

Enhancing the Global Health Competency for Nursing Students Based on Transcultural Nursing Education- A Flipped Learning Approach

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Abstract: *The purpose of this study to introduce new pedagogy design to engage students and help them develop cultural and global health competency through multicultural nursing education lecture with flipped approach.*

Methods: *the study design used a descriptive, cross-sectional, mixed-methods design and the participants were 160 first grade nursing students who enrolled multicultural nursing education course. A series of course development meetings with faculties from the nursing school and multicultural welfare center officials, also course format and content developed by subject instructor. Flipped approach implemented on spring (10th-13th week) semester. The study course evaluation conducted by using the general open-ended questions and effects of flipped learning analyzed by descriptive statistic with focus group interviews.*

Results: *Reports of student's perception of flipped classroom was somewhat mixed, but generally positive overall. Students tend to prefer in-person lectures to video lectures, but prefer interactive classroom activities over lectures. Anecdotal evidence suggests that student learning is improved for the flipped compared to traditional classroom.*

Conclusion: *The Flipped learning approach requires sufficient preparation to facilitate student motivation and maximize learning outcomes. Thus, there is a need for continuous effort to integrate multicultural education programs in the nursing curriculum with study of various educational strategies to be added to meet learning objectives.*

Keywords: *Transcultural Nursing, Flipped Learning, Nursing students, Global health competency.*

1. Introduction

Until recently, Korea was a culturally and ethnically homogeneous society. Since the 1990s, the number of international marriages involving women immigrants and foreign workers has been continuously increasing in Korea (Nho & Kim, 2011). Also, foreign patients are becoming increasingly common along with a boom of the medical tourism industry, which combines medical service and tourism (Jin, Kim, Sung, Hwang, & Jung, 2010). The Korean Health Industry Development Institute reported that the number of foreign patients increased rapidly from 7,900 in 2007 to 210,000 in 2013. Despite the rapidly increasing number of foreign patients, Korean nurses has limited experience with people from varied ethnic and cultural backgrounds; this limited experience may reflect a lack of competency in transcultural nursing care.

In recent years, there has been dramatic growth in the number of global health programs at both the undergraduate and graduate levels. This growth reflects a number of related trends including greater nursing student's awareness and interest in global health issues; cultural care issues, and a demand for educational opportunities to meet this interest; heightened public awareness of the global health agenda. Education in transcultural nursing care helps undergraduate nursing students develop an awareness of global health problems and improve their competency in providing nursing care to patients from diverse cultural backgrounds. With growing concerns about racial and ethnic disparities in health, and the need for health care systems to accommodate increasingly diverse patient populations, "cultural competence" has become more and more a matter of national concern.

Training nurses to care for diverse populations is essential. To promote population health, safety, and well-being at local and global levels by enhancing the global health competence of students based on transcultural nursing by newer learning strategy of flipped learning method in order to meet related global health and cultural competencies among nursing students. The specific aims of the study, to provide nursing students with different ways to learn content and demonstrate mastery, explore students' learning experiences and their acceptance of the Flipped learning; and identify key factors in the success of the Flipped learning, Conduct ongoing formative assessments during class time through observation and by recording data to inform future instruction.

1.1: Definitions:

1.1.1. Global health:

It is relatively new and overlaps with the preexisting fields of international health, public health, and tropical medicine.

1.1.2. Global health competency: It refers to “an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration; and is a synthesis of population-based prevention with individual-level clinical care.”(J.P. Koplan, T.C. Bond, 2009).

1.1.3. Transcultural nursing : Transcultural nursing is defined as a learned subfield or branch of nursing which focuses upon the comparative study and analysis of cultures with respect to nursing and health-illness caring practices, beliefs, and values with the goal to provide meaningful and efficacious nursing care services to people according to their cultural values and health-illness context. (Leininger, 1979).

1.1.4. Flipped Learning: It is defined as a “pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter.” as known as “flipped classroom,” “flipped learning,” or “inverted learning”.(FLN, 2014).

1.2. Literature review:

Transcultural nursing and Multi cultural Nursing:

Nurses are faced with new and complex challenges because of an increasingly diverse cultural population (Kanitsaki, 2003). Culturally competent nurses have knowledge of other cultural ways and are skilled practitioners in identifying unique culture patterns so that an individualized plan of care is formulated to help meet the healthcare goals for that patient (Gustafson, 2005).

Reyes et al.'s (2013) research examined whether the self-perception of cultural competence in baccalaureate nursing students increased during the nursing program as a result of their education and experiences. The findings showed that nursing students perceived that they had become culturally competent during their nursing education. This study was done during a period of curriculum revision and highlighted the need for continued education relating to this concept beginning with the first course and continuing throughout the nursing curriculum.

Kardong-Edgren and Campinha-Bacote (2008) conducted a study using four different approaches evaluating the effectiveness of cultural competency in four geographically diverse graduating bachelor of sciences of nursing (BSN) groups. Two programs used theories by Madeline Leininger and Josepha Campinha-Bacote, one utilized an integrated approach, and another incorporated a freestanding two-credit culture course taught in the curriculum. The findings were that the graduating nurses scored only in the culturally aware range, regardless of what program they attended.

Flipped learning:

Recently, a paradigm shift has taken place in education with the advent of a model of teaching known as the flipped classroom. The flipped classroom model encompasses any use of using Internet technology to leverage the learning in a classroom, so that a teacher can spend more time interacting with students instead of lecturing (Bergmann & Sams, 2012a). This is most commonly being done using teacher-created videos that students view outside of class time. It is called the flipped class model because the whole classroom/homework paradigm is “flipped”. In its simplest terms, what used to be classwork (the lecture) is done at home via teacher-created videos and what used to be homework (assigned problems) is now done in class. Students frequently believe they fully understand a topic while it is being covered in class, but actually do not (Willingham 2003).

Research shows us that two factors are especially important in causing this disparity: (1) the students’ “familiarity” with a topic and (2) the students’ “partial access” to information (Willingham 2003). With growing concerns about racial and ethnic disparities in health, and the need for health care systems to accommodate increasingly diverse patient populations, “cultural competence” has become more and more a matter of national concern. Training nurses to care for diverse populations is essential.

By using a variety of teaching strategies, teachers can more closely approach the learning styles of each

of their unique students, rather than just the few who may learn in the same method that teachers prefer to teach. Becker and Watts (1995) explain, “[Teachers] should consider using a variety of teaching methods to actively engage our students. Variety in the pace and format of undergraduate classroom instruction-across different class periods and even within a particular class-may well be the missing spice of good teaching and enthusiastic learning.” Many educational professionals maintain that each student is unique and has his or her own style of learning (Ahanbor 2014). While some students prefer to work in groups, it has been shown that some students feel unfairly graded on group projects (Smith 2014). In addition, some students are inspired to be more creative when given more flexibility while other students need more guidance to be able to adequately complete a project. Gardner suggested that the brain has different styles in which it learns which he calls “intelligences” (Garner 2006).

According to a review of studies evaluating FLM in higher education, the majority of them (23 out of 28) were conducted in the U.S. and only two studies have been conducted in Asian countries (one in Taiwan and one in Malaysia). Considering the differences between western and eastern teaching/learning styles, educational environment, and social context, it is important to evaluate the acceptance of the Flipped approach in more diverse Asian countries. Even if students are consciously aware of their preferred learning style, they are usually not aware of each teacher’s teaching style ahead of time and do not explicitly select their courses based on teaching style (Lage 2000). This means that under normal circumstances, each classroom is made up of students with various learning styles and are expected to learn from the teaching style presented to them. To help reach each student in the classroom, multiple teaching strategies have been developed and studied that have been shown to help students learn. In the past few years there has been a substantial rise in the use and interest in a teaching and learning paradigm most commonly known as the flipped Learning Method (FLM).

Snowden’s (2012) findings show no significant difference between student perception and achievement in the traditional and flipped learning experience. However results from McManus, Subramanian and James (2012) find that those instructed through the web-based module have higher ethical judgments compared with students who were instructed through the traditional in-class textbook. Long et al. (2014) findings show that student perceptions on pre-class learning material that rank highest are the video lecture, followed by movie lecture and webinar. The study also finds that the pre-class learning experience gives motivation for students’ learning interest and improves their understanding of learning context.

2. Methodology

2.1. Study design

A descriptive, focus group interview as mixed-methods design was used in this study.

2.2. Setting and sample

The present study was conducted at K’ University on 2016 - Spring Semester. Potential participants were nursing students enrolled in one of the core courses titled, “Transcultural Nursing.”

2.3. Research context: Course description

The authors have attended continuing Education programme titled “flipped learning method” (FLM) conducted by associated University as a part of in order to introduce newer teaching learning methods for professionals. In this study we chose first year nursing core course of, “Transcultural Nursing”. This course is for first year nursing students and it covers the cultural discipline, cultural care, global health issues with cultural awareness and nursing implications based on the nursing discipline focused on Madeleine Leininger’s Culture Care: Diversity and Universality Theory.

The main course content covers Giger and Davidhizar’s transcultural nursing assessment from conception to depth in terms of one’s culture, communication, time, space, Values and beliefs of traditional health approaches such as aspects associated with different cultures. In addition, it is an introduction to the transcultural meta-paradigms of nursing (i.e., human, environment, health, and nursing), through which a person as a recipient of nursing care can be approached. Course included revision of the course format and content based on a series of course development including transcultural, multicultural, Korean immigrant’s health, global health issues and competency, and nursing implications.

Also We held a number of consultation meetings with multicultural welfare center and lectures from China, Japan, Philippines and Vietnam (based on the immigrants population in Korea), a learning management system that provides a platform for students, lecture material (provided one week prior to class), group work activity and discussion, presentation, assignments, and focus group interview with multicultural family women and foreign immigrants for understanding various health care delivery systems for learning activities. As a result of the discussions, we were able to identify core lecture content, special lecture topics to broaden students’ perspectives on transcultural health awareness and global health competency, various learning activities and instructional strategies motivating students to engage in learning and effective evaluation strategies.

2.4. Study procedure

This study was reviewed and approved by author's affiliated University institutional review board (IRB No. 121). Author explained the purposes and procedure of the study in detailed prior to the students and assured the students of confidentiality and anonymity. They were also informed that their grades would not be affected by not participating in the survey. Students completed the Course Evaluation Questionnaire within 15 minutes as a group on the first and last days of the course. For further assessment of students' experiences with the flipped course and areas for improvement, we conducted two focus-group interviews with eight students, who were each group representative while taking group activity (presentation and discussion). The instructor developed the interview questions using the stems of the questions of the selected course content. At the beginning, focus groups explained the purposes and ground rules for the interviews. All the study participants were attended special lecture from multicultural lecturers as a part of course development, students were divided 4 session (40 students) and sub divided in to small group (each group consists 5 students) there are 8 teams in each session. After completion of the special lecture each group leader had an interview with immigrant women as a part of group activity (focus group interview) interview content was recorded and transcoded by team leaders. The interview reports submitted to the instructor for final outcome evaluation. Each focus group leader has interviewed each lasted approximately 15- 20 minutes and the interviews were recorded and transcribed. The questionnaire was designed to assess students' experiences with various components of the transcultural nursing according to country and cultural systems, including presentation, quiz, Group activity, discussion and Assignments. In addition, used five open-ended questions to provide in depth exploration of students' experiences with the Flipped learning and intention to continue in future courses.

2.5 . Data analysis

To examine students' learning experiences and acceptance of flipped method, we used both quantitative and qualitative data analysis methods. Descriptive analyses were conducted for quantitative data collected using the questionnaire of student's perception. Conventional content analysis was selected as the main method of analyzing the qualitative data collected using the open-ended questions and focus group interviews. Students were interviewed and listened about different culture from multicultural participants. They discussed and reported with their own opinion regarding multicultural family health care differences.

3. Results and discussion

Table 1. Shows the main content areas, activities, and assignments for the revised course. The revised course consisted of pre-prepared lectures, a group project (an analysis of a video related to different culture and using four nursing meta-paradigms), a health promotion project, and self-videos on the concepts of health, human and nursing practice. Other than those assignments, we used quizzes and a final examination to evaluate students' performance.

Table 1. Content of the Course: Learning Activities and assignments

Weeks	Learning style	Content	Assessment
1-8	Traditional class room	<ul style="list-style-type: none"> ✧ Introduction and overview of Medeline leininger's transcultural theory ✧ Meta-paradigms in nursing: Human, health, environment, & nursing ✧ Based on Giger and Davidhizar's transcultural nursing assessment: culture, communication, Space, Time, social organization, environmental control 	MCQs Short answers Quiz
10-13	Flipped class room	<ul style="list-style-type: none"> ✧ Japan ✧ Russia ✧ China ✧ Philippine ✧ Vietnam Language, social organization, hospital and health system environmental control-traditional health practices and nursing care system (10~20 minutes each)	Discussion Presentation Group project Assignment
		Special lecture by cultural lecturers (Multicultural welfare center) from Japan, China, Philippine and Vietnam. Global health nursing competency components (Linda Wilson , 2012)	Focus group interview report (5 scores) Open ended Questions
	Flipped activities	Group project: <ul style="list-style-type: none"> • Presentation:, An analysis of multicultural health perspectives and nursing implications nursing meta-paradigms: Peer feedback • Approximately 6 students in each group Health promotion project: <ul style="list-style-type: none"> • Traditional health beliefs for various developing and developed countries with Alternative and complementary therapy. Final outcomes of each other's projects report Critical thinking activities, Nursing implications for multicultural	MCQs/true or false (5 questions in each presentations) (25 Score) Discussion and Individual Assignment (5 score)

		patients care.	
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Author provided quizzes on the main content areas to assess the students' learning readiness and levels of comprehension. The quizzes consisted of varied types of questions, including multiple choice, true or false, and short-answer formats; students were able to complete their quizzes within 10~20 minutes. We utilized the next 5~10 minutes to review the quiz and Lecture materials in order to enhance the students' learning.

An independent samples t-test was conducted to compare student perception in a traditional and flipped classroom setting. The results are presented in (Table 2) t-test for independent samples revealed a significant difference in perception between students different learning transcultural nursing lecture ($t = -3.71, p < .05$). The mean students who learn in a traditional classroom reported significantly different perceptions ($M = 4.85, SD = .38$) than students who learn in a flipped classroom ($M = 4.40, SD = .34$). In other words, students in the traditional classroom appear to have a better perception on method of delivery than the flipped classroom. However based on the mean, students from both classes had similar perceptions on their learning experience.

Table- 2: Students Perception of traditional and Flipped learning method. (N=160)

Learning style		Mean (M)	Std Deviation (SD)	t	df	P(sig)
Perception	Traditional	4.85	0.38	-3.51	89	0.00
	Flipped	4.40	0.34			

2. Students' learning experiences of Flipped learning*focus group interview*:

There were five open-ended qualitative response questions at the end of the survey. The questions were as follows:

1. What are the advantages of the Flipped Classroom?
2. What are the disadvantages of the Flipped Classroom?
3. Would the Flipped Classroom be useful for other subjects? Why or why not?
4. What improvements would you recommend to improve learning in the Flipped Classroom?
5. Please state any other comment you wish to make about the Flipped Classroom.

In addition eight students (three male and five girls- two students from each session) participated in one of the two focus groups, the focus group interview results as follows by each student's verbal response. Students commented that "we marked the parts that we couldn't understand while reading the pre-prepared lecture note and got the answers for the questions during the class with instructor. That helped us to be prepared for the class and master the content. It is easier to be social and have fun in the class while doing work and the teacher is always free to help."

There were a number of students who expressed concern with taking responsibility for their learning in a self-paced environment. As one student remarked, "It's hard to stay on pace, hard to stay motivated to work every day. As an example, in a regular classroom if I don't feel like working I have to suck it up and do the lesson but in flipped class I can just not do it." Flexibility and efficiency also were strengths of the Flipped approach might expressed by other student as "I was able to fully understand difficult part of culture and comprehend nursing system of different country by watching videos, which would not be possible in a traditional classroom".

Moreover students were somewhat satisfied and answered contradictorily with the Flipped learning because they were able to "get lecture material in advance and prepare themselves as their convenient at a time and place." Another student expressed : "It was hard to assign extra time to prepare self study, because of other subject's home works etc. but videos and multicultural women's (own experience) interview information are very useful to understand the various cultures than oral explanation. It motivated us to meet cultural care competency in clinical setting". Also "During semester, it was stressful to prepare self study and quizzes before coming to class. However, I have to say that I found that work extremely useful for mastering the content and preparing for the exam

Some more positive answer of student commented "I also enjoyed the convenience of watching the videos, shown other county culture and traditional health practices were interesting and wonder nursing organization system which is differing from our country. We learned more than we would have learned in a 'normal' class." Also commented by other student "I read pre lectures at home first once and read the handouts while travel in bus on the way to class. I could use my time efficiently. The last but most meaningful strength of the Flipped method was that it enhanced students' cultural and global competency."

Some participants expressed their interview experience with multicultural women that "Interviewing multicultural women and their information regarding adjustment of new culture and health care system was more helpful for us to provide better care for them in clinical setup based on their own cultural beliefs." Another

student replied that “Class discussions helped me to understand the concepts of transcultural health, cultural awareness, global health, and nursing implications from diverse population perspectives. Various class activities and discussions enabled students to “pursue in-depth knowledge, “and “share diverse opinions in an open environment” The enhancement of cultural and global health care delivery system experience is meaningful for first-year students who are less motivated and committed than senior students

4. Discussion

The purpose of this study to introduce newer method of teaching for nursing students who enrolled Transcultural nursing course and to enhance their global health competency with selected learning approach. In our study, students’ responses regarding difficulty concentrating were somewhat contradictory. Although some students reported that they found it difficult to stay focused on the prerecorded lecture, another group of students preferred the self study method of using pre-prepared lectures to the in-class lectures. Authors believe that the inconsistent finding is attributable to individual preferences; however, it needs further investigation. The findings of the study demonstrate that the Flipped approach created a learning environment for diverse student groups while simultaneously valuing their unique learning styles.

This is a promising model for learning; however, we need to be mindful that the success of the flipped approach depends on many factors beyond just flipping the order of instruction. Although the present paper is on experiences students and instructors with diverse disciplines in varied educational settings and evaluating long-term learning outcomes are needed [Critz CM, Knight D, 2013]. This study supports the contention of Mason *et al.* (2013) that the flipped classroom students gave significantly higher ratings than traditional classroom students. Moreover lecturer perceptions towards the flipped classroom show that it was interesting approach but still needs time to be implemented as a new teaching and learning environment. According to Baran (2013), the use of open source and social media tools has provide extensive opportunities for teachers and students as producers of learning material by developing an innovative instructional tool to create a new pedagogically practice

5. Conclusion

Flipped learning program provided an opportunity for nursing students to learn about transcultural nursing care for patients from diverse cultural backgrounds, within different health care systems. The format and length of pre-recorded lectures is another important motivational factor. Participants of the study reported that lengthy lectures might result in difficulty concentrating, increased time commitment, and decreased satisfaction. A previous study also reported that lectures longer than 30 minutes reduced student satisfaction (Boucher *et al.*, 2013). A flipped classroom was implemented for one final semester accountancy class, financial accounting 4 courses. The theoretical framework was used to determine the perceptions of new environments as a platform for using ICT in teaching and learning environments that helps students with up to date learning material (Barker *et al.*, 2013). Reasons that the flipped classroom may be better than the traditional classroom relate to student class time and structure, student engagement, communication and achievement. Students in traditional classroom are just using textbooks or modules in solving accounting problems outside classroom and less time with the lecturer.

The flipped classroom allows students to pace themselves through the subject material before attending the class and spend more time on solving the misunderstanding that they had before class and complete the assignment and exercise with lecturer and peers without worries about the due date of assignments. Thus, the use of video material about cultural background of various countries could help those with good accounting. Therefore, this learning culture will help to create a cooperative learning among students themselves with the presence of the lecturer to facilitate them, and had an effective communication because of prior knowledge that they had before class. Moreover, the ability of good lecturers to communicate will lead to student engagement and active learning environment that could effectively motivate students about the subject matter of cultural competency as the lecturer play their role in class efficiently.

6. Limitations and Recommendations

In summary, our findings show that changing from traditional classroom to flipped classroom had given the positive and besides contradictable impact on student perception and achievement. The study participants were large group, in order to meet same instructional objectives to all the enrolled students equally and should not affect their final grade. A small group flipped approach might be more effective and positive. The cost to achieve this, however, would require greater effort and time in the development of the pre recorder videos or online learning resources, planning and implementation in class activities recommended. Therefore, this study can be used to change from the traditional classroom to the flipped classroom that this new learning environment helped lecturers to achieve their learning outcomes and make teaching and learning more engaging, active and student-centered. Therefore by choosing appropriate learning approaches, nursing lecturers and

students could think globally by teaching locally to meet students' needs of learning. Recommendations that emerged from the findings for improving Flipped Classroom implementation included: interactive instructional videos, increased in-class learning activities, and alterations to assessment.

Conflicts of interest disclosure:

The authors declare that there is no conflict of interest.

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