

## Advantages of Cooperative Learning: A Systematic Review

Loh Stanley Yuh<sup>1\*</sup>, Mary Bi Suh Atanga<sup>2</sup>

<sup>1</sup>PhD, Department of Nursing, Texila American University

<sup>2</sup>Department of Nursing and Midwifery, Faculty of Health Sciences, University of Bamenda-Cameroon

\*Corresponding Author: [lostanyuh@yahoo.com](mailto:lostanyuh@yahoo.com)

### Abstract

*Nursing education is responsible for the production of competent nursing staff with the collaborative skills required by the workforce. Nursing recruitment and retention requirements have made nursing education more challenging. Consequently, alternative teaching methods are being explored in nursing education to narrow the gap between workforce requirements and training. This article contains literature review conducted to examine the advantages of cooperative learning. The purpose of this study is to survey the advantages of cooperative learning using articles outlining the advantages of cooperative learning. A literature search with focus on studies published between 2009 and 2018 was undertaken from four electronic databases. Identified articles were pruned with the help of the Prisma (2009) Flow Diagram. Forty-five articles were identified, 15 reviewed and 11 considered eligible for this study. Significant differences were found in favour of cooperative learning, between the various teaching methods in almost all the studies. Additionally, cooperative learning was noted to markedly enhance human development. The studies reviewed concluded that cooperative learning was better than traditional teaching methods like lecture as cooperative learners were noted to display higher achievements and positive social interdependence than their peers from traditional methods. These results are important for both nursing administrators/managers and faculty in planning lessons; hiring and assigning faculty respectively. The implications of this study are that nursing curricula should be designed to incorporate cooperative learning as a means to enhance learning and hiring of nursing faculty should be based on the appropriate display of cooperative learning skills.*

**Keywords:** Cooperative learning; nursing education; collaborative skills; teaching methods.

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### Background

Nursing education has for a long time been looking for the particular teaching methods that would equip nursing staff with the collaborative skills needed in the interdisciplinary healthcare team. Cooperative learning seems to have provided the answer. Cooperative learning is a student-centred teaching strategy in which the teacher organises students into small groups of three to four and makes them responsible for their own learning as well as the learning of all the group members (Li & Lam, 2013). The main advantages of this instructional technique will be elaborated in this study in view of its application in nursing education in Bamenda-Cameroon.

### Aim

The rationale for this systematic review is based upon a gap that has been identified in the literature related to advantages of cooperative learning in nursing education in Bamenda-Cameroon. This review would make available pertinent literature on advantages of cooperative learning practices to faculty in Cameroon.

### Objective

The objective of this study is to provide the reader with a list of the existing literature on advantages of cooperative learning.

Nursing education is a professional education that involves the application of general education principles in the training of nursing staff. It is consciously and systematically

planned and implemented through instruction and discipline.

## Materials and methods

A review of the literature was undertaken through a search of the following electronic databases: Science Direct, CINAHL, Eric on EBSCHO Host and Research Gate. To ensure consistency, the review was guided by the PRISMA (2009) Checklist. The key words used in the literature search included: cooperative learning, collaborative learning, benefits of cooperative learning, advantages of cooperative learning, effects of cooperative learning and importance of cooperative learning. The inclusion criteria were (a) Studies published in English language (b) studies published from 2009 to 2018, (c) studies carried out in primary, secondary or tertiary education settings; and (d) primary and secondary studies. Excluded from the review were (a) studies

published in other languages other than English (b) studies published before 2009 and (c) studies conducted out of a formal educational setting.

The search strategy for Science Direct was thus: 1. [www.sciencedirect.com](http://www.sciencedirect.com); then advantages of cooperative learning. Forty-five articles were identified from the initial search and following application of the inclusion and exclusion criteria, eleven articles met the eligibility criteria for the study. Screening was done with the help of PRISMA (2009) Flow Diagram (Figure 1).

To ensure validity of the data and integrity of the study, a research assistant was recruited to independently extract data from the reports using the format in Table 1. The data were then compared with the one extracted by the principal investigator for similarities. Areas with disagreements in data were further reviewed and a consensus sought. The co-investigator was consulted for evaluation and clarifications.

## Results and Discussion

Table 1 shows a summary of the major features of the studies reviewed. This review compared cooperative learning with the traditional methods such as the lecture method and identified its advantages.

The studies considered generally presented the supremacy of cooperative learning over traditional methods of teaching. Significant

differences were found in favour of cooperative learning, between the various teaching methods in almost all the studies. Additionally, cooperative learning was noted to markedly enhance human development. These results are important for nursing faculty in planning lessons, hiring and assigning faculty.

## Conclusion

A number of conclusions can be drawn from this review. Overall, cooperative learning is more effective than traditional learning methods as it significantly influences learning, psychosocial development and communication better than other techniques of leaning. The most important aspect of learners in this area includes higher achievement and positive social interdependence.

There are some implications for nursing following this review. Nursing curricula should be designed to incorporate cooperative learning as a means to enhance learning. In addition, hiring of nursing faculty should be based on appropriate display of cooperative learning skills. Finally, future studies in nursing education on this topic are encouraged in Cameroon to continue to encourage the training of more customer sensitive nursing staff.

The review of literature revealed that cooperative learning is advantageous over traditional learning methods such as the lecture. However, various techniques and sample sizes were employed to determine the advantages. Some suggestions are therefore necessary in this aspect. Future studies should select reports that use the same technique to determine the advantages. Replications should use larger sample sizes and nursing students. Faculty can make use of the results of this study to develop and maintain skills that are necessary for effective teaching/learning.

**Table 1a.** Summary of the studies reviewed

<b>Author and year</b>	<b>Location/year of the study</b>	<b>Study design</b>	<b>Study population</b>	<b>Data collection methods</b>	<b>Aim of study</b>	<b>Main findings</b>
Cloud (2014)	N/A	Literature Review	Not stated	Article selection criteria not stated	To determine the effectiveness of cooperative learning	Social skills are easily developed, ideas are exchanged among students and leadership skills are improved
Cornelius-Ukepi, Aglazor & Odey (2016)	University of Calabar-Nigeria	Literature Review	Not stated	Article selection criteria not stated	To find out the impact of cooperative learning on classroom management	Enhancement of cognitive & social development; controls disruptive behaviour, thus reducing the need for discipline in the classroom and school environment.
Dembilio <i>et al.</i> , (2018)	Universidad Jaume I de Castellón Spain in 2017	pre-post intervention study	Forty-nine students from the second course of the Nursing degree program	1. an on-line ad hoc questionnaire on knowledge on hand washing through the assignment's virtual classroom was used. 2. Ultraviolet measurement of quantity of hydro alcoholic solution in hands after hand washing	to evaluate effectiveness of cooperative learning on acquisition of knowledge and skills on hand washing. In addition, the interest and self-perception of the participants on the acquisition of knowledge and skills was studied	Students' knowledge & skills on hand washing was significantly improved and their interest also awakened

**Table 1b.** Summary of the studies reviewed

<b>Author and year</b>	<b>Location/year of the study</b>	<b>Study design</b>	<b>Study population</b>	<b>Data collection methods</b>	<b>Aim of study</b>	<b>Main findings</b>
Goyak (2009)	Liberty University-USA, 2007-2008	quasi-experimental design	127 science of education students	Measurement of the differences in both perception of learning environment and growth of critical thinking skills of preservice teachers	to quantitatively measure differences in both the perception of learning environment and growth of critical thinking skills of preservice teachers.	cooperative learning yields significant and better results among students than the lecture
IT Learning & development Centre of Penn State University (2017)	Penn State University, USA (2017)	Literature Review	Not stated	Article selection criteria not stated	To determine of benefits of cooperative learning	Cooperative learning leads to increased achievement & retention; more healthy relationships & social support; and better attitudes towards teachers & school.
Johnson & Johnson (2018)	University of Minnesota, Minneapolis, Minnesota, USA (2018)	Literature Review	Not stated	Article selection criteria not stated	To find out the outcome of cooperative learning	Increased achievement & productivity were noted; healthier and committed relationships were developed; and students became

**Table 1c.** Summary of the studies reviewed

<b>Author and year</b>	<b>Location/year of the study</b>	<b>Study design</b>	<b>Study population</b>	<b>Data collection methods</b>	<b>Aim of study</b>	<b>Main findings</b>
Laal & Ghodsi (2012)	Tehran University of Medical Sciences, Tehran	Literature Review	Not stated	Article selection criteria not stated	To present the main benefits of collaborative learning, CL	<p>psychologically healthier with a higher self-esteem, compared with competitive or individualistic learning</p> <p>CL was noted to have social, psychological, academic and assessment benefits as a social support system for learners/learning communities are developed, students &amp; staff learn to understand each other diversely. Students' self-esteem is increased due to the student-centred learning, anxiety is reduced and positive attitudes developed towards staff. Academically, critical thinking is promoted, students are actively involved in the learning process, results are improved, provides required student problem-solving technique, possibility to personalise large lectures and very motivating especially in specific curriculum. CL enables use of alternate student &amp; teacher assessment techniques</p>

**Table 1d.** Summary of the studies reviewed

<b>Author and year</b>	<b>Location/year of the study</b>	<b>Study design</b>	<b>Study population</b>	<b>Data collection methods</b>	<b>Aim of study</b>	<b>Main findings</b>
<b>Li &amp; Lam (2013)</b>	Hong Kong	Literature Review	Not stated	Article selection criteria not stated	To identify the benefits of using cooperative learning, CL.	Cooperative learning led to more inclusive classrooms and learning for all since the groups are heterogenous, formal and encourage peer support and linkage. Interest in the subjects and achievements were greater compared with the control groups as content was mastered. Thirdly, students from CL easily accepted others' feelings, made friends with students from other cultures/ maintained the friends outside the classroom; worked in transcultural settings with ease; liked their classmates/teachers more than learners from control the groups and negotiated/resolved conflicts in conflict situations. The learners also had more positive feelings about themselves, showed more time on tasks and a higher degree of service/care to others.

**Table 1e.** Summary of the studies reviewed

<b>Author and year</b>	<b>Location/year of the study</b>	<b>Study design</b>	<b>Study population</b>	<b>Data collection methods</b>	<b>Aim of study</b>	<b>Main findings</b>
Molla & Muche (2018)	Ethiopia	Quasi-experimental control group interrupted time series	Data were collected from 369 students and 18 biology teachers in three schools.	Measurements of biological tests and use of semi structured questionnaire	To evaluate the impact of cooperative learning methods on students' academic achievement and laboratory proficiency in biology.	The students in the cooperative learning groups had greater improvement in their academic achievements than their counterparts in the control (individual learning) group
Sijali (2017)	Nepal, India in 2017	longitudinal research study	Grade 10 students with a sample of 150	Proficiency test, questionnaire and interview	To investigate the effectiveness of cooperative learning (CL) for improving learners' English language proficiency level in secondary level education in Nepal.	Cooperative learning significantly improved the English language proficiency of learners ( $M = 26.71$ , $SD = 4.478$ ) than the traditional lecture ( $M = 16.50$ , $SD = 5.619$ )
Slavin (2010)	USA	Literature	Review of 99	Article selection criteria	To determine	Students showed

			Review	studies conducted among elementary and secondary school learners	not stated	the effectiveness of cooperative learning methods in elementary & secondary schools	more interest to work in groups; had more friends of different ethnic groups and readily accepted the views of others.
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