Knowledge and Comprehension of online courses among CMU nursing students
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Backgrounds
From the university system development policy in the main concept in education evolution according to the National Society and Economic Developmental plan issue no.9 about Educational Development, which intend to let graduates have knowledge in multidisciplinary, have learning-teaching management, which use learners as student center, emphasize the learning knowledge process, exchange ideas, data, information and technology together between teacher and students. There is information technology identification to be used as equipment to make new knowledge from knowledge base to make Thai society to be knowledge base society, including to emphasize the content of learning-teaching course to make graduates have knowledge and can innovate and adapt the knowledge in making further living.

Chiang Mai University is the big educational institution. It has arrangement to response to governmental policy in that educational evolution in many types and has idea in using new learning-teaching system in the type of learning-teaching through e-Learning or online course in the characteristic, which emphasize to self-direct study of learner, too. Which now it bring electronic learning system to be used with normal students, who walk to study in some subjects (http://www.cmu.ac.th/CMU online learning). Moreover, there is university policy in promoting each faculties join together to make online courses, too.

Nursing Faculty, Chiang Mai University, which has organizational vision that in year B.E.2550 will be the leader and Academic Nursing centre in country level and international level by emphasizing the research, produces quality graduates and self-responsibility one. It has the related policy with each policies of university, too. By arranging the activity, which leads to each educational development items are:
Educational service, educational management and educational improvement, etc. As seeing from making public hearing of Nursing
Degree course(Improvement B.E. 2546 Academic Seminar Arrangement in any courses meeting agenda of Faculty administrator, who looks at the problem of current learning-teaching arrangement in the case study, which is the educational system as mostly learning-teaching in classroom and has major learning-teaching media in printing type, has divided group of students as one teacher per a lot of students. The faculty has seen the benefits of online course will be media and channel to additional support the student’s learning, including to the faculty also pay attention to online course continuously by promoting management team, personnel take a training course of online course both local and outside the faculty periodically and the main thing is to identify quality KPI (Quality Key Performance Index) to assurance the faculty’s educational quality, which relates to the course of learning-teaching through computer network system by showing in Measurement Template of KPI No.18. It is percentage of the course, which has learning-teaching through computer network system (Quality Assurance Department of Educational Service Job B.E. 2546:75)

From fundamental data survey about online course arrangement in each department of Nursing Faculty, Chiang Mai University during February- March B.E. 2546 has founded that there was arrangement to make online course in various type, but from surveying via online system in http://www.cmu.ac.th/cmulo online learning has founded that there is still no have Nursing Faculty, Chiang Mai University’s learning-teaching course through computer network system completely. The researcher has interested strongly about implementation of online course development of the Nursing Faculty, Chiang Mai University. From the experience and observation, the researcher found that one measuremet in production of product, which means online course, should pay attention to group of using service, which is the target group of students in the research. The researcher interested in knowledge and comprehension about nursing students’ online course, Nursing Faculty, Chiang Mai University to get the information to develop nursing students to have more knowledge and comprehension in the online course and be fundamental data for concerned administrators, personnel in course online production to match with the students’ requirement.

Objective

To study the knowledge and comprehension level of nursing
students, Nursing Faculty, Chiang Mai University in Bachelor Degree in general knowledge about online course.

The Research Scope

This study uses the educational theory about knowledge and comprehension level and general knowledge about meaning, composition and benefits to students of e-learning by Thanormporn Laohajarassaeng B.E., 2545 to be an idea to study, knowledge, comprehension about online course of nursing students, Nursing Faculty, Chiang Mai University by collecting from August 22-31, B.E. 2548

Definitions

nursing student means Bachelor degree student in nursing graduates course for all 4 year-students, which register to study in semester B.E. 2548

Knowledge and comprehension about online course means Intellectual capability in memory part, bringing knowledge, memory to make comprehension in online course. It is measured by knowledge and comprehension test of meaning, composition and benefits of online course, which the researcher creates it by himself. This online course means the learning-teaching type in the course, which Nursing Faculty, Chiang Mai University or other department, organization’s created knowledge lessons as system and has demonstrated it through electronic network, which maybe either intranet or internet network by using the media composition and promoting equipment in any type of learning i.e. web board or chatting on the network, photo and video voice. Learning through computer is similar as learning in classroom, electronic library, digital information technological service and chat room, etc.

Method

This research is Descriptive research. Used population in this research is nursing students in graduates Nursing course, normal course, 1st- 4th year student in semester B.E. 2548 quantity 509 persons. Identify group sample by sampling as stratified random sampling from total nursing students quantity 224 persons separated in each year as:

Using equipment in data collecting in this research as questionnaire with 2 parts is:

Part1. Personal Data Questionnaire i.e. Sex, Age, study year, computer using type, learning online course experience and self-evaluation about knowledge, meaning of online course comprehension. Questionnaire characteristics are selective choices 7
Part 2. Online course knowledge, comprehension Questionnaire. The researcher creates it by himself according to the idea of Thanormporn Laohajarassaeng B.E. 2545 and related literature review. Type of questionnaire is yes No question. In each item has score as 1 and 0 total qty is 32 items, composes with 3 subjects are:

Subject 1 Meaning of Online Course 2 items

Subject 2 Major compositions of Online Course 20 items

Subject 3 Benefits of Online Course 10 items

By having meaning translation of score in each subject as below:

1. The student has knowledge, comprehension in meaning of online course in low level means the score between 0-0.66; medium level means the score between 0.67-1.33; and high level is the score between 1.34 – 2.00.

2. The student has knowledge, comprehension in main composition of online course in low level means the score between 0 -6.60, Medium level means the score between 6.70-13.33; high level is the score between 13.40–20.00.

3. The student has knowledge; comprehension in benefits of online course in low level means the score between 0 -3.33, medium level means the score between 3.34-6.66; high level means the score between 6.67–10.00.

4. The student has knowledge and comprehension in online course totally as low level means the score between 0-10.66; medium level means the score between 10.67-21.33; high level means the score between 21.34–32.00

Inspection the equipment quality in this research use the content validity inspection (content validity: CVI) by 5 qualified persons, has result as 0.83. The researcher has adjusted the questionnaire according to their suggestion, and then brings to meet the reliability of questionnaire by using Kuder Richardson formula. The questionnaire has reliability value as 0.67.

Collecting data from sampling group in this research by distributing questionnaires to nursing students, graduates in nursing course, normal course, which register to study in semester B.E.2548; quantity 224 persons had sent completely questionnaire qty 220 as 98.21%.
Data analysis by using ready to use software: SPSS/PC+ (Statistical package for the social science/personal computer) as below:

1. Personal Data is analyzed by using frequency distribution and percentage

2. Knowledge and comprehension data in online course is analyzed by finding average vale and standard variation.

**Results**

1. Sampling group in this study has total 220 persons as major 94.5% are female, average age is 21.08 years old (S.D. 3.45) study in first year as 30.5% has characteristics in using computer of Faculty reaching to 71.8%, have knowledge/skill in using internet explorer program as 96.8%, have learning experience in online course system as 51.4% and has self-direct evaluation as having knowledge and comprehension in online course as medium level as 70.0%

2. Sample group by total and by separating as year student as 1st, 2nd, 3rd, and 4th has knowledge and comprehension about online course both total content and by subject in high level. It shows that nursing students has development from observation, skill and experience practice in learning any academic subjects through online course learning-teaching has level of knowledge and comprehension in online course according to knowledge idea (Cognitive Domain) of Bloom, 1956 referred in Pornphan Anankul and group B.E., 2546 which said that the ability born from using brain process to get knowledge, comprehension in data information or any experiences, which get from both direct and indirect observation, including to

<table>
<thead>
<tr>
<th>Study Year</th>
<th>Knowledge and Comprehension about online course</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Variation</td>
</tr>
<tr>
<td>1</td>
<td>28.51</td>
<td>2.61</td>
</tr>
<tr>
<td>2</td>
<td>28.26</td>
<td>5.36</td>
</tr>
<tr>
<td>3</td>
<td>26.94</td>
<td>5.16</td>
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<tr>
<td>4</td>
<td>27.17</td>
<td>3.12</td>
</tr>
<tr>
<td>total</td>
<td>27.76</td>
<td>2.94</td>
</tr>
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</table>

**Discussion**

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using idea to manage knowledge system to have meaning readily to bring it to use later. It has characteristics as procedure (Taxonomy) as basic ability will be fundamental of higher level ability. In this case, from sampling group has knowledge/ skill in using internet explorer as 96.8% , has learning experience in online course system as 51.4% (as research result conclusion item1) before , then effect to knowledge and comprehension of online course level in next level by starting from special memory of knowledge level especially knowledge of Terminology such as meaning, definitions of anything, in this case means online course and in second level is Comprehension, which means type of understanding or measurement of comprehension , which each one know that they should show what meaning and use which content or idea to show their meaning. It may no need to use relationship with other content or subject by personal behaviour, which reflects to the comprehension level, has divided as 3 sub items are: Translation, Interpreting and Extrapolation. In this case, nursing student has knowledge, comprehension in major composition of online course with translation, interpreting and extrapolation in benefits of online course, too. So, when we measure the knowledge, comprehension about online course level of nursing student in Nursing Faculty, Chiang Mai University, then we found that they are in high level, so that it shows that students has readiness to study academic subjects in nursing course as online course. By the way, the readiness of student is one of major composition of learning-teaching arrangement as online course or e-Learning Supachai Sukhanin B.E.2545, which is more important.

**Suggestion in bringing this research to be used**

From the research result, the researcher suggests to bring it to be used as below:

1. **Administration field;** The Educational Institution Administrator can bring this research result to be the guideline in:

   1.1 Identify research polity, which has time flexibility and budget for teachers to use the learning-teaching with online course to develop the quality both course administration, product the quality media, develop each knowledge in each subject, which demonstrates through online course to be suitable for online course knowledge, and comprehension level of students, which already have high level.
1.2 Identify Personnel Development policy, which will have trained, increased knowledge and comprehension about online course, produce quality media to have ability to promote online course administration and produce quality media, including to push it to be job responsibility or special job performance to support each interested in personnel or who has special skill in this field to work as teamwork with teacher to make highest benefits to students, which reflects to the quality and standard of learning-teaching as online course arrangement in the future.

1.3 Develop in organizational environmental structure supporting learning-teaching through online course i.e. having more points to reach internet system in Nursing Faculty area., to have the high efficient and enough quantity of computer, can log in to use 24 hours, to have the investigation via hi-speed internet or intranet network in Nursing Faculty with efficiency, etc.

2. Adaptation in arranging learning-teaching as online course. The Nursing teachers can bring this research result to be guideline to:

2.1 Arranging learning-teaching, produce new Academic media instead of using old fashioned teaching documents to be in new interesting form and suitable, related to knowledge and comprehension level of nursing students in learning by this mentioned method.

2.2 Arrange researching team or high quality media producer by requesting supportive budget or time from Nursing Faculty Administrator, other related departments or organizations to promote the research scholarship about online course or high quality media production to make online course learning-teaching has more effectiveness and efficiency.

Suggestion for next time research

1. Should have educational research about readiness of students, who learn through online course as sample group i.e. master degree students, who attend in special Nursing courses, general people, who register to study online course for whole life continuously study, etc.

2. Should have the educational research about learning efficiency, self-direct learning capability level of students, who learn full type of nursing online course and have evaluation package by subject to follow up the students’ readiness and effectiveness.

3. Should have educational research about satisfaction of
students to media or full option of learning-teaching as online course to follow up its effectiveness and evaluate the online course quality, which is produced and to apply it to be use.

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