

Cooperative Learning as Active Learning in Yeka Sub-city Preparatory Schools: Practices, Benefits, Challenges and Implications for Quality Education

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Abstract

The study was conducted to examine the practices, benefits and challenges of one-to-five cooperative learning in preparatory schools of Yeka Sub-city, Addis Ababa. Descriptive survey design was used and data were collected through questionnaire from 263 participants recruited through simple random-lottery method. Quantitative data were analyzed using percentage, mean, standard deviation, and independent sample t-test whereas qualitative data were analyzed thematically. The result shows that both teachers and students were concentrated on the middle of the scale i.e. unable to decide the practice of one-to-five cooperative learning in relation to the basic elements including positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal skill, and the role of teachers' in the process. Teachers were significantly higher than students on group processing and the role of teachers in one-to-five cooperative learning implementation. Regarding the benefits of one-to-five cooperative learning, both teachers and students encountered difficulty to decide about the academic, social and psychological benefits of cooperative learning. Concerning demographic variables, female teachers scored significantly higher mean than male counter parts in responding about the practice of one-to-five cooperative learning as per the basic elements and the role of teachers in facilitating the process. In addition, statistically significant difference were found between grade 11 and grade 12 students where the latter group of students better acknowledged the involvement of teachers in one-to-five 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 affecting the practice of cooperative learning. This study suggests that preparing awareness raising training and discussion forums for 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, cooperative learning elements, practice

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I. 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^[1], which is ‘one of the most remarkable and fertile areas of theory, research, and practice in education’^[2].

Different scholars define cooperative learning in their point of view but in almost similar ways as a teaching approach conducted in small teams, each students with various talents, abilities and backgrounds, in which students are active and highly interdependent and responsible for their learning in which 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^[6,7,8], 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^[9].

Cooperative learning has multiple advantages for promoting students’ outcomes including academic, psychological and social domains^(1, 3, 9, 10, 11, 12, 13). Specifically, it builds higher-level thinking skills, increases achievement, promotes appreciation for diversity, enhances team skills and self-esteem, and self-direction^[9]; promotes values such as honesty, cooperation, mutual respect, responsibility, and tolerance; develops self-confidence; more positive attitudes toward subject areas, enhances deep learning of materials, motivate students to learn and achieve better grades^[13,14]. The finding of the study conducted in Haramaya University also revealed that cooperative learning is used to improve the academic achievement and social skills of students^[15].

In view of multiple advantages of cooperative learning, there is a strong movement to use^[16] and has increasingly become a popular form of instruction in academic institutions^[17]. It has also received an increased attention in the form of one-to-five groups and becomes a known approach of instruction in different educational institutions of Ethiopia in recent years. However, much work was not done and there is a dearth of research aims to investigate cooperative learning particularly in preparatory schools. Thus, conducting research on such issue is vital and timely to cast new light on and provide necessary input for intervention. Therefore, this research sought to examine the practices, benefits and challenges of one-to-five

cooperative learning in Yeka Sub-city Preparatory Schools. Hence, throughout the research process, efforts were invested to:

- Explore the status of one-to-five cooperative learning practices as per the basic elements of cooperative learning.
- Investigate the benefits of one-to-five cooperative learning for students.
- Examine whether there is significant difference between teachers and students about one-to-five cooperative learning practices and benefits.
- Look at whether there are significant differences across some demographic variables with regard to one-to-five cooperative learning practices, benefits and role of teachers.
- Identify the major challenges affecting the practice of one-to-five cooperative learning.

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 one-to-five cooperative learning basic elements or considerations, benefits and the status of its practice in their schools. Thus, together they can 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 fill in order to implement one-to-five 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 one-to-five cooperative learning.

II. Literature Review

Elements of Cooperative Learning: Johnson, Johnson and Smith identified five essential elements cooperative learning ^[1]

Positive Interdependence:- it shows that in effective cooperative lesson, students should believe that " they sink or swim together" ^[18]. 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 ^[18]. Each member's effort and unique contribution has indispensable role for group success, they cannot succeed unless their group mates do ^[18,19].

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^[1,19]. Team members promote each other's success by providing appropriate assistance; encouragement and feedback to each other's efforts achieve the goal^[18, 20, 21].

Individual Accountability: - this refers the responsibility of each student for learning the assigned task^[21] that ensures the fair distribution of the workload^[19]. It exists when group members feel concerned to do their share of the work that contributes to the group's success^[18, 20]. 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^[7]. 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^[3].

Interpersonal Skills: - these are interactive skills of the group members necessary to learn effectively with others^[21]. This entails the importance of teaching social skills such as how to communicate, lead, manage conflict, build trust, and make effective decision^[18,19,20,].

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^[1]. This urges students to evaluate group members' strengths and weaknesses in terms of collaboration, defining the problem, and overall accomplishments^[19]; to identify helpful and unhelpful members' actions and make decisions about what actions to continue or change^[18]. Teachers' role in the implementation of cooperative learning is facilitation and providing guidance to students on how to achieve educational objectives^[12].

Benefits of Cooperative Learning: Research evidences have generally indicated that effective implementation of cooperative learning benefits students in cognitive/academic, social and psychological domains of development^[1, 7, 18].

Cognitive/Academic Benefit:- the integration of cooperative learning as an instruction strategy stimulate students' critical thinking^[4], problem solving and higher level of reasoning^[18,20], and promote innovation and creativity^[6]. It aids learners to have deeper understanding of the material^[7] in turn produces higher academic achievement and greater productivity^[1, 4, 7, 13, 17, 18, 20]. Students who taught through cooperative learning scored significantly higher on achievement and knowledge retention than those who taught in lecture-based teaching^[12].

Social Benefit:- cooperative learning activities develop interpersonal skills of students^[4,7]. That is, it enhances constructive relationships with peers and teachers, interpersonal communications, caring for each other, and conflict management skills [4, 7, 13, 18, 22]. Students learn leadership and good decision skills, trust building and hurt feelings repairing mechanisms, and understanding other's perspectives^[20].

Psychological Benefit: - Students who learned through cooperative learning are psychologically healthier (high self-esteem) than learners do in traditional classes^[4, 7, 20]. It enhances students' self-confidence and motivation^[13, 19], acceptance by others^[18], positive attitudes toward learning and self-efficacy^[7], ego-strength, autonomy, resilience and ability to cope with adversity including stress^[20].

However, cooperative learning may also potential negative outcomes if there is the formation of dysfunctional groups^[16].

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^[23]. But, another researcher indicated that male students achieved significantly higher than female students due to the use of cooperative learning^[24]. On the contrary, cooperative learning created significant gender difference in achievement with male students have higher than females^[25]. Regarding the teachers' gender, female teachers practice cooperative learning more than male teachers^[8]. 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^[7,13]. 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^[13].

Another researcher identified that lack of awareness and motivation, shortage of instructional materials and clear guidelines were the major challenges hampered cooperative learning^[15]. As to this researcher 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.

III. Methods

Study Area: Yeka sub-city, where the research was conducted, has two preparatory schools,. The reason behind selecting these schools from the sub-city sites was due to researcher's nearness and easily accessibility to the place, and the researcher's familiarity with some members of the schools so that the researcher believed to get support from them during the data collection process. Moreover, the basic reason in considering only preparatory school teachers and students was their longer experiences in implementing one-to-five cooperative learning and their better understanding to provide data about the program.

Design: Descriptive survey design was used. And both quantitative and qualitative data were collected through closed-ended and open-ended questions.

Population: In 2008 E.C. these schools accommodated 156 teachers and 3266 students. The number of male teachers was higher than the number of female teachers but the total number of male students was smaller than the total number of female students and all of them were target populations from which the samples were drawn for the study (see Table 1).

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

Table 1: Profile of the Participants

Category		Kokebetsebah		Dejasmach Wondyirad		Total Population	Total Sample	
		Male	Female	Male	Female		Male	Female
Teachers		46	7	76	27	156	44	8
Students	Grade 11	183	323	528	609	1643	64	147
	Grade 12	200	355	445	623	1623		
Gross Total						3422	263	

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

Whereas, 18 items were concentrated on the practice of one-to-five 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 accountable to collect data about the roles of teachers in the practice of cooperative learning. One open-ended item was also included requesting participants to list the major challenges of cooperative learning.

Two doctoral candidates were invited to evaluate the instrument's validity at face value. Based on the valuable comments collected from these experts, items of the instrument were edited for the final version of data collection. In addition, factor loading were calculated to group items in relation to their sub-scales.

Moreover, before the instrument was used in the actual investigation, pilot test was conducted on 30 participants in similar schools of the other sub-city, followed by calculating Cronbach Alpha in order to check the reliability coefficients of the instrument. The result revealed that the reliability coefficient of items on the practice of cooperative learning was .93, teachers' role was .85 and the benefit of cooperative learning was .96.

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 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 describe the data while independent sample t-test was employed to see the significant differences between teachers and students about the practices and benefits of one-

to-five cooperative learning. The qualitative data collected through open-ended question were analyzed thematically integrated with the quantitative data.

IV. Results

A total of 280 questionnaires were distributed to teachers and students. Of these 269 were returned to the researcher after 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.

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

Table 2: Composition of Study Participants

Variable	Category	Teachers	Students
		F(%)	F(%)
Sex	Male	44(84.6)	64(30.3)
	Female	8(15.4)	147(69.7)
Average age		31.98	17.72
Educational level	First degree	40(76.9)	-
	Second degree	12(23.1)	-
	Grade 11	-	102(48.3)
	Grade 12	-	109(51.7)
Area of study	Social Science	27(51.9)	77(36.5)
	Natural Science	25(48.1)	134(63.5)
Average years of teaching experiences		10.27	-

According to Table 2, among the total number of teacher participants ($n=52$), the majority 44 (84.6%) of the respondents were males whereas 8 (15.4%) were females. Regarding students participants 167 (69.7%) were females and the remaining 64 (30.3%) were males. The mean age of teacher participants was 31.98 ($SD=6.27$) years while the mean age of student respondents was 17.72 ($SD=1.04$) years.

Concerning educational level of the respondents, most of the teachers 40 (76.9%) were first degree holders whereas the rest 12 (23.1%) had second degree. On the same variable, student participants constituted of 102 (48.3%) and 109 (51.7%) grade 11 and grade 12 respectively. Of the total teacher participants, 27 (51.9%) taught social science fields including languages and the rest 25 (28.1%) taught natural and computational science fields. Similarly, 134 (63.5%) and 77 (36.5%) of students were attending natural and social sciences respectively. Relating to

teaching experience, teachers had 10.27 ($SD=7.49$) average year of teaching experiences.

Cooperative Learning Practices: - As it was mentioned in the method section, every items of the instrument was rated on five levels ranging from 1= strongly disagree to 5= strongly agree. Hence, the analysis and interpretation of the level of one-to-five cooperative learning practice 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	Minimum	Maximum	<i>M</i>	<i>SD</i>	Maximum Expected Score on the Scale
Positive interdependence	Teachers	5.00	20.00	12.52	4.28	25
	Students	5.00	25.00	12.11	4.43	
Face-to-face promotive interaction	Teachers	3.00	12.00	7.60	2.70	15
	Students	3.00	15.00	7.60	2.92	
Individual accountability	Teachers	3.00	15.00	8.21	1.88	15
	Students	3.00	15.00	8.51	2.08	
Interpersonal skills	Teachers	7.00	16.00	11.19	2.28	20
	Students	4.00	20.00	11.44	3.43	
Group processing (Reflection)	Teachers	3.00	13.00	7.31	2.83	20
	Students	3.00	14.00	6.24	2.57	
Overall elements	Teachers	26.00	67.00	46.83	11.65	90
	Students	20.00	74.00	45.89	11.47	
Teachers' roles	Teachers	5.00	23.00	14.02	5.06	25
	Students	5.00	25.00	11.27	4.76	

As it can be seen in Table 3, the mean scores of teacher and student participants were almost equal and concentrated around 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, majority of the respondents rated the option “difficult to decide” on the scale. However, the mean values of group processing (reflection) component of one-to-five cooperative learning were almost three times below 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 one-to-five cooperative learning practices, the mean score of teachers’ response were relatively higher and nearest to the mid-point on the scale than students’ response whose mean scores were closest to the second level on the scale.

In order to see whether there is or not significant mean differences between teachers and students in relation to the level of one-to-five cooperative learning practices, independent sample t-test were conducted. Evidences depicted in Table 4 shows the presence of statistically significant difference between teachers and students only on group processing and the role of teachers’ in the practice of one-to-five cooperative learning. That is, teachers had significantly scored higher 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 higher ($M = 14.02$, $SD = 5.02$) than the mean value of students ($M = 11.27$, $SD = 4.76$) on the role of teachers in the practice of cooperative learning ($t(261) = 3.55$, $df = 261$, $p < 0.05$).

Table 4: Differences between Teachers’ and Students’ on One-to-five Cooperative Learning Practices * $p < 0.05$

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*

Benefits of Cooperative Learning for Students: The items addressing academic, social and psychological benefits of one-to-five cooperative learning were rated on five point scales where 1=strongly disagree and 5=strongly agree (see Table 5 below)

Table 5: Benefits of One-to-five Cooperative Learning (Teachers, n=52; Students, n=211)

Sub-scales	Category	Minimum	Maximum	<i>M</i>	<i>SD</i>	Expected Maximum Score on the Scale
Academic benefit	Teachers	5.00	25.00	12.50	5.07	25
	Students	5.00	22.00	11.43	3.99	
Social benefit	Teachers	5.00	25.00	13.77	5.14	25
	Students	5.00	23.00	13.82	5.31	
Psychological benefit	Teachers	5.00	22.00	12.12	4.70	25
	Students	5.00	24.00	11.48	4.37	
Overall benefit	Teachers	15.00	70.00	38.38	14.15	75
	Students	15.00	65.00	36.73	11.81	

The mean scores of both teachers and students in Table 5 were centered very close to the mid-point of the scale on all of the sub-scales measuring the benefits of one-to-five cooperative learning for students. That is, majority of the teachers and students rate the option “difficult to decide” many times than other alternatives.

However, the independent t-test results in Table 6 revealed that there were no significant mean difference between teachers and students about the benefits of one-to-five cooperative learning for students in relation to academic, social, and psychological dimensions and its overall benefits.

Table 6: Differences between Teachers’ and Students’ about the Benefits of One-to-five Cooperative Learning

Variables	Teachers (<i>n</i> =52)		Students (<i>n</i> =211)		<i>df</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
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 sex, male teachers scored significantly less mean on responses related to the practice 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 on roles they play in facilitating cooperative learning practice at their school ($t(50) = -2.02, p < 0.05$), female teachers having higher mean score than males. However, significant difference was not seen

between male and female teachers about the benefit of implementing cooperative learning for students.

Table 7: Teachers’ responses about One-to-five Cooperative Learning Practices, Teachers’ Role 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		
		<i>M</i>	<i>SD</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>t</i>
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 second degree holders and teaching natural science fields higher than the mean values of first degree holders and social science teachers across the practice of cooperative learning as per the major components, the role of teachers in the practice and its multidimensional benefits for students, the differences were not statistically significant.

Table 8: Students’ Responses about One-to-five Cooperative Learning Practices, Teachers’ Role and Benefits across Demographic Variables (n= 211) * $p < 0.05$

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	

An examination of Table 8 revealed that female students and students from grade 12 were scored more on the three comparison criterion including the implementation of cooperative learning as per the five basic elements, the role of teachers in the practice and its benefits for them. But significant difference was observed between grade11 and grade 12 students about teachers’ role in the practice of cooperative learning in their school ($t(50) = -3.37, p < 0.05$), with grade 12 students better acknowledged the support of teachers in their practice. Concerning the type of field, the difference between social science and natural science students on cooperative learning practice, teachers’ role and its benefits for them were non-significant.

Major Challenges of Cooperative Learning:

Uncomfortable Time Schedule: many teachers and students pinpointed that the consultation time allocated for one-to-five cooperative learning is not comfortable for teachers and students. Because schools have two days per week scheduled for cooperative learning practices at the end of the regular classes that is after 3:00 pm. In this time teachers and students are much

tiered, due to this reason students do not concentrate on the task given from teachers. 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 from families with very low income, they engage in other work activities to fulfill their basic needs and educational materials out of the regular classes, so this time is not suitable especially for these students. Moreover, few teacher and student respondents revealed that the allocated time to conduct one-to-five cooperative learning is very short (30 minutes per day), to finish the specific tasks given for the students in relation to the plan. On the contrary, some student participants presented that the time is too long for cooperative learning practices.

Lack of Interest and Motivation: Many respondents of both groups underscored that lack of students' interest and motivation is the big challenge to implement one-to-five 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 and follow up the practices, and provide appropriate timely feedback to students. Large number of student respondents reported that most teachers are not serious in managing the practice rather they are negligent to closely support students when they have difficulties during the discussion. Teachers 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 responsibility and engage in side talk and other misbehaviors in the class. “.....as to my observation, one-to-five cooperative learning did not effective to produce any positive effect on students since it is a time of talking than doing” (Stated by grade 12 female student).

Lack of Awareness about the Importance of Cooperative Learning: many respondents from teachers and students identified that lack of awareness about the nature and importance of one-to-five cooperative learning is one of the main barriers for its implementation. Students have negative attitude and they think that participating in one-to-five cooperative learning is killing time.

According to some participants, students have also lack of trust and respect one another and there is over domination of leaders. Most of the students do

not take responsibility in one-to-five cooperative learning activities, rather much of the tasks are leave for one or two team members especially for the team leader. Some teachers also revealed that teachers are not convinced about the importance of one-to-five cooperative learning. Few teachers and students also linked one-to-five cooperative learning with politics. The school administrators are also order teachers and students to implement one-to-five cooperative learning as an obligation than positively convincing them to do. Uncomfortable class seating arrangement due to fixed chairs and tables, large class size, lack of worksheets, absence of payment for teachers' extra time are other challenges of the practice cited by some respondents.

V. Discussion

According to robust literature, cooperative learning consisted of five major ingredients including positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal skills, and group processing, and one more additional important element; i.e. teachers' roles. Hence, to say 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 and helping the other members, and skills to communicate, lead, manage conflict, build trust, and make effective decisions^[1,3,18,19,20,22]. In this regard, the analysis of data in the current study demonstrated that the mean score of majority of the respondents centered around the midpoint of the scale on four elements of cooperative learning including 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 one-to-five 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 one-to-five

cooperative learning. The presences of these key elements in the practice are under question. The findings in the present study also seem to contradict with the definitions of cooperative learning ^[3, 4]. Similar finding was also recorded on the role of teachers in one-to-five cooperative learning practice, where both groups of participants were unable to decide about the presence of teachers' orientation to raise the awareness of students about the program, continuous facilitation and follow-up of students in the practice, and proper assessment and provision of timely feedback to students. This is not in agreement with Zhang as cited in ^[12], which revealed that teachers should play active role to facilitate and guide students in the implementation of cooperative learning.

However, participants disagreed about the practice of one-to-five 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 requirement 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 about future activities ^[1,18,19].

Although both teachers and students had difficulty to decide on the presence of group processing and the role of teachers in facilitating the implementation of one-to-five cooperative learning, teacher participants had significantly scored higher mean than students. That is, teachers better acknowledge the practice of students' reflection and teachers' facilitation in cooperative learning than students. This shows there is the gap between teachers and students to have common understanding about these issues. These contradictory findings concerning the implementation of one-to-five 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 produce positive effect 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^[1,4,9,10,12,13,15,17,18,20,22,]. However, both teacher and student participants of the current study were not able agree about the cognitive/academic, social and psychological benefits of one-to-five cooperative learning. That is, majority of the teachers and students were neutral to acknowledge the multiple benefits of one-to-five cooperative learning for learners. Hence, the findings of the present research somehow deviate from the literature. This may be the gap due to the lack of awareness, follow-up, and training 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 of teachers and students on one-to-five-cooperative learning across their demographic characteristic including sex, educational level, and field. The result underscored sex difference was observed on responding cooperative learning as per the five basic elements and the role of teachers in facilitating the practice, with female teachers scored higher mean than male teachers. This finding corresponds with the research conducted by^[8] where female teachers practice cooperative learning more 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. But, female and male teachers did not differ about the benefits of one-to-five cooperative learning for students. This seems that teachers do not recognize observable difference on students' learning due to the improper implementation of one-to-five cooperative learning. 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 set their mind to go to their home.

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 one-to-five cooperative learning as per the basic components, the role of teachers' in the practice and its benefit for the students. This is similar with recent research finding which underscored that teachers' education level was non-significantly correlated with cooperative learning activities^[8].

Concerning student participants, significant sex differences were not recorded on the practice of one-to-five cooperative learning as per the five

basic elements and its benefits for them. Consistent with this finding ^[22] pinpointed that learning did not create significant difference between male and female students in their course grades. But, the current research finding contradicts with ^[26,25] who indicated that the implementation of cooperative learning created significant difference between male and female students in their achievement. These contrary findings may be attributed to the differences in research settings, resource availability, and the level of awareness among practitioners towards cooperative learning.

Regarding field category of students, significant differences were not seen on one-to-five cooperative learning practice, teachers' role and its benefits for their learning. But, in terms of their educational level, grade 11 students were significantly higher than grade 12 students in responding about teachers' role 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 ^[13,15], uncomfortable time schedule; lack of interest and motivation among teachers and students; and lack of awareness about the nature and importance of one-to-five cooperative learning are the major challenges. Moreover, uncomfortable class seating, large class sizes, lack of worksheets, absence of payment for teachers' extra time are other challenges.

VI. Conclusions

- Teachers and students are not sure to decide about the implementation of one-to-five cooperative learning in relation to the basic elements. However, teachers better admit the existence of group processing and teachers' role to play in the practice than students do.
- Both teachers and students are doubtful to acknowledge the benefits of one-to-five cooperative learning in promoting cognitive/academic, social and psychological aspects of students.
- Female teachers better implement one-to-five cooperative learning as per the basic components and relatively better facilitate the practice than male teachers. However, teachers' educational level and the type of field of study do not guarantee the appropriate implementation of one-to-five 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 one-to-five cooperative learning as per

important elements, teachers' role to play in the process and their stand to its advantage for students.

- Students' sex, educational level, and field category does not affect their approval towards the practice of one-to-five cooperative learning in consideration with key components and its importance for their learning and development.
- Uncomfortable time schedule, lack of teachers and students interest and motivation, and lack of awareness about the importance of one-to-five cooperative learning are the major challenges of implementing one-to-five 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 affecting its practice. Due to these problems the program is not properly implemented in these preparatory 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. \

VII. Implications

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 one-to-five 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 one-to-five 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 center on the basic pillars, how it can be practiced, the potential benefits and the ways to handle the possible challenges of one-to-five cooperative learning. These activities can break the negative attitude towards one-to-five cooperative learning and 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 one-to-five 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 size hinder the mobility of students and teachers in one-to-five cooperative learning practice. Hence, for effective implementation of one-to-five cooperative learning, in the long run, schools in collaboration with sub-city education bureaus, and the community should modify the classroom seating arrangement and minimize the class size. Doing all these contributes for improving the quality of education.

For educators: Teachers should pay close attention and open their mind to know about the what, how and purpose of one-to-five 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 about the importance of one-to-five cooperative learning, give clear instructions, explain how students work together, facilitate the process, properly assess and provide timely feedback for their team work.

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 research by considering wide research sites, more number and group of participants, additional variables such as teachers' training regarding one-to-five cooperative learning using additional qualitative data collection instruments like interview and focus group discussion.

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