



## The Model of Learning Management for Curriculum Development Subjects of Graduate Students

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### Abstract

The objectives of this research were to developed and studied the effectiveness of the model of learning management in the course of curriculum development for graduate students. Research and development methodology (R&D) was used for developed the model. The 1st phase was synthesized the literatures, the 2nd phase was created the model, the 3rd was implemented the model, and the 4th phase was evaluated the effectiveness of the model. The samples were 10 doctoral students in Research and Curriculum Development program of Srinakharinwirot University Thailand. Research instruments was the scoring rubrics of curriculum development ability composed of 5 dimension. The research results found that, the learning model named “SCIE” and it had effectiveness followed the criteria.

**Keywords:** Model of Learning Management, Curriculum development, Graduate students

### Introduction

Curriculum development is the one of many courses in curriculum and instruction program. Learning management of this course is very important for develop graduate students can develop curriculum effectively. The effectiveness of learning

management are various methods or techniques, and the action learning (AL) is the one of effectiveness of learning management for graduate students. (Office of the Higher Education Commission. 2009) Action learning is the approach of learning management, it focus

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on practice in the real situations, lesson learned, and share the experiences continuously (Revans. 1980, Marquardt. 2011). Furthermore, cognitive coaching is the methods for engage higher-order thinking of students (Costa and Garmston. 2002). In this research, action learning and cognitive coaching were used for the development of learning model.

For the course of curriculum development in graduate program, the expectation of learning outcomes are students can develop any curriculum effectively such as school curriculum, training curriculum, or enhance curriculum. Moreover, students should be have ethics, knowledge, thinking, responsibility, and information skills (Office of the Higher Education Commission. 2009).

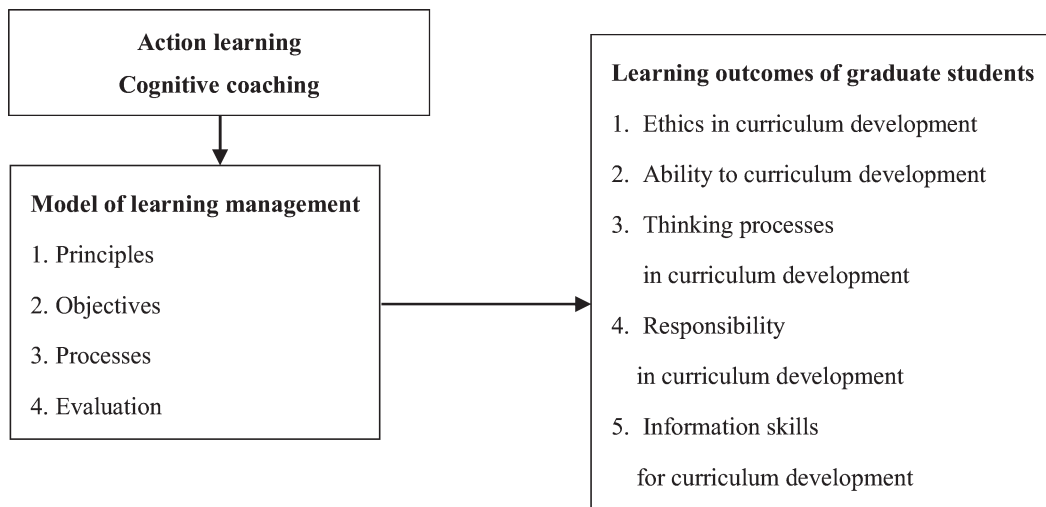
Learning management in the course of curriculum development for graduate students is the challenge issue of many program in university, that teachers try to create new method of learning management for their students. In this research, researcher want to develop the model of learning management in the course of curriculum development for graduate students and study the effectiveness of it.

## Objectives

1. To develop the learning management model in curriculum development subject for graduate students.
2. To study the effectiveness of the learning management model in curriculum development subject for graduate students.

## Conceptual Framework

To developed the model of learning management in the course of curriculum development for graduate students, researcher used the concept of action learning for develop the model that composed of 1) principles 2) objectives 3) processes and 4) evaluation. And this model effect to learning outcomes of graduate students in 5 dimensions. There were 1) ethics in curriculum development 2) ability to curriculum development 3) thinking processes in curriculum development 4) responsibility in curriculum development and 5) information skills for curriculum development. The conceptual framework of this research is following.



**Figure 1** The conceptual framework Research Methodology

Research and development methodology (R&D) was used in this research.

The 1st phase was synthesized academic concepts such as action learning, cognitive theories, cognitive coaching, and the concepts of lesson learned. The results of this phase found that, learning management for the course of curriculum development should engage students learn by create new curriculum more than learn from lecture. In addition, learning by doing and practice in real situation will develop students effectively.

The 2nd phase was created the master of model following the results of the 1st phase and evaluated the quality of it before implementation, the results of evaluated found that, the model had the quality in high level ( $\bar{X}$  = 4.42,  $S$  = 0.31

from full score = 5). And then researcher developed the instruments for data collection. The instrument for data collection in this research was 5 levels of scoring rubrics in 5 dimensions, there were 1) ethics in curriculum development 2) ability to curriculum development 3) thinking processes in curriculum development 4) responsibility in curriculum development and 5) information skills for curriculum development. The scoring rubrics had content validity (IOC) equal 1.00 all of items and it had very high of reliability ( $\alpha$  = 0.92)

The 3rd phase was implemented the model, the sample were 10 doctoral students in curriculum research and development program of Srinakharinwirot University Thailand. Implementation the



model was operated in the 1st semester in 2015 academic year (August–November 2015). Researcher separated the curriculum development activities in 4 steps followed the idea of model. Doctoral students were practiced step by step. The 1st step was analyzed the big data for curriculum design. The 2nd step was created the curriculum. The 3rd step was implemented the curriculum and the 4th step was evaluated the curriculum and improved. In this phase, researcher coached doctoral students followed the cognitive coaching concept continuously until they finished.

The 4th phase was evaluated the

effectiveness of the model. Researcher evaluated doctoral students in 5 dimensions. There were 1) ethics in curriculum development 2) ability to curriculum development 3) thinking processes in curriculum development 4) responsibility in curriculum development and 5) information skills for curriculum development. And then researcher improved the model for completely.

## Results

The results of implemented the model before learning management, between learning management, and after learning management were following.

**Table 1** The results of implemented the model

Dimensions	Before		Between		After	
	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
1. Ethics in curriculum development	3.00	0.00	4.00	0.00	4.50	0.53
2. Ability to curriculum development	2.70	0.48	4.00	0.47	4.50	0.53
3. Thinking processes in curriculum development	2.50	0.53	4.00	0.00	4.40	0.52
4. Responsibility in curriculum development	2.80	0.42	3.80	0.42	4.70	0.48
5. Information skills for curriculum development	2.70	0.48	4.10	0.31	4.60	0.52
Overall average	2.74	0.44	3.98	0.32	4.54	0.50



From table 1 found that, doctoral students had the growth of 5 dimensions such as 1) ethics in curriculum development, 2) ability to curriculum development, 3) thinking processes in curriculum development, 4) responsibility in curriculum

development, and 5) information skills for curriculum development at pre, between, and post implemented the model. Non-parametric testing by Wilcoxon Signed Rank test of 5 dimensions before and after implemented the model were following.

**Table 1** Non-parametric testing results

Dimensions	After - Before		Z	Sig
	Negative Ranks	Positive Ranks		
1. Ethics in curriculum development	0	10	-2.879	.004
2. Ability to curriculum development	0	10	-2.972	.003
3. Thinking processes in curriculum development	0	10	-2.850	.004
4. Responsibility in curriculum development	0	10	-2.913	.004
5. Information skills for curriculum development	0	10	-3.051	.002
Overall	0	50	-6.418	.000

From table 2 found that, doctoral students had the 5 dimensions learning outcomes and the overall of learning outcomes after implemented the model higher than before statistical significant at .01 level. This results were followed the

effectiveness criteria of the model. Finally, the model of learning management in the course of curriculum development for graduate students from this research named “SCIE” and it composed of following.



*“SCIE” Model of Learning Management in the Course of Curriculum Development for Graduate Students*

### **Rationale**

Develop learning outcomes of graduate students by using the concept of action learning and cognitive coaching continuously.

### **Objectives**

To develop learning outcomes in the course of curriculum development for graduate students graduate students in 5 dimensions 1) ethics in curriculum development 2) ability to curriculum development 3) thinking processes in curriculum development 4) responsibility in curriculum development and 5) information skills for curriculum development.

### **Processes**

#### **Step 1 Synthesis academic concepts**

Graduate students synthesis academic concepts that bring to develop the innovative curriculum and teacher coach them focus on feed-up, and checking for understanding.

#### **Step 2 Create the innovative curriculum**

Graduate students create the innovative curriculum and check the quality before implement it and teacher coach them focus on power questions technique.

#### **Step 3 Implement the innovative curriculum**

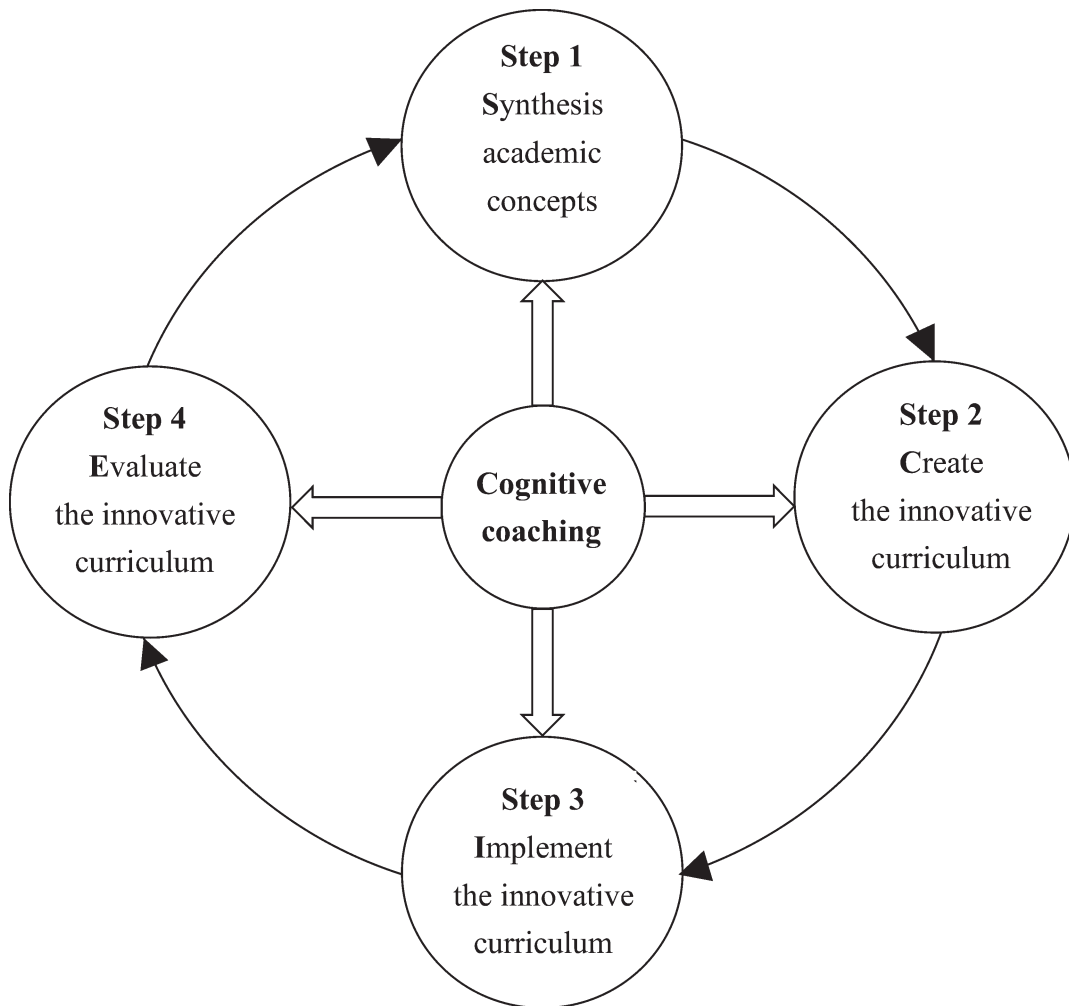
Graduate students implement their innovative curriculum in the real situation and teacher coach them focus on feedback technique.

#### **Step 4 Evaluate the innovative curriculum**

Graduate students evaluated the effectiveness of their innovative curriculum and improve it completely and teacher coach them focus on feed-forward technique.

### **Evaluation**

Use the concept of assessment for learning and the concept of assessment as learning for develop learning outcomes of graduate students.



*Figure 2 SCIE model*

### Discussion and Conclusion

In this research, researcher used the concept of action learning and the concept of cognitive coaching for design the SCIE model. For the concept of action learning (Revans. 1980, McGill and Brockbank. 2004, Marquardt.2011) and cognitive coaching (Costa and Garmston. 2002, Knight. 2009, Marzano and Simms. 2012)

graduate students planed and created the innovative curriculum 4 steps systematically. Each steps developed learning outcomes of them following.

For the first step, graduate students learned and developed their learning outcomes 5 dimensions during they synthesized academic concepts for design the innovative curriculum. Because they



have to decision making what they synthesize, how to synthesize, and how to accredit and responsibility. In addition, they presented their product in the classroom and get suggestion for improvement. Teachers coached graduate students for synthesize the academic concepts effectively focus on feed-up, and checking for understanding.

For the second step, graduate students collaborated and created the innovative curriculum. They learned how to design innovative curriculum, how to evaluate the quality, and improved before implementation. Teachers coached graduate students for develop their curriculum focus on power questions technique.

For the third step, graduate students implemented the innovative curriculum in real situation. They learned how to implementation plan, how to manage curriculum, and how to adjust learning activities. Teacher coached graduate students for implement curriculum focus on feedback technique.

For the fourth step, graduate students evaluated the effectiveness of curriculum and improved it. They learned how to set the effectiveness criteria of curriculum, how to measure the effectiveness variables, how to evaluate the effectiveness of curriculum, and how to improve the curriculum. Teacher coached graduate

students focus on feed-forward technique.

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