

Research Article

Teachers' and Students' Roles in Promoting Cooperative Learning at Haramaya, Dire Dawa, and Jigjiga Universities, Ethiopia

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The purpose of this study was to analyze the roles of instructors and students to implement cooperative learning in eastern Ethiopian higher learning institutions. Using a survey design, purposive and stratified random sampling techniques were used to select 1244 respondents (students, instructors, college deans, department heads, and cooperative learning coordinators) from three universities. Data were collected using questionnaires, interviews, and observations. The mean, standard deviation, and ANOVA were used for analysis of the data. The results revealed that instructors were not acting as facilitators and were not offering guidance on how students should collaborate. Almost every instructor placed an emphasis on the lecture method. As evidenced by the data, the majority of instructors have a solid understanding of cooperative learning. However, owing to heavy workloads, large class sizes, and other factors, cooperative learning was not implemented adequately. Students failed to take ownership of their own learning and failed to share their information, talents, and experiences with one another. The constraints to implementing cooperative learning were inadequate responsibility sharing, inequitable work assignments, and a lack of consideration for diverse ability grouping. As a result, instructors must understand how to arrange learning settings in such a way that positive interdependence, individual accountability, proper use of social skills, and group processing are promoted. Moreover, program leaders should strengthen their monitoring and support of the educational process to ensure that instructors and students practice cooperative learning. It is critical for university quality assurance experts to plan and deliver training on cooperative learning and its implementation.

1. Introduction

The new teaching and learning paradigms in higher education emphasize new relationships regarding access to teachers and a wider range of communication and collaborative skills for working effectively through learning platforms [1]. It requires redesigning of curricula, bridging teaching and research more intensively, rethinking about student workload and teaching load, and continuous upgrading in pedagogy. It also demands using the latest technologies, assessing new models that are aligned with student-centered learning, creating innovative learning platforms, providing guidance and tutoring students with new means and methods, and assessing the impacts and

documenting the effectiveness of the teaching delivered [2–4].

Various institutions in developing countries such as Ethiopia have taken proactive measures by implementing more comprehensive teaching and learning methodologies and building procedures and instruments for enhancing educational quality. The issues may appear insurmountable in light of declining resources and increased competition. Nonetheless, institutions of higher education can and do much to promote excellence teaching and enhance student learning outcomes [5].

In Ethiopia, universities are now on a wave of reform in all spheres of their activities. They have realized that in order to be effective as academic institutions and contribute their

share towards the implementation of the Education Sector Development Programme-VI [6], new thinking and noble strategic plan should be recognized. Other change tools such as Kaizen, cooperative learning, and service-providing standards are also planned to be fully operational in the years to come.

University education and the mode of learning at higher institutions of learning need to prepare students for entry into such an environment and equip them with the appropriate skills, knowledge, values, and attributes to thrive in it. In this regard, there is a strong drive to build and generate knowledge, together with an understanding of the true dimensions of life and the formulation of the concept of knowledge in learning situations. Solid connections with working life through cooperative learning groups might provide authentic opportunities to learn both generic and professional competencies as well as to build networks and pathways for employment after graduation [7, 8]. Learning rooted in working life could help institutions interpret and respond pedagogically to the challenges of this environment by using other forms of teaching and learning patterns, like cooperative learning [9, 10].

With this view of learning in mind, the role of university teachers would, therefore, require thorough transformation. In addition to being, first and foremost, subject experts acquainted with ways to transmit knowledge, they would now be required to have effective pedagogical skills for monitoring student learning outcomes and enabling them to produce or reproduce knowledge [11]. They also need to learn to cooperate with students, colleagues from other departments, and external stakeholders as members of a dynamic, evolving learning community [12].

Cooperative learning is an instructional approach that has attracted attention over the last three decades because of a large body of research that indicates students gain both academically and socially when they have opportunities to interact with others to accomplish shared goals [13–15]. Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject [16]. Each member of a team is responsible not only for learning what is taught but also for helping teammates to learn, thus creating an atmosphere of achievement. Students work through their assignments until all group members successfully understand and complete them.

Providing meaningful learning opportunities, specifically in many of the current university courses, is a problem that affects students in higher education studies [17]. Teachers are faced with a multitude of choices as to what the most effective teaching strategies are that they can use in order to enhance student learning and to maximize student achievement through the accomplishment of the best competencies [18, 19].

In response to higher expectations and a perceived lack of results, researchers and teachers have been seeking the right kind of balance of teaching strategies for years. For instance, educators are faced with the challenge of creating lessons which not only allow students to analyze history,

culture, or economy of many different societies but also allow them to understand the respective time period in relation to today [20]. Classroom learning levels vary widely among students, which make learning in a higher education institution difficult. In order to alleviate the problem, educators can choose from many different teaching strategies in order to increase student achievement [21]. In this regard, cooperative learning raises student achievement while developing collaborative skills in a mutually supportive environment [15].

Cooperative learning is an educational situation where learning occurs while two or more students work together to complete a common task [22]. While cooperative learning offers educators an option different than a teacher-centered approach, problems still exist with regard to which learning strategies prove to be more effective than others. Further problems may arise with the level of competence by the teacher implementing the different cooperative learning techniques. A gap exists in research when comparing cooperative learning methods with each other and analyzing the outcomes in terms of student achievement [18].

Cooperative learning replaces the mass-production, competitive organizational structure of most classrooms and schools with a team-based, high-performance organizational structure. Scholars suggest that cooperative learning should be used 60 to 80% of the time in most classrooms [23]. Also, the teacher's role in implementing cooperative learning includes (1) preinstructional decisions: selecting instructional materials and objectives, assigning students to groups, arranging the classroom, and assigning roles; (2) task work and teamwork: explaining the academic task, structuring positive interdependence, and specifying desired behaviors; (3) executing the cooperative lesson, which includes monitoring students' behavior and providing closure; and (4) postlesson activities: evaluating the quality and quantity of learning and analyzing group effectiveness [24].

The purpose of this paper was, therefore, to clarify the extent of implementing cooperative learning and examine the factors that contribute to its success. In particular, the study focuses on the key elements that underpin successful cooperative learning, including group structure, composition, and task, and the key role teachers play in developing students' thinking and learning. The intention is to provide insights on how teachers can effectively utilize cooperative learning to teach and learn in their classrooms. Moreover, the study investigates to what extent students' roles in cooperative learning are robust and the extent of students' commitment and engagement in the implementation of cooperative learning.

1.1. Research Questions. The following research questions are developed to provide a framework for analysis of the research area under investigation:

- (1) To what extent are teachers committed to using cooperative learning in the classroom?
- (2) How do learners demonstrate their willingness and commitment to facilitate cooperative learning?

- (3) What critical challenges are there in the implementation of cooperative learning?

2. Review of Related Literature

2.1. The Notion of Cooperative Learning. In the mid-1960s, cooperative learning was relatively unfamiliar and largely ignored by educators because individual learning was mainly focused on in teaching at that time [18]. However, since the 1970s, cooperative learning has been seen as an acceptable instructional approach for all levels of education, all parts of the world, and every age group. The instructor assigns students to groups for the purpose of completing academic and social tasks in cooperative learning; students focus their attention on the assigned task to increase their learning and the learning of group members. In cooperative learning, interaction and effective communication between students are critical during cooperative work assignments.

Cooperative learning has roots in the theories of social interdependence, cognitive development, and behavioral learning. Some research provides strong evidence that cooperative learning results in greater effort to achieve more positive interpersonal relationships and greater psychological health than competitive or individualistic learning efforts [25]. Within cooperative learning situations, the role of the student is to complete the assigned group role and to work cooperatively with other students to accomplish a shared goal through interaction and problem solving, and learners try to get a result that is beneficial to themselves and beneficial to all other group members [26].

Cooperative learning is a method for organizing learning in which students work with their peers towards a shared academic goal rather than competing or working separately from their peers. Zakaria et al. [27] provided a brief definition of cooperative learning and differentiated it from competitive and individualistic learning as follows: cooperative learning is the instructional use of small groups through which students work together to maximize their own and each other's learning. According to Slavin [15], cooperative learning is an instructional method in which teachers organize students into small groups, which then work together to help one another learn academic content. According to Wyman and Watson [28], cooperative learning refers to the types of structured peer interaction emphasizing positive human relationships, collaboration between peers, active learning, academic achievement, equal participation, and equal status of students in the classroom. It can be used to teach any subject matter, such as foreign language, mathematics, social studies, and so on.

Different researchers define cooperative learning differently. However, the majority of these attempts to describe cooperative learning reflect the same notions in a more or less consistent fashion. From the foregoing definitions of cooperative learning, it can be concluded that students should direct their attention to the specified work in order to maximize their own and their group members' learning. During cooperative work reassignments, interaction and effective communication among students are crucial. Group members are equally responsible for learning and

completing the specified job in the group. Each team member is accountable for not only learning what is taught but also assisting colleagues in learning. Overall, cooperative learning is a good way to teach because it lets students of different abilities work together to learn more about a subject.

2.2. Teachers' Mediation of Students' Learning. There is no doubt that teachers play a key role in establishing cooperative learning experiences in their classrooms. This includes structuring the groups and the tasks so that students understand what they are expected to do and how they are expected to behave. It also includes teachers' understanding that they have a role in promoting student interactions during small group discussion. Helping students to interact and work together not only enables students to learn from each other but also enables them to accept responsibility for the tasks they have to complete and the decisions they have to make. On the contrary, recent research indicates that high-level cognitive talk, which incorporates task-related talk about facts, concepts, and thinking, only appears with a low frequency when left to emerge as a by-product of small group learning [29]. Students do not elaborate on information, do not ask thought-provoking questions, and do not spontaneously draw upon prior knowledge without some relevant external guidance. Altun [26] also observed that students rarely engage in high-level discourse or explanatory behavior or provide reasons for their conclusions unless explicitly taught to do so. However, when students are taught to talk and reason together and apply those skills in their interactions with each other (in this case, science), Johnson and Johnson [30] found that they were able to talk and reason effectively together. These group activities, which were mostly based on talking, also helped people improve their reasoning, problem-solving, and learning skills.

In a similar vein, Gillies [25] found that when teachers were taught how to mediate students' learning by engaging in dialogic exchanges where they probed and clarified issues, confronted discrepancies in students' thinking, offered tentative suggestions, and acknowledged and validated students' responses, the students' responses to each other mirrored many of the responses they gave their teachers, that is, they were detailed or elaborated. In a study of teachers' and students' verbal behaviors, Gillies [25] found that teachers who implement cooperative learning demonstrate more mediated-learning interactions than teachers who implement group work only. Furthermore, students in the cooperative groups engaged in more verbal behaviors that are generally regarded as helpful and supportive of group endeavours than their peers in the group-work only groups (i.e., ad hoc groups where students had not been taught to cooperate). Gillies argued that many of these verbal behaviors may have, in part, emerged from the types of reciprocal interactions their teachers modeled as they interacted with group members, where the students learned to provide more explanations and detailed responses to other students' requests for help or perceived needs for help. The frequency of the multidirectional responses that

occurred in the cooperative groups, both among the students and with their teachers, may also have emerged from the group tasks, which were generally open and discovery-based and required students to exchange information and ideas in order to find a solution to the problem. In short, research shows that teachers can teach students how to talk and reason together to promote student interactions and learning [31].

2.3. Role of Instructors and Students in Cooperative Learning. In practicing cooperative learning in classroom instruction, students and instructors have their own roles, and it can be classified into three phases.

2.3.1. The Role of Preimplementation. Johnson and Johnson [30] assert that instructors and students must complete a number of activities prior to introducing cooperative learning in the classroom. The teacher should use these to describe the cooperative learning instructional objectives, determine group size and assign students to groups, arrange their classroom spaces, and plan instructional materials. The teacher should assign roles and tasks to groups, clarify success criteria, and establish positive interdependence and responsibility. Students are burdened with several duties. They can assist the teacher in developing an evaluation rubric. They may even be able to assist in designing the assessment activity if the instructor allows it, and they must also ask questions.

2.3.2. The Role of Implementation. In this phase, instructors have the following roles: monitor classroom behavior and visit each group; notice any group conflict or off-task behavior; assist groups with their needs; and praise students' need to know if they are completing the assignment in a satisfactory manner. For this reason, the instructor should let individual students and groups know when they are doing something right or well. Students have the responsibility to work together, listen to one another, question one another, keep records of their work and progress, produce the assessment task, and assume personal responsibility [32].

2.3.3. The Role of Postimplementation. In this phase, instructors have the following roles: provide a summary of the important points of the lesson; evaluate students' learning; reflect on what happened; and give rewards to high-performing groups. Students have the responsibility to take note. They should also be motivated as they participate as group members and arrange conditions for further success [32].

2.4. Challenges of Implementing Cooperative Learning. Just as a coin has two sides, the cooperative learning method is also a double-edged sword because it has some benefits but also has problems when it is implemented. For instance, the implementation of cooperative learning may be affected by

many factors: personal, situational, and other problems. The most critical problems with cooperative learning are as follows.

2.4.1. Human Difficulties. Personal factors refer to a tendency or predisposition to behave in a particular manner. Factors like extremely low or high self-esteem, authoritarianism (domination), anxiety, language abilities, absence of tolerance, negative attitude, and unwillingness to speak may seriously harm the implementation of cooperative learning [33]. According to Moges [34], problems like instructors' beliefs, attitudes, professional experience, motivation, training, and understanding of innovation are the factors that debilitate the implementation of pedagogical innovations. Mackey [35] asserted that for classroom learning to be effective, the instructor educator must be well trained and should be ready to take huge responsibility. Meanwhile, students' sufficient knowledge of how cooperative learning is done and what they should do has a big impact on how cooperative learning is used.

Pescarmona [36] stated that unless learners consider the implications of the ideas in their own lives and decide to act on what they know and believe in new ways, they are likely to adapt to a passive acquaintance with the instructors' knowledge structure. Most of the limitations came from not being able to implement the cooperative structure carefully. The instructors' and students' attitudes towards cooperative learning largely depend on the knowledge they adhere to. People who are very supportive of a teacher's method think that the teacher is the only source of knowledge and knows best.

2.4.2. Situational Difficulties. Situational constraints like group size, group composition (heterogeneous groups are preferred), group cohesiveness (the extent to which the members like each other), friendship, gender, discipline, classroom atmosphere, ethnicity, social class, religion, personality, age, language proficiency, educational materials, and so on may affect the normal process of cooperative learning [36]. In addition, the way to organize the group influence on the learners' discipline, classroom management, and success of the activity also affects the implementation of cooperative learning.

2.4.3. Non-Human Difficulties. Pescarmona [36] states that schools in many parts of developing countries are composed of a large number of students. For this reason, instructors attempt to retain, control, and teach all the students at the same time by lecturing them. For effective learning, however, the physical environment (classroom arrangement, furniture arrangements, a clean and well-kept room with appropriate resources and a well-aired room, etc.) helps to establish a positive contribution to implementing cooperative learning. It is a common experience that most modules do not incorporate cooperative learning; they only provide one-way instruction. Moreover, most instructions lack instructional materials like shortages of learning modules, learning aids, and so on, which account for the low

implementation of cooperative learning in classroom instructions. Most of the curriculum materials prepared are overcrowded with information or content, with very few activities or exercises [34]. Hence, this greatly reduces the creativity of learners on their own and, in turn, hinders the implementation of cooperative learning.

3. Research Design and Methodology

The purpose of this study was to find out what variables help Haramaya, Dire Dawa, and Jigjiga universities better adopt cooperative learning. To achieve this goal, the study used a survey design that combined qualitative and quantitative research methods. The research targeted final-year students from all universities. Academic staff members with a level of lecturer and above were considered. The research included all academic program heads and university senior management. The sample students and teachers were chosen via stratified random selection. 50 senior lecturers, academic leaders, and top management were interviewed. Colleges were chosen using purposive sampling. The main criterion used to select colleges was their experience in dealing with cooperative learning.

Students were divided into three groups (by college, program, and year). Similarly, professors were classified by university, academic level, and teaching experience. The sample size was calculated using the following equation:

$$n = \frac{\sum_{i=1}^k N_i^2 P(1-P)/W_i}{N^2 d^2 / Z_{\alpha/2}^2 + NP(1-P)} \quad (1)$$

where p is the percentage of responders, d is the margin of error, and 0.05 is the threshold of significance. In the formula, total number of students/faculty in i^{th} stratum is N_i , W_i is percentage of i^{th} stratum to total number of students/faculty, and n is total sample size.

Using the formula above, 890 students and 334 instructors were considered. This sample was proportionately distributed to each stratum and selected at random (Table 1).

1224 participants (334 instructors and 890 students) were surveyed through questionnaires. The internal consistency of the questionnaire was assessed using Cronbach's alpha (>0.71). A semistructured interview was developed for college deans, department heads, and cooperative learning coordinators, and it was administered to them. Observation checklist was also developed to gather data on instructor-student interaction related to cooperative learning. Extracts from interviews were analyzed using thematic description and narration.

4. Results and Discussion

4.1. Analysis and Interpretation. Observation was conducted using the checklist in order to see the classroom instruction. The results of the observation checklist were compiled and presented in tables in order to evaluate the instructors' and students' roles in practicing cooperative learning.

According to Table 2, the greater part of the activities that were expected to be undertaken by the instructors was

not accomplished. When cooperative learning was implemented in the classroom, instructors were not playing the role of facilitator, and they were not providing meaningful directions on how students should cooperate with each other. However, scholars claims that instructors should create role interdependence among students when they assign them complementary roles such as reader, recorder, checker of understanding, encourager of participation, and elaborator of knowledge [30]. From these data, it is possible to infer that instructors simply order students to discuss the activities without telling them how they should do it and what they should say while they are discussing subjects cooperatively. Instructors also did not provide feedback or rewards for students' endeavours.

The result further revealed that cooperative learning groups were not heterogeneous in ability, which was also contrary to the rule that students should be mixed as heterogeneously as possible [28]. Moreover, the observed sessions did not show that instructors were employing the essential elements and characteristics of cooperative learning. Almost all instructors emphasized the lecture method. This indicates that students did not have the opportunity to interact among themselves. Also, it is possible to understand that the instructor's teaching-learning process was different from the principles of cooperative learning. Therefore, it can be concluded that instructors were not successful in implementing cooperative learning and also lacked the basic skills for forming cooperative groups in all study sites, which may be the main reason for the poor practices of cooperative learning among the institutions.

The results in Table 3 show that the majority of the students were passive listeners. Students did not take responsibility for their own learning and did not share knowledge, skills, and experience with each other. This contradicts the idea emphasized by Kessler [32] that instructors and students must accomplish some of their tasks before implementing cooperative learning in the classroom. They did not do as well as they should have been because their teachers did not divide up the work and make groups of students with different levels of achievement (high, medium, and low).

This finding coincides with the literature [30] that suggests cooperative learning involves assigning roles within each small group (such as recorder, participation encourager, or summarizer) to ensure the positive interdependence of group participants and to enable students to practice different teamwork skills. Similarly, what instructors did was also contrary to the literature that says instructors should organize the three/four/five-member groups so that students are mixed as heterogeneously as possible [34, 36]. Students should not be allowed to form their own groups based on friendship. When groups are maximally heterogeneous and the other essential elements are met, students tend to interact and achieve in ways and at levels that are rarely found in other instructional settings.

Pescarmona [36] stated that the physical environment (classroom arrangement, furniture arrangements, classroom appearance and layout, etc.) contributes a lot to promoting cooperative learning. Thus, giving enough attention and

TABLE 1: Sample size and sampling techniques.

University	College	Sample respondents					Total
		Instructors	Students	College deans	Department heads	Cooperative learning coordinators	
HU	CEBS	38	200	1	2	1	242
	CSSH	113	410	1	2	1	527
JJU	CEBS	43	51	1	2	1	98
	CSSH	107	148	1	2	1	259
DDU	CSSH	33	81	1	2	1	118
Total sample size		334	890	5	10	5	1,244
Sampling techniques		PS	SRS	SRS	PS	PS	

AS: availability sampling; SRS: stratified random sampling; HU = Haramaya University; CEBS = College of Education and Behavioral Sciences; JJU = Jigjiga University; CSSH = College of Social Sciences and Humanities; DDU = Dire Dawa University.

TABLE 2: Instructors' role in classroom instruction.

Role of teachers	Colleges		Yes	%	No	%
	Arranging the students in heterogeneous grouping and giving more emphasis on cooperative work.	HU-CEBS	1	20	4	80
HU-CSSH		—	—	5	100	
JJU-CEBS		—	—	5	100	
JJU-CSSH		—	—	5	100	
Clarifying set of specific learning objective.	DDU-CSSH	2	40	3	60	
	HU-CEBS	—	—	5	100	
	HU-CSSH	2	40	3	60	
	JJU-CEBS	—	—	5	100	
Providing well-defined directions and instructions.	JJU-CSSH	—	—	5	100	
	DDU-CSSH	2	40	3	60	
	HU-CEBS	2	40	3	60	
	HU-CSSH	2	40	3	60	
Using different techniques to implement cooperative learning.	JJU-CEBS	—	—	5	100	
	JJU-CSSH	—	—	5	100	
	DDU-CSSH	—	—	5	100	
	HU-CEBS	—	—	5	100	
Utilizing the essential elements of cooperative learning.	HU-CSSH	1	20	4	80	
	JJU-CEBS	1	20	4	80	
	JJU-CSSH	—	—	5	100	
	DDU-CSSH	—	—	5	100	
Monitoring the groups to participate actively in group work.	HU-CEBS	2	40	3	60	
	HU-CSSH	2	40	3	60	
	JJU-CEBS	1	20	4	80	
	JJU-CSSH	1	20	4	80	
Motivating students to participate actively in group work.	DDU-CSSH	—	—	5	100	
	HU-CEBS	—	—	5	100	
	HU-CSSH	2	40	3	60	
	JJU-CEBS	—	—	5	100	
Giving feedback and rewards to the students' work.	JJU-CSSH	2	40	3	60	
	DDU-CSSH	—	—	5	100	
	HU-CEBS	—	—	5	100	
	HU-CSSH	—	—	5	100	
Summarizing important points of the lesson.	JJU-CEBS	—	—	5	100	
	JJU-CSSH	—	—	5	100	
	DDU-CSSH	—	—	5	100	
	HU-CEBS	1	20	4	80	
	HU-CSSH	1	20	4	80	
	JJU-CEBS	1	20	4	80	
	JJU-CSSH	1	20	4	80	
	DDU-CSSH	1	20	4	80	

HU-CEBS = Haramaya University College of Education and Behavioral Sciences; JJU-CEBS = Jigjiga University College of Education and Behavioral Sciences; JJU-CSSH = Jigjiga University College of Social Sciences and Humanities; DDU-CSSH = Dire Dawa University College of Social Sciences and Humanities.

TABLE 3: Students' role in classroom instruction.

Role of students	Colleges	Yes	%	No	%
Students simply listen to the teacher's explanation	HU-CEBS	4	80	1	20
	HU-CSSH	4	80	1	20
	JJU-CEBS	4	80	1	20
	JJU-CSSH	4	80	1	20
	DDU-CSSH	4	80	1	20
Students express their feelings, ideas, views, etc. freely	HU-CEBS	1	20	4	80
	HU-CSSH	1	20	4	80
	JJU-CEBS	2	40	3	60
	JJU-CSSH	1	20	4	80
	DDU-CSSH	1	20	4	80
Students take responsibility for their own learning	HU-CEBS	—	—	5	100
	HU-CSSH	—	—	5	100
	JJU-CEBS	—	—	5	100
	JJU-CSSH	—	—	5	100
	DDU-CSSH	—	—	5	100
Students share knowledge, skill, and experience with each other	HU-CEBS	—	—	5	100
	HU-CSSH	—	—	5	100
	JJU-CEBS	—	—	5	100
	JJU-CSSH	—	—	5	100
	DDU-CSSH	—	—	5	100
Students are willing to ask and give answer for questions	HU-CEBS	3	60	2	40
	HU-CSSH	2	40	3	60
	JJU-CEBS	—	—	5	100
	JJU-CSSH	2	40	3	60
	DDU-CSSH	2	40	3	60
Students keep records of their work and progress	HU-CEBS	2	40	3	60
	HU-CSSH	2	40	3	60
	JJU-CEBS	2	40	3	60
	JJU-CSSH	2	40	3	60
	DDU-CSSH	3	60	2	40
Students are cooperative in doing given tasks	HU-CEBS	2	40	3	60
	HU-CSSH	2	40	3	60
	JJU-CEBS	2	40	3	60
	JJU-CSSH	2	40	3	60
	DDU-CSSH	2	40	3	60

meeting the needs of every student so as to engage them actively in the learning process should be a priority. As depicted in Table 4, the data obtained from classroom observation indicate that the arrangement of seats did not support the implementation of cooperative learning except in HU-CSSH. Similarly, the data revealed that there was not enough space for instructors and students to move, support, and monitor every group's activity. With regard to the appropriateness of distance between groups in all universities, the situation was not attractive and/or suitable to implement cooperative learning. Similar to the data obtained via observation, in the open-ended questions, instructors complained that classroom conditions were not supportive of the proper implementation of cooperative learning.

Accordingly, the classroom conditions of the colleges being observed were not helpful for implementing cooperative learning. In addition, though there were not enough seats, the classroom was not well cleaned and attractive, and the number of students was not manageable. They were placed haphazardly, and the instructors neglected to arrange the students' seats in a way suitable to encourage the implementation of cooperative learning. Moreover, in

contrast with the instructors' and students' responses, the researchers observed that most of the teaching-learning practice was dominated by the lecture method in their classroom interaction. This makes students more passive and less motivated to participate in practicing cooperative learning.

Meanwhile, the results of the above study revealed that the three universities were exposed differently to the essential elements and characteristics of cooperative learning. The reality on the ground can be attributed to various problems. The finding further revealed that Haramaya University and Dire Dawa University have better implementation of cooperative learning than Jigjiga University.

Overall, the practical implementation of cooperative learning in classroom interaction at selected eastern Ethiopian public universities was not in line with what most literature recommends. The cooperative learning method is expected to include principles such as positive interdependence, individual and personal accountability, face-to-face interaction, appropriate use of social skills, and group processing [30]. Furthermore, to have effective cooperative learning implementation in classroom interaction,

TABLE 4: Issues related to conduciveness of classroom environment.

Classroom condition	Colleges	Yes	%	No	%
The chairs are easily movable	HU-CEBS	5	100	—	—
	HU-CSSH	1	20	4	80
	JJU-CEBS	4	80	1	20
	JJU-CSSH	5	100	—	—
	DDU-CSSH	5	100	—	—
There is enough space for interaction in groups	HU-CEBS	2	40	3	60
	HU-CSSH	1	80	4	80
	JJU-CEBS	3	60	2	40
	JJU-CSSH	3	60	2	40
	DDU-CSSH	5	100	—	—
Appropriateness of distance between groups	HU-CEBS	1	20	4	80
	HU-CSSH	1	20	4	80
	JJU-CEBS	1	20	4	80
	JJU-CSSH	1	20	4	80
	DDU-CSSH	2	40	3	60
The classroom is well cleaned and attractive	HU-CEBS	5	100	—	—
	HU-CSSH	5	100	—	—
	JJU-CEBS	3	60	2	40
	JJU-CSSH	3	60	2	40
	DDU-CSSH	3	60	2	40
The number of students is easily manageable	HU-CEBS	5	100	—	—
	HU-CSSH	5	100	—	—
	JJU-CEBS	5	100	—	—
	JJU-CSSH	5	100	—	—
	DDU-CSSH	5	100	—	—

implementers should be acquainted with the principles, models, and theories of cooperative learning that result in meaningful teaching-learning experiences and practices.

4.2. Analysis of the Responses Related to Challenges of Cooperative Learning Implementation. The area of the investigation under this part signifies identifying the major challenges faced in the implementation of cooperative learning in classroom instruction in the selected university colleges. Accordingly, the results of the study were presented in the following manner.

The results in Table 5 indicate that all the selected colleges responded differently to the challenges in the implementation of cooperative learning. The overall mean and standard deviation of the selected colleges in the universities ($X = 32.30$ and $SD = 9.00$) show that they have an undecided response towards items related to challenges in cooperative learning practices. This means that participants do not understand the problem behind the implementation of cooperative learning. It also means they do not have an interest in resolving the problem proactively. From this, it can be safely inferred that colleges have some problems of implementing cooperative learning effectively in the classroom, which could in turn have a negative impact on the teaching-learning process.

The ANOVA summary in Table 6 shows that the selected colleges differ significantly in their response to challenges in the implementation of cooperative learning ($F(4, 1059) = 9.724$, $p \leq 0.001$). This means that all the selected colleges in the study area do not have similar practical problems. In plain language, this would mean that the colleges have no enabling

TABLE 5: Descriptive statistics for issues related to challenges of cooperative learning by colleges.

Variable	Colleges	f	X	SD
Challenge	HU-CEBS	227	34.6872	10.04521
	HU-CSSH	464	32.5819	8.61197
	JJU-CEBS	77	30.3506	7.58594
	JJU-CSSH	200	31.4350	7.64053
	DDU-CSSH	96	28.6563	10.17409
	Total	1064	32.2998	8.99542

f = frequency; X = mean; SD = standard deviation.

environment to ensure the practical implementation of cooperative learning, which in turn results in real differences. As clearly indicated, even though the degrees of challenges differ from college to college, all the selected colleges have critical problems with the implementation of cooperative learning, like physical setup of the classroom, motivation to work in groups, and considering cooperative learning as a politically motivated issue. To find out the colleges that are statistically different from each other, the post hoc multiple comparisons were made using the Tukey test.

The result revealed that HU-CEBS differed significantly from the rest of the colleges, and there was no statistically significant difference observed in the rest of the four colleges. The implication is that even though all the selected colleges have serious problems in the implementation of cooperative learning, HU-CEBS had different responses. This difference may happen because the college is in one of the senior universities or senior colleges.

Table 7 shows that there was a statistically significant difference ($F(1, 1062) = 14.407$, $p \leq 0.001$) between the

TABLE 6: Summary of ANOVA for issues related to challenges of cooperative learning by colleges.

Variable	Source of variation	Sum of squares	df	Mean squares	F	Sig.
Challenge	Between groups	3047.335	4	761.834	*9.724	0.000
	Within groups	82968.025	1059	78.346		
	Total	86015.360	1063			

* shows statistically significant mean differences between colleges; df = degree of freedom; $F = F$ -test.

TABLE 7: Summary of ANOVA for issues related to challenges of cooperative learning by respondents.

Variable	Source of variation	Sum of squares	df	Mean squares	F	Sig.
Challenge	Between groups	1151.247	1	1151.247	*14.407	0.000
	Within groups	84864.113	1062	79.910		
	Total	86015.360	1063			

* shows statistically significant mean differences between institutes; df = degree of freedom; $F = F$ -test.

respondents (instructors and students) in their responses to challenges that affect the effective implementation of cooperative learning in classroom instruction. This indicates that they have different views pertaining to the problems encountered in the implementation of cooperative learning. Respondents unanimously agreed that they lack knowledge on how to implement cooperative learning and lack motivation to work in a group. According to Moges [34], instructors' and students' beliefs, attitudes, professional experience, motivation, training, and understanding of innovation are the factors that affect the implementation of cooperative learning.

Implementing cooperative learning was not without problems. College deans, department heads, and cooperative learning coordinators have responded with open-ended comments regarding the challenges they face during the implementation of cooperative learning in classroom instruction. Overall, the factors can be attributed to the four categories: students, instructors, institutions, and resources. With regard to student-related problem, able students believe that studying cooperatively is killing time. Most students come with their cell phones and play music instead of studying with a group. It becomes a means of conflict and overlap of tasks. Moreover, the age and behavior of the students, the time and support they have, the amount and type of student training, and the level of instructor and student understanding were some of the issues that were responded to by students and instructors in open-ended items of the questionnaire.

Instructor-related problems like limited knowledge and negative attitudes towards the use of cooperative learning, instructors' belief in organizing their tasks, instructors facing challenges from talented students, other instructors giving assignments in different groups, and associating cooperative learning with politically motivated tendencies were raised.

In support of the above reflection, one of the department heads responded as follows.

The physical setup of our classroom has not facilitated practicing cooperative learning in classroom interaction. In addition, our students have low language ability and cannot participate freely in their cooperative groups. Furthermore, the instructors and the students have an aversive attitude towards cooperative learning implementation. The other

challenges in the adoption of cooperative learning are related to a lack of awareness and motivation, infrastructure problems, and students' and instructors' lack of information and communication technology resources and skills.

The combined responses of the participants indicate that the implementation of cooperative learning in the selected study areas faced different challenges. There were common and idiosyncratic as well as attitudinal challenges faced in the implementation of cooperative learning. Overall, time constraints for the majority of instructors to cover course contents in the allotted time and coordinators and department heads' lack of training on cooperative learning were major reasons for discouraging instructors from effectively implementing cooperative learning in classroom instruction.

The researchers did further statistical analysis to assess the challenges that affect cooperative learning implementation in classroom instruction among the three universities. Accordingly, one-way ANOVA was employed. The results were compiled and are presented in Table 8.

The ANOVA summary in Table 8 shows that the selected universities differ significantly in the challenge issues ($F(2, 1061) = 14.616, p \leq 0.001$). That means all the selected universities do not have similar institutional problems. In other words, universities do not have the same conducive environment for implementing cooperative learning in their classroom interactions. Even though the degrees of challenges differ from university to university, all the selected universities have agreed on the challenges that affect the implementation of cooperative learning in the classroom teaching and learning process. To find out the universities that statistically differed from each other's, post hoc multiple comparisons were made using the Tukey test. The result shows that Haramaya University significantly differs from the other two universities. Overall, the main challenges identified were as follows: a lack of awareness about how to promote learning through cooperative learning, negative interdependence among students, unequal shares of work among group members, insufficient time to cover courses, student competition to score high marks, lack of well-designed learning materials, the physical setup of their classroom, and a lack of clear guidelines to assess group performance.

TABLE 8: Summary of ANOVA for issues related to challenges of cooperative learning across universities.

Variable	Source of variation	Sum of squares	df	Mean squares	F	Sig.
Challenge	Between groups	2306.341	2	1153.170	*14.616	0.000
	Within groups	83709.019	1061	78.896		
	Total	86015.360	1063			

* shows statistically significant mean differences between institutes; df = degree of freedom; $F = F$ -test.

5. Conclusions and Recommendations

The study indicates that the three universities were exposed differently to the essential elements and characteristics of cooperative learning. Most of the study sites found that the implementation of cooperative learning in classroom settings was not in line with what most of the literature recommended. The reality on the ground can be attributed to various challenges.

When cooperative learning was implemented in the classroom, instructors were not playing the role of facilitator, and they were not providing meaningful directions on how students should cooperate with each other. From these data, it is possible to infer that instructors simply order students to discuss the activities without instructing them how they should do it and what they should say while they are discussing subjects cooperatively. Instructors also did not provide feedback or reinforcement to strengthen students' endeavours.

Moreover, the observed sessions did not show that instructors were employing the essential elements and characteristics of cooperative learning. Almost all instructors emphasized the lecture method. This indicates that students did not have the opportunity to interact among themselves. It can, therefore, be concluded that instructors were not successful in implementing cooperative learning and also lacked the basic skills for forming cooperative groups in all study areas, which may be the main reason for the poor practices of cooperative learning among the institutions. Overall, the instructors' commitment to employing cooperative learning was not satisfactory. As indicated in the findings, the majority of instructors at the selected study areas had a clear understanding of the concepts of cooperative learning. However, due to workload, large class size, and the like, the implementation of cooperative learning was not satisfactory.

The result showed that the majority of the students were passive listeners. Students did not take responsibility for their own learning and did not share knowledge, skills, and experience with each other. Students were interested in forming their own groups based on friendship. Their arrangement of the group was against the principle of cooperative learning.

The study identified major challenges that negatively affected the practices of cooperative learning in classroom instruction. This was further confirmed by the following findings: responsibilities were not shared properly; tasks were not assigned equitably among students (instructors did not assign individual responsibility to students); heterogeneous ability grouping was not considered; positive interdependence was not considered (group members had unique contributions to achieve the same goal); poor face-to-face interaction (individuals did not encourage each other

to complete tasks in order to reach the group's goal); inadequate social skills (lack of interpersonal skills to cooperate effectively between group members); and lack of group processing (group members had not been given the time and opportunities to discuss and evaluate how effectively the groups were working to achieve their goals).

Therefore, teachers need to understand how to structure learning situations to effectively implement cooperative learning through promoting positive interdependence, individual accountability, appropriate use of social skills, and group processing. There are hundreds of studies indicating that cooperation, compared to competitive and individualistic efforts, tends to result in greater effort to achieve more positive relationships and greater psychological health. Similarly, students should take responsibility for their own learning through cooperative learning.

Continuous monitoring and support are important tasks that program leaders can perform in order to make sure the implementation of cooperative learning is effective and satisfactory. Hence, quality assurance experts and leaders should strengthen their monitoring and support of the instructional process so that instructors and students do not ignore the implementation of the desired cooperative learning. It is important for the academic leaders and quality assurance experts to provide some training sessions on cooperative learning instructional methods and strategies. They should also organize workshops to encourage more experienced instructors to share their experiences and knowledge with other instructors. Leaders and supervisors should also have better communication with teachers and students so that they can learn about their problems and help them as soon as possible.

Last but not least, how can eastern Ethiopian higher education institutions adapt and implement cooperative learning appropriate to their context? These may emerge as contemporary thinking and cross-cutting issues, which can potentially serve as a springboard for further studies.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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