

องค์ประกอบของรูปแบบเครือข่ายสังคมเชิงเสมือนสำหรับห้องเรียนพหุวัฒนธรรม เพื่อการสร้างความรู้และความตระหนักในคุณค่าทางวัฒนธรรม สำหรับนิสิตนักศึกษาระดับบัณฑิตศึกษา

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อวิเคราะห์องค์ประกอบของรูปแบบเครือข่ายสังคมเชิงเสมือนสำหรับห้องเรียนพหุวัฒนธรรมเพื่อการสร้างความรู้และความตระหนักในคุณค่าทางวัฒนธรรมสำหรับนิสิตนักศึกษาระดับบัณฑิตศึกษา โดยกลุ่มตัวอย่างสำหรับการวิจัยประกอบด้วยผู้บริหารและอาจารย์ที่สอนในระดับอุดมศึกษาทั้งสิ้น 153 คน และแบ่งกระบวนการวิจัยออกเป็น 2 ขั้นตอน ได้แก่ ขั้นที่ 1 การศึกษา วิเคราะห์ และสังเคราะห์ข้อมูลพื้นฐานที่เกี่ยวข้องกับการพัฒนารูปแบบเครือข่ายสังคมเชิงเสมือนสำหรับห้องเรียนพหุวัฒนธรรมเพื่อการสร้างความรู้และความตระหนักในคุณค่าทางวัฒนธรรมสำหรับนิสิตนักศึกษาระดับบัณฑิตศึกษา และ ขั้นที่ 2 วิเคราะห์องค์ประกอบรูปแบบเครือข่ายสังคมเชิงเสมือนฯ โดยผลการวิจัยพบว่า องค์ประกอบของรูปแบบเครือข่ายสังคมเชิงเสมือนสำหรับห้องเรียนพหุวัฒนธรรมเพื่อการสร้างความรู้และความตระหนักในคุณค่าทางวัฒนธรรมสำหรับนิสิตนักศึกษาระดับบัณฑิตศึกษา ประกอบด้วย 11 องค์ประกอบ ได้แก่ 1) ด้านการออกแบบกิจกรรมการเรียนการสอนบนเครือข่ายสังคมพหุวัฒนธรรม 2) ด้านกระบวนการในการสร้างความรู้และการติดตามพฤติกรรมของผู้เรียน 3) ด้านฐานการช่วยเหลือผู้เรียนในการเรียนบนเครือข่ายสังคมเชิงเสมือน 4) ด้านการเสริมสร้าง/การจัดการเครือข่ายบนเครือข่ายสังคมเชิงเสมือน 5) ด้านปัจจัยที่ก่อให้เกิดความตระหนักในคุณค่าทางวัฒนธรรม 6) ด้านระบบการบริหารและการจัดการบนเครือข่ายสังคมเชิงเสมือน 7) ด้านการเสริมแรงในด้านพฤติกรรมของผู้เรียน 8) ด้านการมีปฏิสัมพันธ์ของผู้เรียนบนเครือข่ายสังคมเชิงเสมือน 9) ด้านการยอมรับและการอยู่ร่วมกันของผู้เรียนในสังคมพหุวัฒนธรรมบนเครือข่ายสังคมเชิงเสมือน 10) ด้านเครื่องมือที่ใช้สำหรับการสะท้อนความรู้ของผู้เรียน และ 11) ด้านเครื่องมือที่ใช้สำหรับการติดต่อสื่อสารบนสังคมเชิงเสมือน

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Factors of Virtual Networks for Multicultural Classrooms to Enhance Knowledge Construction and Cultural Awareness for Graduate Students

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Abstract

The purpose of this research was to analyze factors of virtual networks for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students. The aim was to develop such a factor of virtual network model for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students. The sample consisted of 153 administrators and instructors who teach in higher education and the study was divided into two phases. The first phase was to analyze and synthesize literature and documents relating to the development of a virtual network for multicultural classrooms to enhance knowledge construction and cultural awareness for Graduate and the second phase was to analyze factors for a virtual network for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students. The research results indicated that a virtual network for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students factors consisted of eleven factors: 1) Factor of the design of learning activities on the multicultural social network, 2) Factor of process of knowledge construction, 3) Factor of scaffolding, 4) Factor of the support and management of a virtual social network, 5) Factor of the cultural awareness, 6) Factor of the administration and management system of a virtual social network for multicultural classrooms, 7) Factor of the students' behavior reinforcement, 8) Factor of the students' interaction on virtual social network for multicultural classrooms, 9) Factor of the students' acceptance of cultural awareness on virtual social network for multicultural classrooms, 10) Factor of reflective tools, and 11) Factor of communications tools.

Keywords: Joint Classroom in Multicultural Education, Virtual Community, Knowledge Construction and Cultural awareness

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1. Introduction

The current population of Thailand exhibits ethnic diversity. For example, Thai natives, Thai-Chinese and Thai-Malays. As Thais, they share a common culture and language, a respect for the monarchy and are subject to the same laws and regulations. On the other hand, there are distinct subcultures.

For example most ethnic Thai Malays are Muslims who speak, dress and follow a way of life as a Muslim. Thai-Chinese people will follow their own traditions, such as paying respect to god, worshiping the ancestors and celebrating the Chinese New Year. Some local Thai people will also have their own specific culture, such as the Northern Thai people who have their own language, eat rice and adopt native dress. Their works of art have unique characteristics (Yongyuan, B., 2008).

So educators must not overlook the fact that Thailand is a multicultural society and a multicultural approach is the only form appropriate to the development of students from all cultural groups. Hence the need to study and research Multicultural Education.

The researcher's aim is to develop The Factors to improve teaching and learning in higher education by respecting student's cultural differences, by leveraging the resources and strengths of each institution with respect to each other, as well as to improve learning overall and preparing students to strengthen and lead to knowledge-based society in order to step to the next the ASEAN Economic Community: AEC.

2. Purposes of the Research

To analyze factors for a virtual network for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students. More specifically, the focus of the research is develop the factors of virtual network model for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students.

3. Research Methodology

The research method consisted of two phases.

Phase 1) Analyzing and synthesizing related literature and documents regarding the development of a virtual network for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students.

The researcher analyzed and synthesized the concepts, principles, theories, and research studies concerning existing multicultural education and the development of the virtual network for multicultural classrooms in order to define the composition and procedures of a suitable virtual network for multicultural classrooms.

Phase 2) Analyze factors for a virtual network model for multicultural classrooms to enhance knowledge construction and cultural awareness for graduate students. The research results indicated that a virtual network for multicultural classrooms to enhance knowledge construction and cultural awareness for graduates. This phase has two stages.

1. Create Variable Factors for a Virtual network model in four areas including;

- a) Knowledge construction
- b) Distance education



c) Multicultural education

d) Virtual community

Seek expert opinions about suitable components and processes (Variables) pertaining to a virtual network model for multicultural classrooms. as follows:

1.1 Create a table allowing experts to analyze and rate each variable.

1.2 Assess the expert responses in this table.

1.3 Use the information obtained from the experts' opinions phase to develop the questionnaire..

1.4 Assess the quality of the questionnaire for reliability by content validity and a pilot study using the alpha coefficient (Cronbach).

2. Analyze The Factors using a factor analysis method with principal component analysis. The researcher selected subjects in graduate school to develop a variable at factor loading of .50 or higher. A factor should include at least two Variables to be considered as a factor.

4. Research Results

1. The samples consisted of 153 administrators and instructors who teach at higher education level. It was found that the majority of the sample are female (n=79;53%); the majority religion are Buddhist (n=116; 75.82%) and the second are Muslims (n=35;22.87%). The majority are aged around 31-40 years old (n=59; 38.56%); the majority of the sample group possess a doctoral degree (50.98%); and the majority have been working for about 6-10 years (29.41%)

2. The factor analysis results as follows:

2.1 Hypothesis testing in correlation matrix method by Bartlett's test of sphericity are significantly at the low level (sig = .0000)

2.2 Analysis and comparison of Bartlett's Test of Sphericity size by using KMO (The Kaiser-Meyer-Olkin) or measure of sampling adequacy were found at .881 which means the data was closed to 1 indicate that were more suitable for analysis.

3. The analyze factors for a virtual network for multicultural classrooms is using principal component analysis technique. The result show that a model has eleven factors with 78.388 percentage of variance.

4. This analysis based on Orthogonal rotation by varimax method with factor loading of .50 or higer lead to eleven factors with fifty-three variables as follows:

4.1 Factor one: the design of learning activities on virtual network for multicultural classroom - has nine variables with weight of .791-.500.

4.2 Factor two: the process of knowledge construction - has seven variables with weight of .741-.530.

4.3 Factor three: the scaffolding of virtual network for multicultural classrooms - has five variables with weight of .786-.648.

4.4 Factor four: support and management of virtual network for multicultural classrooms - has seven variables with weight of .644-.529.

4.5 Factor five: factors causing of cultural awareness - has six variables with weight of .725 - .569.

4.6 Factor six: administration and management system on virtual network for multicultural classrooms - has five variables with weight of .682-.513.

4.7 Factor seven: reinforcement in student's behavior - has three variables with weight of .701-.519.

4.8 Factor eight: Interaction of learner on on virtual network for multicultural classrooms - has three variables with weight of .539-.518.

4.9 Factor nine: Students' adoption of cultural awareness on virtual network for



multicultural classrooms - has three variables with weight of .698-.602.

4.10 Factor ten: Reflective tools - has three variables with weight of .703-.555.

4.11 Factor eleven: Communications tools - has two variables with weight of .727-.655.

Variables	Text	Factor loading
	<u>Factor one</u>	
15	- Accommodate diverse learning Styles	.791
17	- Students' can offer a clear explanation of what they learn and how to apply it in daily life.	.703
32	- Collaborative construction of knowledge and student interaction's activities.	.595
18	- Students can reflect their explicit knowledge and see the link between prior knowledge and new knowledge that has been learned.	.574
12	- Students can adapt new knowledge to prior knowledge	.573
13	- Learns by sharing knowledge and skills with others and offering social support.	.537
16	- Task based activity or problem-based learning.	.532
14	- Learning activities with the intention to gain knowledge.	.523
26	- Perception, experience and daily life have impact on cultural awareness.	.500
	<u>Factor two</u>	
8	- Use realistic learning examples to solve authentic problems.	.741

Variables	Text	Factor loading
9	- Interpolation of social experience into the learning process.	.668
4	- Encourages critical thinking.	.634
7	- Diverse learning experiences for new vision of students.	.624
5	- Preparation tools for student's learning experiences.	.550
2	- Meaningful context for students	.542
10	- Authentic assessment of learning within the tasks.	.530
	<u>Factor three</u>	
63	- Metacognitive Scaffolding to assist learners to think for themselves.	.786
65	- Strategic Scaffolding assists learners to complete tasks and solve problems during learning processes.	.777
64	- Procedural Scaffolding assists learners to use resources and tools as part of the learning environment.	.762
62	- Conceptual Scaffolding assists learners to summarize the important aspects of a problem.	.731
61	- Search engines are an important tool to help students learn.	.648
	<u>Factor four</u>	
38	- Challenged course development which is meaningful context .	.644
43	- Collaborative learning by construction and sharing of	.596



Variables	Text	Factor loading	Variables	Text	Factor loading
	knowledge.			<u>Factor six</u>	
41	- A good learning environment encouraging students with different skills.	.574	52	- The learner achievement record can help the teacher to plan and manage class activities and also to analyze student achievement.	.682
48	- Students can create a project where each student can add their story or extend the story of other students	.566	51	- Statistical system to track student behavior during activities and monitor learning participation in virtual network.	.641
47	- Students share knowledge with multiple perspectives.	.544	50	- Virtual networks should have a good security system.	.611
40	- Students collaborative learning and activities process.	.543	54	- Summary evaluation and formative evaluation system.	.567
39	- Create an atmosphere to support learning group process and learning conversation of students in virtual network.	.529	67	- Use diverse and interesting media.	.513
	<u>Factor five</u>			<u>Factor seven</u>	
22	- The duration and frequency of recognition of the cultural context can affect the cultural awareness of students.	.725	31	- The recognition of the racial and cultural differences in class and society by students.	.701
24	- The synthetic approach is integrated with and links cultural context to daily life.	.672	33	- Regulate students' attitude about living together with others who have different race and culture.	.522
25	- Ethical courage, understand and accept the differences in culture in society.	.669	34	- Promote a learning experience to develops students' skills, understanding and a positive attitude to society.	.519
27	- The environment familiarity will affect the cultural awareness of students.	.582		<u>Factor eight</u>	
21	- To think creatively within the core beliefs of the society and culture.	.573	3	- Link experiences on the virtual network to the real world.	.539
23	- The nature and format of the subject-matter will affect the cultural awareness of students.	.569	6	- Link students' outside experiences with class activities.	.534
			56	- Communication through chat rooms is important for	.518



Variables	Text	Factor loading
	creating an online social network.	
	<u>Factor nine</u>	
37	- The students' acceptance of cultural awareness on virtual social network for multicultural classrooms	.698
36	- Support the stability and the value of Thai social multi-culturalism in the classroom.	.660
45	- the students shall tolerate the differences of others' thought, ability and attitudes.	.602
	<u>Factor ten</u>	
59	- Reflective Journal is a tool for students communicate and exchange knowledge, ideas, and attitudes.	.703
58	- Blog is a tool for students to communicate and share knowledge, ideas, and attitudes.	.624
55	- Webboard is a tool for students to communicate and create an online community	.555
	<u>Factor eleven</u>	
57	- Facebook is a tool for students' interaction on virtual network for multicultural classrooms.	.727
60	- e-Mail is a tool for communicate between instructor student and experts on virtual network for multicultural classrooms.	.655

5. Conclusions

In conclusion, the results of this research showed that The Factors can be grouped into 11 sets. The summary is as follows:

Factor one: the design of learning activities on the multicultural social network was a factor that focused on the learning environment and student activities when using a multicultural social network. The learning environment should accommodate and support diverse learning styles.

learning styles should include both cooperative and communicative learning activities. The students could clearly explain what they have learned from task and problem learning activities. Moreover, they could also apply the lessons from the virtual social network to their own life and knowledge.

Factor two: The process of knowledge construction and tracking student progress focuses on the actual learning situation and the actual problem-solving context by using social experience to enhance the learning process, and encourage critical thinking. A variety of techniques are used to build deep experience and broaden students' views. An evaluation process to monitor students during these activities is important.

Factor three: scaffolding was one of the factors affecting virtual social networks. Scaffolding can be divided into 4 types – (1) Metacognitive scaffolding is a method that motivates the students' self-awareness for their solution. (2) Strategic scaffolding shows students how to learn, how to analyze problems and how to achieve their objectives. (3) Procedural scaffolding is a method of using resources and tools that are related to the system type and the learning environment to gain maximum benefits, including the preparation of search engine to allow students to do their own research when studying. (4) Conceptual scaffolding helps the students to determine the main/important concepts of problem or content.

Factor four: The support and management of a virtual social network was a factor in designing an



environment to setup small groups with common interests. The virtual social network skills could be established by giving the students opportunities to write or create a project where each student could add their own story or extend the story of others. The students could share stories within a topic and could then search for the same point or for different points in that topic giving the students both a variety of points of view and practice cooperating in studying and activities.

Factor five: The cultural awareness causing factors depend on the duration and frequency of students' exposure to cultural content and stories. It can influence their behavior, how they approach problem analysis and synthesis, the integration and linking of cultural context to their daily life, and an understanding and acceptance of cultural differences. All should cause students to think creatively in ways that don't conflict with beliefs about society, religion and culture.

Factor six: The administration and management system of a virtual social network forms part of a virtual social network management and security system that supports operational activities and data collection. For example, the learner achievement record can help the lecturer in planning and managing the class and activities and also in analyzing the students' achievement. The class attendance statistic records can be used for tracking the learning behavior and activities of the students within the virtual social network. The evaluation system can be used to monitor students during and after the mission and to determine the effectiveness of the various media-types being used.

Factor seven: The students' behavior reinforcement was a factor that focused on the recognition of the racial and cultural differences in class and society. To change students' attitude about living together with others who have different race and culture and to promote proper learning

experience could develop the students' skill, understanding and positive attitude for the society.

Factor eight: The students' interaction on virtual social network for multicultural classrooms was a factor that focused on the learning style arising out of the knowledge context that the students could link with or develop from reality. To link the students outside class experience with the inside class activities and experience was the main objective so that the students could share or integrate their new knowledge with their previous knowledge.

Factor nine: The students' acceptance of cultural awareness on virtual social network for multicultural classrooms was a factor focused on the student's understanding and acceptance of the differences in other people's culture. These should support the stability and the value of Thai social multiculturalism in the classroom and encourage students to tolerate the differences of others' thought, ability and attitude.

Factor ten: Reflective tools were a factor that demonstrated the students' knowledge by allowing them to record what they have learned from the class. The tools consisted of a reflective journal or weblog etc.

Factor eleven: Communication tools were a factor for communicating on social artifacts. The tools could enable the students to link to social networks to communicate with friends from different places. The objective was to encourage the students to build up their social network. The communication tools consisted of Facebook or twitter etc.

6. Recommendations

1. Recommendations for the research use

The Factors are flexible and can be modified to proper situation, students, subjects and objectives of learners.

2. Recommendations for the next research:

2.1 Make The Factors more complete, research and develop learning media to encourage



both synchronous and asynchronous online learning activities.

2.2 Develop The Factors to cover basic education which is an early preparation for students in being the member of ASEAN economic community.

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