Importance of Implementing the Cooperative Learning Approach

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Received March 05, 2022; Revised April 08, 2022; Accepted April 15, 2022

Abstract There are many new ideas and themes from existing literature that talk about cooperative learning approaches. It gives an even broader aspect to thinking about the cooperative learning approach and its implementation in the educational system. There are three main themes that I would like to discuss in this paper; (1) the importance of implementing a cooperative learning approach in science classrooms; (2) teachers’ understanding towards a new learning approach that involves practical activities; and (3) science students’ social and behavioral response towards the cooperative learning approach. Before exploring a topic, I believe it is necessary to have relevant and adequate information about it and to know all the factors that may affect it. Existing literature has explored many directions and knowledge, but the most appealing themes to me are the three listed. I think the further exploration of these themes would help me continue the research in this area.

Keywords: approach, classroom, cooperative learning, science, students, teachers

Cite This Article: Almaha Radha Alruwaili, and Mark Templin, “Importance of Implementing the Cooperative Learning Approach.” American Journal of Educational Research, vol. 10, no. 4 (2022): 208-211. doi: 10.12691/education-10-4-8.

1. Introduction

Education is an important part of society and everyone’s life. It allows a person to live a stable and smooth life with requisite intellect and knowledge. The polishing of skills and capabilities makes a person learn better. Learning new concepts and ideas is important for students, but teachers must also deliver supportive and encouraging behaviors. In this paper, I am interested in discussing the cooperative learning approach. I want to explore the concept of cooperative learning. I have heard a lot about it, and as declared by Bilgin [1], it seems to be a unique and broader approach to learning. Students get to experience many new things with a cooperative learning approach in comparison to the traditional learning approaches. Different learning approaches yield different outcomes with positive and negative influences. An approach with more positive influence needs to be adopted by the educational system.

In addition, cooperative learning is the practical implementation of the education and knowledge that is being delivered in classrooms. Cooperative learning is a teaching methodology based on small teams. The groups are formed with various students of different abilities and skills. They are instructed to work towards a common goal. All students of a team become supportive towards each other. Students coordinate and communicate to find solutions to problems. Students resolve issues and hurdles together, and each student’s contribution to the outcome becomes prominent. Students are usually motivated to participate efficiently in solving problems. This activity as stated by Lenkauskaitė [2], is expected to make students confident about their ideas and innovations.

This paper focuses on using the cooperative learning approach in the science classroom. The topic gives rise to many questions regarding the cooperative learning approach. The first question is, how are goals set before planning activity and implementing it for science students? This refers to the expected outcomes that are to be achieved. Scientific approaches are combined with the learning approach to yield an efficient system. Another question that comes to mind is the formation of the groups and teams. How are students of different capabilities and knowledge levels managed while forming teams? Every individual has different skills and talents. This question is directed toward teachers and instructors who play an active role in the formation of teams and groups [3]. Teachers and students both contribute in their own way to the education system, and the formation of teams is a puzzle for educators.

2. Finding Related Literature

There are many researchers and educators exploring the implementation and outcomes of the cooperative learning approach. I examined different articles in this regard in order to explore different perspectives and aspects in this research area. Different methodologies and settings yielded useful and helpful information. I gathered relevant
data from reliable academic sources. I also used Google Scholar the most for this purpose as it is one of the reliable sources for academic research. There were several relevant data on varying academic platforms regarding the cooperative learning approach. However, I took the perspective of extracting those articles that are directly relatable to science classrooms. Several studies were making a comparison between traditional and cooperative learning approaches in language classrooms. I used some of the data from such sources to analyze students' overall responses and behavior.

Additionally, it is not easy to directly jump on articles and books directly related to the area of interest. I invested time and energy in gathering useful and important data for the research. I decided to put in a considerable effort at the data-gathering stage since investing time to gather relevant articles would make the ensuing process simpler and faster. On the other hand, if I had decided to pick up random articles from academic sources, I might have had to spend more time studying and filtering relevant information. I chose the articles by going through the topic, abstract, introduction, sub-headings, and finally, the conclusions. All these factors made it easier for me to choose credible articles.

Furthermore, I believe that keywords play an efficient role in searching for relevant materials and information for research. It saves time. I used keywords like 'cooperative learning approach in science classrooms,' 'implementation of cooperative learning approach by science teachers,' and 'cooperative learning approach outcomes for science students.' These words and phrases helped me locate articles and sources that are useful for my research. There were tons of valuable data for me to use for my research. Science classrooms consist of many projects and activities that need group formation. Students are more interested in the practical work rather than the theoretical, as this allows students to understand the concepts better.

2.1. The Importance of Implementing Cooperative Learning Approach in Science Classrooms

The article ‘Barriers and Facilitators to Using Digital Technologies in the Cooperative Learning Model in Physical Education’ has been written by Bodsworth and Goodyear [4]. The researchers highlight the fact that the cooperative learning approach, combined with digital technology, is new to the educational system. The implementation of such an approach is not easily handled. Every new tool and technique requires facilities and preparations to be implemented correctly. Otherwise, the situation becomes difficult to handle. Though science students get to experience many advancements during their study period, implementing those techniques and adopting them as a practical activity seems quite challenging. There were confusion about group formations, assigning responsibilities, and poor cooperation between educators and students. There are many barriers and hurdles making it difficult for the approach to be clearly understood and implemented [4].

In addition, ‘Investigation of Cooperative Learning Techniques and Attitudes in Language Learning Classrooms’, a study conducted by Alhebaishi [3]. The researcher’s aim was to evaluate and analyze the impact of the cooperative learning approach in language classrooms. There were observations catered using different classrooms of an intermediate school. Unfortunately, the real impact to be studied could not be made. This was due to a wrong implementation of the approach. Teachers were unable to successfully implement the technique. There were 12 intermediate schools considered for this study. It comprised 31 classrooms of different subjects. The observation reports yielded that students did not feel the approach rightfully because it had not been instructed the way it should be. In the classrooms with teachers having full acknowledgment of the approach, the outcome of the approach was positive. The study reveals the importance of implementing the program. If the implementation is not done right, no outcome will be expected from the approach [3].

2.2. Teachers’ Understanding towards a New Learning Approach that Involves Practical Activities

There’s an article, ‘Challenges for Cooperative Learning Implementation: Reports from Elementary School Teachers’ written by Buchs et al., [5]. The article declared that students are learners who are not going to question an approach or process without getting involved in it. It is the educators who can bring changes to the system and learners’ minds. If a teacher is ready to understand and adopt a technique, a student would definitely get along at least once. The study states that there are a few teachers who support this new technique of learning. Teachers of different classrooms and disciplines are finding it difficult to absorb the new method. This leads to misunderstandings and misconceptions about the approach. Teachers’ guidance and instructions need to be strong enough to handle students’ confusion. However, if the teachers would themselves be confused about an approach they are following, there are fewer chances of getting effective outcomes [5].

Moreover, Slavin [6] explained in the article, ‘MAKING COOPERATIVE LEARNING POWERFUL’ that teachers do not feel strong enough to control a classroom that consists of groups and activities. Many students still consider it as their party time rather than the golden chance to achieve many benefits. Science students needed more motivation and support from teachers to participate actively in the activities, but they failed to do so. Educators were unable to deliver the objectives behind the cooperative learning approach. Moreover, teachers do not find it easy to implement this approach because of the lack of understanding and confusion regarding its application. A strategy or approach is of no use if it is not implemented the way it should be. It takes time for a new technique to become acceptable to society. The consistent effort of teachers in making the implementation a success could definitely show the beneficiaries [6].

2.3. Science Students’ Social and Behavioral Response towards the Cooperative Learning Approach

There were a few other studies that showed the achievement of effective outcomes after implementing the cooperative learning approach. ‘Cooperative Team
Learning and the Development of Social Skills in Higher Education: The Variables Involved" written by Mendo-Lázaro et al., [7] provides enough information on the psychological outcome of students experimented with the cooperative learning approach. The university-level students were confident, motivated, and encouraged by this approach. The group activities improved their social skills and ethical behavior [7]. The academic results of such students improved. The critical thinking skills and innovative ideas became better. Students’ participation and activeness improved, and students were supportive towards each other because of the team spirit and teamwork. The language learning classrooms got benefit from this approach. Group activities allowed students to discuss more. Communication made them understand the languages more [8].

Researchers have used different strategies and methodologies to examine the impact of the cooperative learning approach. Meng [9] conducted a study, ‘An Empirical Study on the Application of Cooperative Learning to Comprehensive English Classes in a Chinese Independent College’. The comparison between usual methods and cooperative learning methods is being done to know students’ behavioral and mental changes. Students’ direct responses have also been studied using interviews, questionnaires, and surveys. Though it was very clear from most of the studies that the cooperative learning approach contributed positively to the educational system. However, there is still a lack of understanding regarding its implementation, group formation, and planning activities [9].

Furthermore, a study, ‘The Role of Cooperative Learning Method in Teaching of Science Subject at Elementary School Level: An Experimental Study’ has been conducted by Najmonnisa and Saad [10]. The quantitative approach and Quasi-experimental research designs are used to analyze the impact of the cooperative learning approach on science students. The experimentation took 13 weeks to analyze the effects justly. There were two groups. One was taught about the cooperative learning approach and its procedure, and the other was the control group. As a result, students’ scores in science subjects improved. Though there were a few limitations like teachers’ understanding and lack of learning resources, but science students still maintained better results. The study recommends that this approach should be commonly used in science classrooms [10].

3. Methods

There are many things done to make research successful. The researchers from all studies have been carefully observing the experimentations and participants. This is done to yield effective outcomes that might bring positive changes in the future.

3.1. Differences in the Literature

There were different age groups considered for the studies. Few studies focused on undergraduate students, whereas there were a few others focusing on different classrooms from a single school. There were random judgments or focus on language classrooms as per the demands of the research [6]. The studies involved different research methodologies; qualitative, quantitative, or even mixed methodology for a few cases. There were analyses made based on questionnaires and surveys. But there were interviews conducted too. Not all studies, but a few considered teacher’s responses as well rather than focusing only on student’s [9].

3.2. Similarities

Though the participants of each study were different, but the main focus of each study was on the cooperative learning approach. All studies are relatable. Information and findings of one study somehow contribute to the other [7]. I noticed that when I studied the importance of the implementation process of this approach, I realized the fact that every part of this approach has a role to play. No part can be ignored while understanding the overall impact and strength of the approach. This led me to study teacher’s role and their participation in understanding the cooperative learning method [11].

3.3. Understanding the Analyses

I believe it is important and necessary to explore each study. Many researchers have explored different sides and perspectives of the same area of interest. It began with the importance and led to the reasons that have been making the implementation process go wrong. I believe there are many people focusing more on the issues and problems related to the topic. Unfortunately, there is limited data about making things right [12]. We need to understand the importance of education. It is not only the students who need guidance and understanding of new tools and techniques. There is a lack of understanding found among teachers and educators. Moreover, another thing that bothered me was the attitude of teachers towards the implementation. If they were unable to understand the process, they could have worked on it and invested more time in the right direction of work. But they understood whatever they could and implemented the process as per their understanding. These confusions lead students towards more misperceptions. They are unable to share their thoughts when the educators themselves are unable to understand things clearly [13].

3.4. Gaps in the Literature

All the studies reviewed are associated with people who understand the importance of learning and education. They know the value of knowledge and skills in society. Unfortunately, things need to be more focused and detailed. Researchers need to work more deeply on the perspectives of both the teachers and students. Students must be asked about their responses towards the cooperative learning approach, but there could also be a different perspective evaluated using the same setup with different participants. There were researchers who concluded that teachers were unable to understand the approach. For such cases, the same process could be performed using a different instructor to observe students’ responses. I expect more studies to focus on instructors,
learning environment, and student’s responses altogether since missing any one of these would affect the final results [14].

4. Conclusion and Future Work

My work will start by making understanding about the cooperative learning approach clearer. I would try to eliminate that void between the educational system and teachers. The three themes reviewed in this paper are important towards bringing positive and effective changes to the education system. The absence of any of the themes would affect the others, thereby leading to either no change or a minimum change in the outcomes. I have an opinion that a tool and technique can only be judged when it is used rightly. Otherwise, we will not get the respective outcome, so there is no point in judging [11]. Similarly, in an educational setting, the judgment about a learning approach is gained using students’ behavioral and academic results. The training and understanding of teachers are all done in the backend stage. So, teachers would be trained before beginning the study and applying any methodology. Instructors with a good understanding about this approach would be appointed to help others with issues. As part of the education system, I believe it is my responsibility to not let go of the learning approaches based on misconceptions. Understanding a technique is the most important thing before using it practically.

References

[1] Bilgin, I. (2009). The effects of guided inquiry instruction incorporating a cooperative learning approach on university students’ achievement of acid and bases concepts and attitude toward guided inquiry instruction. *Scientific Research and Essays*, 4(10), 1038-1046.

[2] Lenkauskaitė, J., Colomer, J., & Bubnys, R. (2020). Students’ social construction of knowledge through cooperative learning. *Sustainability*, 12(22), 1-24.

[3] Alhebaishi, S. M. (2019). Investigation of cooperative learning techniques and attitudes in language learning classrooms. *International Journal of Applied Linguistics & English Literature*, 8(2), 219-230.

[4] Bodsworth, H., & Goodyear, V. A. (2017). Barriers and facilitators to using digital technologies in the cooperative learning model in physical education. *Physical Education and Sport Pedagogy*, 22(6), 1-17.

[5] Buchs, C., Filippou, D., Pulfrey, C., & Volpe, Y. (2017). Challenges for cooperative learning implementation: Reports from elementary school teachers. *Journal of Education for Teaching: International Research and Pedagogy*, 43(3), 286-306.

[6] Slavin, R. E. (2014). Making cooperative learning powerful. *Educational Leadership*, 72(2), 22-26.

[7] Mendo-Lázaro, S., Leon-del-Barco., Felipe-Castano, E., Polo-del-Río, M., & Iglesias-Gallego, D.. (2018). Cooperative team learning and the development of social skills in higher education: The variables involved. *Frontiers in Psychology*, 9(1536), 1-11.

[8] Meng, J. (2017). An empirical study on the application of cooperative learning to comprehensive English classes in a Chinese independent college. *English Language Teaching*, 10(2), 1-6.

[9] Najmonnisa, K., & Saad, I. (2017). The role of cooperative learning method in teaching of science subject at elementary school level: An experimental study. *Bulletin of Education and Research*, 9(2), 1-17.

[10] Nwabueze, A. I., & Ighinedion, D. A. (2013). The implications of cooperative learning strategy on students’ academic achievements. *African Journal of Education and Technology*, 3(1), 115-124.

[11] Gull, F. & Shehzad, S. (2015). Effects of cooperative learning on students’ academic achievement. *Journal of Education and Learning (Edulearn)*, 9(3), 246-255.

[12] Felder, R. M., & Brent, R. (2007). Cooperative learning. In P. A. Mahrouk (Ed.), *Active Learning: Models from the Analytical Sciences*. ACS Symposium Series, 970, Chapter 4. Washington, DC: American Chemical Society (pp.34-53).

[13] Slavin, R. E. (2008). Cooperative learning, success for all, and evidence-based reform in education. *Education and Didactique*, 2(2), 151-159.

[14] Slavin, R. E. (1995). Research on cooperative learning and achievement: What we know, What we need to know. *Contemporary Educational Psychology*, 21(1), 43-69.