

# The Study of Competency of Instructors toward Teaching and Learning in the 21<sup>st</sup> Century

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**Abstract** - The objective of the study is to study competency of instructors toward teaching and learning in the 21<sup>st</sup> Century. The samples consist of 80 instructors of the Faculty of Science and Technology of Valaya Alongkorn Rajabhat University under the Royal Patronage. The research methodology consists of three phases. Phase one is the analysis and synthesis of related reviews. The analysis for competency framework from the publications of official organizations include: (1) the Ministry of Education, (2) the Office of the Basic Education Commission (OBEC), (3) the Office of the Higher Education Commission (OHEC), (4) United Nations Educational Scientific and Cultural Organization (UNESCO), (5) the Office of Secretary Khurusapha, (6) the Office of the Teacher Civil Service and Educational Personnel Commission (OTEPC), (7) the National Institute for the Development of Teachers, Faculty Staff and Educational Personnel (NIDTEP), and (8) Partnership for 21<sup>st</sup> Century Learning. All information with regard to the competency aspects of instructors toward teaching and learning in the 21<sup>st</sup> Century are synthesized and evaluated in terms of its suitability and concordance of competency aspects by five experts. Phase two is the designing of the questionnaire that is used in the research. The questionnaire's suitability is

also evaluated by five experts. Phase three is the collection of the data. The research findings are as follows: The competency of instructors toward teaching and learning in the 21<sup>st</sup> Century operates at a high level with regard to 17 competencies. The competency aspects mostly include: (1) the promotion of moral values and ethics ( $\bar{x} = 4.49$ , S.D. = 0.57), (2) the management of classroom ( $\bar{x} = 4.26$ , S.D. = 0.71), and (3) the management of classes and network, teamwork ( $\bar{x} = 4.26$ , S.D. = 0.68). The competency aspects at a medium level include: (1) research to improve teaching and learning ( $\bar{x} = 3.18$ , S.D. = 1.15) and (2) the use of language and communication ( $\bar{x} = 3.45$ , S.D. = 0.90).

**Keywords** - Competency of Instructors, Teaching and Learning, 21<sup>st</sup> Century

## I. INTRODUCTION

Learning in the 21<sup>st</sup> Century focuses on preparation of learners with regard to the necessary skills in various fields, and for living in the 21<sup>st</sup> Century. The Partnership for 21<sup>st</sup> Century skills (P21) has created a framework for 21<sup>st</sup> Century learning including core subject and life skills. The core subjects include Language and World languages, Arts, Mathematics, Economics, Science,

Geography, History, Government, and Civics. The life skill include: (1) Learning and innovation Skills, (2) Data, information, media and technology skills, and (3) Life and work skills. The main factors ensuring that learners develop the various skills identified by the framework 21<sup>st</sup> Century learning is having instructors with the knowledge, understanding and skills related to performance for learning in the 21<sup>st</sup> Century [1, 2].

Organizations of Thailand have a set standard framework for the competency of instructors for the 21<sup>st</sup> Century such as the Ministry of Education Thailand, the Office of The Basic Education Commission, the Office of The Education Council, the Office of The Higher Education Commission, UNESCO, The Teachers Council of Thailand, the Office of The Teachers' Civil Service and Educational Personnel Commission, and the National Institute for the Development of Teachers, Faculty Staffs and Educational Personnel (NIDTEP).

Therefore, the researcher has the objective of study the competency of instructors toward teaching and learning in the 21<sup>st</sup> Century in the Valaya Alongkorn Rajabhat University under the Royal Patronage.

## **II. OBJECTIVE OF THE STUDY**

To study the competency of instructors toward teaching and learning in the 21<sup>st</sup> Century.

## **III. THEORETICAL REVIEWS**

### ***A. The 21<sup>st</sup> Century Learning Skills***

Learning in the 21<sup>st</sup> Century involves learning the content of core subjects in the form of Language and World languages, Arts, Mathematics, Economics, Science, Geography, History, Government, and Civics. Educational institutions must not focus on learning core subjects, but should promote an understanding of the content of high-level academic studies through a blend of interdisciplinary knowledge interpolated in all core subjects because this is important for life in the 21<sup>st</sup> Century (21<sup>st</sup> Century Themes). The essential knowledge

includes Global Awareness, Financial, Economic, Business and Entrepreneurial Literacy, Civil Literacy, Health Literacy, and Environmental Literacy. The skills needed for 21<sup>st</sup> Century life creates learners with three skills in the form of: (1) Learning and innovation Skills, (2) Data, information, media and technology skills, and (3) Life and work skills. Learning and innovation skills are important in terms of preparing learners for work in a complex economic system and for using increase technology in the workplace. These skills include: (1) Creativity and innovation, (2) Critical Thinking and Problem Solving, and (3) Communication and Collaboration.

Firstly, creativity and innovation composed of: (1) Creative thinking, (2) Working creatively with others, and, (3) Implementing innovations. Secondly, Critical Thinking and Problem Solving composed of: (1) Reasoning effectively, (2) Using systems thinking, and (3) Making judgments and decisions. Finally, Communication and Collaboration composed of (1) Communicating clearly and (2) Collaborating with others [3, 4, 5, 6, 7, 8, 9].

### ***B. Competency of Thai Instructors***

The competency of instructors is related to the ability to teach and demonstrates knowledge, skills and attitudes or behavior can be measured and evaluated [10].

The competency of instructors is the knowledge, skills, and faith belief that the instructors should have [11].

The competency of instructors relates to the performance of the instructors which in turn requires knowledge and skills for the managing of teaching [12].

Therefore, the competency of instructors are the behavior of the instructors indicated by their understanding, skills and attitude in terms of developing the knowledge and ability of learners which can be measured and evaluated as being consistent with 21<sup>st</sup> Century skills [13, 14, 15, 16, 17].

### **C. Framework of Instructor Competency**

The Office of the Basic Education Commission has created a competency framework with regard to instructors which is composed of core competency and functional competency. The core competency composed of five competencies: (1) operational achievement, (2) good service, (3) self-development, (4) teamwork, and (5) ethical and professional conduct. The functional competency composed of six competencies: (1) curriculum management and learning management, (2) development of learners, (3) classroom management, (4) analysis, synthesis, and research to develop learners, (5) teacher leadership, and (6) relationship building and partnerships with the community for basic learning [18].

The Office of the Higher Education Commission has created a framework of standard learning outcomes for teachers of the new generation composed of: (1) morality and ethics, (2) knowledge, (3) intellectual skills, (4) interpersonal relationships skills and responsibility, (5) skills of numerical analysis, communications and using information technology, and (6) learning management skills [19].

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has suggested an information communication and technology competency framework for instructors. This has established development standards for instructors of member countries including 6 competencies and, with regard to each, 3 competencies levels as follows. Competency level 1: Knowledge of technology composed of: (1) awareness of ICT policy for education, (2) fundamentals of curriculum and evaluation, (3) integration of technology for teaching, (4) basic tools for ICT, (5) classroom management standards, and (6) knowledge and skills of digital learning for career purposes. Competency level 2: Depth of knowledge composed of: (1) understanding of ICT policy for education, (2) the application of knowledge in terms of curriculum and evaluation, (3) solving complicated problems in teaching, (4) dealing

with complex ICT tools, (5) the management of group cooperation, and (6) the management and coaching of learning for careers. Competency level 3: The creation of knowledge composed of: (1) innovation of ICT policy for education, (2) social skills knowledge in terms of curriculum and evaluation, (3) self-management for teaching, (4) ubiquitous ICT tools, (5) organizational learning, and (6) master instructors for career [20].

In terms of competency and basic abilities of information communication and technology for communication, learning, work and living in an era of information technology or social learning, instructors should have the competency with regard to the management of teaching in order to promote ICT learners as follows: (1) cognitive expertise, (2) technical expertise, and (3) IT expertise to include accessing data, managing data, analysis and impressions with regard to data, evaluation of data, and the creation of new data [21].

## **IV. RESEARCH METHODOLOGY**

### **A. Sample Group**

The samples consist of 80 instructors of the Faculty of Science and Technology, Valaya Alongkorn Rajabhat University under the Royal Patronage.

### **B. Methodology**

**Phase One:** analysis and synthesis. The analysis relates to the conceptual competency of instructors of organizations including: (1) the Ministry of Education, (2) the Office of the Basic Education Commission (OBEC), (3) the Office of the Higher Education Commission (OHEC), (4) United Nations Educational Scientific and Cultural Organization (UNESCO), (5) the Office of Secretary Khurusapha, (6) the Office of the Teacher Civil Service and Educational Personnel Commission (OTEPC), (7) the National Institute for the Development of Teachers, Faculty Staff and Educational Personnel (NIDTEP), and (8) 21<sup>st</sup> Century Skills. The synthesis of all the information relating to the aspects of competency of instructors toward

teaching and learning in the 21<sup>st</sup> Century and the evaluation of the suitability and the concordance of aspects competency of instructors has been undertaken by five experts. The evaluation results in terms of all competencies concordance. Competencies at a high level composed of: (1) teaching and learning, (2) the evaluation of learning, (3) the promotion of moral values and ethics, (4) classroom management, networking and teamwork, (5) research to improve teaching and learning, and (6) the use of language and communication. The evaluation results are suitable at a high level. Competency are suitable at a high level including: (1) curriculum development, (2) teaching and learning, (3) the evaluation of learning, and (4) classroom management, networking and teamwork [22, 23].

**Phase Two:** questionnaire design. The creation of a questionnaire to determine the competency of instructors toward teaching and learning in the 21<sup>st</sup> Century. The suitability of the questionnaire is evaluated by five experts. The results of the evaluation are that all competencies have concordance. Based on recommendations from the experts, some questions are re-written to ensure the understanding of the respondents.

**Phase Three:** data collection. The perform data collection with a pilot group of five instructors for assessing the questionnaire in terms of understanding, suitability and amount of writing that is involved. The questionnaire is adapted in the light of their comments. The

perform data collection with a sample group amount 80 people.

**C. Tools**

1. Evaluation form for the suitability and concordance of aspects of competency of instructors for use by experts.

2. Questionnaire with regard to the competency of instructors toward teaching and learning in the 21<sup>st</sup> Century for use with pilot groups.

3. Questionnaire with regard to the competency of instructors toward teaching and learning in the 21<sup>st</sup> Century for use by a sample group.

**V. RESULTS**

The research findings are as follows: The competency of instructors toward teaching and learning in the 21<sup>st</sup> Century operates at a high level with regard to 17 competencies. The competency aspects mostly include: (1) the promotion of moral values and ethics ( $\bar{x}$  = 4.49, S.D. = 0.57), (2) the management of classroom ( $\bar{x}$  = 4.26, S.D. = 0.71), and (3) the management of classes and network, teamwork ( $\bar{x}$  = 4.26, S.D. = 0.68). The competency aspects at a medium level include: (1) research to improve teaching and learning ( $\bar{x}$  = 3.18, S.D. = 1.15), and (2) the use of language and communication ( $\bar{x}$  = 3.45, S.D. = 0.90).

**TABLE I  
THE COMPETENCY OF INSTRUCTORS TOWARD TEACHING AND LEARNING  
IN THE 21ST CENTURY**

Competency of Instructors	$\bar{x}$	S.D.	Level
The development of curriculum	3.64	0.83	High
The management of teaching and learning	3.90	0.82	High
The management of classroom	4.26	0.71	High
The preparation of lesson plans	3.92	0.68	High
The evaluation of learning	3.85	0.70	High
The creation for environment of learning	3.79	0.76	High
The development and use of technology resources	4.19	0.81	High
The development of skills for ranking of ideas at a high level	3.95	0.67	High
The facilitation of learning	4.02	0.62	High
The promotion of moral values and ethics	4.49	0.57	High

Competency of Instructors	$\bar{x}$	S.D.	Level
The development of professional, promoting the development of life, and professional skills to learner	3.99	0.84	High
The management classes and networking, teamwork	4.26	0.68	High
The management of welfare and mission to learner	3.97	0.78	High
The focus achievement of operation	4.17	0.60	High
The good service	3.74	0.90	High
The leadership of teacher	4.23	0.60	High
The research to improve teaching and learning	3.18	1.15	Medium
The use of language and communication	3.45	0.90	Medium
The analysis and synthesis	4.13	0.49	High

## VI. CONCLUSION AND SUGGESTION

Instructors have a high level of 17 competencies various aspects of learning and teaching in the 21<sup>st</sup> Century. There are 2 competencies at a medium level. Therefore, instructors should development competencies in terms of research for improving teaching and learning, and the use of language and communication.

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