

Learning Achievement on Massive Open online course: Palliative Care

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ABSTRACT

Background: Massive Open Online Course (MOOC) is a significant learning-teaching innovation that learner can be accessed openly, and self-learned through the website. Palliative care course help to enhance their attitude, knowledge, and self-practice of the learners especially nursing students.

Objectives: The objectives were to examine the effectiveness of MOOC: Palliative care on the learning achievement regarding nursing students.

Methods: The Quasi - experimental study were used to design based on the one group pre-test and post-test on the learning achievement of the nursing students. The study was conducted at the Faculty of Nursing, Naresuan University, Thailand over six months during the period of June to November 2020 based on the Ethical issues from the Naresuan University Institutional Review Board (IRB no 0618/62), Naresuan University

Results: A total of 120 nursing students of the third years from the Faculty of Nursing, Naresuan University, Thailand were invited to participate in the palliative care course over ten hours in the five weeks intervention (two hours/week). Baseline measures were collected before starting the palliative care course and learning outcome after the completion of this course. The data were analysed by using SPSS and the data were reported as the descriptive and paired t-test. The learning outcomes after study the palliative care course were higher than the before study significantly ($p < .005$).

Conclusion: MOOC is new trend in higher education for nursing students. It significantly improves the effective learning achievement. The study indicated the MOOC: Palliative Care supports to gain the knowledge and attitude including the self-practice of nursing students for palliative care. It will be useful for the innovation teaching and learning in nursing education during the COVID-19 pandemic.

Keywords: MOOC, Palliative care, Online teaching, Nursing student, Learning achievement

INTRODUCTION

Massive Open Online Course (MOOC) has a crucial role in higher education for improving the knowledge and accessing the course through the website. There is an important to continue learning as a long-life learning in the period of 21st Century especially the COVID-19 pandemic (Murugesan, Nobes, & Wild, 2017). MOOC defines by European Commission as “an online course open to anyone without restrictions (free of charge and without a limit to attendance), usually structured around a set of learning goals on an area of study, which often runs over a specific period of time (with a beginning and end date) on an online platform which allows interactive possibilities (between peers or between students and instructors) that facilitate the creation of a learning community. As it is the case for any online course, it provides some course materials and (self) assessment tools for independent studying.” (European Commission, 2014). The main concept of MOOC supports and facilitates a teacher and learner to freely access online course (Liyaganawardena, Adams, & Williams, 2013). MOOC has become an important tool for nursing education. It is very useful for nursing student to engage and enhance their knowledge, attitude and self-practice of the nursing care during the globalization and the COVID-19 pandemic. Now a day, following to advance public health the rates of communicable diseases are decreased and number of aging people increased in the worldwide. As a result, the rate of chronic illness amplified dramatically (Danielson 2019).

Aging people is increasing continuously in Thailand that related with health problems as non-communicable diseases (NCDs): cardiovascular diseases, cancer, and others. The NCDs are serious global health problems as a leading cause of mortality and morbidity (World Health Organization (WHO), 2019). Palliative care has been developed to care patients and their families until the end of life (Nilmanat, 2016). Palliative care is defined as “an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification impeccable assessment and treatment of pain and other problems, physical, psychological and spiritual.” (WHO, 2019). An education and training of palliative care in Thailand has become a significant for healthcare professionals including the nursing students; who has become a young blood in the healthcare system; that provide a holistic care for patients and their families from diagnosis to after end of life (Krongyuth, Campbell, & Silpasuwan, 2014; Garcia-Baquero Merino, 2018). In addition, the MOOC: the palliative care course will be useful for nursing students to gain their confidence and review the content of palliative nursing care based on their time and satisfaction (Murugesan, Nobes, & Wild, 2017).

Therefore, the aim of this study were to examine the effectiveness on interactive of Massive Open online course model for Palliative care course on learning achievement of nursing students; and determine the palliative care course

in term of content, design and graphic, and technology, and satisfaction of nursing students on this course .

METHODS

The Quasi - experimental design were used based on the one group pre-test and post-test on the learning outcome of the nursing students. This study was conducted at the Faculty of Nursing, Naresuan University, Thailand over six months during the period of first of June to the end of November 2020. Ethical approval for the study was obtained from the Naresuan University Institutional Review Board (IRB no 0618/62), Naresuan University, Thailand, dated on January 15, 2020 until January 15, 2021.

The MOOC: palliative care was developed by the researcher team which include two researchers and one information technology (IT) support. The palliative care course were conducted in term of collaboration on content, context of Thailand, types of media, sounds, pictures, video creation and editing including completeness of online course in three stages: course induction or course overview, contents and feedback in each chapter, and evaluation (Murugesan, Nobes, & Wild, 2017; Ismail, et al, 2018). The online course was accuracy checked and tested by the consultant, who is an expert in palliative care nursing.

The course consists of the five chapters over ten hours, which were split to two hours in each chapter for five weeks. The first chapter contains the concept of palliative care and palliative care in Thailand. The second chapter consists of health problem issues of patients and their families. The third chapter includes assessing requirement and assessing tools for patients and their families. The fourth chapter demonstrates the nursing care based on physical, psychological, sociological and spiritual. The last chapter provides the continue caring and end-of-life issues. The contents of each chapter were designed based on the evidences of palliative care (Dobrina, Tenze, & Palese, 2014; Trueman & Woytkiw, 2015).

The data were collected from the third year of nursing students at the Faculty of Nursing, Naresuan University, Thailand through the questionnaires which consists of the palliative care test, content evaluation, and satisfaction of the course. The palliative care test was a multiple choice which consists of five chapters test for ten items in each chapter. The content evaluation was designed as a rating scale from 0 to five score (0 was mean I really disagree with this item and 5 was mean I really agree with this item) which included three main items (ten points for each item):

(1) content, (2) design and graphic, and (3) techniques and satisfaction of the course were a rating scale from 0 to five score. All the questionnaires were tested the reliability with the thirty nursing students through a Kuder-Richardson (KR-20) at 0.88, 0.90, 0.95 respectively. The content validity was proved through the three experts based on the index of concurrence (IOC).

Baseline measures through palliative care test were collected before starting the course as a pre-test. The learning outcomes data through the palliative care test, content evaluation, and satisfaction after the completion of this course. The data were analysed by using SPSS for Windows version 24.0 (IBM Corp, 2016). A two-tailed statistical evaluation of the study was performed with an alpha of 0.05 as the cut off for significance (Eldridge, et al, 2016). The data were reported as the descriptive: numbers, percentages, frequency, mean and standard deviation. The paired t-test was used to compare the learning outcome between pre-test and post-test. The assumptions were checked normally as a distributed continuous variable (Field, 2015).

RESULTS

Initially 125 nursing students of the third years from the Faculty of Nursing, Naresuan University, Thailand were invited to participate in the palliative care course over ten hours in the five weeks intervention (two hours/week). Two students rejected to participate in the study due to their duties and three students withdrew from the study at the second week of the palliative care course due to their time and satisfaction (4%). A total of 120 nursing students were participated in this intervention from the first until the five weeks and completion the questionnaires (96%).

The sample was aged between 22 and 25 years. The mean (M) sample age was 22.40 years with standard deviation (SD) of 1.22 years. The learning outcomes after study the palliative care course were higher than the before study significantly ($p = .003$). The sample demonstrated improvement across all five palliative care tests after the completion of the palliative care course over 10 hours for five weeks: (1) the concept of palliative care and palliative care in Thailand ($p = .002$), (2) health problem issues of patients and their families ($p = .000$), (3) assessing requirement and assessing tools for patients and their families ($p = .002$), (4) nursing care based on physical, psychological, sociological and spiritual ($p < .005$), and (5) continue caring and end-of-life issues ($p = .004$) (Table 1).

Table 1: The learning outcomes of the participants (n = 120)

Chapter	Pre-test M (SD)	Post-test M (SD)	t	df	p	d
Palliative care test (% correct)	33.5 (19.0)	46.9 (15.2)	5.2	119	.003	13.4
(1) the concept of palliative care and palliative care in Thailand	2.97 (1.03)	7.90 (0.98)	2.24		.002	4.93
(2) health problem issues of patients and their families	5.65 (1.55)	9.70 (2.80)	2.95		.000	4.05
(3) assessing requirement and assessing tools for patients and their families	3.10 (3.25)	7.23 (2.55)	4.24		.002	4.13
(4) nursing care based on physical, psychological, sociological and spiritual	3.25 (4.10)	8.45 (3.65)	7.74		.000	5.2
(5) continue caring and end-of-life issues	4.65 (2.10)	7.75 (3.25)	5.65		.004	3.1

The sample showed their experiences about the palliative care course in term of the content evaluation was medium level (Table 2). The main three items consisted of the content of the palliative care was scored high, the design and graphic were medium, and the course techniques was medium. The participants indicted their learning satisfaction was high level.

In addition, the sample also expressed their experiences that help to gain their knowledge and self-confidence. They can access the online course any time based on their free time and duties. They can stop and review many times when they want. However, the design and graphic should be redesigned for interesting and attachment the learner. The techniques of this course might be limited for some devices. It might be better to develop for all devices and easy to access.

Table 2: The content evaluation and satisfaction on MOOC: the palliative care course of the participants (n = 120)

Items	Mean	SD
The content evaluation (Overview)	28.40	8.20
(1) The content of the palliative care	9.25	3.20
(2) The design and graphic	6.45	5.25
(3) The course techniques	5.45	4.50
Learning satisfaction	18.50	6.25

DISCUSSION

This study demonstrated the MOOC: Palliative care course supported the learner to get better the learning achievement. The learning outcome of the participants after study the palliative care course were significantly higher than before the study. The samples also indicated their learning improvement across all five palliative care sections over 10 hours for five weeks: (1) the concept of palliative care and palliative care in Thailand, (2) health problem issues of patients and their families, (3) assessing requirement and assessing tools for patients and their families, (4) nursing care based on physical, psychological, sociological and spiritual, and (5) continue caring and end-of-life issues. The findings were consistent related with the studies on the learning achievement through the website and internet as an E-learning and online learning. These studies were found the learner gain their understanding, knowledge and self-practice in their subjects (Brindley, 2014; Israel, 2015; Gil-Jaurena & Kucina Softic, 2016). It is very useful to improve attitude, knowledge, capability, and basic skills in palliative care of nursing students. Several studies illustrated the success rate of learning achievement on the online course was associated with the high level of positive attitude, that related with high self-efficacy in term of knowledge and basic skills including the nursing care. The benefits of MOOC also aid the learners as a facilitator to increase self-confidence and self-practice (Brindley, 2014; Firmin, et al, 2014; Deng, Benckendorff, & Gannaway, 2020).

The participants expressed their high satisfaction of the palliative course in term of content. It might be useful for nursing care at the real situation and work in the future. The participants also showed their experiences that help to gain their knowledge. The palliative care course can be accessed anytime and anywhere based on individual

schedules and requirement. However, the sample indicated the design and graphic; and course techniques that were medium. These findings also stated that the interactive of MOOC for palliative care course would be develop to continue create in term of design, graphic, and the technology of the course that will be supported the learning to study easily, freely, and achieve their goal of the study (Bralić & Divjak, 2018; Deng, Benckendorff, & Gannaway, 2020).

The small sample size and characteristics of nursing students who participated in this study has limited the generalisability of the study findings. The sample in this study was the third year of nursing students that studies the nursing theories, nursing process, nursing care for palliative care and clinical practice in the hospital and communities, which support the sample to gain better their understanding with the patients and their families than novice nursing students. Therefore, in the future, this MOOC: palliative care course will be tested the effectiveness and learning achievement in other groups of healthcare students. It also helpful for a nursing instructor to plan the research and development the MOOC or online course for integration within the taught course as a blended learning in nursing education and after graduation that help to improve the learning innovation and learner's knowledge, attitude and self-practice through the MOOC (Bralić & Divjak, 2018; Deng, Benckendorff, & Gannaway, 2020). On the other hand, some researchers pointed that due to COVID-19 Outbreak, the lockdown is enforced in most offices such as universities, therefore, online course can help students to continue their education (Maddah & Modanloo 2020). This study will be use as a good strategy and evidence to develop the online course in term of the design and graphic, and technology of course for attachment the learners.

CONCLUSION

MOOC is new trend in higher nursing education for nursing students. It also significantly improves the effective learning achievement. The study indicated the MOOC: Palliative Care supports to gain the knowledge and attitude including the self-practice of nursing students for palliative care. It will be useful for the innovation teaching and learning in nursing education during the COVID-19 pandemic that will be supplied the classroom study as the blended learning: the face-to-face and online learning.

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