ORIGINAL ARTICLE

Cooperative Learning in High Schools: Practices, Benefits and Challenges in Focus

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Abstract

The main purpose of this research was to examine the practices, benefits and challenges of cooperative learning in high schools of Yeka Sub-city, Addis Ababa. Descriptive survey design was used, and data were collected from 263 participants who were recruited using simple random-lottery sampling technique by using questionnaire. Quantitative data were analyzed using percentage, mean, standard deviation and independent sample t-test whereas content analysis was employed to analyze the qualitative data which were collected using an open-ended questionnaire. The result of the study showed that the response of both teachers' and students' towards the practice of cooperative learning were concentrated on the middle value of the scale of measurement. That is, respondents often rate 'unable to decide' about the practice of cooperative learning in relation to its basic elements. But, their responses were far below the center of the scale on group processing element. On the other hand, teachers were significantly higher than students on group processing, and on the role of teachers in cooperative learning implementation. Regarding the perceived benefits of cooperative learning, the responses of both teachers and students showed that they were positioned around the midpoint of the scale. That means, they were not sure whether to agree or not to agree about the academic, social and psychological benefits of cooperative learning for students. Concerning demographic variables, female teachers scored significantly greater mean than male counter parts in responding to the practice of cooperative learning as per its basic elements, and on the role of teachers in facilitating the process. In addition, statistically significant difference was found between grade 11 and grade 12 students where the latter group of students scored better acknowledged the involvement of teachers in cooperative learning practices. Uncomfortable time schedule; lack of interest and motivation and lack of awareness about the importance of cooperative learning were identified as the major challenges which affect i the practice of cooperative learning. The researchers recommended that preparing awareness raising training and discussion forums for both teachers and students and integrating the program as part of the regular class are salient for effective implementation of cooperative learning.

Keywords: benefits, challenges, cooperative learning, elements, practices

Introduction

In the current time, there appear to be an increasing conformity among scholars about the transformation in instructional approach from more of teacher-centered to student-centered. Cooperative learning is one of the major learner-focused instructional methods that get the attention of many professionals. Hence, it is considered as an effective teaching and learning strategy (Jones &Jones, 2008), which is 'supported theory, research and practice in education' (Johnson, Johnson & Stanne, 2000, p.1).

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Different scholars defined cooperative learning differently from their own subject matter point of view, but in almost similar ways they agreed on it as it is a teaching approach which is conducted in small teams each students with various talents, abilities and backgrounds students are active and highly interdependent and responsible for their learning and teachers play facilitation role using a variety of learning activities to improve students understanding of a subject to accomplish their shared goal. It is basically build on Paget's and Vygotsky constructivist theories of learning (Musingafi & Rugonye, 2014; Roustaee, Pourrajab, Kasmaienezhadfard & Taleblo, 2015) which views that students are active, collaborator, constructor of knowledge and self-monitoring whereas teachers act as supporter, facilitator, observer, change agent, adviser and feedback provider (Hoots, 2002).

According to different evidences, cooperative learning has multiple advantages for promoting students' learning outcomes including on their academic, psychological and social domains (Akhtaret al., 2012; Gillies& Boyle, 2010; Muhammed, 2014; Tran, 2013; Zakaria, Solfitri, Daud&Abidin, 2013Since it builds higher-level critical thinking and reasoning skills, increases academic achievement, promotes appreciation for diversity, enhances team skills, self-esteem, self-confidence, self-direction and communication skills (Bezabih & Arega, 2019; Hoots, 2002).In addition, it promotes values such as: honesty, cooperation, mutual respect, responsibility and tolerance. In the same way, it develops self-confidence; more positive attitudes about subject areas, enhances deep learning of materials, motivate students to learn and to achieve better grades (Slavin as cited in Wang, 2009; Zakaria et al., 2013). The finding of a study which was conducted in Haramaya University also revealed that cooperative learning is used to improve the academic achievement and social skills of students (Muhammed, 2014).

In view of the multiple advantages of cooperative learning, there is a strong interest to use it (Tsay & Brady, 2010) and has increasingly become a popular form of instruction delivery in academic institutions Roger & Johnson, 2009). Similarly, it has also received an increased attention from researcher groups, and it becomes a known approach of instruction in different educational institutions of Ethiopia in recent years. However, the implementers (both teachers and students) seem not accepting the approach. This is because much work was not done on the awareness creating to the implementers. In addition, there is a dearth of research which aims to investigate the advantages of cooperative learning in high schools. Thus, conducting research on such issue is a vital and timely to cast new light on it, to and provide necessary input for intervention. Therefore, this research sought to examine the practices, benefits and challenges of cooperative learning in two high schools of Yeka Sub-city which have high student accepting capacities. Hence, throughout the research process, efforts were invested to:

- Examine the level of cooperative learning practices in schools as per its basic elements.
- Investigate teachers' and students' perception about the benefits of cooperative leaning.
- Examine whether there is significant difference in perception between teachers and students about cooperative learning practices and its beneficial effects.
- Look at whether there are or not significant differences on cooperative learning practices, perceived beneficial effects and roles of teachers across some demographic variables (sex, educational level and field of study).
- Identify the major challenges which affect the practice of cooperative learning in schools.
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Contribution of the Research: this research has immense contributions for teachers, students, administrators and researchers. It helps teachers and students to be better familiar with cooperative learning, its basic elements or considerations, benefits and the status of its practices in the above mentioned schools. Thus, it can help both teachers and students to modify the trend of instructional approach. Furthermore, the finding of this research provides necessary information for school administrators concerning the gaps that need action to be filled in implementing cooperative learning effectively. It is also very helpful to initiate future local researchers to do detail similar studies since the current study can shade light on the issue of cooperative learning.

Literature Review

Elements Assuring the Practice of Cooperative Learning

Johnson, Johnson and Smith identified five essential elements of cooperative learning (as cited in Jones & Jones, 2008).These are the major components that should be visible in the classroom during the implementation of cooperative learning.

Positive Interdependence: **-** it shows that in effective cooperative lesson, students should believe that " they sink or swim together" (Roger & Johnson, 2009, p.16). They should believe that every team members dependent on each other and have complementary roles in which their joint participation have mutual benefits to the members. Positive interdependence demands the full participation of all team members to set common learning goals, share roles and responsibilities(Johnson, Johnson & Smith as cited in Jones & Jones, 2008, Roger & Johnson, 2009). Each member's effort and unique contribution has indispensable role for group success, they cannot succeed unless their group mates do(Adams, 2013; Roger & Johnson, 2009).

Face to Face Promotive Interaction:- this is characterized as team members seat face-to-face and communicate verbally and non-verbally to discuss, ask questions, teach what they know to teammates and support each other in the completion of the assigned learning task or material(Adams, 2013; Jones & Jones, 2008). Team members promote each other's success by providing appropriate assistance, encouragement and feedback to each other's efforts achieve the goal (Adams, 2013; Iyer, 2013; Johnson & Johnson, 1998a).

Individual Accountability: -this refers the responsibility of each student for learning the assigned task (Iyer, 2013) that ensures the fair distribution of the workload (Johnson & Johnson, 1998a). It exists when group members feel concerned to do their share of the work that contributes to the group's success (Adams, 2013; Johnson & Johnson, 1998a). Every member student in cooperative learning is responsible for learning the material and also helping the other members of the team until all members successfully understand and complete the assignment (Musingafi & Rugonye, 2014). Each member of a team is answerable for helping other members to learn, share a common fate, draw on each other's strengths, and assist each other in completing a task, and feel proud for group success (Akhtar et al., 2012).

Interpersonal Skills: -these are interactive skills of the group members necessary to learn effectively with others (Iyer, 2013). This entails the importance of teaching social skills such as how to communicate, lead, manage conflict, build trust, and make effective decisions (Adams, 2013; Johnson & Johnson, 1998a).

Group Processing:- it indicates the ability of the group members to monitor and reflect on how well they are functioning in cooperative learning process to make teams effective (Jones & Jones, 2008). This urges students to evaluate group members' strengths and weaknesses in terms of collaboration, defining the problem, and overall accomplishments (Adams, 2013); to identify helpful and unhelpful members' actions and make decisions about what actions to continue or change (Roger & Johnson, 2009). Teachers' role in the implementation of cooperative learning is facilitation and providing guidance to students on how to achieve educational objectives (Zhang as cited in Tran, 2013).

The review of some local studies conducted in different parts of the Ethiopia among higher education institutions and high schools similarly shows that the practice of cooperative learning is found at the minimal level. For instance a couple of research conducted at Wollo University (Bezabih & Arega, 2019) and Arsi University (Birhanu, 2019) similarly revealed that the implementation of cooperative learning was not satisfactory. The other research held by Anwar (2017) in schools having grade 11 and grade 12 students indicated moderate performance of cooperative learning. These studies commonly evidenced that teachers were not effectively play their roles in facilitating, controlling, heterogeneous grouping, and summarizing the lessons. Chemere and Ashebir (2019) also indicated that teachers were unable to share tasks and responsibilities equally to the group members and show procedures on how to perform the team activities.

Benefits of Cooperative Learning

Research evidences have generally indicated that effective implementation of cooperative learning benefits students in academic, social and psychological domains of development (Jones & Jones, 2008; Musingafi & Rugonye, 2014; Roger & Johnson, 2009)

Academic Benefit:- the integration of cooperative learning as an instruction strategy stimulate students' critical thinking (Li & Lam, 2013), problem solving and higher level of reasoning (Johnson & Johnson, 1999; Roger & Johnson, 2009), and promote innovation and creativity (Bayat, 2004). It aids learners to have deeper understanding of the material (Musingafi & Rugonye, 2014) in turn produces higher academic achievement and greater productivity (Gull & Shehzad, 2015; Jones & Jones, 2008; Li & Lam, 2013; Musingafi & Rugonye, 2014; Roger & Johnson, 2009; Zakaria et al., 2013). Students who taught through cooperative learning scored significantly higher on achievement and knowledge retention than those who taught in lecture-based teaching (Tran, 2014).

Social Benefit: - cooperative learning activities develop interpersonal skills of students (Li & Lam, 2013; Musingafi & Rugonye, 2014). That is, it enhances constructive relationships with peers and teachers, interpersonal communications, caring for each other, and conflict management skills (Iyer, 2013; Li & Lam, 2013; Musingafi & Rugonye, 2014; Roger & Johnson, 2009; Zakaria et al., 2013). Students learn leadership and good decision skills, trust building and hurt feelings repairing mechanisms, and understanding other's perspectives (Johnson & Johnson, 1999).

Psychological Benefit: - Students who learned through cooperative learning are psychologically healthier (high self-esteem) than do learners in traditional classes (Li & Lam, 2013; Musingafi & Rugonye, 2014). It enhances students' self-confidence and motivation (Adams, 2013; Zakaria, et al., 2013), acceptance by others (Roger & Johnson, 2009), positive attitudes toward learning and self-efficacy (Johnson & Johnson as cited in Musingafi & Rugonye, 2014), ego-strength, autonomy, resilience and ability to cope with adversity including stress (Johnson & Johnson, 1999).
However, cooperative learning may also potential negative outcomes if there is the

formation of dysfunctional groups (Divaharan & Atputhasamy, 2002).A local research conducted in preparatory schools accommodating grade 11 and grade 12 students in East Hararge Zone revealed that the perception of both teachers and students towards the benefits of cooperative learning was neither positive nor negative (Anwar, 2017).

Demographic Factors and Cooperative Learning

There are contradictory research findings regarding gender difference in cooperative learning effects. For instance, one study revealed the absence of statistically significant gender difference in course grades (Yusuf, 2014). But, another researcher indicated that male students achieved significantly higher than female students due to the use of cooperative learning (Njoroge & Githua, 2013). On the contrary, cooperative learning created significant gender difference in achievement with male students have higher than females (Olson, 2002). Regarding the teachers' gender, female teachers practice cooperative learning more than male teachers (Roustaee et al., 2015). As to these researchers, teachers' level of education was not significantly correlated with cooperative learning activities.

Challenges of Cooperative Learning Practices

There are several challenges affecting the effective implementation of cooperative learning. Difficulty of controlling the classroom and teachers and students believe that cooperative learning takes too much time (Musingafi & Rugonye, 2014; Zakaria et al., 2013).Work load on teachers to prepare additional materials; teacher' fear of losing content coverage; lack of trust in students to acquire knowledge by themselves; lack of familiarity with cooperative learning methods; and students lack of skills to work in groups are other challenges (Zakaria et al., 2013).

Another researcher identified that lack of awareness and motivation, shortage of instructional materials and clear guidelines were the major challenges hampered cooperative learning (Divaharan & Atputhasamy, 2002). As to these researchers instructors reported that lack of students' motivation to work in group, and poor English language abilities and dominance of some group members over the other are the major problems whereas, students showed that shortage of time and lack of timely feedback were problems hindering the practice of cooperative learning.

Moreover, lack of awareness about cooperative learning, shortage of reference materials, insufficient support and, teachers' unwillingness to follow-up the practice of cooperative learning, unequal sharing of work among team members, poor coordination of team members, carelessness and less accountability of students, absence of clear procedure for monitoring group work, large group size, uncomfortable seating arrangement and unfair assessment result for group work were also other problems affecting the implementation of cooperative learning.

In similar vein, local research evidences revealed that lack of awareness and experience, lack of interest and motivation to work in groups, domination of higher achievers, relating cooperative learning with politics and poor interpersonal and communication skills rated as the major challenges hindering implementation cooperative learning (Bezabih & Arega, 2019; Chemere & Ashebir, 2019).

Theoretical and Conceptual Framework

Cooperative learning fundamentally developed on constructivism viewpoints of Paget and Vygotsky (Roustaee et al., 2015). Both scholars advocate that learners can construct their

understanding if they get favorable opportunities for interaction from their teachers or guiders. They promote learner-centered active learning approaches in teaching students, where cooperative learning highly featured. Thus, the proposed research is framed under these theoretical views since cooperative learning requires students to actively interact each other in order to construct their knowledge, skills and attitude. Taking this into consideration, the current research conceptually framed that the proper implementation of cooperative learning assured through the existence of basic elements in the practice that requires active engagement of students. If this is so, students cultivate academic, social and psychological benefits. However, the process may be challenged by factors related to students, teachers, schools and families.

Methods

Study Area: Yeka sub-city is one of the eleven sub-cities of Addis Ababa. The research was under taken in two big high schools with large student intake capacity in the sub-city. The reason behind selecting these schools as a research sites was due to the researcher's close observation, and the researchers access to hear teachers and students' complain about cooperative learning implementation in the schools.

Design: Descriptive survey design was used to address the stated objectives. Quantitative data were collected to achieve the first four objectives which are targeting to investigate practices, perceived benefits and differences among participants in relation to these variables. Besides, quantitative data were collected using an open-ended question to deal with the challenges of cooperative leaning implementation.

Population: The study considers grade 11 and grade 12 teachers and students. The basic reason to include these grades was due to longer years of experiences in using cooperative learning so that they could have better understanding to provide data about the program. According to the first semester report of schools, these schools accommodated a total number of 156 teachers and 3422 students in grade 11 and grade 12. Table 1 below showed that the number of male teachers were greater than the number of female teachers. However, the total numbers of male students were smaller than the total number of female students. Hence, all the population of teachers and students during the academic year of these schools was target population from which the samples were drawn for this research (see Table 1).

Samples and Sampling Technique: As it can be seen in Table 1 below, the participants of the study were 263 (52 teachers and 211 students). Teacher participants were selected through simple random-lottery method. With regard to student participants, from a total of four sections; two sections from each school (one from each grade level) were selected through simple random sampling technique-lottery method.

Table 1: Profile of the Participants

Category		Male	Female	Total Population	Total Sample	
					Male	Female
Teachers		122	34	156	44	8
Students	Grade 11	711	932	1643	64	147
	Grade 12	645	978	1623		
Gross Total				3422	263	

Instrument: Questionnaire was used to collect relevant data about the problem under investigation. An English version questionnaire was developed after thoroughly review of different relevant literatures in the area. The questionnaire was composed of 38 items which were rating on five point Likert scales type with responses ranging from 1=strongly disagree to 5=strongly agree. Out of the total 38 items, 15 items of the instrument were used to measure the benefits of cooperative learning including academic, social and psychological benefits with sub-scales in which five items were allotted for each.

On the other hand, 18 items were concentrated on the practice of cooperative learning having five sub-scales including positive interdependence (five items), face-to-face promotive interaction (three items), individual accountability (three items), interpersonal skills (four items) and group processing/reflection (three items). The rest five items were prepared to collect data about the roles of teachers in the practice of cooperative learning. Furthermore, one major open-ended question which has specific objective was also included to request participants to explain the major challenges of cooperative learning.

To improve the qualities of the instrument, two doctoral candidates were invited to evaluate its validity at face value. Based on the valuable comments which were given by these experts, some items of the instrument were edited for the final version of data collection. In addition, factor loading was calculated to group items based on their sub-scales.

Moreover, before the instrument was used in the actual investigation, pilot test was conducted to 30 participants who were learning in similar level schools which are located in other sub-city. Besides, Cronbach Alpha was calculated in order to check the reliability coefficients of the instrument. The result of the calculation revealed that the reliability coefficient of items on the practice of cooperative learning was .93, teachers' role was .85 and the perceived benefit of cooperative learning was .96.

A total of 280 questionnaires were distributed to both teachers and students in the main study. Of these 269 were returned to the researcher after being filled by the participants. This entails that the rate of questionnaire return was 96.07 percent. Again, out of the collected questionnaires, six were excluded from scoring due to escaping of items and double ratings. Therefore, the presentation, analysis and interpretation of data done in this part of the research were made on questionnaires of 263 participants.

Data Collection Procedure: First, the researcher obtained verbal informed consent from the study participants. Then, the questionnaire was distributed to the participants in person with the assistance of two teachers. Next, the questionnaires were collected and further checked, and the questionnaires which were not correctly filled filtered and excluded. Finally, negatively stated items were reversed and scored.

Data Analyses: Percentage, mean and standard deviation were used to analyze the quantitative data, and to describe the characteristics of the participants. Likewise, the independent sample t-test was employed to see whether there were significant differences between teachers and students about the practices and perceived benefits of cooperative learning. On the other hand, content analysis was used to analyze the qualitative data collected through open-ended questions.

Results

Demographic Characteristics of Participants: Frequency and percentage were used to present the specific personal information of the participants (see Table 2).

Table 2: Composition of Study Participants

Variable	Category	Teachers	Students
		F(%)	*F*(%)
Sex	Male	44(84.60)	64(30.30)
	Female	8(15.40)	147(69.70)
Average age		31.98	17.72
Educational level	First degree	40(76.90)	-
	Second degree	12(23.10)	-
	Grade 11	-	102(48.30)
	Grade 12	-	109(51.70)
Area of study	Social Science	27(51.90)	77(36.50)
	Natural Science	25(48.10)	134(63.50)
Average years of teaching experiences		10.27	-

Table 2 above revealed that among the total number of teacher participants (n=52), the majority 44(84.6%) of the respondents were males whereas 8 (15.40%) were females. Regarding student participants, more than double number of the participants167 (69.70%) were females while the remaining 64 (30.3%) were males. The mean age of teacher participants was 31.98 (SD=6.27) years whereas the mean age of student respondents was 17.72 (SD=1.04) years.

Concerning educational level of the respondents, most of the teachers 40(76.90%) were first degree holders, and the rest 12(23.10%) had second degree. On the same variable, student participants constituted of 102(48.30%) and 109(51.70%) grade 11 and grade 12 respectively. In addition, of the total teacher participants, 27(51.90%) were from social science fields including languages while the rest 25(28.10%) were from natural and computational science fields. Similarly, 134(63.50%) and 77(36.50%) of students were attending natural and social sciences respectively. Relating to teaching experience, participant teachers had 10.27 (SD=7.49) average year of teaching experiences.

Cooperative Learning Practices:- As it was mentioned in the methods section, the items of the instrument were rated on five levels which were ranging from 1= strongly disagree to 5= strongly agree. Hence, the analysis and interpretation of the level of cooperative learning practices were made by comparing the mean values with the maximum expected scores on the scale (see Table 3).

Table 3: Cooperative Learning Practices across the Basic Elements (Teachers, n=52; students, n= 211)

Scales/Components	Category	*M*	*SD*	Maximum Score on the Scale
Positive interdependence	Teachers	12.52	4.28	25
	Students	12.11	4.43	
Face-to-face promotive interaction	Teachers	7.60	2.70	15
	Students	7.60	2.92	
Individual accountability	Teachers	8.21	1.88	15
	Students	8.51	2.08	
Interpersonal skills	Teachers	11.19	2.28	20
	Students	11.44	3.43	
Group processing (Reflection)	Teachers	7.31	2.83	20
	Students	6.24	2.57	
Overall elements	Teachers	46.83	11.65	90
	Students	45.89	11.47	
Teachers' roles	Teachers	14.02	5.06	25
	Students	11.27	4.76	

As it can be seen in Table 3 above, the mean scores of teacher and student participants were almost equal, and they are placed in the middle of the scale on positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal skills and overall elements of cooperative learning practices. This is inferred from the analysis of, the respondent's answers which the majority of them rated the option "difficult to decide" on the scale. However, the mean values of group processing (reflection) component of cooperative learning were almost three times less than the maximum expected score on the scale which is closest to the second lowest level of the instrument. That is teacher and student respondents rated "disagree" most frequently than other options. With regard to the role of teachers in cooperative learning practices, the mean score of teachers' responses were relatively greater and nearest to the mid-point on the scale than students' responses which the mean scores were closest to the second level on the scale.

Table 4: Differences between Teachers' and Students' Responses on Cooperative Learning Practices

Scales/components	Teachers (*n*=52)		Students (*n*=211)		*df*	*t*
	M	*SD*	*M*	*SD*		
Positive interdependence	12.52	4.28	12.11	4.43	261	.60
Face-to-face promotive interaction	7.60	2.70	7.60	2.92	261	.00
Individual accountability	8.21	1.88	8.51	2.08	261	-1.20
Interpersonal skills	11.19	2.28	11.44	3.43	261	-1.02
Group processing (Reflection)	7.31	2.83	6.24	2.57	261	2.62*
Overall elements	46.83	11.65	45.89	11.47	261	.20
Teachers' roles	14.02	5.06	11.27	4.76	261	3.55*

*p<0.05

In order to see whether there is or not significant mean differences between teachers and students in relation to the level of cooperative learning practices, independent sample t-tests were conducted.

Evidences which are depicted from Table 4 above shows the presence of statistically significant difference between teachers and students only on group processing, and on the roles of teachers' in the practice of cooperative learning. This means teachers had scored significantly greater mean value (M = 7.31, SD = 2.83) than students (M = 6.24, SD = 2.57) on group processing (t (261) = 2.62, df = 261, p<0.05). Similarly, the mean score of teachers was significantly greater (M = 14.02, SD = 5.02) than the mean score of students (M = 11.27, SD = 4.76) on the roles of teachers in the practice of cooperative learning (t(261)=3.55, df=261, p<0.05).

Perceived Benefits of Cooperative Learning for Students

The items which focus on addressing academic, social and psychological benefits of cooperative learning for students were rated on five point scales where 1=strongly disagree and 5=strongly agree (see Table 5 below).

Table 5: Perceived Benefits of Cooperative Learning (Teachers, n=52; Students, n=211)

Sub-scales	Category	*M*	*SD*	Maximum Score on the Scale
Academic benefit	Teachers	12.50	5.07	25
	Students	11.43	3.99	
Social benefit	Teachers	13.77	5.14	25
	Students	13.82	5.31	
Psychological benefit	Teachers	12.12	4.70	25
	Students	11.48	4.37	
Overall benefit	Teachers	38.38	14.15	75
	Students	36.73	11.81	

As shown in table 5 above, the mean scores of both teachers and students' were located very close to the mid-point of the scale on all of the sub-scales measuring the benefits of cooperative learning for students. This is because the majority of the teachers and students rated the option "difficult to decide" many times than other alternatives.

However, the independent t-test results which are shown in Table 6 below revealed that there was no significant mean difference between teachers and students about the benefits of cooperative learning for students on academic, social and psychological dimensions, and on its overall benefits.

Table 6: Differences between Teachers and Students on the Benefits of Cooperative Learning

Variables	Teachers (n=52)		Students (n=211)		*df*	*t*
	M	*SD*	*M*	*SD*		
Academic benefit	12.50	5.07	11.43	3.99	261	1.64
Social benefit	13.77	5.14	13.82	5.31	261	-.06
Psychological benefit	12.12	4.70	11.48	4.37	261	.92
Overall benefit	38.38	14.15	36.73	11.81	261	.87

P > 0.05

Cooperative Learning across Demographic Variables

Regarding to sex, male teachers scored significantly less mean on responses which are related to the practices of cooperative learning as per the five basic elements than female teachers (t (50) = -2.33, p < 0.05). Similarly, statistically significant mean difference was observed between male and female teachers' responses on the roles they play in facilitating cooperative learning in their respective schools (t (50) = -2.02, p < 0.05) where female teachers have greater mean score than males. However, significant difference was not scored between male and female teachers about the benefit of implementing cooperative learning for students.

Table 7: Teachers' responses on their Cooperative Learning Practices, Roles and Benefits by Demographic Variables (n= 52)

Variable Category		Cooperative Learning Practices as per the five Elements			Teachers' Role in Cooperative Learning Practices			Benefits of Cooperative Learning for Students		
		M	*SD*	*t*	*M*	*SD*	*t*	*M*	*SD*	*t*
Sex	Male (n=44)	44.39	14.67	-2.33*	13.43	5.27	-2.02*	36.89	14.35	-1.83
	Female (n=8)	57.00	9.90		17.25	1.49		46.62	10.07	
Educational level	First degree (n=40)	46.56	15.56	.18	13.90	5.08	-.51	37.54	13.91	-.78
	Second degree (n=12)	45.67	12.80		14.75	5.24		41.25	15.74	
Field	Social Science (n=27)	44.41	18.05	-.98	13.04	5.52	-1.47	37.70	16.77	-.36
	Natural Science (n=25)	48.40	9.86		15.08	4.39		39.12	10.91	

*p<0.05

Likewise, though the mean values of those teachers who have second degrees, and who are teaching in natural science fields scored greater than the mean values of those teachers who are first degree holders, and who are teaching in social science fields on the practice of cooperative learning as per the major components, the roles of teachers in the practice and its multidimensional benefits for students, the differences were not statistically significant.

Table 8: Students' Responses on Cooperative Learning Practices, Teachers' Roles and on the Benefits across Demographic Variables (n= 211)

Variable Category		Cooperative Learning Practices as per the five Elements			Teachers' Role in Cooperative Learning Practices			Benefits of Cooperative Learning for Students		
		M	*SD*	*t*	*M*	*SD*	*t*	*M*	*SD*	*t*
Sex	Male (n=64)	44.73	11.35	-.97	10.77	4.40	-1.02	36.38	13.19	-.29
	Female (n=147)	46.40	11.52		11.49	4.91		36.88	11.20	
Educational level	Grade 11 (n=102)	45.68	11.02	-.27	10.17	3.92	-3.37*	36.43	11.69	-.25
	Grade 12 (n=109)	46.10	11.92		12.30	5.24		37.01	11.97	
Field	Social Science (n=77)	46.55	10.34	.62	10.77	4.08	-1.24	37.96	11.75	1.15
	Natural Science (n=134)	45.52	12.09		11.56	5.10		36.02	11.83	

*$p < 0.05$

An analysis of data which is shown in Table 8 above revealed that female students, and students who are from grade 12 scored greater than male students and grade 11 students on the three comparison criterion including the implementation of cooperative learning

as per the five basic elements, the roles of teachers in the practice, and on its benefits for them. On the other hand, significant difference was observed between grade11 and grade 12 students on the teachers' roles in the practice of cooperative learning in their respective schools ($t(50) = -3.37$, $p < 0.05$) where grade 12 students possessed better acknowledged on the support of teachers in their practices. Concerning the type of field, the difference between social science and natural science students on cooperative learning practices, teachers' roles, and on its benefits for them was non-significant.

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Major Challenges of Cooperative Learning

Uncomfortable Time Schedule

Many teachers and students pinpointed that the consultation time which is allocated for cooperative learning is not comfortable for teachers and students since schools have two days per week which are scheduled for cooperative learning practices, and the time is at the end of the regular classes that is after 3:00 pm. In this time, teachers and students are much tired. Due to this reason, students do not concentrate on the tasks which are given from teachers. Besides, teachers are also not eager enough to give appropriate support and facilitate the practices.

In addition, some teacher and student participants indicated that since there are many students who are from families with very low income, they engage in other extra works to fulfill their basic needs, and to buy educational materials out of the regular classes. Therefore, this time is not suitable especially for these students who are from low income families. Moreover, few teacher and student respondents revealed that the allocated time to conduct cooperative learning is very short (30 minutes per day) to finish the specific tasks given for the students in relation to the lesson plan. On the contrary, some student participants presented their claims that the time which is allocated for cooperative learning practices is too long.

Lack of Interest and Motivation

Many respondents of both groups underscored that lack of students' interest and motivation is the big challenge to implement cooperative learning. As it is indicated by some teachers and many students, there is also lack of interest from the side of teachers to organize the activities, to follow up the practices, and to provide appropriate timely feedbacks to students. Similarly, large number of student respondents reported that most teachers are not serious in managing the practices rather they are negligent to closely support students when they have difficulties during the discussion. They simply give the worksheet for students, but they do not facilitate and supervise them to discuss focusing on the given issue. Hence, students lose their attention, and they engage in side talk and other misbehaviors in the class. "*…..as to my observation, cooperative learning is not effective to produce any positive effect on students since it is a time of talking than doing which is manifested in losing interest to engage them in the process*," (Stated by grade 12 female student).

Lack of Awareness about the Importance of Cooperative Learning

Many respondents from both teachers and students identified that lack of awareness about the nature and importance of cooperative learning is one of the main barriers for its implementation. Students have negative attitude, and they think that participating in cooperative learning is killing time.

In addition, according to some participants, students have also lack of trust and respect on one another, and there is also over domination of leaders. Most of the students do not take their responsibilities in cooperative learning activities, and much of the tasks are leave for one or two team members especially for the team leaders. In the same way, some teachers also revealed that teachers are not convinced about the importance of cooperative learning. Moreover, few teachers and students also linked cooperative learning with politics. The school administrators also try to enforce teachers and students to implement cooperative learning as an obligation than positively convincing them to do. Uncomfortable class seating arrangement due to fixed chairs and tables, large class sizes, lack of worksheets and absence of payment for teachers' extra time are other challenges to practice as responded by some respondents.

Discussion

According to robust literature, cooperative learning consisted of five major ingredients which included: positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal skills and group processing. The other minor ingredient which is additional to the major elements is teachers' roles. Hence, to say that there is true implementation of cooperative learning, team members should have: face-to-face seating, complementary roles, joint participation, common learning goals, fair share and distribution of the workload responsibility for learning the material, helping the other members, skills to communicate, lead, manage conflicts, build trust and make effective decisions (Adams, 2013; Akhtar et al., 2012; Johnson & Johnson, 1999; Jones & Jones, 2008).

In this regard, the analysis of data in the current study demonstrated that the mean score of majority of the respondents located around the midpoint of the scale on four elements of cooperative learning which included: positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal skills and overall elements of cooperative learning practices. They preferred the option "difficult to decide" on the scale. That is, most teacher and student participants were reserved to either agree or disagree about the practice of cooperative learning in their school in accordance with its core components. This implies that teachers and students were hesitant to decide whether there is or not positive interdependence (i.e. active participation, reliance on each other, mutual benefits and common goals, sharing of information and materials), face-to-face promotive interaction (exchange of views, face-to-face conversations, challenging each other's' ideas), individual accountability (responsible to contribute), and interpersonal skills (respect, constructive problem solving) in the implementation of cooperative learning. The presences of these key elements in the practice are under question. This finding is consistent with Anwar (2017) which reported that the average performance of cooperative learning. But it is partially deviating from Bezabih&Arega, 2019) and (Birhanu, 2019) who generally indicated the presence of minimal practice of cooperative learning in Universities which is manifested in passive engagement of both teachers and students to play their proper roles which compromises the active and interactive nature of cooperative learning as emerged it is from Vygotsky.

The findings in the present study also seem to contradict with the definitions of cooperative learning (Akhtar et al., 2012; Li & Lam, 2013). Similar finding was also recorded on the role of teachers in cooperative learning practices where both groups of participants were unable to decide on the presence of teachers' orientation to raise the awareness

of students about the program, continuous facilitation and follow-up of students in the practice, proper assessment and provision of timely feedbacks to students. This is not in agreement with Zhang (as cited inTran, 2013) that revealed that teachers should play active roles to facilitate and guide students in the implementation of cooperative learning. However, participants disagreed on the practice of cooperative learning in consideration with group processing. That is, students missed opportunities to set common goals together, continuously monitor and evaluate their progress, and provide feedback each other about their strengths and weaknesses. This finding contradicts with the requirements in the literature where in cooperative learning members of the team should identify helpful and unhelpful actions of the members, monitor their progress, reflect on their strengths and weaknesses and make decisions on future activities (Adams, 2013; Jones & Jones, 2008).

Although both teachers and students had difficulties to decide on the presence of group processing and the role of teachers in facilitating the implementation of cooperative learning, teacher participants had significantly scored greater mean than students. This indicated that teachers possessed better acknowledge on the practice of students' reflection, and teachers' facilitation in cooperative learning than students. This in turn showed that there is a gap between teachers and students to have common understanding on these issues. These contradictory findings concerning the implementation of cooperative learning as per its important elements may be due to the lack of familiarity of teachers and students with the core elements of the program.

Previous research findings consistently pinpointed that cooperative learning produces positive effects on students' cognitive, social and psychological dimensions of learning and development. It improves critical thinking, problem solving skills, creativity, academic achievement, communication skills, conflict management skills, leadership skills, good decisions skills, self-confidence, self-esteem, self-efficacy, motivation and attitudes toward learning and resilience (Adams, 2013; Akhtar et al., 2012; Gillies& Boyle, 2010; Jones & Jones, 2008; Li & Lam, 2013; Tran, 2013;Zakariaet al., 2013). However, both teacher and student participants of the current study were not able to agree or disagree on the academic, social and psychological benefits of cooperative learning. That is, the majority of the teachers and students were neutral to acknowledge the multiple benefits of cooperative learning for learners. This is congruent with Anwar (2017) who reported that students and teachers were neither positive nor negative to agree on the benefits of cooperative learning. Hence, the findings of the present research somehow deviated from the literature. This may be because of the gap on: the lack of awareness, follow-up and training which are helpful for the proper implementation of the program in order to cultivate its effects on students' learning and development.

One of the objectives of this research was to see the responses given by teachers and students on cooperative learning across their demographic characteristics such as: sex, educational level and field of study. The result of the study underscored that sex difference was observed from respondents responses on cooperative learning as per the five basic elements, and on the roles of teachers in facilitating the practice with female teachers scored greater mean than male teachers. This finding corresponds with the research which was conducted by Roustaee et al. (2015) where female teachers practice cooperative learning better than male teachers. This could be attributed to small sample size of female participant teachers that can be taken as one of the limitation of this research. However, female and male teachers did not differ in their responses on the benefits of cooperative learning for students. This seems that teachers do not recognize observable difference on students' learning due to the improper implementation of cooperative learning. This is because the time schedule for the program is not comfortable for teachers and students

since it is at the end of the regular class after they are very tired, and after they set their mind to go to their home.

On the other hand, there were no statistically significant mean difference across teachers' educational level (first degree or second degree) and field category (social or natural) in acknowledging the practice of cooperative learning as per the basic components, the roles of teachers in the practice, and on its benefits for the students. This is similar with recent research finding which underscored that teachers' education level was non-significantly correlated with cooperative learning activities (Roustaee et al., 2015).

Concerning student participants, significant sex differences were not recorded on the practice of cooperative learning as per the five basic elements and on its benefits for them. Consistent with this finding Olson (2002) pinpointed that cooperative learning did not create significant difference between male and female students in their course grades. Hence, the current research findings contradicts with Yusuf (2014), and Njoroge and Githua (2013) who indicated that the implementation of cooperative learning created significant difference between male and female students in their achievement. These contradictory findings may be attributed to the differences in research settings, resource availability, and on the level of awareness among practitioners towards cooperative learning.

Similarly, regarding field category of students, significant differences were not seen on cooperative learning practices, teachers' roles, and on its benefits for their learning. In contrast, in terms of their educational level, grade11students were significantly greater than grade 12 students in responding about teachers' roles in facilitating the practice of one-to-five-cooperative learning. The possible reason for this finding is that teachers may give much attention to grade 12 students since they are expected to be ready for national examination.

Similar to the previous evidences (eg. Bezabih & Arega, 2019;Chemere&Ashebir, 2019;Divaharan&Atputhasamy, 2002; Zakaria et al., 2013), the current research findings indicated that uncomfortable time schedule; lack of interest and motivation among teachers and students; and lack of awareness about the nature and importance of cooperative learning are the major challenges which hinder the implementation of cooperative learning. Moreover, uncomfortable class seating, large class sizes, lack of worksheets, absence of payment for teachers' extra time are also other additional challenges which affect the practice of cooperative learning. This implies that the problems reported before a decade and so are still prevalent.

Conclusions

Teachers and students are not sure to decide about the implementation of cooperative learning in relation to the basic elements. However, teachers possessed better knowledge on the existence of group processing and on the teachers' roles to play in the practice than students do.

Both teachers and students were doubtful to acknowledge the benefits of cooperative learning in promoting cognitive/academic, social and psychological aspects of students.

Female teachers were better in implementing cooperative learning as per the basic components, and they relatively facilitate the practice better than male teachers. However, teachers' educational level and the type of field of study do not guarantee the appropriate implementation of cooperative learning. That is, being a bachelor degree or master degree holder, or being a social science or natural science teacher does not significantly affect the practice of cooperative learning as per important elements, teachers' roles to play in the process and on their stand to its advantages for students.

Students' sex, educational level and field category does not affect their approval on the practice of cooperative learning in consideration with key components, and on its importance for their learning and development.

Uncomfortable time schedule, lack of teachers and students interest and motivation, and lack of awareness on the importance of cooperative learning are the major challenges in implementing cooperative learning in the schools. Students' seating arrangement, large class size, lack of resources like work sheets and absence of payment for teachers extra work hours are also the frustrating factors which affect its practice. Due to these problems, the program is not properly implemented in these schools so that it does not produce positive effects on students' learning and development. Hence, all these compromise the quality of education that schools strive to achieve.

Recommendations

There seems an increasing agreement that cooperative learning is the leading strategy of practicing student-centered and active learning pedagogy in order to secure the quality of education. Hence, interventions considering administrators, teachers and students are highly important. In order to go extra miles and effectively implement cooperative learning, teachers, students and school administrators should be on the same page in underscoring the importance of the program.

For Administrators: effective implementation of cooperative learning should be primarily viewed in relation to the knowledge and skills of teachers. In this regard, the schools should organize different short term trainings, workshops and discussion forums which center on the basic pillars, how it can be practiced, the potential benefits and the ways to handle the possible challenges of cooperative learning. These activities can break the negative attitudes on cooperative learning, and they can equip teachers with the necessary knowledge and skills that are helpful for effective implementation of the program. In addition, the school administrators together with teachers should decide to integrate cooperative learning practices as part of the regular class. School administrators should also hear the voice of teachers and students. They should have positive communication with teachers in order to know about the teachers' concerns and offer timely support as necessary. Fixed seats and large class sizes hinder the mobility of students and teachers in cooperative learning practices. Hence, for effective implementation of cooperative learning in the long run, schools in collaboration with sub-city education bureaus and the community should modify the classroom seating arrangements and minimize the class size. Doing all these, contributes for improving the quality of education.

For educators: Teachers should pay close attention, and they should open their mind to know about the what, how and the purposes of cooperative learning. They should be willing to practice this instructional approach in their classrooms. Regardless of the size

of the class, teachers should be committed to raise the awareness of students on the importance of cooperative learning, give clear instructions and explain how students work together, facilitate the process, properly assess and provide timely feedbacks for their team works.

For future researchers: Along with the important findings, the present research is limited in study site, sample size, groups of participants, variables and data collection instruments. Due to these limitations, it would be sensible to suggest for future researchers to do further intensive researches by considering wide research sites, more number and group of participants, additional variables such as teachers' training on cooperative learning using additional qualitative data collection instruments like interview and focus group discussion.

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