Teacher-Student Interaction on Reflective Thinking Instructional Model Classes for Improving Students' Desirable Learning Achievements

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Abstract: *The purpose of this study i to investigates and developing the reflective thinking instructional model (RTIM) for improving pre-service and in-service of educational students in Roi-Et Rajabhat University.. Qualitative and quantitative methods were used to indicate students' desirable learning outcomes, teaching and learning targets, social system relationships, and performances. Students' perceptions of their RTIM classroom learning environments to their teacher interpersonal behaviors with the 48-item Questionnaire on Teacher Interaction (QTI) and the Performance Desirability Skill Test (PDST) toward their desirable learning achievements were assessed. Associations between students' perceptions of the QTI with their PDST in their RTIM were found. Students' desirable learning achievements with their teachers' interpersonal behaviors were satisfied. Students' learning skills of their RTIM involve increasing desirable outcomes and making decisions thoughtful were higher effectively level. The efficiency predictive value (R^2) is significant for the QTI and considered association with the PDST, and value indicates that seventy three percentof the variance in students' desirable skills.*

Key words: *Teacher-student interaction, reflective thinking instructional model, the Questionnaire on Teacher Interaction (QTI), the Performance Desirability Skill Test (PDST).*

INTRODUCTION

This paper gives a background of reflective thinking of teachers and students' instructional model. Qualitative and quantitative methods were used in this study. Generally, students will have to take more and more responsibility for their own learning processes, which are initiated and controlled by realistic, job-oriented or competency-oriented learning tasks. These changes are referred to as the "new learning" (Simons et al., 2000). The implementation of this type of curricular change into new learning practices will affect teachers' role perceptions. Teachers will have to change their role from being "transmitters of content" too becoming "coaches of students' learning processes" (Pratt et al., 19982; Vermunt and Verloop, 1999). From this viewpoint, teacher trainers' problems of curriculum innovation can be interpreted as problems of instructional design (Enkenberg, 2001). In addition, the increasing emphasis on real life problem solving tasks requires teachers to develop complex design skills. Teachers' participation in the curriculum redesign process is considered to be a crucial factor in the success of curriculum innovation (Beijaard, 1994).

Literature review

Instruction, even when designed and based on sound instructional principles, oftentimes does not stimulate learners' motivation to learn. The result may be that learners may not be motivated to pursue lifelong learning and use the knowledge and skills learned to deliver patient care (Omrani, Fardanesh, & Hemmati, 2012). This study was integrated the *Instructional Design for Teaching and Learning* specialization to design for preparing the expert practitioners to design, deliver, and evaluate physics learning programs for the 11th grade level as well as upper secondary education, professional education, corporate schools, training and development, government

agencies, and community settings. Emphasis will be on evaluating instructional design models from both theoretical and research bases with a focus on practical application to online and blended learning. The specialization allows students to experience and critically reflect upon high-quality instructional design for physics content and blended learning, as well as instructional message design for media presentation. It affords the participants to build a depth of knowledge in this research and practice of instructional design and blended teaching and learning through carefully designed programs and coursework, and engage in increasingly complex learning experiences to develop teaching and design skills. Students will be able to design instruction, facilitate learning, engage in strategic administrative decision-making, apply research and effective practice, and evaluate programs and coursework in online and blended learning (King, 2015).

Monitoring learning achievement means assessing the knowledge, skills, and attitudes/values learners have gained. Given that learning achievement is one of the three major targets for students' education in the classes. Research team's colleagues are going to gain more of an understanding about the issues related to Learning Achievement. Especially in subjects such as Science fields of knowledge can be distorted by: Generating a catalogue of facts for students to recall and presenting science as if it is possible to produce absolutely objective truths, pretending that a scientific method exists when most real scientists are funded by politically driven sources, and teaching with the expectation that only a super intelligent elite can ever understand science's concepts (Lemke, 1990 as cited in Hildebrand, 1996).

Teachers are encouraged to use technology to enhance student learning while teaching, emphasizing that teachers applying technology in educational settings should focus on pedagogical goals rather than technological innovation (Angeli & Valanids, 2009). However, some studies have indicated that technology integration by teachers in the classroom is insufficient (Park & Son, 2009). This observation has led to analyses of technology integration by teachers (Güyer & Sahin, 2011). This study explores the instructional strategies of teachers when developing their designing lesson plans. A teacher professional development teaching processes, in which teaching activities and deep discussions were key processes, was conducted. Instructional may be participated observations and focus-group interviews were the secondary evaluation methods. Designing instructional strategies in applying the SSIBL and STEM education methods are an iterative process in which teachers must actively engage students in transforming, organizing, and reorganizing their experiences. Teachers must also teach content using appropriate technology based on their knowledge and beliefs with the reflective thinking instructional model was selected.

Reflective thinking in teaching is associated with the work of Dewey (1933, 1938), who suggested that reflection begins with a dilemma. Effective teachers suspend making conclusions about a dilemma in order to gather information, study the problem, gain new knowledge, and come to a sound decision. This deliberate contemplation brings about new learning. In the 1970s, Lortie (1975) described how failing to reflect on teaching decisions leads to teaching by imitation rather than intentionality. People who enter the profession have already gone through 16 years of "apprenticeship of observation" as students themselves and have developed preconceived ideas

of what teaching is through having watched others do it. They may sense *what* teachers do but have no grasp of *why* they do it. Other researchers (Clift, Houston, & Pugach, 1990; Hargreaves & Fullan, 1992) have reinforced how important it is for teachers to examine their own beliefs

about their classroom practices. To understand the complexity of reflection, consider the four modes of thinking Grimmett proposed: technological, situational, deliberate, and dialectical (Danielson, 2008; Grimmett, Erickson, Mackinnon, & Riecken, 1990). These modes in a hierarchy from the lower-level reflection useful for making routine decisions to the higher-level reflection needed for complex dilemmas. Each mode requires an increasing degree of conscious analysis and data seeking. Expert teachers adapt their reflective thinking to the situation, recognizing when each level of thought is sufficient to address a concern and when they need to move to the next mode.

METHODOLOGY

Research Questions

It was considered important to discover what the qualitative methods, such as; observation, interview, short note paper, and discussion group, the students had about their Reflective Thinking Instructional Model (RTIM) classroom environments as these were suspected to be more of the factors that affected student learning achievement in the RTIM, the focus of the first research questions.

> *Research Question 1*: What are the students' opinions and their responses of their behaviors about the situation of Reflective Thinking Instructional Model (RTIM) classroom learning environment?

The overall aim of this research study was to describe the determinants and effects of students' perceptions of the Reflective Thinking Instructional Model (RTIM) classroom environments for the sophomore educational students in Roi-Et Rajabhat University in Thailand, in order to improve the performance learning desirability of students in RTIM; therefore, the validation of the QTI and the PDST forms the focus of the second and the third research questions.

> *Research Question 2*: Is the Questionnaire on Teacher Interaction (QTI) a valid and reliable for use in the Reflective Thinking Instructional Model (RTIM) classroom learning environments for the sophomore educational students in Roi-Et Rajabhat University?
>
> *Research Question 3*: Is the Performance Desirability Skill Test (PDST) a valid and reliable for use in the Reflective Thinking Instructional Model (RTIM) classroom learning environments for the sophomore educational students in Roi-Et Rajabhat University?

It was also considered important to investigate associations between students' perceptions of their teachers' interpersonal behaviors and their performance desirability skills toward their RTIM classroom environments. This formed the focus of research question 4.

> *Research Question 4*: What associations are there between students' perceptions of their teachers' interpersonal behaviors and their performance desirability skills toward their RTIM classroom learning environments for improving their desirable learning achievements?

Selected Quantitative Research Instruments

The Questionnaire on Teacher Interaction (QTI)

Wubbels, Creton, and Hooymayers (1985) designed a questionnaire to measure perceptions of teacher-student interpersonal behavior, name the Questionnaire on Teacher Interaction (QTI).

The QTI has been used in both on teaching and learning environments as well as in teacher professional development (den Brok, Wubbels, and Brekelmans, 2004), to gather students' perceptions of interpersonal behavior to remain relatively students within classrooms (Wubbels and Levey, 1993). An important issue related to the development of classroom learning environment instruments is the explanation and amplifying information gained though the use of quantitative methods. The Australia version of the QTI has 48 items with 6 items in each scale (Fisher, Fraser, and Wubbels, 1993), adapted this QTI in Thai version (Santiboon and Fisher, 2005). Santiboon (2013) had been widely used of Thai version in physics classroom research studies and developed from psychosocial perspectives, being based on a systems approach to communication and personality theory on interpersonal behaviors were obtained of 8 scales, namely; *Leadership*, *Helping/Friendly*, *Understanding*, *Student Responsibility/Freedom*, *Certainty*, *Satisfaction*, *Admonishing*, and *Flexibility* behaviours from the original scales revealed that Leadership, Helping/Friendly, Understanding, Student Responsibility/Freedom, Uncertainty, Dissatisfied, Admonishing, and Strict behaviors. The QTI specifically assesses teacher interpersonal behavior in the reflective thinking model was assessed by students' perceptions in this study.

The Performance Desirability Skill Test (PDST)

Due to social desirability has long been of concern to evaluators relying on self-report data. It is conceivable that reflective thinking instructional model program evaluation is particularly susceptible to students' desirability as individuals may be inclined to present themselves or certain behaviors in a more positive light and/or appease the course leader. Thus, the influence of students' performances of their desirability on self-report outcomes was explored in the present study. To measure the influence of potential socially desirable responses, several scales have been developed. Of these, the Performance Desirability Skill Test (PDST) was applied from the original the Marlowe-Crowne (MC) Social Desirability scale. The PDST scale consists of 33 items. Therefore, for some respondents it may be a burden to complete, particularly if the scale is among a panel of scales. As a consequence, short forms have been developed with short forms being most frequently applied from researcher team.

Selected Qualitative Research Instruments

Observation, Interview, Short note, and Group discussion are important of data in this study, In an open-endedness interview with group of students, the researcher team asked the information about, age, gender, learning outcome, student cohesiveness, desirable learning activities, factors that should help improve students' achievement or outcomes and performances. Research team observed teachers who used the reflective thinking instructional model for teaching of their classes, short note for students' responses and their discussion between their group and these processes were recorded with the camera and video tape.

Sample One of the researchers of this work is an instructor at the higher education system, the Training Teacher College in Roi-Et Rajabhat University. The educational students have Bachelor degree; the senior student teachers must improve themselves to be able to trainee students who will teach in local basic school commission was established Roi-Et Rajabhat University, the

higher educational committee is under the jurisdiction of the Ministry of University Affairs in the government sector. This research study which sample groups consisted of:

1. Reference research articles for guiding evidence of 30 texts with the Meta Ethnography Technique.

2. Students' leaning achievements were assessed with the reflective thinking instructional model with the sample sizes of 126 educational students from 5 departments, such as; Mathematics, Science, English, Social Science, and Music Education who were the sophomore Bachelor degree students' level in Faculty of Education, Roi-Et Rajabhat University.

3. Students were developed and enhanced of their learning achievements and performances with four expert teachers who were trained and practiced of their teaching with the reflective thinking instructional model, professionally.

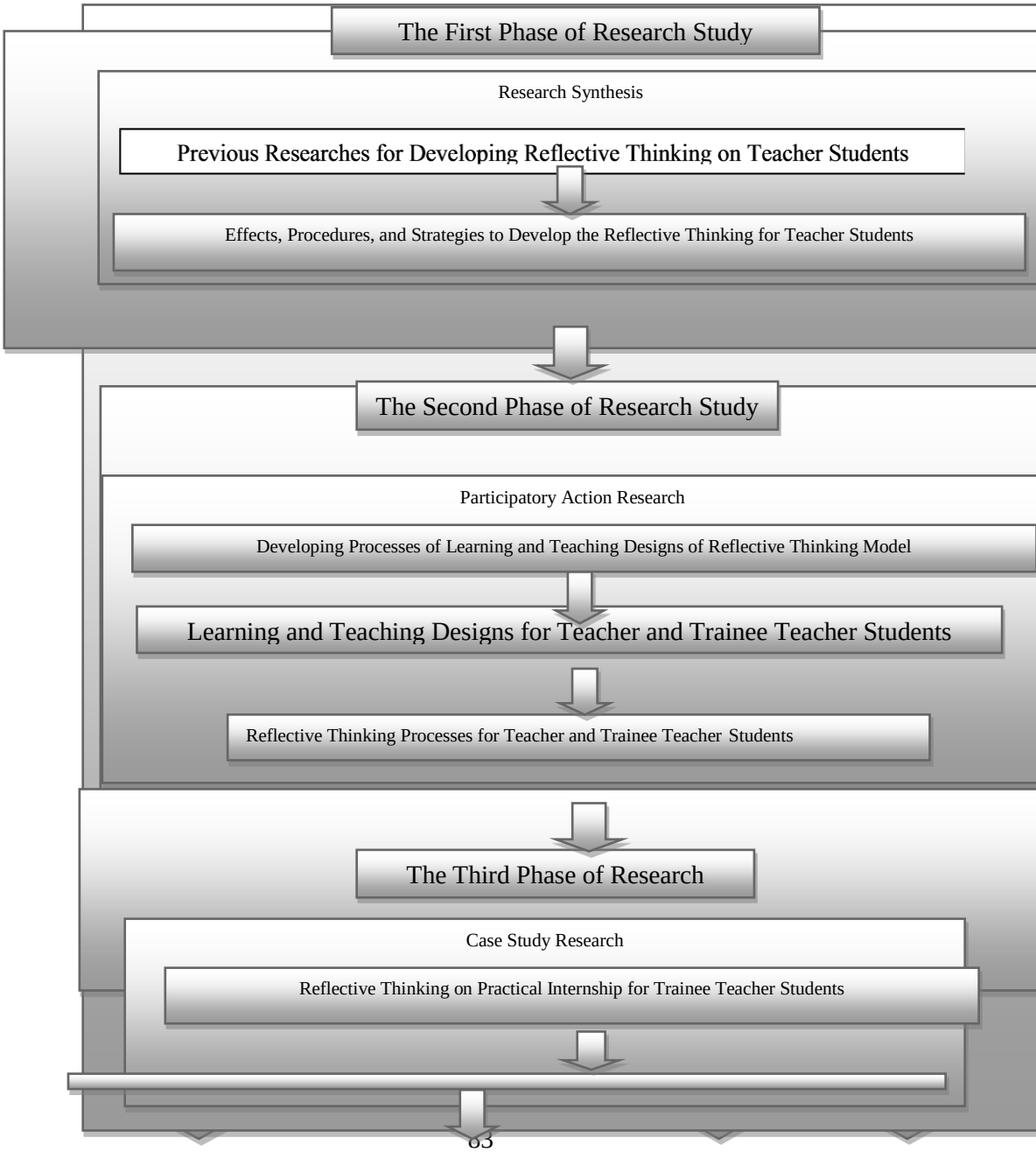
4. Students' perceptions of their teacher interpersonal behaviors with the QTI and their desirability instructional skills with the PDST consisted of 126 educational sophomore students from 5 departments.

Research Framework

This research study is to design for developing sophomore educational students' learning achievements, performances of their outcomes to their desirable skills and their perceptions of their reflective thinking instructional model with the QTI and the PDST were assessed with the quantitative method. Students' responses in reflective classroom learning environment research, qualitative methods, such as; observation, interview, short note, and group discussion have been used in refining questionnaires and seeking explanations to patterns indentified though statistical analysis of quantitative information. Researcher team describes in Figure 1. To determine for developing of reflective thinking model to enhance educational students' learning and teachers' teaching outcomes, the relationships between reflective thinking model and syntax teaching phase, associations between student teachers' learning and teaching outcomes and social system. Environmental responding principal of learning reaction, supporting system to enhance the teaching and learning designs that must be got to straighten learning and teaching goals and the application of using learning and teaching positions with the reflective thinking model were done.

The reflective thinking model from previous research studies was used to develop the reflective thinking of this work, and using the Meta Ethnography technique. Students' responsibility was described using the learning theory of Davidson (1998). The *Kolb's reflective model* was highly influenced too earlier research conducted by John Dewey and Jean Piaget. Adapted version of the original reflective thinking from the single loop of learning of Chris Argyri and Dodald Schon (1978) was examined. The structured reflection involved in Kolb's experiential learning cycle with Gibbs (1988) was discussed. A structured mode of reflection was designed that provides a practitioner with a guide to gain greater understanding of student teachers' practice, according to Johns (1995). Brookfield (1998) suggested that reflective practitioners should constantly research their assumptions by practice through four complementary ideas. However, this study follows completely Gary Rolfe's reflective model (2001) based on Terry Borton's 1970 developmental model. Finally, the concept of the *design cycle* describes the reflective and repetitive structure of design processes, with this structure underlying all such processes of Ganshirt (2007). This study involves investigation, interview, and observation using both qualitative approach and the reflective thinking theories of the followings: Schon's theory (Schon, 1987, 1991), Rolfe's

theory, Gibbs' theory, and Argyris' theory Argyris and Schön, 1974). A sample of lecturers and student teachers of Roi-Et Rajabhat University, Thailand was used in three steps. Firstly: To synthesis previous researches on developing reflective thinking and suggesting effects and strategy of student teachers' reflective thinking with the Meta ethnography. Secondly: To develop the teaching and learning of reflective thinking formats to the educational personnel who train student teachers with the Participatory Action Research. Thirdly: To develop the reflective thinking model for supporting students' internships in schools. The reflective thinking model was used to improve their attitude towards teaching and students' responsibilities in schools. Trainee students were assessed of their development using the reflective thinking model.



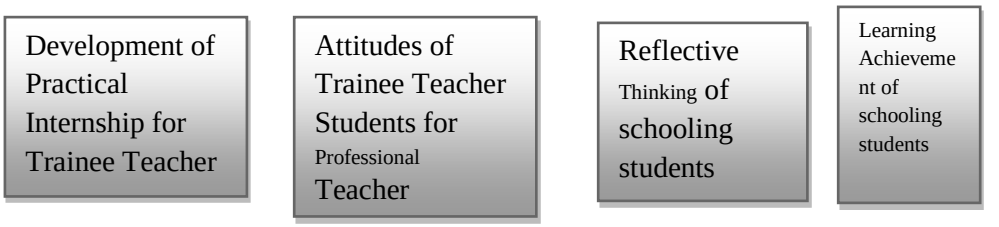


Figure 1. Reflective thinking model for developing learning and teaching designs of teacher students.

Accumulating data The following qualitative research instruments - observation, interview, group discussion, and post learning short note techniques were administered according to these procedural steps.

Step I: Synthesis data

The literature review, texts, documents, thesis reports, and relative research were synthesized to build up a model of the reflective thinking instructional model for teaching and learning in sample classes, and developing the learning skills of student teachers. Thereafter scaffolding tools such as interactive journals, question prompts, and concept maps also prompted reflective thinking, namely the *Teaching Model Dummy.*

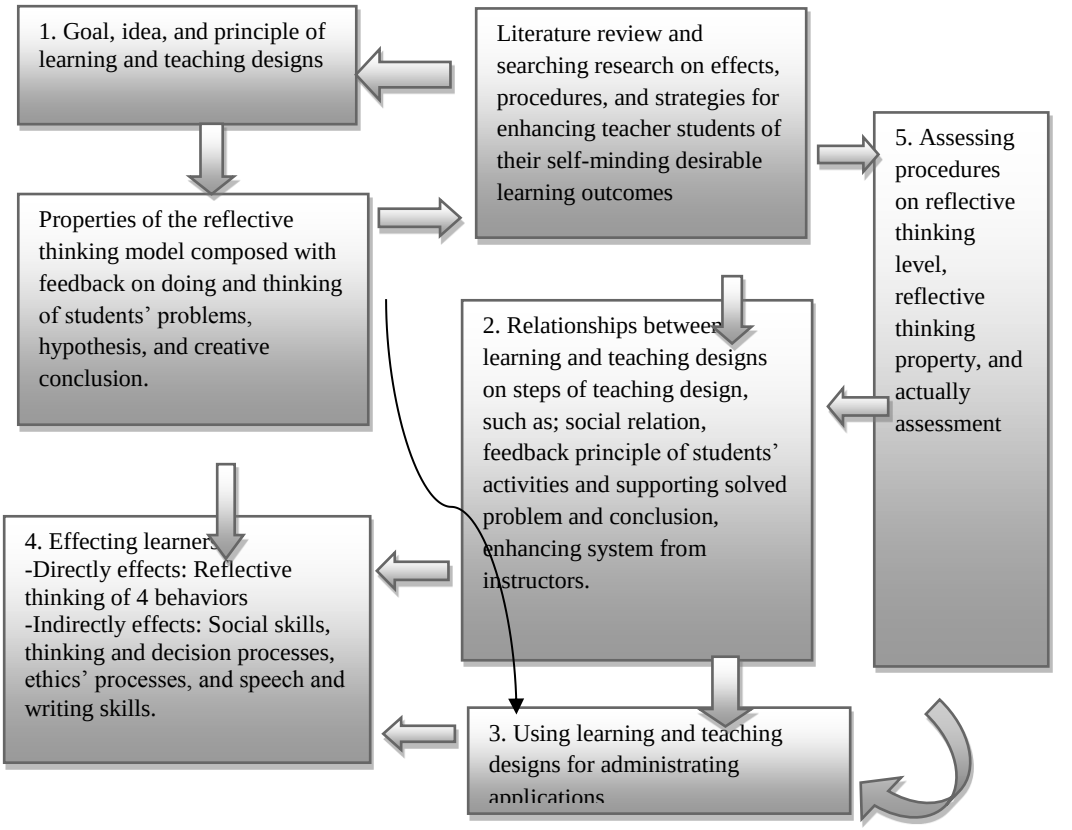


Figure 2. Framework reflective thinking model for teaching and learning.

Step II: Framework model: Researchers who prefer inquiry-oriented activities help students to reflect on a situation by asking thoughtful questions. Following Joyce and Weil (2010)'s suggestion, whose present what is considered to be a classic model in the field, this work covers the rationale behind the major models of teaching, and applies these models using scenarios and examples of instructional materials. These models accelerate students' learning and act as lifelong learning tools with the major psychological and philosophical framework, namely Reflective Thinking Model for Teaching and Learning (Figure 2).

Step III: Experimental teaching: Normally, the *learning environment* might prompt students to construct meaning actively and reflectively. The *Framework Reflective Thinking Model for Teaching and Learning* was also used with an experimental group of 26 junior Mathematics student teachers in Roi-Et Rajabhat University in the first semester, 2011. Providing learner-controlled instruction encourages students to make their own decisions regarding their learning progress so as to improve the Reflective Thinking Mode (Figure 3).

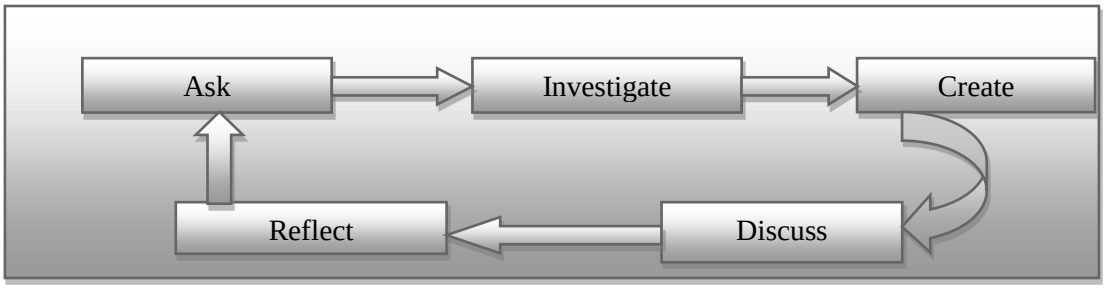


Figure 3. Reflective thinking model.

Step IV: Checking quality of model

Participatory Action Research: Collaborative learning, in which students explore their understandings and misunderstandings together, helps students to think about what they already know, what they need to know, and how they would present and defend their own ideas in reaction to an instructional situation. Researchers presented this model for adaption, improvement, and advice by the related-senior professional educators who were able to check its validity according to the IOC (Index Of Concordance) for efficiency value. This step is called the improving quality reflective thinking model (Figure 4).

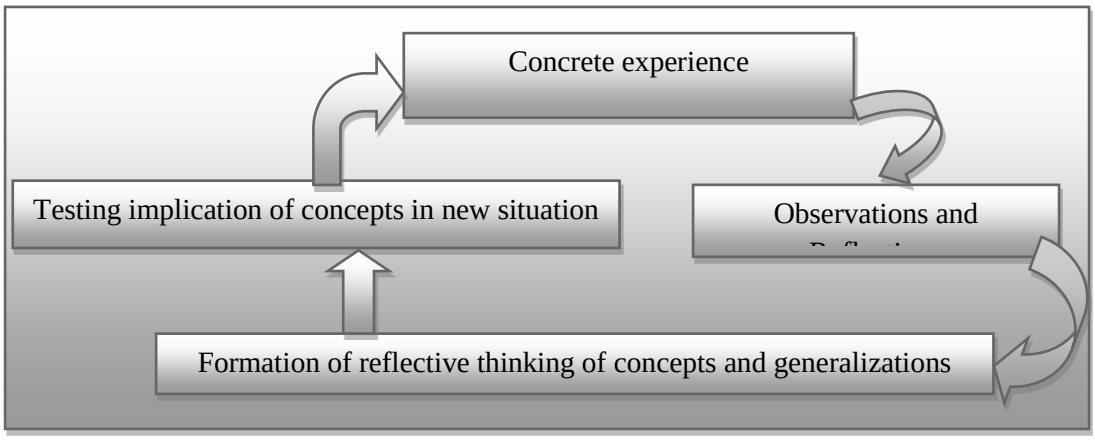


Figure 4. Improving quality reflective thinking model

A Quality Reflective Thinking Model of information was adapted. Researchers taught this model to the four lecturers taking part in the participatory action research (Figure 5).

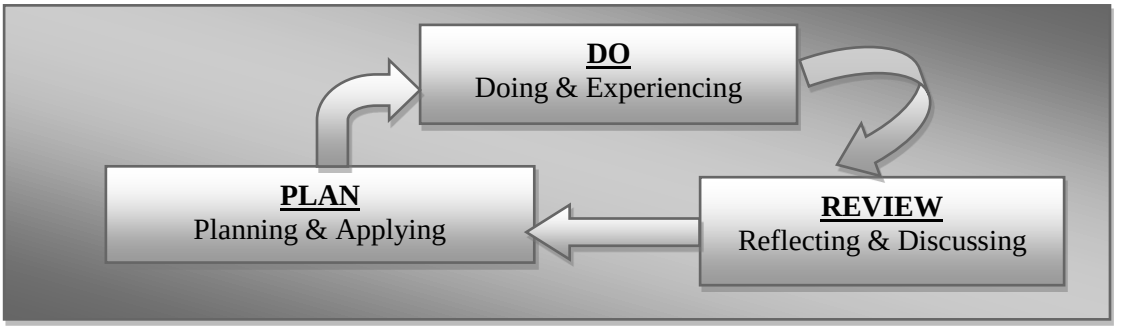


Figure 6. A quality reflective thinking model

Step VI: Using model for teaching and learning processes

A further investigation on individual difference in student teachers' reflective skills is also needed, so as to discover which underlying factors are meaningful. Students may perceive the effectiveness of particular design factors differently according to their individual characteristics.

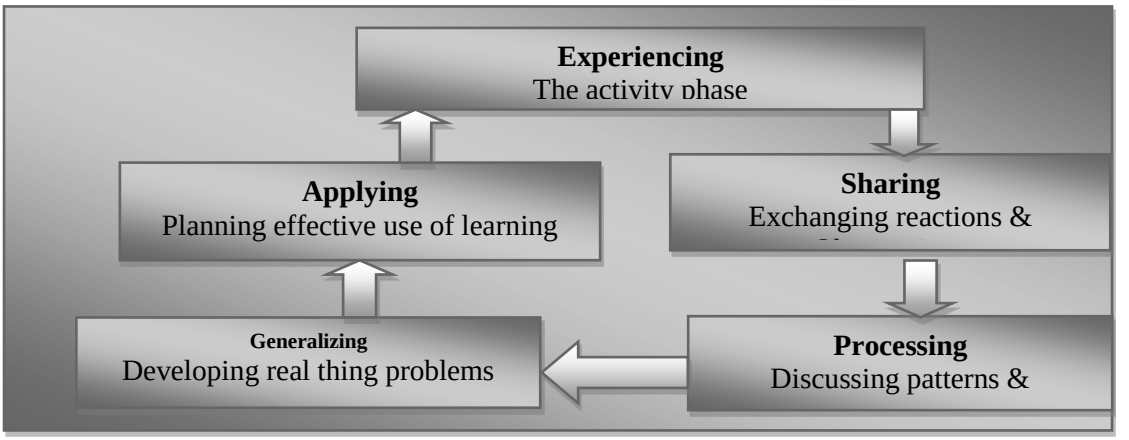


Figure 6. The reflective thinking instructional model

A qualitative technique utilizing observation, interview, group discussion, and post learning short note techniques was developed by the researchers and used because no pre-existing instruments were available to measure the perceived helpfulness of factors prompting reflective thinking. The survey instrument was composed of carefully targeted question items, based on an extensive examination of the reflective-thinking literature, namely- Reflective Thinking Instructional Model (Figure 6).

Step VII: Conclusion

This study identified five design factors that a sample of student teachers perceived as helpful in prompting their reflective thinking. Researchers participated with willing researchers to conclude the meta-cognitive model on self-explanation strategies used for specific problems connected to students' understanding of the process of reflection (Figure 7).

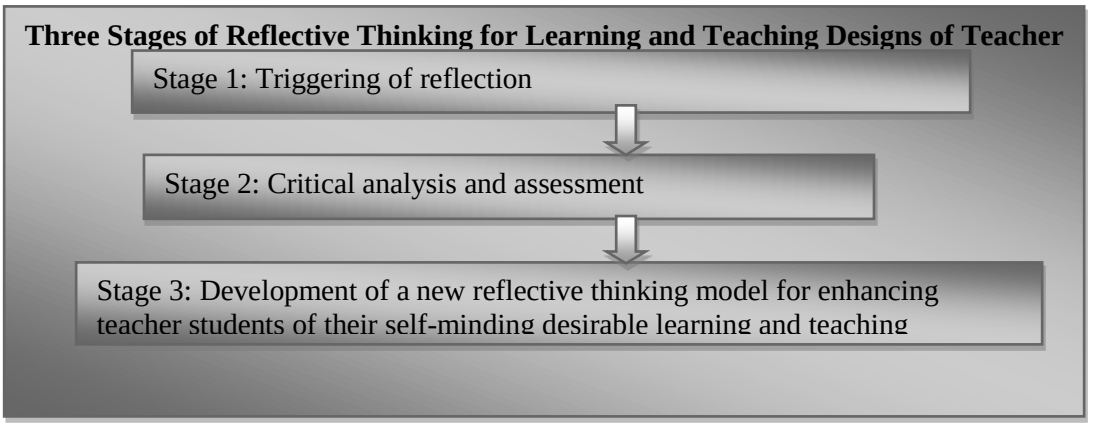


Figure 7. Three stages of reflective thinking for learning and teaching designs of teacher students

RESULTS

The results from the qualitative data indicated that 62% of the sample size was female which was surprisingly high. The average age of educational sophomore students was 20.52 years old. Most of students thought that their reflective thinking instructional model for teachers were instructed in a friendly way, students' desirable learning outcomes were responded about positive relationships with teachers who were enthusiastic about reflective thinking instructional model classes, teaching and learning targets were helped and friendly environments, social system relationships were flexible and satisfied respectively, indirect and direct specifications on reflective thinking instructional model classes were dominated by the formal rule and supported what had been discovered with the use of the QTI, students' performances of their responses were relaxed and understood of their teachers' leadership and admonishing instructional technique with the reflective thinking instructional model was used.

Validation of the Questionnaire on Teacher Interaction (QTI)

In keeping with the reflective thinking instructional model classes, the following analyses were conducted to determine the reliability and validity of the QTI. The internal consistency reliability of the QTI version used in this study was determined by calculating Cronbach alpha coefficients for the scales of the QTI using students' scores. Table 1 reports the internal consistency which ranged from 0.67 to 0.81 when using the students' scores.

Table 1 Scale Internal Consistency (Cronbach Alpha Reliability) for the QTI

Scale	Means	Average mean score	Standard deviation	Alpha reliability	Discriminant validity
Leadership	21.93	3.66	3.90	0.79	0.74
Helping/Friendly	21.35	3.56	3.71	0.74	0.75
Understanding	20.56	3.43	3.32	0.71	0.75

Student Responsibility/Freedom	22.65	3.77	3.26	0.81	0.74
Certainty	20.47	3.41	3.58	0.69	0.76
Satisfaction	21.89	3.65	4.12	0.77	0.74
Admonishing	20.35	3.39	3.13	0.67	0.76
Flexibility	22.34	3.72	4.62	0.80	0.74

N = 126

In Table 1, the results show mean scores for each of the five QTI scales, namely; *Leadership, Helping/Friendly, Understanding, Student Responsibility/Freedom, Certainty, Satisfaction, Admonishing, and Flexibility* behaviors. As each scale has six items, the scale means ranged from 20.35 to 22.65 on the QTI Form (maximum 24, minimum 0). The average mean scores ranged from 3.41 to 3.77 (maximum 4, minimum 0). Standard deviation ranged from 3.13 to 4.62. Table 2 reveals that the differences between the Actual and Preferred Forms of the SLEI scales were statistically significant at the 0.05 level for all scale of the five scales. As reports in Table 1, the reliability coefficient for the different QTI scales ranged from 0.67 to 0.81 when using the individual student as unit of analysis. On the whole, these results are acceptable somewhat previously in the original validation sample (Fisher, Henderson, and Fraser, 1995; Fisher and Rickards, 1999; Khine and Fisher, 2001, Koul and Fisher, 2004, Santiboon and Fisher, 2005, Kijkosol, 2006; Santiboon, 2013).

Validation of the Performance Desirability Skill Test (PDST)

To measure students' perceptions of their desirable learning achievements toward their learning skill with the reflective thinking instructional model were assessed with the 30-item Performance Desirability Skill Test (PDST) which it has never used for study in Thailand. Using internal consistency reliability the PDST had a value of 0.82 which was considered satisfactory for further use in the reflective thinking instructional model classes in this study.

Associations between Students' Perceptions of their Teachers' Interpersonal Behaviors and their Desirable learning achievements in the Reflective Thinking Instructional Model Classes

Focusing on the QTI and the PDST, the statistical procedures also involved the investigation of associations between students' perceptions of their teacher interpersonal behaviors and students' performance toward their learning skills in the reflective thinking instructional model classes. The simple correlations values (r) are reported in Table 2 which shows significant correlations ($\Delta<0.05$) between students' desirable learning achievements on all eight scales. These associations are all positive. In classes where the students perceived higher evidence level of student responsibility and freedom ($\overline{X}$ = 3.77), flexibility ($\overline{X}$ = 3.72), leadership ($\overline{X}$ = 3.66), satisfaction ($\overline{X}$ = 3.65), and helping and friendly ($\overline{X}$ = 3.56), and students perceived high

evidence level of understanding ($\overline{X}$ = 3.43), certainly ($\overline{X}$ = 3.41), and admonishing ($\overline{X}$ = 3.39), consequently. Each of this study has suggested the psychosocial climate of reflective thinking instructional model classes is an important determinant of student learning outcomes and performances. In this study, it was considered important to investigate associations between students' perceptions of their teachers' interpersonal behavior and their desirable learning achievements in the reflective thinking instructional model classes with the QTI and the PDST. This suggests that the scale is correlated **for** measuring students' perceptions of their teacher interpersonal behaviors and their desirable learning achievements.

Table 2 Associations between Students' Perceptions on QTI Scales and their PDST Learning Skills to Performance Learning Skill Test in the Reflective Thinking Instructional Model in Teams of Simple and Multiple Correlations (R) and Standardized Regression Coefficient *(β)*

Scale	The PDST Form	
	Simple Correlation Attitude (r)	Standard Regression
Leadership,	0.25***	0.24***
Helping/Friendly	0.24***	0.23***
Understanding	0.22***	0.21***
Student Responsibility/Freedom		
Certainty,	0.26***	0.25***
Satisfaction,	0.21***	0.20***
Admonishing,	0.24***	0.23***
Flexible	0.20***	0.18***
	0.25***	0.23***
Multiple Correlation (R)	0.8572***	
$R^{/2}$	0.7348***	

Correlation is significant at the 0.05 level (2-tailed) ** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.001 level (2-taile)*

Two main methods of data analysis were used to investigate this reflective thinking instructional model classroom learning environments and teachers' interpersonal behaviors to students' desirable learning achievements were related. The sample correlation value (r) are reported in Table 2 which show statistically significant correlations (Δ<0.01) between students' learning performance skills and teachers' interpersonal behaviors on all scales. The multiple correlation *R* is significant for the QTI and shows that when the scales are considered together there are significant with the PDST. The R^2 values indicated that 73% of the variances in students' learning performance skills to their reflective thinking instructional model classroom learning environments were attributable to their perceptions. The beta weights (β) show that in classes where the students perceived higher evidence level of student responsibility and freedom, flexibility, leadership, satisfaction, and helping and friendly, and students perceived high evidence level of understanding, certainly, and admonishing. Students had a more fovourable

performance learning skills towards their reflective thinking instructional model classroom learning environments. Overall, the sophomore educational students in Roi-Et Rajabhat University show relatively favourable perceptions of their desirable learning achievements and their participating of the reflective thinking instructional model technique, relatively.

Conclusions

The findings of this study which were presented under four main headings: 1) the development of the Reflective Thinking Instructional Model (RTIM) was used for instructional planning for improving sophomore educational students in a university in Thailand; 2) students' opinions and their responses of their participating behaviors about the situation of Reflective Thinking Instructional Model (RTIM) classroom learning environments; 3) validation of the questionnaires; the Questionnaire on Teacher Interaction (QTI) and the Performance Desirability Skill Test (PDST) for use in this research study; 4) associations between students' perceptions of their teacher interpersonal behaviors and their performance desirability skills for improving students' desirable learning achievements. The development of the RTIM for supporting educational students is an important aspect of departmental education, upholding the fundamental belief that all educational students are able to learn. Researchers emphasize on developing the reflective thinking model on learning and teaching designs; however, students have different learning preferences and educational subject status. Therefore, the researchers agree with Joyce et al. (2009) that teachers must not only be knowledgeable about the content they teach, but must also know and be committed to making decisions that involve the use of a variety of instructional strategies and approaches suited for particular purposes, and these must be appropriate to meet the diverse learning needs of students. The conclusions of the main findings, their implications for the RTIM, and recommendations for future research are provided that following as each research question.

A part of this research study investigated this major problem in Thai education and to gather sophomore educational level of students' opinions and their responses in their RTIM classroom learning environments was intended to be 126 students for interviews, observations and class group discussions with the short noted by observers who are the research team. Generally, students' did not like their teachers' style of teaching. Most of them thought that the Reflective Thinking Instructional Model (RTIM) classroom learning environments was dominated and improved their desirable learning achievements which were integrated on their students' reflections are related to the social system and conceptualizations affecting students' activities. Persuasive thinking and experience reinforce the experimental exchanged report and reflections scales. A significant of the sample thought that their teacher interpersonal behaviors that helped and supported well be from the RTIM classroom learning environments. Focused on the second research questions, the reliability results for eight scales of the QTI ranged from 0.67 to 0.81, the highest alpha reliability was obtained for all scales to have shown that the QTI is a reliable and valid instrument for assessing students' perceptions of their teachers' interpersonal behaviors in RTIM classroom learning environments. Suggestions that the QTI can be used as valid and reliable instrument in this study. As with the Performance Desirability Skill Test (PDST), in this current study, the reliability coefficient was appropriate statistical procedures were used in order to answer the third research question which was evidence of 0.82, this suggests that the PDST is valid for use in this study. Associations between students' perceptions of their teachers'

interpersonal behaviors and their performance desirability skills toward their RTIM classroom learning environments for improving their desirable learning achievements were explored using the simple and multiple correlation analyses. The simple and multiple correlations for all scales of the QTI were statistically significant ($\Delta<0.01$) for the Leadership, Helping/Friendly, Understanding, Student Responsibility/Freedom, Certainty, Satisfaction, Admonishing, and Flexibility of teachers' interpersonal behaviors with students' perceptions and the standardized regression coefficient (β) shows that when the scales are considered together there is significant ($\Delta<0.01$) associations with the PDST. The R^2 indicated that 73% of the variance in students' performance desirable learning achievements' skills to their perceptions of their teachers' interpersonal behaviors in the RTIM classroom learning environments for improving their desirable learning achievements, responsibility.

Limitations Of The Study

This research study has limitations and therefore its findings should be generalized with caution. The limitations of this study include the following: First, although the qualitative and quantitative instruments were adapted to suit the context on originally developed for students in Western countries. The reason for these differences could be Thailand has a highly centralized education system and a different culture from that of Western countries. Second, the sample represented 10% of the total educational students in Roi-Et Rajabhat University; the findings might not be applicable to all groups of educational students.

Implications For Improving Students" Desurable Leaning Achievements In The Rtim Classes

This study has implications for educational teachers, educators, the Higher Education Commission, and the educational researchers. The availability of these research methodologies provides a mean by which qualitative and quantitative methods which students' perceptions and their responses behaviors can be monitored by educational teachers to attempt and improve their classroom teaching practice with the reflective thinking instructional model classroom learning environments, and to monitor reviews of the administration of systematic educational reforms. The teachers were good on relating ideas to prior knowledge, clear and specific in the use of the RTIM. It is suggested that the RTIM classroom environment ideas and practical learning techniques could be incorporated into inservice and preservice courses for educational students in the universities in Thailand.

Suggestions For Future Research Study

The development of the reflective thinking instructional model was administered in educational classroom environment research, is one of the reforms the educational system in higher education level has been providing with the higher educational curriculums. Most of teachers who are teaching in primary, secondary, and higher education could improve their teaching by using the findings of classroom environment research with the reflective thinking instructional model. This present study is one of instructional techniques to involve on three separate measures; the development of the reflective thinking instructional model, the Questionnaire on Teacher Interaction (QTI), the Performance Desirability Skill Test (PDST), and students' interviews, observations, short note, and group discussions. These research procedures have been shown significant for reliable and valid for use in future studies, exactly.

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