มุมห้องเรียน
Take Peek at a Classroom Corner

Rungrawee Samawathdana

การพัฒนาหลักสูตรสุขศึกษานานาชาติ สำหรับนิสิตนักศึกษาปริญญาบัณฑิต รายวิชาสิ่งแวดล้อมเพื่อสุขภาพ

THE DEVELOPMENT OF AN INTERNATIONAL HEALTH EDUCATION COURSE CURRICULUM FOR UNDERGRADUATE STUDENTS: AN ENVIRONMENT FOR HEALTH

บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อ 1) พัฒนาหลักสูตรรายวิชาสุขศึกษา (นานาชาติ) ระดับปริญญาบัณฑิต: สิ่งแวดล้อมเพื่อสุขภาพ 2) เพื่อศึกษาประสิทธิผลของหลักสูตรที่พัฒนาขึ้น หลักสูตรนี้ใช้ปรัชญาปฏิรูปนิยมและพัฒนาการนิยมซึ่ง มุ่งเน้นการแก้ปัญหาสังคม ส่งเสริมผู้เรียนด้านพฤติกรรมสุขภาพและการสื่อสื่อสารสุขภาพ นอกจากนี้ยังคาดว่า หลักสูตรรายวิชานี้ยังช่วยสนองนโยบายของอาเซียนในด้านการสื่อสารและความร่วมมือรวมทั้งการช่วยเป็นการย้ำเตือน ให้คำนึงถึงสิ่งแวดล้อมของโลกที่ส่งผลกระทบต่อสุขภาพอีกด้วย ในการวิจัยนี้เป็นการวิจัยแบบผสมผสานที่มีการเก็บ ข้อมูลเชิงปริมาณและคุณภาพ โดยใช้การพรรณนาและการทดลองแบบกลุ่มเดียว การศึกษาวิจัยในครั้งนี้แบ่งออกเป็น 3 ระยะ ได้แก่ 1) ระยะการพัฒนาหลักสูตรรายวิชาซึ่งมีการวิเคราะห์ความต้องการจำเป็นด้านข้อมูล 4 กลุ่ม 2) พัฒนาเครื่องมือ และ 3) ทดสอบประสิทธิผลของหลักสูตรรายวิชาที่พัฒนาขึ้นซึ่งเป็นการนำหลักสูตรไปการทดลองใช้โดยใช้กลุ่มตัวอย่างแบบเจาะจง ผลการวิจัย ตามวัตถุประสงค์การวิจัยทั้ง 2 ข้อ จากการเก็บข้อมูลใน 2 ภาคการศึกษา ได้แก่ในช่วง ปีการศึกษา 2557 และ ปีการศึกษา 2559 พบว่า

1) ผลการพัฒนาหลักสูตรรายวิชานี้ องค์ประกอบหลักสูตรมี 4 องค์ประกอบคือ วัตถุประสงค์ การเรียนรู้ เนื้อหาการเรียนรู้ รวม 11 บท กระบวนการเรียนรู้ และการวัดและประเมินผลการเรียนรู้

2) ผลการทดสอบประสิทธิ์ผลของหลักสูตรโดยศึกษาจากผลสัมฤทธิ์ทางการเรียนในด้านพฤติกรรมสุขภาพ (ความรู้ เจตคติและการปฏิบัติ) และความสามารถในการสื่อสารภาษาอังกฤษเพื่อวัตถุประสงค์เฉพาะในด้านเนื้อหา (สิ่งแวดล้อมเพื่อสุขภาพ) นั้นพบว่ามีคะแนนหลังการทดลองสูงกว่าก่อนการทดลองอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

คำสำคัญ: หลักสูตรรายวิชานานาชาติ / สิ่งแวดล้อมเพื่อสุขภาพ / สากล / ภาษาอังกฤษสำหรับเนื้อหาเฉพาะ

Abstract

The objectives of this study were to: 1) develop an International Health Education Course Curriculum for Undergraduate students: An Environment for Health; and 2) examine the effectiveness of the curriculum. This course was based on the reconstructionism and progressivism philosophies which focused on solving social problems and instilling within students health behaviors and communication. The course was also expected to serve ASEAN needs of health communication and cooperation as well as world environmental concerns affecting health. The research used a mixed method of qualitative and quantitative approaches in a descriptive and one group experiment. The study comprised three phases: 1) course curriculum development with participants in four groups investigating need analysis, 2) research on instrumental development, and 3) examine the effectiveness of the course curriculum implementation using purposive sampling. Data was gathered twice for implementation, in academic year 2014 (2557 B.E.) and 2016 (2559 B.E.).

1) The finding of developing the course curriculum consisted of four main components: learning objective, 11 units of learning course contents, learning process, and learning assessment and evaluation.

2) The findings of course curriculum effectiveness, the learners' achievements in health behaviors (K, A, P) and English for specific content (ESC)

after the experiment were significantly higher with a statistical difference of .05 than before the experiment.

KEYWORDS: INTERNATIONAL COURSE CURRICULUM / ENVIRONMENT FOR HEALTH / INTERNATIONALIZATION / ENGLISH FOR SPECIFIC CONTENT

Introduction

Why do we need to provide an International course curriculum in Environment for Health?

This type of course curriculum has been needed to be constructed because learners should be motivated to improve the awareness of health behaviors related to the global pollution which nowadays affects to health. Another aspect of the learners in Thai context could be considered seriously was English focusing on Health communication ability. These aspects should be built and prepared our young generation to be qualified as the ASEAN in-service teacher which is related to environmental health as well as the ability to connect to one another with English. Creating a new International Course Curriculum for Environment for Health is not only serving the ASEAN policy on education, but also being one of the world significance issues. The course of Environment for Health are meaningful for many nations that are facing increasingly serious and costly with deadly diseases related to environment. While the risks are all kinds of pollutions being well recognized regarding acute, infectious and toxicological illnesses, there is only now increasing recognition the hazards of building and community layouts that fail to recognize human health. Learning Environment for Health course would analyze each of these factors, health and disease endpoints. Thus, this research has been constructed with two purposes which were 1) develop an International Health Education Course Curriculum for Undergraduate students: Environment for Health and 2) examine the effectiveness of the curriculum. Then, why does the course have to provide as an international program?

Crystal (2003) and Harmer (2007) stated that English is used as the most official global language. English is the most used as an academic text in the world. The global language can be a tool of communicating and autonomous of lifelong learning especially increasing benefits for non-native English speakers. How Thai learners would be part of the ASEAN charter operation and WHO citizen, able to cooperate and compete with other countries, and/or qualified as a world citizen lack of an ability of using English as a global language? Moreover, the idea of one course fits all is no longer accepted as an individual context is caused different process and outcome (Marsh & Willis, 2003; Tyler, 1949; Schwab, 1969).

Thus, this International Health Education Course Curriculum for Undergraduate students is necessary to provide for undergraduate learners as it can be one of the best approaches to enhance lifelong learning; what's more, it can be served the demand of in-service teachers for bilingual, EP, EIS, and international programs for basic education level. Especially, undergraduate students studying in Health Education or/and Physical Education program(s) would receive benefits not only by the course content objectives which focus on the global environmental problems effected to human health, but also accomplished the chances of practicing English skills. Likewise, Ornstein and Hunkins (2004; 2009) proposed that global, international, or universal curriculum, each country would remain to motivate its own culture, values, political, economic, environmental systems to learners to understand international society and global cooperation.

This paper illustrates two times of the data gathering in academic year 2014 (2557 B.E) and 2016 (2559 B.E), The data collecting in academic year 2014 was studied in first semester before the experiment in order to conduct need analysis (NA) as a part of the developing the course curriculum. Then the data gathering in academic year 2016 was investigated in first semester after the experiment was examined as a part of curriculum evaluation with Tyler's Model. Tyler's goal attainment model or the objectives-focus model in development

and evaluation that objectives must have relevancy to the field of study and to the overall curriculum (Bond, Qian, & Huang, 2003; Keating, 2006) the origin popular models. This model consists of four main parts: 1) drawing objectives of the learning; 2) selecting content to meet the learning objectives; 3) organizing the learning activities; and 4) evaluating and assessing the learning experiences. According to Bremer and Wende (1995) internationalization of curriculums can denote to such numerous terms as study abroad, foreign language, interdisciplinary or area programs, or the provision of programs or courses with an international, intercultural, or comparative focus. Though, several of the scholars discussed an internationalized curriculum to course content and teaching and learning approaches which integrate an intercultural and international perspective (Adams, 1992; Bond, 2006; De Vita & Case, 2003; Leask, 2001; Maidstone, 1995; McKellin, 1998; McLoughlin, 2001). Bond (2006) describes this curricular transformation as "changing fundamentally what we teach and how we teach it." Other researchers accord to emphasize the importance of an internationalized curriculum providing a student-centered learning experience for all students and preparing students to be successful in interdependent global society today (Bonfiglio, 1999; Leask, 2001; Schuerholz-Lehr et al., 2007). Consequently, in this research internationalization course curriculum is concentrated on content international situation of knowledge, teaching and or learning methods which integrate both native and English languages as the global language and the content to meet the international standard point.

The purpose of this study is to 1) develop an International Health Education Course Curriculum for Undergraduate students: Environment for Health and 2) examine the effectiveness of the curriculum.

Methodology

The study was a mix method, qualitative and quantitative using descriptive and experimental research. The study was composed of three phases; course curriculum development with cluster sampling technique (Need Analysis),

research instrumental development, and examine the effectiveness of the course curriculum. The last phase was using purposive samplings in order to examine the course curriculum based on Need Analysis (NA) for a specific context (Ornstein & Hunkins, 2009). This study focused on undergraduate students studying in Health and Physical Education Division, Faculty of Education in a university in Bangkok. The two major variables were;

1) Independent variable which is an International Health Education Course Curriculum for Undergraduate students: Environment for Health

2) Dependent variables are; the students' achievements based on four areas;

2.1) English for specific content (ESC) focused on the course curriculum

2.2) Content knowledge (K) towards the course curriculum content

2.3) Attitude (A) towards the course curriculum

2.4) Practice (P) towards the course curriculum objectives

Phase 1: The course curriculum development which consisted of three steps.

Step 1: Conducting a NA was to investigate learners' needs and interests in Environment for Health course using documentary review, semi-structure interviews and a questionnaire from four common places (Schwab, 1969). This step was to search the related literature, identifying the population samples, and to construct and validate instruments of NA.

Participants: there were four groups of participants according to Schwab's four common places including an administrator, a teacher, and learners, and alumni

1) An educational administrator, who was expert in Health Education (related to environment), the participants' characteristic in this group had experiences in Health Education related to environment more than 5 years. The participants were interviewed with a semi-structured interview.

2) A higher educational teacher from Malay sia, considering as an ASEAN

member countries who had teaching experiences in Health Education (related to environmental health). A semi-structured interview was conducted.

3) Seventy undergraduate students studying in related Health Education and/or Physical Education in ASEAN countries were the participants to answer a questionnaire of needs and wants. The questionnaire was constructed using content analysis and investigated from 40 Thai undergraduate students, 30 undergraduate students from Malaysia (10), Vietnam (10), and Indonesia (10). The 70 participants were explained the objectives of the investigation from the questionnaire and all were warrantees to cooperate with answering the questionnaire.

4) Thirty Thai alumni who graduated from the division of Health and Physical Education were the participants to answer the questionnaire. The participants were explained the objectives of the investigation from the questionnaire and all were warrantees to cooperate with answering the questionnaire.

Instruments, data collection, and analysis

There are two instruments, semi-structured interviews guideline constructing from documentary research using content analysis validity, as well as a five-Likert scale and open-ended questionnaire. The two instruments were submitted to three experts in Health Education (related to environmental health) before tried out for reliability (IOC=0.88), the questionnaire will be analyzed by statistical description (percentage, SD and Mean), including the Cronbach-alpha reliability coefficient (α =0.82)

Phase 2: The course curriculum research instruments development and validation
This phase consisted of three steps;

Step 2.1 Identify the participants for the experiment of the course curriculum

The participants were 30 undergraduate students who registered for Environment for Health course and studied in Health and Physical Education

Division at a Faculty of Education, University in Bangkok, Thailand.

Step 2.2 developing the research instruments which were used to examine the effectiveness of the developed course curriculum. There were presented as the following.

(1) The instruments for the experiments included the developed course curriculum, curriculum manual, and lesson plans.

(2) The instruments for collecting the data were pretest and posttests, progressive performance evaluation forms for each unit, attitude evaluation forms toward the course curriculum (composed of four parts; objectives, contents, learning processes, and evaluations)

Step 2.3 Examining the instruments by three experts (IOC=0.9) with minor adapted as the suggestion) in Health Education and then try out the instrument to the different group of samples but comparable to the characteristics. Then, Collecting and analyzing the data using statistical description (SD, Mean, %). Adjusting the instruments according to the experts' comments and the data analysis after the tried out.

Phase 3: Examination of the course curriculum implementation and evaluation the effectiveness of the course. There were two steps for this phase;

Step 3.1: Course curriculum implement:

This step proceeds by conducting an experimental class of 49 students for one term, a two credits course with 32 periods (an hour per period), 16 weeks including pre/posttest, and midterm examinations in academic year 2014 (2557 B.E.). The course was instructed for 11 units by the researcher. The study has been re-experimented with 30 students for the same process in academic year 2016 (2559 B.E.).

Step 3.2: Evaluation the effectiveness of the course:

The process was evaluated by the research instruments in the following. Pre-Posttest were used the same test to examine the learners for

knowledge (K) which focused on English for specific content (ESC) and content knowledge which bases on course curriculum), attitude (A), and practice (P) towards the course curriculum.

Note: The attitude (A) & Practice (P) have been lost accidently, the data have been collected again in academic year 2016 (2559 B.E.), the whole process of examine the course curriculum have been constructed again in academic year 2016 (2559 B.E.)

The Data analysis were compared pre-posttest scores with Mean, standard deviation (SD) and paired t-test.

Results and Discussion

Phase 1: The course curriculum development

Conducting a need analysis (NA) was to investigate learners' needs and interests in Environment for Health course using documentary research, semi-structure interviews and a questionnaire from four common places (Schwab, 1969). This step was searched the related literature, identifying the population samples, and constructing and validating NA's instruments.

Phase 2: Development and validation

The course curriculum research instruments, namely, course syllabus, test blueprint for Knowledge (K), Attitude (A), Practice (P), and English for Specific Content (ESC) were composed and qualified by experts in both related in Environment for Health and English teaching and corrected the draft of the curriculum. The IOC mean score of the instruments were higher than the criteria score in total items. The pilot was tried out for six hours in 3 weeks (two hours a week) at the first semester of academic year 2013, and implemented for two times in 2014 and 2016 as the course only provide during the first semester.

Adjusting and revising the draft of the course curriculum, the information, results and data including literature reviewing were analyze for suitable the details of the course curriculum. Mostly data needed to adjust that were leaners'

interesting in the learning process and some details of the content should be up to date from news to use as teaching material. As well as some of the statistic that related to the topics or content such as population, mortality rate, or new technology and application involving environmental health in used.

Phase 3: Examination of the course curriculum implementation and evaluation the effectiveness of the course.

Course curriculum implements with two times of one group quasi-experimental for each academic year in 2014 and 2016 as to assure the course curriculum. The revised course curriculum was implemented with 49 and 30 undergraduate learners studying HPE program in 2014 and 2016 respectively (Note: In the proposal, samples were 50, but as the requirement of The Teachers Council of Thailand, a class in faculty of education must not over than 30 students in a section starting in 2016). The experiment both in academic year 2014 and 2016 were processed 11 units by researcher, 16 weeks (32 periods of hours/ two hours a week) including pre/posttest, and midterm examinations. However, there was some missing data, the data of pre-and post-tests of attitude and practice lost after the implementation in academic year 2014. The experiment had to be extended and conducted another time in academic year 2016.

Then, evaluation the effectiveness of the course: The process was evaluated by the research instruments in the following. Pre/post tests were used the same test to examine the learners for knowledge (K) which was focus on English for specific content (ESC) and content knowledge bases on course curriculum, attitude (A), and practice (P) towards the course curriculum of Environment for Health. And each unit had progressive performance evaluation forms. The data were both quantitative and qualitative methods. The quantitative analyzed using the computer program for t-test dependent for paired sample statistical analysis, SD, and Mean. The qualitative data were used for content analysis.

The results of the experiment in academic year 2014 and 2016 were showed that the mean scores of the participants of the pre-test were at 0.05 level significantly higher than the post-test in all aspects K, A, P, and ESC.

The finding of quantitative a paired-samples t-test was conducted with 49 participants to compare **Knowledge (K) Content of Environment for Health in Academic Year 2014**. There was a significant difference in the scores for Pretest-K (M=13.45, SD=3.39) and Posttest-K (M=20.73, SD=4.87) conditions; t (48) =12.33, p = 0.005. These results suggest that students after having treatment had higher score of knowledge regarding the environment for health. **In academic year 2016,** it was conducted with 30 participants. There was similar finding. A paired-samples t-test was conducted to compare Knowledge (K) Content of Environment for Health. There was a significant difference in the scores for Pretest-K (M=12.85, SD=3.44) and Posttest-K (M=24.42, SD=2.45) conditions; t (29) =18.28, p = 0.005. These results indicated that students after having treatment had higher score of knowledge regarding the environment for health.

Attitude (A) finding analyzed with a paired-samples t-test to compare attitude (A) toward Environment for Health in Academic Year 2014 was missing, but data in academic year 2016 was completed. In academic year, there was a significant difference in the scores for Pretest-A (M=7.55, SD=1.28) and Posttest-A (M=8.25, SD=1.27) conditions; t (29) = 5.15, p = 0.005. These results showed that students after having treatment had higher score of attitude toward environment for health.

The results from quantitative analysis

The finding of practice in academic year 2016, a paired-samples t-test was conducted to compare Practice (P) toward Environment for Health in Academic Year 2016. There was a significant difference scores of Pretest-P (M=5.33, SD=1.40) and Posttest-P (M=7.13, SD=1.70) conditions; t (29) =-10.66, p = 0.005. These results indicated that students after having treatment had higher score of Practice toward environment for health.

The findings of English for specific content (ESC) were used Reading and writing, Speaking and Listening as follow:

A paired-samples t-test (2014) was conducted to compare Knowledge (K) Content of Environment for Health in Academic Year 2014. There was a significant difference in the scores of Pretest-K (M=13.45, SD=3.39) and Posttest-K (M=20.73, SD=4.87) conditions; t (48) =12.33, p = 0.005. These results indicated that students after having treatment had higher score of knowledge regarding the environment for health.

A paired samples t-test (2014) was conducted to compare English for Specific Content focusing on Listening and Speaking by oral presentation (ESC-LS), especially the content of Environment for Health in Academic Year 2014. There was a significant difference scores of Pretest- ESC-LS (M=6.12, SD=.88) and Posttest- ESC-LS (M=7.37, SD=1.01) conditions; t (48) = 10.77, p = 0.005. These results showed that students after having treatment had higher score of English for Specific Content focusing on oral presentation as speaking and listening skills (ESC-RW), especially the content of Environment for Health.

A paired samples t-test was conducted to compare English for Specific Content focusing on reading and writing (ESC-RW), especially the content of Environment for Health in Academic Year 2016. There was a significant difference scores of Pretest- ESC-RW (M=.70, SD= 1.08) and Posttest- ESC-RW (M=3.25, SD=1.73) conditions; t (29) = 9.86, p = 0.005. These results indicated that students after having treatment had higher score of English for Specific Content focusing on reading and writing (ESC-RW), especially the content of Environment for Health. However, the mean scores both before and after the treatment were lower than 50 percent.

A paired samples t-test was conducted to compare English for Specific Content focusing on Listening and Speaking by oral presentation (ESC-LS), especially the content of Environment for Health in Academic Year 2016. There was a significant difference scores of Pretest- ESC-LS (M=7.05, SD=.83) and

Posttest- ESC-LS (M=8.18, SD=1.01) conditions; t (29) =9.66, p = 0.005. These results indicated that students after having treatment had had higher score of English for Specific Content focusing on oral presentation as speaking and listening skills (ESC-RW), especially the content of Environment for Health.

Discussion

The experiment examined the course curriculum and curriculum evaluation by using Tyler's Model. Tyler's goal attainment model or the objectives-focus model the most basis models in development and evaluation. These objectives must have relevancy to the field of study and to the overall curriculum (Bond, S., Qian, J., & Huang, J. 2003; Keating, 2006). This model contained four key parts: 1) drawing objectives of the learning; 2) recruiting content to meet the learning objectives; 3) forming the learning activities; and 4) evaluating and assessing the learning experiences. However, the process of developing this course curriculum has been created the combination of Shawab, (1969); and Tyler, (1949). The Academic Subject Curriculum is one of the four types of curriculums categorized (McNeil, the course curriculum followed Tyler's Model, the process of investigating the NA used Marsh and Willis, (2003); Ornstein and Hunkins, (2004); (2009). Learner-centered designs (Ornstein and Hunkins, 2004; 2009) were suggested to apply to develop course curriculum as the curriculum models that are theoretically beneficial, directly involved in the learners' characteristics such as the personal attitudes, emotional state, ethic, and value. One of the best ways to improve learner learning, a course engineer should analyze learners' and socials' needs, wants, problems and design appropriate courses to meet their goals. Then wrap up the course components by analyzing and synthesizing to demonstrate as the finding for two research purposes.

1. The components of the course curriculum

The educational objectives of learning course was developed by applying Shawab, 1969; Tyler; 1949; Ornstein and Hunkins, 2009 to study and setting

the objective learning course. The objective of the course needed to concern learning philosophy, social needs, learners' needs, and context limitation. The philosophy of this Environment for Health course curriculum was solving deconstructionism based on social problems solving. The course constructed using education as a tool of preventing served ASEAN and global needs in cooperative of protecting the world environment aspects of health issues. That also suited for social needs as of 2017 the WHO website on environmental health states "*Environmental health reports environmental affect people health. It is targeted towards preventing disease and creating health-supportive environments. .....Researchers and policy-makers also play important roles in how environmental health is practiced in the field. In many European countries, physicians and veterinarians are involved in environmental health...*" (WHO, 2017: Online.) This could be analyzed that environmental health/ environment for health has been essential in our life and many countries have been concerned. The effective of health education needed integration of the pedagogy of teaching and learning process as well as behavioral strategies to encourage individuals to make voluntary adaptations conducive to health (Green, 1980).

As learners' needs, there were two dimensions to consider for internationalization course curriculum which included content and languages use. According to Schuerholz-Lehr et al., (2007), internationalization course is *"a process by which international elements are infused into course content, international resources are used in course readings and assignments, and instructional methodologies appropriate to a culturally diverse student population are implemented"* In addition, Green, M., (2012) stated that the requiring one or more courses on international/global/intercultural understanding for all students could be focus on many aspects, for example; specific schools or faculties in the institution; focus on individual, specific degrees. Similarly to this research, the course curriculum development was focus on global understanding of the content, international resources. Internationalized course might refer to course content and/or teaching and learning methods

which integrate an intercultural and international view. Thus, the three main factors were the subject matter of the course curriculum and the pedagogical implications, and evaluation of teaching and learning methodologies that could promote the inclusion of worldwide learners (Bond, 2006; De Vita & Case, 2003; Leask, 2001; McLoughlin, 2001). The languages use as part of course objective for the learners' development in this study context was to develop English for specific content (Environment for Health). Most of the learners on this course were Thai undergraduate who study in Health and Physical Education Program with limitation of English communication ability. This seemed to be difference with internationalization course for most people perception as it should be Englishization, English as a media of instruction. Though, according to Mestenhauser, (2002b) an internationalization curriculum might alienate international students who are accustomed to muti-directional, multicultural, multilingual of teaching and learning. Furthermore, Lemasson, J.,P., (2002:) argued that internationalization course may essentially offer diversity intercultural awareness, and needed adapt some form of bilingual procedure as an integral part of their internationalization platforms in order to protect the native language(s) and academic written in the local language(s). International learners from varied cultural backgrounds might have trouble harmonizing the prospects of the traditional of others curricular perspective and pedagogical tactics with their own culturally based learning prospects and values (Mestenhauser, 2002a). Consequently, the use of bilingual, the target language for the learners' development in this context, is the native and English that would be a suitable tool of learning in this course implementation. Additionally, the learners wanted to use bilingual for their learning and testing process. This agrees with Collier (2010), using bilingual could reduce their anxiety while learning and testing.

Next, the developing learning process in this research, the course curriculum development was constructed from the learners' needs and wants. The study indicated that leaners wanted teaching methods; interactive discussion, group work with cooperative learning, games, simulation; and several IT and

VDO teaching media. Moreover, they also wanted experiences of learning with field trip sometimes. In terms of teaching approaches, an integrated curriculum encourages a multi-dimensional strategy to the instructional process and tends to combine regularly multi-convergent and divergent strategies of teaching (Westwood, P., 2008). Teaching methods as Lecture sometimes might be needed as leaners wanted teachers to delivery large amount of content and theories with the time consuming especially a week before the examination or during the review chapters before their examination. Similarly, Mbirimtengerenji and Adejumo (2015: Online) stated that appropriately structured-lectures would be one of necessary teaching methods for many subjects and learners, and lecture might be especially suitable to the conduction of theoretical and systematic knowledge. During the learning process, interactive style as discussion, group working with cooperative learning, games, and simulation were the preference of the learners from this study in the Interactive instruction methodologies, the learners interacted with each other with information and materials; the teacher was as an organizer and/or a facilitator (Cruikshank, Bainer, & Metcalf, 1999). In addition, Gupta (2010) also stated that interactive teaching styles help to endorse an atmosphere of attention and lead to learners' interest. These styles of teaching methods encouraged learners' pursuit, research, discovery the knowledge they were about to learn, discovering him-self resolutions to the problems, processing knowledge. Interactive methods enhanced students critical thinking and imagination as well as the use of learning by discovery, learning by cooperation, problematization involved learners in learning more than an clarification, an exposure and a demonstration (Gupta, 2010).

The leaners preferred to this course using technology and IT as teaching media Recently, technology has transformed the world with a smart phone; many medias have used this channel to communicate their tasks. That could guide the use of tasks from online resources and all other learning tools and content such as VDO clips as learning and instructional tools (Van Scoter, Ellis, & Railsback, 2001; Clements & Sarama, 2003a; Plowman & Stephen, 2005, 2007.)

Students must develop not only the component skills and knowledge necessary to perform complex tasks, they must also practice combining and integrating them to develop greater fluency and automaticity. Finally, students must learn when and how to apply the skills and knowledge they learn. As instructors, it is important that we develop conscious awareness with these elements of mastery so as to help our students learn more effectively.

One of the most importance evaluation processes to implement the course curriculum was the assessment and evaluation of the learners. This study developed the assessment and evaluation process by reviewing from many well-known educators, namely Anderson (2002), Cronbach (1970), Henderson, Morris and Fitz-Gibbon (1987). The framework of developing the assessment and evaluation process in this study were used formative and summative and Table of Test Specifications (TTS) system (Bloom, Hastings, & Madaus, 1971). The formative used to evaluate the progressive of learners especially English for Specific Content (ESC), communicative skills (speaking and writing as productive skill, and reading and listening as receptive skills). The summative used for evaluated the content knowledge (K), attitude (A), and practice (P) for this study. The most important for the evaluation system on this study was construct the test specifications or test blueprints in order to validate the course content, objectives, and identify the achievement domains being measured. According to Chase (1999) a Table of Test Specifications benefits learners not only to improve the validity of teacher-made tests, but also it can improve student learning as well. Similarly to Bloom, Hastings, & Madaus (1971); Carey (1988); Kubiszyn & Borich (2003); Linn & Gronlund (2000) tests must be designed carefully to yield reliable and valid scores, and TTS provide those tasks.

2. The effective on the learners' achievement bases on Knowledge (K), Attitude, Practice (P), and English for Specific Content (ESC).

The effectiveness of the course curriculum implementation on the learners' achievement were measured by the comparison of the score pre-posttest, Knowledge (K), Attitude, Practice (P), and English for Specific Content

(ESC) which conducted two times during the first semester of the academic year 2014 and 2016. The finding was supported with the rationale, theories, and many researchers (e.g. Bond, Qian, & Huang, 2003; Palmer, 2006; Richards & Lockhart, 1994; Malderez & Wedell, 2007; Ansari, 2010). The course curriculum was conducing based on the process of curriculum development by investigating need analysis of learners. The rational from Ansari., W., El., (2010) who stated that an important impact to achieving sound outcomes is to focus on the individual learners' needs and their fulfillment with learning capability and practices.

Next, the components of the curriculum were concerned during the development process and fulfilled the main key concepts which composed of the course objective, contents, learning processes, and evaluation. The main key components of this course curriculum were synthesized from many well-known curators (e.g., Marsh, C. J., & Willis, G., 2003; Tyler, 1949; Schwab 1969; Wolf, Hill, & Evers, 2006; O'Neill, 2010; Ornstein & Hunkins, 2004; 2009). The course objective and learning outcome should be clear identifying as to be the guideline for deciding the learning contents, process and activities, and evaluation (Tyler 1949; O'Neill, 2010; Ornstein & Hunkins, 2004; 2009). Course contents from this study composed of 11 units which were reviewed and synthesized the process of curriculum development, process of need analysis with the concerning of context and internationalization concepts. The statement supporting this study indicated that an internationalized curriculum to course content and teaching and learning approaches which incorporate an intercultural and international perspective (e.g., Adams, 1992; Bond, 2006; De Vita & Case, 2003; Leask, 2001; Maidstone, 1995; McKellin, 1998; McLoughlin, 2001).

Course learning process and activities from this study suggested that due to cultural differences in educational systems and pedagogy of International and ASEAN learners, the process of learning should be provided with whole cooperation system from faculty and university level. For example, using integrated instructing systems might need cooperation between instructors from other majors into the course or sharing some technology from other department.

For university level, the course may need some policy to support such as language entrance examination policy for International students. Similarly to Ballard B. and Clanchy J. (1997) discussed information regarding the academic adjustment difficulties encountered by predominantly Asian international students in institutions of higher education due to cultural differences in educational systems and pedagogy. It provides practical suggestion and strategies that faculty can employ to modify their teaching to better meet the needs of international students. For the course curriculum level in learning process in this study use of experiential learning bases plus Content and Language Integrated Learning Approach (CLIL) in order to develop learners in content and target language. Coyle, Holmes, & King (2009) developed CLIL into the classroom both to benefits to teachers and learners in relation to four specific four dimensions; content, cognition, communication and culture. For Experiential Learning (ELT) by Kolb (1984) supported learners in practice (P) domain.

The finding from this study confirmed that teacher provide more opportunities for learners to use the target language, and learners could develop the communicative skills naturally without anxiety.

Conclusions

The course curriculum for Environment for Health was composed of four major elements, objectives, content topics, learning process, and evaluation. The course is two credits hour of lecture. The objectives of the course were; learners are able to explains, analyze concept and the relationship between environment and human health; analyze the problem related to environmental health in the local and global level; and purpose guidelines of solving environment that affected to human health. The philosophy of the course curriculum was focus on both reconstructionism and progressivism as the course curriculum focus on the problem solving in global environment and learners' development ability. The content of the course was composed of 11 topics. The top three interested topics for the learners from most to least were 1) Municipal, industrial, and

hazardous waste (M=4.83); 2) Environmental health economics; justice and policy of the ASEAN region and global (M=4.80); 3) ASEAN and global issues related Environmental Health (M=4.77) and there were three topics as the same level (M=4.73), diseases from pollutions (air, water, noise, solid, and toxic), global climate change, energy and radiation, and impacts of growth on ecosystems. The least interested topic was exploring environment and health connections (M=4.30), but it was as strong interested topic as the most interested topic. The learning and evaluation processes of both academic years 2014 and 2016 are mostly the same; leaners preferred teaching methods, discussion, and group work with cooperative learning as well as various IT equipment and VDO teaching. The language used in the classroom; both Thai and English, but they preferred to Thai more than English language. Finally, the learners expected less assessment, take home examination or open book examination.

The research findings from this study suggest that 1) teachers should prepare and study the course details in order to be familiar and well organize the plan of instruction, materials and try out before implementing the course. 2) Before starting the course, teachers should construct NA of learners' background. 3) The language used in the course may consider on the context of the course and learners' comfort as it's may effect to the learning outcome. The recommendations for further studies were suggested that the study should be extended to others groups such as students study in general education subject, a university requirement course. The result would be generalized to the population of others undergraduate program in higher education, not only the population in health and physical education program learners. The pattern of teaching methods might be adapted depending on the context of the learners' interest. It would be useful for future study for conducting NA when starting a new course in order to assure the effectiveness of the leaners' achievements.

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