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INNOVATIVE CLASSROOM PEDAGOGY IN NURSING EDUCATION: A SYSTEMATIC REVIEW

Hamdoni K. Pangandaman[1], Ritchel P. Boloron[2], Joy Hope C. Lambayong[3], Mona Liza G. Ergas[3], Romanoff M. Raki-in[1], Sittie Ainah M. Mai-Alauya[1], Jonaid M. Sadang[1], Ashley A. Bangcola[1], Paulo Carl G. Mejia[4], Nursidar P. Mukattil[5]

[1]College of Health Sciences, Mindanao State University, Marawi, Lanao Del Sur, 9700, Philippines.
[2]Notre Dame of Kidapawan College, Kidapawan City, North Cotabato, 9401, Philippines.
[3]College of Nursing, Christian University of Thailand, Don Yai Hom, Muang, Nakhon Pathom, 73000, Thailand.
[4]Department of Nursing, Al Ghad International College for Applied Medical Sciences, Najran City, 66243, Kingdom of Saudi Arabia.
[5]College of Arts and Sciences, Mindanao State University-Sulu, Jolo, Sulu, 7400, Philippines.

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Correspondence to Author:
Hamdoni K. Pangandaman
College of Health Sciences, Mindanao State University, Marawi, Lanao Del Sur, 9700, Philippines.

E-mail:
pangandamanhamdoni@gmai.com

ABSTRACT

The changing pattern of gaining knowledge and learning skills in response to the evolution of the nursing curriculum and generational cohort's gap is a great challenge for the nurse educators in today's generation. This paper has the goal to review the classroom pedagogical approaches in nursing education and analyze how efficient a certain pedagogy to the teaching-learning process of the student nurses. Nevertheless, it is generally accepted that the different pedagogy may depend on the nature of the learners, therefore, it is favorably considered relative. The systematic review involves the elements of population, the nursing students, innovative classroom learning pedagogy as intervention/s, reviewed in comparison to the traditional learning pedagogy and outcome/s desired is the active learning engagement and improved learning competencies of the student nurses. From three hundred twenty-one research articles identified through academic database searching, ten studies were included as it fulfilled the inclusion criteria after rigorous screening for

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eligibility and appraisal. The reviewed innovative pedagogies such as flipped classroom, collaborative classroom stimulation, self-directed learning, mastery modeling, used of apple technology, clicker technology, utilizing team-based learning, and application of expert patient illness narratives, have aimed for the engagement and enhancement of active learning and critical thinking of the learners. Underpinned by several studies, these pedagogies are significantly framed to dynamically explicit more interactive learnings. Predominantly, it provides the nurse educators a pedagogical repertoire in conceptualizing best to its finest pedagogy for student-centered nursing curriculum as perceived to be necessary and applicable to constantly connect with the learners.

INTRODUCTION

Trends, issues and concerns about learning process affect nursing education. The changing pattern of gaining knowledge and skills varies deliberately as it implies different methods, strategies and techniques in the teaching-learning process. To consider the diversified range in every generation, who are now into learning the world of nursing, it challenges the nurse educators into what practice of teaching will he/she should present in the classroom.

The nursing curriculum evolves, and so as the generational characteristics. Bridging the generational [26] cohort's gap in classroom learning, this primarily needs an innovative pedagogical method suited to the nursing students of today's generation to be studied and discussed further. The term pedagogy encompasses the nature of knowledge, the topic to be taught, and the learning process of both the teacher and the learners.[19] Just as how we acclimated to explain the millennial students,[23] here comes the new wave of the Generation Z (Gen Z) [28] nursing students that radically characterized massive difference to the past generations.[33]

There is a call for educational reform, particularly in the nursing program.[4] Benner calls for a transformation in the pedagogical approach that would facilitate the learners to be critical thinker and rationale[1] rather than relying on a traditional didactic approach wherein students as empty vessels passively absorb information.[20] There is a significant variance in the impact of traditional teaching for the students of the past generations and the current world generations. In today's generational cohorts, students' attention span lasts no more than eight seconds; it enables the educator to sort information in search of what suits their interests to learn inside the classroom. The faculty need to provide a multiplicity of innovative teaching methods across various platforms to keep them engaged. [33]

To meet the challenges in the evolving nursing education while waiting for innovations, academic institutions are devising new strategies. Thus, several teaching strategies through multi-level instructional delivery are being proposed and implemented to reinforce the lecture-based methodology. [17]

Moreover, innovative classroom learning pedagogies arise in nursing education. This involves flipped classroom that provides a student-centered approach to learning and promotes students' engagement and critical thinking [7] through switching the educator's instructions to the learner's self-learning.[24] Collaborative classroom simulation (CCS) pedagogy is designed to provide a simulation learning experience simultaneously through the use of unfolding case scenarios. [2]

Other classroom pedagogy identified includes mastery modeling that scripted classroom learning experience,[16] Apple technology,[9] clicker technology,[31] Zimmerman's self-directed learning model,[29] team-based learning,[5] and expert patient illness narrative.[12] Hence, to keep pace with the revolution in nursing education, the nurse educators need to keep abreast of the evidence-based, innovative classroom pedagogies.

AIM

This paper has the goal to review the classroom pedagogical approaches in nursing education and analyze how efficient a specific pedagogy to the teaching-learning process of the student nurses. Also, it provides a brief notion to the nurse educators into conceptualizing best as its most exceptional pedagogy intended for a student-centered nursing curriculum, particularly in today's generation.

METHODS

In writing the systematic review, the following steps were followed: formulation of research question that typically involves the elements of populations, intervention(s), comparison, outcome(s) and study design. The population (P) involved in the review were the nursing students. The intervention/s (I) identified is the innovative classroom learning pedagogy in nursing education and it is reviewed in comparison (C) to the traditional learning pedagogy. The outcome/s desired in the conducted systematic review is the active learning

engagement and improved learning competencies of the student nurses.

Review Procedure

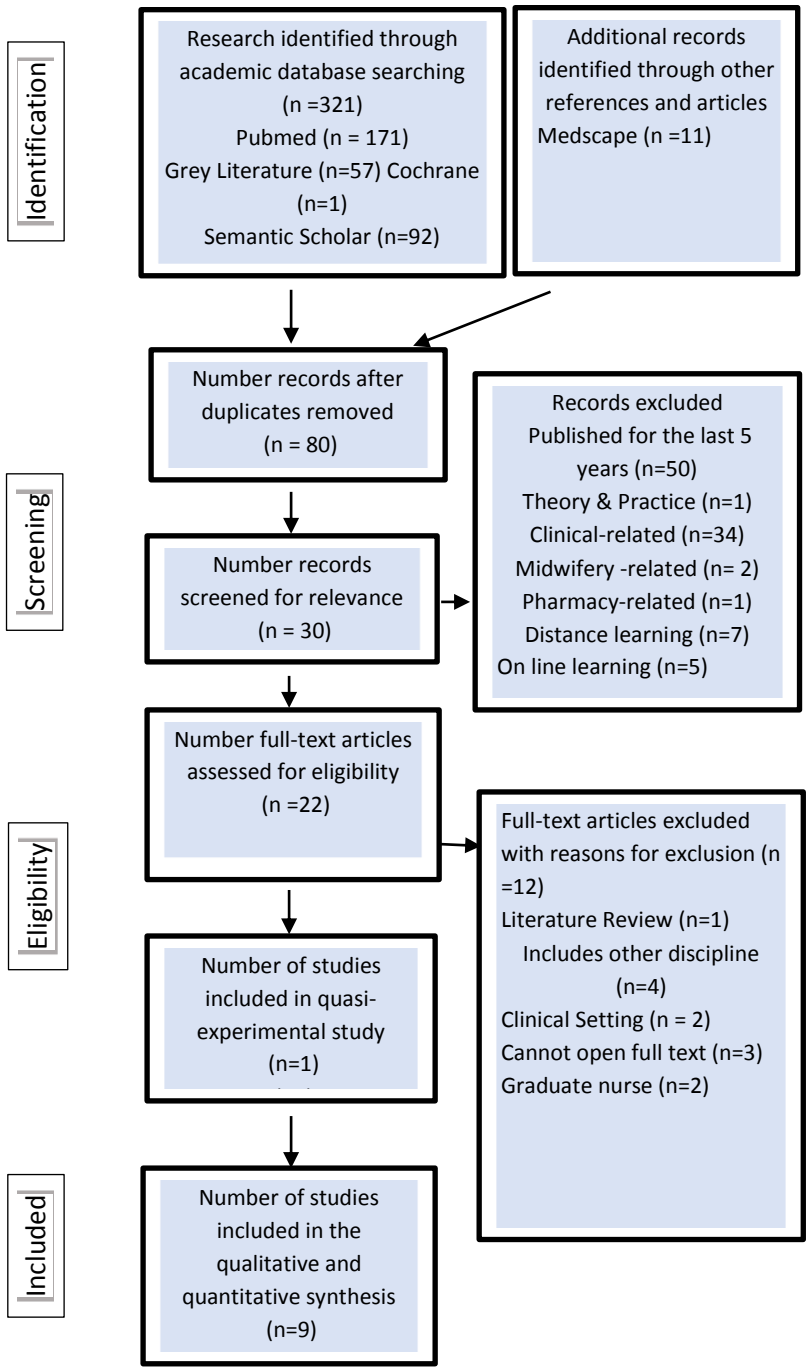

Figure 1. Flow diagram of a systematic review process.

Literature Search Strategy

A systematic literature search was conducted based from the electronic databases that includes Pubmed, Semantic Scholar, Cochrane Library. Grey Literature searched terms used were innovative [All Fields] AND classroom[All Fields] AND ("teaching"[MeSH Terms] OR "teaching"[All Fields] OR "pedagogy"[All Fields]) AND ("nursing"[Subheading] OR "nursing"[All Fields] OR "nursing"[MeSH Terms] OR "nursing"[All Fields] OR. Results filtered taken from the Duke Medical Center Library. There is no hits for line in PROSPERO using the key terms innovative nursing pedagogy. Other network sites or references were also reviewed further to look for potential information that are relevant and has qualified to the set inclusion criteria.

Inclusion and Exclusion Criteria

Studies included were English in language. The articles were peer-reviewed and are quantitative and

qualitative. The abstracts involve two (2) or more of the key search terms identified: innovative classroom pedagogy in nursing, innovative pedagogy in nursing education. Literature was published from 2014 to 2019. Studies in a clinical setting, the population involving professional nurses, and from another field of discipline were excluded. Studies also with no available abstract and full-text were excluded.

Search Outcomes

Three hundred twenty-one (321) research papers/articles were identified through academic database searching. After the removal of duplicate researched articles, several records were screened for its relevance to the topic reviewed. By screening the title or abstract, articles were being rejected for not fulfilling the inclusion criteria. After rigorous screening in detail through opening the full-text of the article using the Sci-hub site, the articles were assessed for eligibility. Based on the quality appraisal, there are ten (10) studies which are included, one (1) is quasi-experimental, and nine (9) studies designed in the qualitative and quantitative synthesis.

RESULTS AND DISCUSSION

The systematic review of the innovative classroom pedagogy in nursing education varies depending on the concept or course taken in the nursing curriculum. This is a worldwide concern about its primary purpose, to enhance the teaching and learning process of the nurse educators and learners based on the classroom pedagogy being implemented. With the thorough review, innovative classroom pedagogies collectively discussed their effectivity in the active learning, academic performance or output and nursing learners' satisfaction.

Effectivity of the pedagogy through active learning and academic performance

There were two studies reviewed on the flipped classroom [18] [11] that have shown no significant difference found between the two (2) sections compared, the flipped classroom and traditional. Descriptively, during period 1, students in the flipped classroom scored significantly higher on exam one than the traditional classroom, but there was no significant difference in the second exam.[11] It was also noted that as the semester went on, students rated the flipped model higher than the lecture. On top of that, students' test scores improved from the pre to post-course evaluation. [18]

In addition, Gopalan & Klann (2017) study on the effect of flipped teaching combined with modified team-based learning have found out that the lower 50th percentile of the class had a 13.91% higher correct answer response on the flipped classroom versus unflipped classroom. Such findings suggest that flipped teaching is more effective than the traditional unflipped lectures.

In Taiwan, the innovative strategies for the nursing research course were studied to engage more the student in research. The study reflected with beneficial effect as the experimental group maintained a significantly higher level of performance in their pre and post knowledge test. [21]

Furthermore, there was two reviewed literature on innovative classroom teaching: Mastery Modeling and nursing education with Apple technology. The Mastery modelling [21] was utilized specifically on diabetes concepts that appeared to be effective in terms of student's clinical reasoning. It also resulted in a higher level performance in the final exam, specifically to the mentioned concept.

On the other hand, the use of Apple technology in the classroom opens a learning opportunity to the faculty and students in transforming their knowledge attainment. Adoption of the technology by using iPads, iTunes allowed improving the standard lecture formats as students engage more in interactive teaching. [9] Additionally, recordings can be reviewed for skill enhancement using technology.

Pedagogical Innovation in relation to Learning Satisfaction

A study revealed that out of 20 students being studied, 85% reported of "liked" having access to the prerecorded lectures from flipped method to provide them with their own pace to learn.[18] Students also felt more engaged during class time and were able to regulate their learning better.

Another innovative pedagogy reviewed was the Collaborative Classroom Simulation (CCS). A study on the simulation was rated highly to be effective for student learning, critical reasoning and increasing clinical judgment. [2]

In the experimental study of innovative teaching strategies in Taiwan, the study revealed higher scores on attitudes toward research, eight-core competencies in nursing, classroom engagement and self-directed learning as exhibited by the experimental group of students than the control group. [21] The students also

have shown a lower degree of pressure and a higher degree of interest in research. Another point anent to this is Zimmerman's self-directed learning model which was studied by Tao, Li, Xu & Jiang (2015) in the Chinese context. Zimmerman's self-directed learning model was utilized as the theoretical framework in the development of an education program. Self-directed learning is based on the social cognitive view [34] that would be influenced by personal, environmental, and behavioural determinants in improving students' self-efficacy.

Furthermore, the above-mentioned determinants were considered in every module developed. It was revealed in the study that such program contributed to the nursing students' self-directed learning ability. The experimental group showed an increase post-test score compared with the pretest score. Hence, this evidence of a learner-centered study was highly advocated.

Meanwhile, Toothaker's (2018) study on the perspective of clicker technology in a nursing classroom, evidently revealed a better understanding of a student to the subject matter when compared to the traditional lecture-based class. Clicker technology provides instant feedback to concepts delivered in the classroom. As students' generation are accustomed to live in a highly technological world and are technologically savvy, [14], [27] clicker technology was widely adopted as an active learning strategy. The findings of the clicker technology study portrayed a positive correlation of learning. Consequently, students' response showed a positive direction of critical thinking as well. This is based from the result of the study that ninety-one (91%) percent of the students agreed or strongly agreed that the use of clickers helped them to develop a better understanding of the subject matter when compared to traditional lecture-based class. Ninety percent reported enhanced perception of interaction in the classroom; while only sixty- eight percent felt more comfortable participating in classroom discussion. Clickers also statistically shown to be beneficial to students due to their ability to increase knowledge retention and student engagement.[22] Its immediate feedback allows students to evaluate their understanding and learning of the concepts.

As students and academics have called for a greater emphasis on bioscience in nurse education, [13], [30] this directed Branney & Priego- Hernandez (2018) to conduct a study about the pedagogy team-based learning in application to the course of pathophysiology. Through contextualization and teamwork, results indicated a favourable experience for the students with higher accountability and satisfaction. This classroom pedagogy has relevant influence on the students to make meaningful contributions for the team activities.

The primary recipient of these students' learning outcome-based from the different classroom pedagogies are the patients. Thus, another pedagogy that innovates student learning is the Expert Patient Illness Narrative (EPIN). Feijo-Cid et al. (2017) studied the EPIN to the sixty-four (64) students of the Universitat Autonoma de Barcelona which resulted to a learning outcome that facilitated the development of the students' critical thinking and ability to identify normalized or deviant care situations. This educational innovation provided a richer perspective of human care through the integration of new knowledge, meaning, theory applicability as well as critical and reflective thinking. EPIN helped the students to understand the phenomenon of illness,[3] train them to be better listeners, [25] and develop cultural sensitivity to respect and trust others.[10] Charon (2007) otherwise termed this as "narrative competence" that is used to "recognize, absorb, metabolize, interpret, and be moved by stories of illness".

CONCLUSION

There were many innovative classroom pedagogies being studied to respond to the evolving needs of the nursing curriculum. With the changing world and the shift of characteristics of the educational interests of the new generations, educators tend to make moves to teach the course in the context of learners' range of focus. The student nurses within the four corners of the classroom seem to have diverse or multiple intelligence. Thus, it requires the educators to use different methodologies that are also multiple in techniques and strategies.

Based on the rigorous study of the innovative classroom pedagogies in nursing education, it showed that traditional teaching is quite limited to fit the student nurses' active physiognomies of learning. To teach the nursing students, pedagogies vary on the concepts discussed and its importance to practice. Active learning and academic performances of students must be considered. More so, the students' satisfaction with what have been learned inside the classroom implies that a certain learning pedagogy applied significantly enhances the learning capability process of individual students.

The innovative classroom pedagogies in nursing education such as flipped classroom, collaborative classroom stimulation (CCS), self-directed learning (SDL), mastery modeling, used of apple technology, clicker technology, utilizing team-based learning, and

application of expert patient illness narratives, are teaching approaches that commonly aimed for the engagement and enhancement of active learning and critical thinking of the learners in nursing education. These contemporary pedagogies underpinned by several research studies are deliberately significant in the advancement of the nursing curricula. The dynamics link explicitly with the concept trailed to a more interactive learning and have predominantly provide the nurse educators a pedagogical repertoire to be connected with the learners.

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