



ASSESSMENT OF COOPERATIVE LEARNING IN NORTH SHEWA ETHIOPIA, IN THE CASE OF DEBRE BIRHAN COLLEGE OF TEACHER EDUCATION

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Abstract: *The way teachers teach is of critical concern in any reform designed to improve quality Education. Teacher quality and teacher learning, therefore, are becoming the foci of researchers, policy makers, program designers, implementers, and evaluators. Thus, this study was undertaken with the aim of assessing the practices, challenges and opportunities of cooperative Teaching-Cooperative base groups with reference to Debre Birhan College of Teachers Education. Data were collected randomly in different department's students. The sample population was selected by considering numbers of students in each department, sex and the roles of the students in cooperative base group. Both qualitative and quantitative methodologies were used to generate relevant information. Students' attitude about cooperative base group was examined using quantitative method. The results of the study revealed that the practice of cooperative learning through base group in Debre Birhan College of Teachers Education was at its infancy stage. However, the analysis of the chi square test shows that there is a significant difference between the roles of students in the group and the attitude they have to cooperative learning. On the other hand, the study had also revealed that the members in each cooperative base group were not sharing responsibilities equally. In the focus group discussion, some of the participants said that in some cooperative base group, group leaders were doing most of the activities while the rest of the group members participated just only by contributing materials and money. Though the college has produced a guideline for cooperative base group, the result of the study showed that the actual classroom practice of cooperative learning was in different from the expected cooperative base group arrangement. Thus, the study concludes by recommending measures that should be taken for effective cooperative base group in the context of the college and to other similar higher institutions which have similar setting with our college.*

Keywords: *Cooperative learning, Cooperative base group, Quality education, Quantitative phase, Plot testing*



1. INTRODUCTION

1.1 Statement of the Problem

Good basic education is the result of the interaction of multiple factors, the most important of which is increasingly recognized to be quality teachers and teaching (Lewin and Stuart, 2003). What goes on in the classroom, and the impact of the teacher and teaching, has been identified in numerous studies as the crucial variable for improving learning outcomes. The way teachers teach is of critical concern in any reform designed to improve quality (UNESCO, 2004). Teacher quality, teacher learning, and teacher improvement, therefore, are becoming the foci of researchers, policy makers, program designers, implementers, and evaluators.

The Ethiopian government, parallel with rapid expansion of the education system, called for improving quality of education by employing interactive teaching and learning process with the limited resources at hand (Cook & Cook, 1998). It is being cognizant of this situation that the employment of learner-centered pedagogy is emphasized in the Ethiopian Education and Training Policy of 1994 (MoE, 2002).

Some research studies were conducted on the implementation of active learning approaches in Ethiopia. Sirak (2000) indicates that about 58% of class activities in teachers' training institutions were inclined to be lecturer-centred while 42% were identified as student-centred. The study conducted by Oli (2006) revealed that the status of the active learning/student-centred approaches in teachers' education colleges was also relatively low (less than 50%). The policy statement refers frequently to the employment of a learner-centered approach, active learning, and cooperative learning approaches in different contexts. Recently, national and regional education personnel are also advocating for students for cooperative learning through cooperative base group arrangement.

Recent empirical studies have shown the positive effects of cooperative learning activities for increased academic achievement. In considering the effects of cooperative learning on academic achievements, researchers have repeatedly examined cooperative versus individual learning experiences by comparing academic achievement of students. Results indicate that cooperative learning experiences promote higher achievement and greater retention than do individual learning experiences for all students (Cohen *et al.*, 2004). A local study in Debre Birhan high



school also states that the effects of cooperative learning on academic achievement and social skill are better than the usual methods of teaching (Seid, 2012).

Recently, the Debre Birhan Teachers Education College has prepared manual for the implementation of cooperative learning to address quality and distributed the manual to instructors to use it as a guideline in implementing cooperative learning through cooperative base group. The college is advocating cooperative learning to the classroom and outside classroom learning. Thus, the researcher is going to assess the practice, opportunities and challenges facing in the implementation of cooperative learning in the college.

1.2 Objectives of the Study

The general objective of the study is to assess the practices, opportunities and challenges of cooperative learning (Cooperative base groups) with particular reference to Debre Birhan College of Teacher Education. The specific objectives of the study are:

- Describe the practice of cooperative learning in Debre Birhan College of Teacher Education.
- Examine the attitude of the student teachers towards cooperative learning
- Assess the opportunities of cooperative learning in the context of the college.
- Examine the approach used by the college to implement cooperative learning in the classroom.
- Examine the challenges of cooperative learning in the College.

1.3 Research Questions

This research tries to answer to the following questions:

- To what extent is cooperative learning implemented in Debre Birhan College of Teacher Education?
- How do the students perceive cooperative learning in their class room setting?
- What kind of approach is used to implement cooperative learning in the classroom?
- What are the major factors/challenges in implementing cooperative learning approaches in the College?
- What support, conditions and materials are provided for the implementation of cooperative learning approaches?



2. RESEARCH DESIGN AND METHODOLOGY

2.1 Research Methods

In this study, a mixed methods approach had been followed. Hence, a mixed-method approach using a survey design for obtaining descriptive statistics supported by a qualitative investigation was employed. The specific type of research design used for the quantitative phase of this study is a descriptive survey. In descriptive survey research, the researcher selects a sample of subjects and administers a questionnaire to collect data. The descriptive survey is used to describe the attitudes, knowledge, and opinions of the respondents towards the nature of cooperative learning in the college.

Source of Data and Data Collection Techniques

In order to achieve the stated objectives, primary and secondary data source were used by the researcher and different techniques were employed to collect data from various sources. Among these; questionnaires, in-depth structured interviews and focus group discussion, key informant interviews, document analysis and observation were employed.

Questionnaire

A questionnaire containing mainly closed ended items was administered to Students. The respondents responded on different items concerning the use of cooperative learning and the major problems/challenges that hinder the implementation of this approach in the college and among others. The questionnaire implemented a four point Likert Scale with the following meanings: 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly agree.

Observation

In this study, the observation method of data collection was used practically to assess the extent of implementation of cooperative learning. The observations focused on the following areas: the extent to which cooperative learning were applied/implemented by students; and whether students in a group are free to express and share their opinions and to interact with each other. The researcher was present when the selected 15 cooperative base group discuss with in their opposite shifts of their regular time and used an observation checklist to record what he observed during their discussion time. The observation check list was adapted from Jones and Jones(1981).

Interviews

Semi-structured interviews were conducted with advisors, pre-service coordinators, in-service coordinator and dean. In this research, interview was used for collecting rich



information regarding the nature of the cooperative learning in line with the active learning approaches and the major problems/challenges that lecturers experience or hinder the implementation of this approach at the college.

Document Analysis

Different documents which were related to the practice of cooperative learning had been used. Some of the documents were the manual prepared by the college on cooperative learning, the different checklist prepared by the college and departments and the regional guideline on the arrangement of cooperative base group.

2.2 Pilot Testing

The researcher tested content validity of the questionnaire by providing it for one instructor in the college and one assistant professor working in the university who did research on cooperative learning. Before the items were distributed for the pilot group, the questionnaire was translated to Amharic. Forward-backward translation was employed by one English instructor and Amharic Instructor to avoid meaning difference in English and Amharic version. Afterward, a pilot was made tested on a small scale before using it on a larger scale with the sampled student-teachers. Thus, it provided a trial run for the questionnaire that involved testing the wording of the questions, identifying ambiguous questions, determining how long it takes to complete the questionnaire, and if all important content had been included.

The pilot study enhanced the content validity of the questionnaire. Therefore, the questionnaire was tested with a total of 25 student-teachers who were not part of the sample of the study. A number of problems with the wording of questions came to light. Changes were made accordingly.

2.3 Sample and Sampling Design

In the selection of the sample student-teachers, purposive and simple random sampling were used. Thus, total of 304 students (from six departments in the first year and five departments from 2nd year and 3rd year), were selected based on proportional sampling techniques from each section and 11 advisors were selected based on purposive sampling techniques. 292 questionnaires out of the 304 distributed were properly filled out and refined for the analysis of the study. The selection of the particular advisors was based on the researcher's judgment of the potential for providing worthwhile and comprehensive



data. This approach was adopted on the basis of reputational-case selection. The use of a reputational-case selection, according to Gay & Airasian (in Derebssa 2006), presumes the sample will provide valuable information for the researcher that will help to answer the research questions.

Key informant was employed to obtain how the practice of cooperative learning was carried out in relation to the approach used, follow up by respective advisors and also how far the approach was going well. The key informants were drawn primarily from instructors, pre-service program co-coordinators and deans.

Focus group discussions(FGD) were conducted with students who were selected through purposive sampling method. The participants of the FGD were students who were appointed as class monitors, group leaders and those who did not have roles. Two group of FGD were conducted having a total of six focus group discussions.

The sample design involved stratified sampling technique. Non probability sampling was used to select regular student-teachers of Debre Birhan College of Teacher Education. The first stage was used to select sections from each department in the college through simple random sampling. The second stage of sampling was used to select students from the selected sections through simple random sampling and purposive sampling technique by considering the role of students in the cooperative base group and sex.

Almost 15 percent of the total population was considered in the survey. To determine the sample size, there were some factors considered. Financial and shortage of time forced the researcher to minimize the number of sample size. Moreover, taking about 15 percent of the total population is believed to be significant because an attempt had been made to stratify the sampled population by their section and sex.

The total sample size was distributed into the sample section proportional to the total size of students by considering sex in order to select the sample students proportional to the size of students in each selected sections.

3. DATA ANALYSIS AND DISCUSSION

3.1 Attitude of Student Teachers towards Cooperative Learning

The students' knowledge, attitude and skill are the underlying foundations needed to build a cooperative learning environment. Students first need to be taught what it means to learn in a cooperative group. Students who are products of traditional educational settings have



internalized the idea that a “good” student quietly sits in his/her chair, faces forward, listens to a teacher dispensing knowledge, and patiently waits to be called on. However, Cooperative learning forces students to break out of their traditional roles and work with other students in the class to learn new concepts.

Table 3.1: The attitude of students towards cooperative learning

	The attitude of students towards cooperative learning	Strongly agree	Agree	Disagree	Strongly disagree
1	Cooperative learning creates good environment for effective teaching learning process	69 (23.6)	145 (49.7)	62 (21.2)	16 (5.5)
2	Cooperative learning promotes positive cooperation between group members	90 (30.9)	158 (54.1)	34 (11.6)	10 (3.4)
3	Cooperative learning makes all learners to be actively involved in their learning.	62 (21.2)	127 (43.4)	68 (23.4)	35 (12)
4	Cooperative learning increases the learners’ interest to learn	113 (38.7)	120 (41.1)	50 (17.1)	9 (3.1)

Source: Own – Field Survey (2017)

Table 3.1 reflects the attitude of the student teachers on cooperative learning. Almost, the majority of respondents agreed on the statement that cooperative learning creates good environment for effective teaching learning process (73.3%), cooperative learning promotes positive cooperation between group members (84.1%), and cooperative learning makes all learners to be actively involved in their learning (64.6%).

Table 3.2: The attitude of students towards cooperative learning

	The attitude of students towards cooperative learning	Strongly agree	agree	disagree	Strongly disagree
1	Cooperative learning favors those students who have high academic performance	25 (8.5)	37 (12.7)	171 (58.6)	59 (20.2)
2	Cooperative learning creates personal conflict between individuals	73 (25)	91 (31.2)	72 (24.7)	56 (19.2)
3	Cooperative learning abuses the time and energy of high achievers	-	97 (33.2)	144 (49.3)	51 (13.0)
4	Cooperative learning benefits slow learners most	49 (16.8)	98 (33.6)	92 (31.5)	53 (18.1)

Source: Own – Field Survey (2017)



Similarly, as indicated in table (3.2), most of the respondents disagree on the statements that cooperative learning favors those students who have high academic performance (78.8%) and cooperative learning abuses the time and energy of high achievers (62.3%). However, almost half of the respondents (50.4%) responded that cooperative learning benefits slow learners most and 56.2% of them said that cooperative learning creates personal conflict between individuals.

Table 3.3: Comparing the attitude of students towards cooperative learning with respect to the role of the students in the group

Cooperative learning abuses the time and energy of high achievers	Group Role		
	Group leaders	Recorders	Other group members
Strongly disagree	7(10.6%)	13(16.7%)	31(21%)
Disagree	11(16.7.2%)	60(76.9%)	73(49.3)
Agree	48(72.7%)	5(6.4%)	44(29.7%)
Total	66(100%)	78(100%)	148(100%)

Source: Own – Field Survey (2017)

The analysis of the chi square test shows that there is a significant difference between the role of students in a group and the attitude they have to cooperative learning. 72.7% of the group leaders involved in the study claimed that cooperative learning abuses the time and energy of high achievers whereas 49.3% of the students who are just group members disagree and 21% of them strongly disagree on the statement that cooperative learning abuses the time and energy of high achievers.

Table 3.4: Comparing the attitude of students towards cooperative learning with respect to the role of the students in the group

Cooperative learning benefits slow learners most	Group Role		
	Group leader	Recorder	Other group members
Strongly disagree	7(10.6%)	15(19.2%)	31(21%)
Disagree	5(7.6%)	28(35.9%)	59(39.8%)
Agree	20(30.3%)	33(42.3%)	45(30.4%)
Strongly Agree	34(51.5%)	2(2.6%)	13(8.8%)
Total	66(100%)	78(100%)	148(100%)

Source: Own – Field Survey (2017)

Similarly, the result of the chi square test revealed that there is significant difference on the attitude of students on the statement that cooperative learning benefits slow learners most. The majority of the respondents (group leader) said that cooperative learning benefits slow



learners most. On the other hand, majority of the respondents (the other group members) disagree that cooperative learning benefits slow learners most.

3.2 Skill in Cooperative Learning

Regarding the skills students have in cooperative learning, questions were raised to students in the focus group discussion and the interviewed advisors. The majority of participants of the FGD reflected that they didn't have those skills which were essential for effective group communication. Some of the participants said that their respective advisors tried to explain some challenges which the cooperative base group would face in their grouping while they came to form grouping once in a semester. However, the participants added that the skills needed for group communication were not well defined and explained by their respective advisors. Two of the interviewed advisors said that though they don't have adequate knowledge about the skills for effective communication, they had advised their respective students on how they should work in the group. As they stated, how to resolve their conflict and how the group leaders should communicate with the other group members and vice versa were the topics which they explained to their students.

Table 3.5: Check list on the observation of students in their cooperative base group

Skill and activities observed	No of students reflecting the skills	Percent (%)
Contributes idea	33	35.40
Encourages others	20	21
Listen only	19	20.4
Participates	71	76.3
Checks for understanding	17	18.2
Organize the task	23	24.7
Listen to other group members	36	38.7
Total	93	100

Source: Own – Field Survey (2017)

The observation of students in their cooperative base group outside the classroom triangulated what the FGD participants raised. From the observation checklist result analysis, most of the group members (76.3%) in each observed group participated either by asking question, computing and responding to the raised question. However, check for understanding (18.2%) was the least observed skill by the participant groups followed by encouraging others to participate (21%). As the analysis of the checklist result indicated, in



most of the cooperative base groups, one or two of the group members did most of the tasks and the other group members just listened and participated by asking questions.

Vermette (1998) stated that personal and social competencies are necessary for cooperative learning group: treat each other with respect, equally contribute, value other opinions, disagree and agreeably, listen to other group members, stay focused and encourage others to talk are some of the skills that students should practice to make cooperative learning effective.

3.3 The Implementation of Cooperative learning

Creating a cooperative learning classroom begins with the formation of groups or teams of students. The majority of research suggests cooperative groups be heterogeneous, including high, middle, and low achievers, boys and girls, and an ethnic and linguistically diverse representation of the class (Johnson & Johnson, 1999; Kagan, 1994; Mueller & Fleming, 2001; Toumasis, 2004).

Table 4.6: The response of the selected sample population on the criteria of grouping students

Criteria for grouping	Frequency	Percent
Academic	122	41.7
Sex	45	15.4
Both sex and academic performance	91	31.2
students Id	34	11.7
Total	292	100.0

Source: Own – Field Survey (2017)

The response of the students on the formation of grouping indicated that there is no uniform grouping criterion in the cooperative learning in the college. Most of the respondents (41.7%) said that academic achievement is taken as criterion for grouping and 31.2% of the respondents said that both sex and academic achievement were used. Even some of the respondents (11.7%) claimed that only student's ID number was used as a criterion for grouping.

On the other hand, among the interviewed advisors, 18.2% of them said that sex was used as a criterion for grouping and 54.5% of them replied that both sex and academic performance were used and 27.3 % of them said that only academic performance was used as a criterion for grouping students in their cooperative base group. However, the manual



prepared by the college explicitly stated that students should be organized in their cooperative base group by taking sex and academic performance into consideration.

Table 3.7. The criteria for group by the students class level(year)

Criteria for grouping	Students class level (Year)		
	Year one	Year two	Year three
Academic	25(23.8%)	39 (41.9%)	43(45.8%)
Sex	46 (43.8%)	24(25.8%)	19(20.2%)
Both sex and academic performance	23 (22%)	30 (32.3%	32 (34%)
students ID	11 (10.4%)	.0%	.0%
Total	105(100%)	93(100%)	94(100%)

Source: Own – Field Survey (2017)

The criteria for grouping differ across class level. Majority of first year respondents (43.8%) said that sex was taken as criteria for grouping. 41.9%, 25.8% and 32.3% of 2rd year students replied that academic performance, sex and both sex and academic performance were used for grouping respectively. Most of 3rd year respondents (45.8%) said that academic performance was used as a grouping criterion.

According to the response of the students, the roles given to the respective cooperative group members are group leaders and recorders. The rest of the group members do not have specific roles. 50.7% of the respondents said that they did not have a specific role and 22.6% of them replied that they were group leaders. 26.7 % of the respondents said that they were recorders. As the participants of the FGD reflected, in most cooperative base group, it was the group leader who was coordinating the work of the group members and most of the task will be left to him/her. She/he (group leader) takes most of the roles as organizer (provides the group with the overall process structure), recorder (writes down important information), spokesperson (represents the group and presents group work to rest of the class), timekeeper (keeps group on task and on time) and summarizer (restates the team's conclusions or answers).

Though the manual talks about the need of accountability in each groups, it does not clearly indicate those roles that students should have in their cooperative base group. There is no doubt that group members' roles have the potential to affect the way group members interact with each other. Cohen (1994) said that students needed to share the task and



accept different roles. As students become more comfortable with teamwork, however, it is a good idea to rotate roles within the teams so that students experience a variety of responsibilities. Whenever one person dominates by doing all of the work, others feel less valued and tend to shrink back. On first glance it might appear as though some group members were simply lazy. But in reality, students accused of slacking off will often tell you that somebody else is bossing them.

3.4 Group Norms and Goals

When beginning to use cooperative learning with students, it is also important to establish team norms. Norms for working in groups tend to be very different from traditional classroom norms. In cooperative classrooms, students work with others to complete tasks. Team norms, if designed well, can help to create a safe and supportive atmosphere.

The participants of the focus group discussion reflected that in their respective cooperative base groups, they didn't have team/group norm, however, in some cooperative base group, they had set rules which would govern the whole class and the rules were drafted by the representatives of each cooperative base group. As the participants of FGD said, the rules or the guidelines focused on how the students should behave in the class like coming on time to class, respecting teachers and the like. However, group/team norms like, treat one another with respect, encourage new ideas and value the consideration of all suggestions, justifying opinions to the group and make decisions as groups and others norms which have been clearly stated in the college manual did not put into practice.

Researchers on cooperative learning suggest that setting group goal will help students to support one another because the group goal can be achieved only if each member learns the material being taught (in the case of a task that culminates in an exam) or makes a specific contribution to the group's effort (in the case of a task that culminates in a presentation or a project).

3.5 Opportunities of Cooperative Learning

The college has considered cooperative learning as its main key task so as to bring quality education. This creates conducive environment to implement it effectively. In this sense, the college has scheduled one period per week to assist students in their cooperative base group by their respective advisors. This will create opportunity for the students to get assistance and to be reassured that they can positively interact with others.



Besides this, the college has prepared a checklist for periodic self-assessment of group functioning. Some of the assessment questions are like: how well are groups meeting their goals and expectations? What are the strengths of the groups within the week? What areas do need improvements? What will the groups do differently next time, if any? In addition to these, there is peer assessment that is, students collectively assessed the contribution of their group members towards different tasks, through negotiation (intra-group process evaluation). An assessment guide and a scoring rubric were provided for this purpose.

The preparation of a manual on the guidelines and the rational of cooperative learning approach by the college is one opportunity for the implementation of cooperative base group in the college. According to the result of the interview made, advisors have showed their appreciation to the manual already prepared. They said that it has given scientific explanation about cooperative learning and how to implement it in the college in general and to their respective classrooms in particular. Thus, the manual makes things easier, especially in arranging students in cooperative base group, making clear responsibilities of students and instructors.

The other opportunity that promotes cooperative learning is grading system. It could be theoretically possible for every student in a class to score an A grade. If grades are curved, team members have little incentive to help each other. If an absolute grading system would be used, there is a great incentive for cooperation. In this regard, the College had been using norm referenced grading system for almost eleven years (from 2003/4 to January 2014).

3.6. Challenges of Cooperative Learning

Similar to the challenges indicated by Randall (1999) student teachers have raised issue of group responsibility in the focus group discussion. They said that making members of the group responsible for each other's learning can place too great burden on some students.

The other main challenge raised by both advisors and pre service and in service coordinators was, since instructors did not get/have enough training and discussion on the concept and the implementation of cooperative learning, they faced difficulty in arranging and also in supporting student teachers in their cooperative base group. Even some of the interviewed advisors said that though cooperative base group is one of scientifically researched effective methods of active learning, the college administrators did not make an effort to convince and conduct discussion on it thoroughly. During the interview, a few instructors reflected



that they did not have the manual at their hand and even some of them did not go through it.

Group conflict is also the other challenge experienced in the implementation of cooperative base group learning which sometimes spoiled the group spirit of working together. Though, most of the participants supported the peer assessment as a good instrument in controlling 'free-riders' still others did not feel comfortable with it. As they reflected in FGD, they found the task somewhat difficult and sometimes felt awkward in having to judge the performance of their peers a view similar to that expressed in Divaharan's study (2002). One of the interviewed in-service coordinator, also highlighted that the peer assessment created antagonistic feeling on some cooperative base groups.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

This study has found out that the effort made to implement cooperative learning in Debre Birhan college of teacher education has shown some progressive improvement. The college outlined cooperative learning as the key task so as to bring quality education. To this end, the college prepared a manual on the guidelines and the rational of cooperative learning approach. In addition, the college administrative bodies have shown commitment to implement cooperative learning by scheduling one period per week to assist students in their cooperative base group by their respective advisors. Besides these, the college has prepared a checklists through each department for periodic self-assessment of group functioning.

Furthermore, the analysis of the attitude of students shown that majority of the respondents agreed on the statements that cooperative learning creates good environment for effective teaching leaning process (73.3%) and cooperative leaning makes all learners to be actively involved in their learning (64.6%). However, the analysis of the chi square test shows that there is a significant difference between the role of students in a group and the attitude they have to cooperative learning. 72.7% of the group leaders involved in the study claimed that cooperative learning wastes much of the time and energy of high achievers. In addition, more than half of the group leaders (54%) said that cooperative learning benefits slow learners the most.



Though the college has made efforts to implement cooperative learning, there are some challenges which are revealed in this study. Prominent researchers on cooperative learning recommended that for effective cooperative learning to occur, learners should be taught about social skills. However, the analysis of the observation checklist and the reflection of students and instructors showed that students lack those skills. Moreover, their respective advisors even do not have enough knowledge about the skills needed for cooperative learning.

Furthermore, the research reveals that the roles given to the respective cooperative group members are only group leaders and secretariat which create 'free-riders' to occur on

4.2 Recommendations

The following recommendation has been provided based on the finding of the research:

- The college administrative bodies should prepare panel discussion on cooperative learning so that instructors will have a clear vision about it thereby they can assist their respective students while advising them and applying it in their classroom.
- The college should provide an ongoing professional development for instructors in the application of cooperative learning in their classrooms.
- Respective advisors should make sure that each cooperative base group set out a clear set of guidelines for group functioning and to have members formulate a common set of expectations of one another. These would prevent students from making invalid claims about agreed upon group processes.
- Respective advisors should make students to have roles while they are working in their cooperative learning.
- Though the college manual is more inclusive and well prepared, the role of in service and pre service coordinator is not stated there. Thus, it should be revised a little bit by including the roles of those bodies. In addition, the manual should clearly indicate the roles each student should have in their group.

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