

# Investigating Classroom-Level Barriers to Cooperative Learning Implementation in Saudi Middle Schools

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**Abstract:** *The change process is not easy; effort is required to implement a change in any system. Saudi Arabia's Ministry of Education is working to bring a change to their education system by implementing cooperative learning. This approach is different from traditional learning, so there are different barriers faced by teachers, students, and administrators. This study focuses on analyzing the perceptions of teachers which may act as barriers while they implement cooperative learning in schools in Saudi Arabia. This study aims to investigate the level of preparedness of teachers while implementing cooperative learning; the professional perspective of teachers regarding cooperative learning; and the perception of teachers regarding the benefits and use of cooperative learning. The study used a quantitative research design and a survey was distributed among the teachers working at a public school in Saudi Arabia. Teachers' preparedness, perception, and personal perspectives were tested and quantitative data revealed the barriers limiting the implementation of cooperative learning in schools. Findings can be utilized by policy makers and administrators to dictate necessary changes in the system which will help in the effective implementation of cooperative learning. The policymakers may need to work on the policy framework to equip teachers to mitigate these barriers.*

**Keywords:** *barriers, cooperative learning, professional development, teachers*

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## INTRODUCTION

Adequately prepared and well-educated people are the true wealth of any nation. They have the ability to push the country towards development and prosperity. The government of Saudi Arabia has embarked

upon a great mission to nourish and preserve its citizens' cultural, moral, and spiritual development. The country is struggling to create a curriculum of modernized ideas and beliefs that the majority can agree upon and as declared by Dakhiel (2017), the country has provided free education and training with the major goal of preserving traditional ways of thought and belief. The government's mission is to implement cooperative learning in educational institutions and wants its learners to be cooperative enough to compete with learners across the globe. However, implementing cooperative learning is complex and comprises challenges in the Saudi context, including changes to the curriculum and education assessment system. Moreover, implementing cooperative learning in Saudi Arabia could promote the development of significant new communities of practice. Through cooperative learning, the overall learning experience is enhanced and the benefits of cooperative learning are linked to the students as well as the teachers. This study aims to determine the need for cooperative learning as an important change in Saudi Arabia's curriculum. It will discuss the level of teachers' preparedness, the need for professional development, and will also elaborate on the barriers to implementing cooperative learning.

Cooperative learning is one of the most favoured teaching strategies that is considered to be effective and efficient, enabling science students to work as a team (Slavin, 1980). The instructional strategies of cooperative learning enable students to solve scientific problems and improve thinking skills and abilities by working together (Slavin, 1980). Cooperative learning has the potential to engage the students in an active learning environment and to promote academic achievement in science, improve self-esteem, and enhance social skills. Apart from academic benefits, cooperative learning enhances the learners' self-esteem, and strengthens their interpersonal relationships and attitudes towards their peers and the school. It has a positive influence on the cognitive abilities and social skills of students. It emphasizes greater use of critical reasoning competencies and strategies and greater collaborative skills and attitudes that are necessary to work effectively with others in a team (Chatila & Husseiny, 2017).

The schools in KSA need to train their teachers in understanding all the essential factors of cooperative learning for creating an effective learning environment in their classrooms. It is necessary for the teachers to understand the learners' abilities, students' perceptions, and curriculum constraints so that they could make correct decisions concerning whether or not to use cooperative learning in a particular activity or not. Teachers' experience plays a vital role to implement this change. The schools must be able to motivate the teachers to become facilitators rather than lecturers. The schools in the Kingdom of Saudi Arabia (KSA) need to shift from transmission orientation to transaction orientation by recreating teachers' roles as mediators and coaches. The schools need to provide clear directions and guidelines to the teachers about student-centred learning based on interactions and teamwork (Alghamdi & Gillies, 2013).

Cooperative learning is directly linked with student achievement and engagement in classrooms (Alhebaishi, 2019). It has been observed that for decades biology classrooms have not been capable of helping students develop the skills they need to be successful in science related job fields. Biology is the science subject in which there is a requirement for the learning of scientific skills, however the traditional

environment of Saudi biology classrooms is not perfect nor is it conducive for the practical development of skills in students. It is important to switch towards a practical mode of learning which is known as cooperative learning. Cooperative learning has its focus on the skills development of students. Baloch and Brody (2017) reported the overall effectiveness of cooperative learning for promoting positive, deep learning for students in classrooms of every subject and at each level of study.

The major changes are required in curriculum while teaching the science classes, these are the intensive classrooms and major work on the part of teachers and students is its requirement. A number of changes are important for making a smooth shift transition towards this new mode of learning. It is important that the new curriculum developed for science has the centrality of ideas which provide interaction of cognitive, meta-cognitive and offer important compositions for learning. The shift from the traditional mode of learning is not easy, and students have to face different problems for making a smooth shift. So, it is important that teachers consider this fact while they are designing the curriculum and after that when they are working to implement it. The new curriculum must be designed in such a way that it reinforces their precious learned concepts and knowledge. (Mehta & Kulshrestha, 2014).

This study focuses on the curriculum goals of science, mainly in biology classes in Saudi Arabia as a majority of Saudis in this city get their education from these educational institutions. It is essential to understand the breadth of curriculum goals. The traditional methods of learning have not contributed to creating the abilities of critical-thinking, problem-solving, and decision-making (Lukman & Krajnc, 2012). While living in the 21<sup>st</sup> century, it is all about skill-based learning that embraces hands-on-learning (Saudi Arabia, 2016). Therefore, science students need to work in large research groups and teams so that they can better share and strengthen their scientific ideas (Altun, 2015). Collaboration is thought to be the key to achieve long-term success and high-level achievement in science. Cooperative learning provides a framework of basic premises such as positive interdependence, individual accountability, group accountability, face-to-face interaction, and group processing (Brown & Palincsar, 2018). It establishes positive interdependence where learners work together to attain the group's objectives.

There is a gap between the cooperative learning objectives of the KSA's Ministry of Education and KSA's teachers' implementation of those objectives (Alansari & Rubie-Davies, 2021). The Ministry of Education's objectives are based on their discerning that a change in the systems of education around the world is necessary in order to keep pace with the demands of a 21<sup>st</sup> Century workforce. However, with progressive change to the norms of the education system come many challenges (Beshel, 2019). These new objectives require that teachers play a major role in implementing that change. Since such a change is not easy, there are many challenges that the students and teachers have to face while they make this transition in the school system. In order to fit into the current system educators have to adopt "best learning" methodologies. A number of research studies show that cooperative learning is the most important and prominent method of learning which should be implemented in an educational system, such as in KSA (Alansari & Rubie-Davies, 2021).

Change such as the Ministry of Education requires will involve shifts in curriculum, in instruction, and in what it means to learn. The complexity of these multiple shifts makes implementation difficult. The first problem is the change in curriculum, which is required as the methodology for teaching changes. Another major problem for implementing this change is the instruction medium, which is totally different in the cooperative mode of learning (Baloche & Brody, 2017). Lastly, there is also a problem regarding how learning itself is defined within the learning system. Based on these, teachers may need to adopt different instructional techniques so that they may be able to respond to the changing needs of students in a new system of learning and teaching (Akpolat, 2016).

This research will have its focus on the challenges confronted by teachers while working on the implementation of cooperative learning in their classrooms with the following main research questions:

1. What is the extent to which teachers are aware of preparation in cooperative learning?
2. Based on their implementation of cooperative learning, what is the professional perspective of teachers in KSA regarding the implementation of cooperative learning?
3. What is the perception of teachers regarding the benefits of the cooperative learning approach?

### ***Teachers' Preparation Towards Implementing Cooperative Learning***

The educational system of KSA was running effectively in the traditional method. With the advancement of cooperative learning, new preparation is needed on the end of teachers. It is seen that still majority of teaching workforce relies on the traditional behaviour and attitude. Teachers considered this method more effective because the traditional mode of teaching brings good grades for the students. Therefore, they are not ready to replace it and are not prepared to implement the new cooperative learning process. However, for the development of teachers training or their profession, several programs have been setup. Those who are interested in the process of cooperative learning are very supportive towards the training they received regarding cooperative learning. The majority of the workforce needs awareness and knowledge about cooperative learning in order to replace the old methods and prepare to meet the challenges (Basamh, 2002).

The cooperative learning approach is very different from the traditional learning by memorization approach. When the teachers are working on implementing that change in the system of education, it is important that they must have enough knowledge and have received specific preparation regarding cooperative learning in order for them to teach effectively through cooperative learning methodology. When literature is sought out about the importance of teacher preparation for successful implementation of the cooperative learning approaches in the classrooms, it was reported by Johnson and Johnson (2014) that the preparation of teachers is important as they have been using the new mode of teaching so they have to receive basic preparation in its logic and use. The monthly or yearly preparation programs which are being planned for the teaching staff is vital for their professional development and this will help them to learn the new skills which they can utilize while teaching students through cooperative learning approaches (Johnson & Johnson, 2014). The school administration has the vital role to play in conducting

the preparation of teachers and other staff involved in changing the teaching approach. The study conducted by Johnson and Johnson (2014) further reported that there is positive correlation between the preparation of teachers and the academic achievement of students. The authors stated that the professional preparation of teachers has a positive influence on improving the academic achievement of students as they have learned the basic skills of modulating this change towards cooperative learning system so they are able to implement it accordingly in their classrooms. When compared to the teachers who have implemented cooperative learning in their classrooms without any preparation, they find it difficult to organize students in groups as they don't have knowledge about the technicalities of this mode of teaching. As a result, it is hard for them to make the smooth change towards the use of cooperative learning (Johnson & Johnson, 2014).

### ***Professional Development in Cooperative Learning***

The process of student learning is directly linked with the teachers' knowledge. The connection and dependence of students on the teachers' knowledge demands a developed teaching workforce. The development in their profession means they should have the accurate and authentic scientific knowledge of current ideas as well as being able to analyze the future problems and information. For this purpose, professional development is necessary for teachers in Saudi Arabia.

There are several models and approaches which can do professional development of the teachers (Almazroa & Al-Shamrani, 2015). These models include the coaching and mentoring of the teachers, train-the trainer model, and the face-to-face model. Among the models, the most essential and effective model is the train-the trainer. This is effective because within KSA, majority of the teachers are not aware and ready to adopt cooperative learning. Therefore, if those teachers are provided with the knowledge and skills of cooperative learning and their professional development is in place, they can teach the future teachers with these techniques. This way, professional development of the majority teaching circle can be done. Furthermore, the mentor and coaching can be done initially so that the teachers can be attracted to the professional development. However, for this, it could be difficult to manage the large ratio of teachers. Whereas the face-to-face model demands the effective use of technology, and this further demands another mode of training. Through this model, the skills of the teachers will be enhanced; they will develop their skills about evaluating the students' effort, their learning will enhance which then further enhances the learning in students (Pancucci, 2007).

Positive interdependence, individual accountability, simultaneous interaction, and equal participation can be the best approaches for preparing the teachers. Positive independence provides a potential to promote cooperation. It provides the mode through which the outcomes and interdependence are interlinked. No one can do a structured biology task alone, it can be done only by working together. When utilizing cooperative teams, the teachers must ensure that each individual is accountable for contributing, thinking, and learning. This way, the teachers can evaluate individual performance before, after, and during teamwork. Simultaneous interaction and active engagement increase cooperative learning and prepares

the teachers to do so. Students learn more when they are regularly engaged in cooperative learning. Effective cooperative learning results in simultaneous engagement of students. Teachers should structure the curriculum and learning environment in which the students can equally participate, it serves as an integral part of cooperative learning process. All the approaches can be helpful in preparing the teachers to implement cooperative learning (Navarro-Pablo & Gallardo-Saborido, 2015).

Science teachers in KSA need professional development programs throughout the country. The goal is to achieve a better and brighter future for both the citizens and the country. Vision 2030 has also focused on teacher preparation and professional development programs to foster creativity and innovation in the scientific curricula. The importance of professional development and its impact on students' achievement has greatly increased. Learning opportunities need to extend beyond just talking about new ideas or simply reading about new pedagogy. Professional development must be built into the professional job of teachers. Teachers should keep themselves updated with current and relevant instruction techniques that can lead to more successful learning outcomes for students (Timperley et al., 2007).

The professional perspective of teachers about cooperative learning addresses that professional development is a key to learning and developing teachers' practices to meet the complex contemporary needs of students. Ensuring access to continuous professional development for the teachers is vital for the growth of both teachers and students. The professional development programs for cooperative learning focuses on the development and provision of curriculum materials. Successful professional development programs emphasize that cooperative learning improves, enhances, and strengthens student learning in physical, social, and cognitive domains. Professional development applications permit educators to make knowledgeable choices and alternatives about deciding on, imposing, and evaluating cooperatives, gaining knowledge of style with an appreciation for the variations and variety of goals among specialists in college groups. Such packages consider the desires of instructors' professional development within the context of organizational reforms that foster systemic college alternatives, together with the development of studying communities. There is a need to encourage professional development that goes beyond career workshops to include improvement and guidance for teachers in multiple contexts. The nature of professional development is related to systemic adjustments and the successes, failures, and challenges encountered within the method (Goodyear, 2017).

The connection between professional development and cooperative learning creates a sense of collaborative learning culture. The teachers' professional development is also connected to institutional development, continuously contributing to the growth of the teaching and teaching community (Krečič & Grmek, 2008). Professional development establishes a dialogue between teachers as people and teachers as professionals as well. Teachers can directly test, exchange, and adjust their own personal and professional ideals, perspectives, expectancies, thoughts, deportment, and treatment of enjoying with other instructors.

### ***Perception of Teachers Regarding the Implementation of Cooperative Learning***

The perception of teachers regarding the benefits of cooperative learning has an impact on their preparation for implementing it in their classrooms, and teachers' expectation seems to be the centre for successful implementation of cooperative learning practices. When teachers perceive cooperative learning as a superior approach to the traditional form of learning, they will play an essential role in facilitating the students by closely interacting with the groups. The proper facilitation will be guided to students who will impact their communication and relationship building. Social interaction is the centre of focus for cooperative learning, and teachers have a huge impact on the efficiency of cooperative learning. In the classrooms in which cooperative learning is not positively perceived by teachers, it becomes important to identify the need for training for the teachers so that they may be successful in implementing cooperative learning. The perception of teachers is also impacted by the culture in which they are practicing their teaching because the culture has an impact on changing the perception of teachers, and when the cultural challenges are overcome, then cooperative learning can be adopted by them (Agashe, 2004)

A study by Alias et al. (2018) reported that cooperative learning is a teacher-centred approach and that there is a need for a strong commitment from teachers to implement cooperative learning. They have to spend most of their time preparing for lessons and have to work on using different kinds of aids such as video and audio requirements. The constraints in the implementation of cooperative learning does not prevent teachers from implementing it. Rather, it is the perception of teachers that will prevent the implementation of cooperative learning. Interestingly, the study has reported a positive perception regarding the implementation of cooperative learning and believes that the perception of teachers seems to be effective for implementing cooperative learning. There is a general belief that cooperative learning is effective for teaching practices and also positively impacts the learning of students, which means that these are the positive factors being analyzed in literature for implementing cooperative learning (Alias et al., 2018)

Another study by Agashe (2004) has reported that the level of preparation of teachers and perception of teachers are two closely linked factors that have an impact on the implementation of cooperative learning. The attitude and perception of teachers regarding cooperative learning are greatly influenced by the kind of training they have received for implementing cooperative learning (Agashe, 2004). The teachers show a positive attitude towards cooperative learning when they have received the training, and the teachers who don't receive training regarding cooperative learning believe that they have to work a lot and spend a lot of time making a shift in their method of teaching.

In different schools, the use of cooperative learning is considered the way that will enhance the learning experience of students as well as the teaching experience of teachers, but the perception of teachers regarding these methods has an impact on the final conclusion and results of cooperative learning. Among the number of factors that will act as the barrier to implementing cooperative learning in classrooms, the perception of teachers is considered as the one which is hindering the use of cooperative learning at

different levels of schools. The perception is regarding the implementation and overall benefit of cooperative learning, which a person may have while they work on its implementation and change management process (Wangda et al., 2020).

### ***Barriers to the Implementation of Cooperative Learning***

There are studies that have reported on different kinds of barriers that affect the implementation of cooperative learning in different classrooms that include both science and mathematics (Akpolat, 2016; Beshel, 2019), but the major barrier reported by most of the studies is group conflict. Group conflict means that when teachers assign groups to different students, they find it difficult to liaison with each other, and in this way, problems may be created. The difference in opinion of some people working on the same project will create problems because it becomes difficult for teachers to solve these conflicts. This may be challenging for students and teachers to work on cooperatives, and the willingness of teachers and the involvement of students will act as a barrier. Another potential barrier identified is the experience of teachers, the teachers who do not have experience in the implementation of cooperative learning will find it difficult to implement the change in the system because of lack of abilities. A study has reported that teachers find the process of cooperative learning time consuming as they have to form the groups of participants then have to monitor each student as compared to the traditional form of learning where the teacher just come to class, dictates the lesson, and the student has to learn. So, the major barrier to implementing cooperative learning is the willingness of teachers to bring change to the system. This willingness is then dependent on factors such as prior experience, training received, class size, and years of teaching experience. One other barrier to implementing the change is the strict policy framework that does not allow teachers to bring a change in the system as they wish. They find it suitable for the class. These factors will collectively impact the implementation of cooperative learning in classrooms.

## **MATERIALS AND METHODS**

The quantitative research design was utilized in this study to get the data in comparable form. This design was selected so that the data can be interpreted in the form of numbers and accurate research findings can be collected and reported. The total sample size selected for this study were all teachers who were teaching science classes in the public middle schools in Turaif, KSA. The tool that has been selected for this study completion is the survey design which was conducted for middle school science teachers. The reason for selection of this research tool was that it was easy to be distributed and get it solved from the teachers and data analysis was possible on the basis of individual questions. The questionnaire was designed in such a way that it consisted of questions which read the mind of people according to the use of collaborative learning in their classrooms. The questions formulated were about personal preferences, students' behaviour, learning environment of students, involvement of students towards learning and different kind of competition the students might have to face during their educational career (Johnson & Johnson, 2018).



### ***Instrumentation***

The questionnaire used for the study consisted of three major sections. The first section of the questionnaire focused on teachers' demographic information. The second section was designed in such a way that it inferred about the responses of teacher regarding adoption of this system of education in their institutes. The third section had questions that are entirely linked to the use of cooperative learning and teaching approach in the classrooms. These questions were specially formed to explain the interest of teachers in different kind of learning environment and the involvement of students towards the different kind of activities they plan for the learning of students.

### ***Validity and Reliability***

The researcher gathered validity evidence for the questionnaire that supports its face and content validity. In gathering evidence for the instrument's face validity, two experts in KSA's curriculum and instruction field reviewed the questionnaire. The check for construct validity met the expectations and the experts agreed that the developed questionnaire had face and content validity. For reliability, the researcher conducted a pilot study on 42 participants who are teachers and Cronbach's alpha was used to measure the internal consistency of the survey questions. The internal consistency reliability (Cronbach's alpha) of the questionnaire was 0.701 which is considered acceptable.

### ***Data Collection***

The data collection was online. Each potential participant for the study was approached through their email and a soft copy of the questionnaire was sent online. Once the teacher's willingness to be a part of the study was determined, each willing participant was asked to fill out the questionnaire. There was a total of 30 teachers teaching in TURAIF schools, and the data has been collected from 26 teachers with a response rate of 86.6%.

### ***Data Analysis***

The Statistical Package for Social Sciences (SPSS) and Microsoft excel were used for data analysis. Data were entered into an excel sheet and coded. Each question was given a specific label, and each option was given a code which is the numeric form because SPSS only analyzes numeric data. After the coding, variables extracted from the questionnaire were entered into the SPSS file with the specification of each variable. The variables were then analyzed against the different formulas, which had used descriptive statistics. Teachers' personal information was compared with each of the corresponding questions, and data were analyzed in terms of the variables coded. This data analysis then helped to identify the level of preparation of teachers in terms of the training they have received and their involvement in planning and conducting lessons. Descriptive statistics was used to analyze the factors that change the perception of teachers regarding cooperative learning and their perspective regarding the implementation of cooperative learning. Afterwards, the variables that hinder the implementation of cooperative learning, along with a change in the perception of teachers regarding the benefits of cooperative learning were identified.

## RESULTS

### *Research Question One Part One: Teachers' Personal Information*

Table 1a: Demographics on gender, patience level, subject taught, language spoken in class, years of experience, use of cooperative learning, and average class size

Category	Subcategory	Number	Percentage
Gender	Male	10	38
	Female	16	61
Patience Level	5 (Low)	0	0.0
	4	4	15.4
	3	9	34.6
	2	7	26.9
Subject Taught	1 (Highest)	6	23.1
	English Language Arts	0	0.0
	Chemistry	0	0.0
	Science	26	100.0
Language(s) Spoken in Class	Arabic	0	0.0
	English	0	0
	Arabic	26	100.0
Years of Experience	Both	0	0
	1-5	4	15.4
	6-10	2	7.7
	11-15	12	46.2
	16-20	3	11.5
	21-25	2	7.7
Use of Cooperative Learning	26-30	2	7.7
	Less than 4 years		19.2
	Less than 7 years, but more than 4 years		26.9
	Less than 10 years, but more than 7 years		19.2
Average Class Size	More than 10 years		34.6
	Less than 25	11	37.9
	Less than 35	10	34.48
	Less than 45	7	24.14
	More than 45	1	3.44

**Research Question One Part Two**

What is the extent to which teachers are aware of preparation in cooperative learning?

Table 1b: Extent of teachers' awareness of preparation in cooperative learning

Category	Subcategory	Number	Percentage
Training Received	Yes	22	84.6
	No	4	15.4
Importance of Training	Very Much	20	76.9
	Somewhat Important	5	19.2
	Unsure	1	3.8
	Somewhat Unimportant	0	0.0
	Little Importance	0	0.0
Kind of Training	Programs and Meetings	1	3.8
	Cooperative Learning	8	30.8
	Workshops	3	11.5
	Lectures	1	3.8
	Activity Theory	3	11.5
	Strategies of Teaching	2	7.7
	Training	8	30.8
Total		26	100
Clock Hours of Training	0-20	17	65.4
	21-40	8	30.8
	41-60	0	0.0
	61-80	0	0.0
	81-100	0	0.0
	101-120	0	0.0
	121-140	0	0.0
	141-160	1	3.8
Training Time	Summer Break	2	7.7
	School Year	24	92.3
Involvement in Planning Lessons	Yes	18	69.2
	No	0	0.0
Involving the Teaching of Lessons	Kind of	8	30.8
	Yes	16	61.5
	No	3	11.5
Reflection on What is Being Taught	Kind of	7	26.9
	Yes	23	88.5
	No	1	3.8
	Sometimes	2	7.7

Responses indicated that most of the participants were females, science teachers had moderate patience level and class size, spoke Arabic and had varying years of experience. Regarding the training received, majority responded that they had received the training and were aware of the importance of training in

cooperative learning use. Only a few of the teachers reported that they had attended workshops and lectures, while others responded that they had received training in cooperative learning. The survey result shows that almost 77% of teachers were aware of the importance of training, and they had received training regarding cooperative learning with varying amounts of clock hours. Most teachers had trainings fewer than forty hours while only one participant had more than 150 hours training. In the last part, majority of the participants responded positively regarding their participation in cooperative learning training, which may be in terms of their involvement in planning lessons, teaching lessons, or presenting a reflection on what is being taught. This section is closely linked with the purpose of this study because it investigates what factors must be considered while incorporating cooperative learning into classrooms. At this stage, more than 60% of participants responded that they knew the importance of cooperative learning and involvement of study in the process of planning and reflecting upon the learning outcomes.

### ***Research Question Two***

What is the professional perspective of teachers in KSA regarding the implementation of cooperative learning?

Table 2: Professional perspective of teachers

Professional perspective of teachers	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	N	%	N	%	N	%	N	%	N	%
Requires cooperation of each group member	0	0	0	0	2	7.7	14	53.8	10	38.5
Provides more opportunities for critical thinking	0	0	0	0	2	7.7	16	61.5	8	30.8
Work can be better organized	0	0	0	0	3	11.5	15	57.7	8	30.8
Students can achieve their goals	0	0	1	3.8	1	3.8	17	65.4	7	26.9
Develop a positive attitude among students	0	0	0	0	1	3.8	16	61.5	9	34.6
Students more responsible for their self-study	0	0	1	3.8	1	3.8	14	53.8	10	38.5
Students' participation gets improved	0	0	0	0	0	0	14	53.8	12	46.2
All students contribute and listen to each other	0	0	0	0	3	11.5	12	46.2	11	42.3
Time-consuming for teachers who are unfamiliar	0	0	4	15.4	5	19.2	12	46.2	5	19.2
Level of student engagement in the classroom improves	0	0	0	0	1	3.8	13	50	12	46.2

The result analysis of this section shows that all the teachers responded positively to the statements provided. The statements were about the influence of cooperative learning on different kinds of classroom activities for students and teachers. The data gathered from this portion of the survey suggests that cooperative learning has a positive influence on the learning of students and that teachers perceived this

as a positive impact. The results of the survey regarding this question show that more than 50% of the participants stated that they agree with the positive outcome of students while using cooperative learning. This question is related to our major goal of identifying the factors which may hinder the implementation of cooperative learning.

The results of this survey suggests that professionals believe that the implementation of cooperative learning, despite implementation barriers, will cause a positive change to the educational system. This section of the study highlighted time as a major barrier to the implementation of cooperative learning in classrooms. The barrier of time for preparation and planning is problematic for the teachers as well as the students. The level of engagement of students in cooperative learning also acts as a barrier to implementing this change in the educational system. According to the professional development model (Loucks-Horsley, 2003), it is important to consider the professional perspective of teachers while working on the implementation of cooperative learning. The model for professional development explained by Loucks-Horsley et al. (2003) has emphasized the involvement of teachers in implementing cooperative learning. There is a need to build a professional culture that will require the commitment on the level of all the teachers who are involved in cooperative learning implementation because a lack of their understanding and implementation knowledge will create problems and will be a barrier to the successful implementation of cooperative learning (Goos et al., 2007).

### *Research Question Three*

What is the perception of teachers regarding the benefits of the cooperative learning approach?

Table 3a: Factors influencing teachers' interest in cooperative learning

Factors influencing teacher's interest in cooperative learning	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	N	%	N	%	N	%	N	%	N	%
Enables the teacher to provide the right amount of time	0	0	0	0.0	1	3.8	19	73.1	6	23.1
Enables the teacher to help students to understand the contribution of each member.	0	0	0	0.0	3	11.5	15	57.7	8	30.8
To assist each student to understand that every member is responsible	0	0	2	7.7	5	19.2	12	46.2	7	26.9
Teachers work as facilitators to set the stage for learning	0	0	0	0.0	2	7.7	13	57.7	11	42.3
The teacher gives feedback to each group	0	0	0	0.0	2	7.7	15	57.7	9	34.6

Table 3b: Strategies implemented, allocated time and cooperative learning groups

Category	Subcategory	Number	Percentage	
Cooperative Learning Strategies Implemented in Classrooms	Three Step Interview Strategy	11	18.64	
	Number Heads Together Strategy	11	18.64	
	Think-Pair-Share Strategy	16	27.11	
	Jigsaw Strategy	9	15.25	
	Group Investigation Strategy	12	20.33	
	Best Strategy	Three Step Interview Strategy	8	18.18
		Number Heads Together Strategy	8	18.18
		Think-Pair-Share Strategy	10	22.72
		Jigsaw Strategy	7	15.90
		Group Investigation Strategy	11	25
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Class Time Allocated for Group Activities	Class Time	N	%	
	Whole class time	5	19.23	
	Half class times	7	26.92	
	15 minutes of class	14	53.84	
	Times per week	N	%	
	Once a week	10	38.46	
	2 times a week	7	26.92	
	3 times a week	9	34.61	
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Kind of Groups in Cooperative Learning	Kind of Groups	N	%	
	Instable group	4	10.81	
	Stable groups	19	51.35	
	Homogenous groups	9	24.32	
	Heterogenous groups	5	13.51	
<hr/>				
Groups that Improve Students Learning Outcomes	Kind of Groups	N	%	
	Instable group	5	14.28	
	Stable groups	16	45.71	
	Homogenous groups	10	28.57	
	Heterogenous groups	4	11.42	

Research question three summarizes the major factors influencing teachers' interest regarding cooperative learning. The survey results show that most teachers agree that cooperative learning brings positive change in their learning activities for students. Respondents were of the view that think-pair-share, and group investigation strategies are two of the best strategies which can be utilized in cooperative learning classrooms. The majority of the participants responded that they allocate 15-minutes of class time for such activities, and this is conducted only once a week. On the other hand, the second-highest number of the respondents reported that they use such activities three times a week in their classes. Additionally,

respondents were of the view that cooperative learning activities should be conducted in stable groups, which is the highest percentage of respondents. The third question of the survey is linked to the basic purpose of this research as it identified the factors that can improve the interest of teachers. Once teachers have developed their interest, then it becomes easy for policymakers to implement the change. The survey result indicates that more than 50% of participants agreed with the implementation of cooperative learning in their classrooms and the factors that bring positive change in the implementation of cooperative learning in classrooms. The data suggests that all teachers positively responded to the statements regarding the implementation of cooperative learning. About 73% of teachers opined that cooperative learning use in the classroom enables teachers to provide the right amount of time for the students; about 58% of teachers agreed that cooperative learning techniques help them to understand the behaviour of each member of the group. The respondents also suggested that cooperative learning is conducive to better cooperation among group members, as 47% of the participants agreed with it that it allows students to assist each other. In cooperative learning classrooms, teachers act as facilitators, and most of the participants, i.e., 46%, agreed with this statement. The data suggested that participants view think-pair-share as the best strategy for implementing cooperative learning. More than 27% of participant believes that the implementation of cooperative learning via the think-pair-share strategy will improve the academic outcomes for their students. Another strategy that they have identified as a best practice is the group investigation strategy which received a positive response rate of 25% of the participants.

## **DISCUSSION AND CONCLUSION**

Findings on the first research question indicates that teachers are not well prepared for the incorporation of cooperative learning into their classrooms. There is a lack of training for the participants which may be a possible barrier to implementing cooperative learning. This lack of training for teachers creates problems in their level of preparedness as they don't know the way in which they need to implement cooperative learning. A lack of positive attitude of teachers toward training is itself a barrier to implementing cooperative learning (Goos et al., 2007). A study by Williams (2017) shows that there is an influence of class size on implementing cooperative learning in the classrooms. Large-scale classrooms mean that the classes have more than 45 students in each room, but the survey result shows that more than 69% of the classes are more than 25 participants. This is a major barrier to the implementation of cooperative learning because when the size of the class is larger, it may hinder the involvement of students and teachers individually. Additionally, larger classes are inherently more difficult for the forging of student-teacher relationship.

The sub-questions under research question two were designed to gain insights into improvements of the skills of study participants while they use cooperative learning. Agashe (2004) reported that the interaction of people in cooperative learning groups will help them gain a high level of learning and critical thinking. Agashe declared that most of the respondents also agreed that the use of cooperative learning help students to work together on a common goal. There is a sense of interdependence that is created among the student's

wheel. This will help them to understand the demands and needs, and an element of respect is created among all of them (Buchs et al., 2017). Furthermore, majority of the participants recorded answers that align with the research that states that individuals gain positive influences through the experience of cooperative learning, which in turn has a positive impact on the skills development of students (Nwabueze & Igbinedion, 2013). The professional perspective of teachers regarding cooperative learning shows that they have enough level of preparation for the implementation of cooperative learning, which has made this process easy for them. It is important to consider the professional development model by Loucks-Horsley et al. (2003) and efforts should be made on the part of the teachers to streamline the process of implementing cooperative learning. Teachers must therefore be part of this change management process and should play an active role in implementing the change (Goos et al., 2007). Teachers further responded favourably to the think-pair-share activity. Think-pair-share is a strategy that is employed at every level of education and is widely known for its benefits to studies with higher levels of academic need. If teachers are concerned about the grouping of students with different academic levels, they might benefit from a review of the think-pair-share strategy as it related to student-to-student support.

The first section of the third research question consists of five sub-questions regarding the factors that will influence the teacher's use of cooperative learning in their classrooms. Majority of the teachers agreed with all the provided statements, which inquired about the time that teachers should give to students, the contribution of each group member, the assistance of teachers, the teacher acting as a facilitator, and the feedback system for the groups of cooperative learning. The existing literature shows that cooperative learning is the way that promotes regular feedback from learners and students because this will cause them to analyze the root cause and report something that is unpleasant for them while they work in the group (Emerson et al., 2016). The use of cooperative learning helps students to develop social skills while they work with each other, so they have to learn about different kind of conflicting situations and how to value the opinion of others (Akpolat, 2016; Buchs et al., 2017; Johnson & Johnson, 2014). It is the perception of teachers that cooperative mastering is undoubtedly regarded as an effective mastering practice. However, some enhancements in phrases of system availability and faculty management have to be reviewed to make cooperative mastering to be extra powerful.

## **RECOMMENDATIONS AND FUTURE WORKS**

It is recommended that future research should be done on the actions that may be taken for improving the implementation of cooperative learning. This research may act as an insight for future research and may guide future researchers to formulate studies on patterns that exist within schools trying to implement cooperative learning. The study of cooperative learning can be improved while including different kinds of subjects in which cooperative learning can be implemented with varying degrees of teacher training. It is recommendation to implement the major changes in the policy framework based on the implications of this study on cooperative learning. One policy adjustment that needs to be made is shifting cooperative learning from an optional instruction strategy to a compulsory strategy for teachers. It is also



recommendation that school administrators take a lead in implementing cooperative learning. The implementation of cooperative learning needs to be monitored by administrators who can act as site level instruction coaches for the teaching staff. This study will act as the starting point for future research because it has created a pathway and led to a foundation that is based on the implementation of cooperative learning in classrooms. The level of preparedness of teachers gives an insight into the work that is further required. Moreover, this kind of research can be utilized by policymakers to start the change in already implemented policies and systems. The policy framework will address these barriers and will help in implementing the solutions that will help teachers in facing these barriers and implement cooperative learning.

## DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author(s).

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