	95.31	93.75	93.23	High
3. Measurement and Evaluation (ME)					
3.1 The measurement method corresponds to the measuring instrument and the learning objectives.	81.25	89.06	96.88	89.06	High
3.2 diversity of measuring instruments.	87.50	90.63	87.50	88.54	High

3.3 The assessment criteria are consistent with the measurement method.	65.63	75.00	87.50	76.04	Moderate
3.4 Methods of measurement and evaluation are consistent with learners.	90.63	93.75	93.75	92.71	Highest
4. Action learning Management according to major (AM)					
4.1 The lesson introduction matches the STS Approach teaching method.	87.50	89.06	97.92	91.49	Highest
4.2 demonstration of learning management according to the steps STS Approach.	62.50	82.81	95.83	80.38	High
4.3 Demonstrate techniques that are consistent with the STS-approach teaching method and the subject taught.	68.75	78.13	95.83	80.90	High
The ability to manage learning of graduate students					
	Pre-learning %	During-learning %	Post-learning %	Total %	Level
4.4 Demonstrates a diverse of teaching skills and appropriate for teaching activities and methods.	87.50	87.50	91.67	88.89	High
4.5 Evaluation (pre learning - during learning - post learning)	95.83	93.75	100.00	96.53	Highest
4.6 Activities for teaching social/life integration	71.88	75.00	94.79	80.56	High
4.7 Activities to create interactions/ learning roles of the learners	80.08	89.58	98.44	89.37	High
Total	81.30	87.27	96.04	88.20	High
	High	High	Highest	High	

From Table 3, the results of the development of learning management abilities according to the STS Approach concept of graduate students pre-learning, during-learning and post-learning overall, that at a high level. When considering the period of operation, was found that post-learning period was at the highest level, followed by the distance during-learning and the pre-learning period at a high level, respectively. In considering each aspect of the 3 period, was found that the instructional media was diverse. Methods of measurement and evaluation are consistent with learners. The introduction into the lesson matched the STS Approach teaching method and the

evaluation results (before-during-after, learning) were at the highest level. The rest were at a high level in almost every aspect, except the ability to create assessment criteria consistent with the measurement method at a moderate level.

3. Comparison of the learning management abilities according to the STS Approach of graduate students classified by teaching experience and branch.

3.1 Students who have teaching experience with students have no teaching experience. There is no difference in the ability to manage learning according to the STS Approach. Table 4 details

Table 4 shows a comparison of the learning management abilities according to the STS Approach of graduate students, that students who have teaching experience with students who have no teaching experience.

Group	n	\bar{x}	S.D.	t	p
Have teaching experience	8	87.41	3.01	0.86*	0.20
No teaching experience	8	88.81	3.50		

$p^* \leq .05$

3.2 Graduate students with a bachelor degree in education and other fields are not education fields, such as Thai language, foreign languages,

science, mathematics and social sciences. Overall, and each aspect was found to be no different. Details in Table 5.

Table 5 shows a comparison of learning management abilities according to the STS Approach of graduate students with a bachelor degree in education and other fields are not education fields.

The ability to manage learning of graduate students	df	SS	MSa	MSb	F	Sig
1. Creating learning management that student centered learning (CLM)	15	0.55	.032	.037	.872	.366
2. Create Instructional Media (CIM)	15	3.24	.071	.226	.315	.583
3. Measurement and Evaluation (MA)	15	3.77	.074	.264	.282	.604
4. Action learning Management according to major (AM)	15	0.77	.020	.054	.379	.548
Total	60	8.33				

Discussion and conclusion

1. Results of the development of learning management abilities according to the STS Approach of graduate students, the scores were assessed, classified into 2 types, which were assessed pre and post learning from the learning management ability test and the evaluation learning management ability during-learning, was found that the mean scores for assessment pre-learning were 24.39. The mean scores for assessment post-learning were 24.39 equal to 28.81. When comparing the scores between pre and post learning by t-test statistics, was found that there was a significant difference at the confidence level of .05 ($t = 9.61$, $p\text{-value} = .000$). Graduate student ability to manage learning according to the STS Approach, post-learning was higher than pre-learning and scores for

assessment of learning ability according to the STS Approach pre-learning, during-learning and post-learning, found that overall, the development results are at a high level, at 88.20. When considering the results of the 3-stage assessment, was found that the post-learning period had the highest level of assessment results at 96.04. The aspect that was at the highest level consisted of creating a learning management plan that focused on the learners as follows: (1) activities of learning management in complete steps according to STS Approach, (2) Correspondence of the composition with the group of disciplines have the same evaluation result of 90.80. Regarding the creating media learning, that is, the diverse media has assessment results of 96.70. In terms of measurement and evaluation results, the methods of measurement

and evaluation were consistent with the learners, has an assessment result of 92.71. The Action learning management according to major were evaluation results pre-learning, during-learning, post learning with an evaluation result of 96.53, while the aspect with an assessment result of 76.04% was at a moderate level, ie, that is measurement and evaluation, the assessment criteria are consistent with the measurement method. Factors contributing to the achievement of this objective may come from the practical training that is based on the problems the learners face from real experience as a school teachers and learning problems from their own direct experience, including reflection from society to attract attention and necessities to study. Learning leads to finding the answer to that problem. (Yager & Akcay, 2008) Emphasizes the learning management process that learners have action and used the thinking process (Active Learning) to organize learning activities under 2 basic assumptions:

1.1) learning is a natural endeavor of humans and 2) each person has a different approach to learning. The learners will be switched from the recipient of knowledge (receive) to participate in the creation of knowledge. (Co-creators) Active Learning designs teaching styles to suit the content taught, resulting in teachers becoming active teachers, both content experts and proactive teachers prepare opportunities for students make students have confidence be a non-stop thinker. Learners can remember the content for a long time and can be applied in a wide range of contexts make students interested in the lesson and have higher academic achievement. (Nonthalee Pornthadawi, Rinradee Papanai, Rinradee Papanai and Thong Pikunthong, 2018, p. 1) This is in line with the learning approach of the STS Approach, which focuses on engaging learners in problem-solving activities that students need, which are problems and questions related to everyday problems. (Primastuti & S Atun, 2018) STS Approach helps

learners to develop their thinking skills and processes. Learning must have meaning for life, as can be seen from the learning management activities designed by learners to bring interested problems or issues arising from actual practice to create a learning plan in accordance with their own field of study. The design and management of real learning and criticizing and reflecting together allows learners to analyze their own work, understand and be able to search for answers with curiosity and feeling challenged. Learners participate in experiential learning. Learners will apply new and old knowledge to analyze and organize in a structured manner. (Yager, 1996) That follows a learning approach that focuses on creating a knowledge according to the constructivist learning theory (Constructivist Learning Theory) that shows the perspectives and experiences of each person, that will help connect and create an understanding of interest to learners and will lead to good learning. (Serhat Kurt, 2021)

1.2) The assessment criteria are consistent with the measurement method, with an assessment result of 76.04 at a moderate level. Because the learners did not have sufficient knowledge, understanding and expertise in the assessment results. Especially on the creation of measurement and evaluation criteria, both in terms of knowledge, skills, processes of assessment criteria according to different instruments, which will be the criteria related to the practice, behavior based on learning objectives, that learners create inconsistently. Including, assessment errors such as not according to the standards, indicators or learning outcomes inconsistent with the student context. As Somkiat Tangkitwanich and Supanat Sasiwuttiwat (2012) said that " Problems in the quality of basic education in Thailand are caused by the wrong assessment system. Teachers have little connection with student learning outcomes and test quality issues. In addition, the measurement instruments and measurement

criteria must be consistent with the linkages of the learning standards. (Objective), standard-based learning management (Learning) and assessment based on learning standards (Evaluation). (Chanathip Tuipae, 2021) Therefore, if students has knowledge and a profound understanding of this matter, that becomes an intellectual learning process (Metacognitive Processes) (Rakovic, et al., 2022), which will lead to the practical use of the students."

2. The results of the study on the ability of learning management according to the STS Approach of graduate students, found that the overall ability of learning management according to the STS Approach was at a high level. When considering each aspect found that the highest level was Creating learning management that student centered learning and Create Instructional Media, while measurement and evaluation and action learning management according to major were at a high level. Because this concept emphasizes on teachers to train themselves until they understand. As the saying goes "Teachers must have cognitive skills, teachers need to train themselves with the concepts and methods used to act as teachers so that students must learn to practice themselves more than students. And not just care and love students but must study, practice how to be a "coach" or "facilitator" of good and appropriate learning for students" (Vicharn Panich, 2012, p. 118) Resulting in teachers understand the order of presentation of content and activities to learners. In the 5-step STS Approach learning activity step, will helps students understand the content necessary for learning management. Including learning theory, learning psychology, learning media and technology, evaluation, and technical skills that support learning STS Approach, practice, learning plan design, class design, prepare media and assessment instrument based on real situations in which the teacher aims for participation from the needs that have been modified or developed by the learners themselves

(Kongson, 2021, p. 10814), and Klahan and Yuenyong (2012). In addition, in theory Maslow's Hierarchy of Needs, was found that good learning must arise from physical needs, such as having the knowledge and understanding of the creating a learning management plan, have actually done, being accepted, receiving constructive feedback. Including the appreciation of their own works. Each student will create different works according to their aptitude, interest. (Corporatefinanceinstitute, 2022) and received immediate feedback. This is the reason for wanting to make improvements.

3. Comparison of the learning management ability according to the STS Approach of graduate students with teaching experience and no teaching experience, was found that there was no difference because the learning method according to the STS Approach was a sequenced learning method that promoted independent learning (process of scaffolding) and creating an environment conducive to learning. As Bruner and Vygotsky highlighted, learning that begins with a subject matter or environment or learns from a social problems, will helps learners to improve their learning skills (Mcleod, 2019). Including action from the problem situations that students choose to face and solve problems, learning processes from real experiences, practical processes, will help learners to be trained to develop step by step and be motivated to learn. (Ministry of Education, 2021.p. 25-26) And the STS Approach has a variety of learning techniques that help learners easily understand from the abstract to the concrete, participation, easy to access. Furthermore, can relearn over time through learning materials, documentation, simulations, discussions, reflections and learn with multimedia. (Aikenhead, 1988) Applying technology that is consistent with the subject taught, such as multimedia lessons, teaching videos, example teaching techniques , will increase the efficiency of access to learning

resources for learners, creating opportunities for learners and teachers to bring teaching methods that are different from the traditional image to the outside, not limited to the classroom with the internet and can help teachers reach students including managing the knowledge that is suitable for each individual learner with ease of classroom management. (Intharawiset, Phulketnakhon, Charoensa, Nak-in, & Reaung-Rong, 2019) As a result, whether students with or without teaching experience can learn no differently.

4. Comparison of the learning management ability according to the STS Approach of graduate students with different bachelor degrees had to be no different management abilities. This is likely because students learn with the desire to develop themselves because of problems or situations they face in their duties or in real life. (Carin, 1997, p. 27). Find answers to argue, explain, and constructively criticize themselves and others (Moser, Zimmermann, Pauli, Reusser, & Wischgoll, 2022) And a variety of flexible measurement instruments, both the measure and the assessment forms. The implementation of the STS Approach procedure is a real assessment, there is an appropriate period of time, for example, the teacher assesses immediately after the learning management activities, learning design management. Including increasing the study period, searching outside the classroom in activities “How to arrange a classroom atmosphere so that learners want to learn” for example, creating assessment criteria that correlate between the objectives of learning, learning experience, and measurement and evaluation or OLE, as well as measuring and evaluating, finding the quality that each type of measuring instrument will result in a measure that matches the ability of the learner. (Somchai Rattanathongkham, 2011, p. 138) Including practice in real situations such as teaching demonstrations, presentations of the design of

learning management plans, etc. and found that the students have differences in branches causing students to compete with themselves. With the technique of questions that the teacher asks, focusing on thinking based on their own or social needs in order to create concrete motivation, for example, “If the student is a learner at that level or that group, how want to study that subject? (English, Mathematics, Science or Social Studies) that think, can understand and feel happy?” As Bowling, Rice, Curry, and Marx (2022) find out that successful teacher development must be inspired by their own life experiences. Therefore, whether students have different fields, if, when creating roles for learners to have a meaningful identity in the learners' lives, which is the STS Approach learning approach according to the 5-step learning process. The step is to Identification of social issue stage, Identification of potential solution stage, need for knowledge stage, decision-making stage and reflect. Social process (Socialization stage) is learning to build knowledge that (Constructivism) leads to the learner's life or career in real situations (Peiser, Pratt, & Putwain, 2022).

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