

# Perceptions of Trainees and Trainers towards Diversity Management in Applying Cooperative Learning in Technical and Vocational Colleges

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## Abstract

The implementation of cooperative learning is highly influenced by the student diversity management. This study investigated how cooperative learning was employed at technical and vocational colleges in southwest Ethiopia to manage student diversity. To that end, a mixed research methodology was used to carry out the research investigation. The empirical data was acquired from 458 trainees, 181 trainers, and 24 educational officials using questionnaires and in-depth interviews. An independent sample t-test analysis showed that trainees have more favorable perceptions of students' diversity management in the application of cooperative learning than do trainers. Cooperative learning has been found to work better in diverse classrooms than in monolithic groupings.

**Keywords:** diversity management, cooperative learning, perception

## 1. Introduction

Regardless of their relative representation, a "diverse student population" refers to the presence of students from various racial, cultural, or educational backgrounds.

As a result, even one student from a different ethnic or cultural group helps to increase diversity on campus, and having a varied student body does not necessarily reflect the diversity of the university's ethnic and religious groups. Most students consider the existence of a diverse student body to be advantageous since it gives them the chance to learn from one another's cultures, languages, religions, and experiences as well as to acquire skills that are crucial for their social lives (Abebaw, 2014).

Managing diversity refers to all the procedures dealing with student diversity in terms of attitudes, approaches, and abilities (i.e., negotiation skills, conflict management, building mutual trust, living together, etc.). A combination of historical and social disciplines has given rise to the relatively new field of diversity management. For example, affirmative action and equal opportunity are still associated with diversity management in multi-cultural contexts including race, ethnicity, sexual preference, gender, etc. in the USA. The management of linguistic and ethnic differences, as well as gender equality (gender mainstreaming); have received increased attention in Europe (Vermeulen, 2011). Today, the idea of "diversity management" has expanded to encompass all nations outside of the US and the Western world.

Cultural values should be incorporated into educational programs in countries where multi-ethnicity and multiculturalism are prevalent, such as Ethiopia. A cultural policy that guarantees equal access to culture for "all nations, nationalities, and peoples of Ethiopia," for instance, was authorized by Ethiopia in 1997.

The Federal Democratic Republic of Ethiopia's constitution specifies in Article 39/2 that "Every nation, nationality, and person in Ethiopia has the right to speak, write, and develop their own language; to express, develop, and promote their culture; and to preserve their history." (Fisseha, 2015). Thus, these agendas can be realized if group dynamics are recognized in instructional processes at all levels of education.

Diversity can support a wide range of learning outcomes, including active thinking skills and intellectual engagement, as well as democracy outcomes like perspective-taking, citizenship engagement, and cultural understanding. If diversity is valued, viewed, and used as an essential resource for optimizing learning and teaching in Ethiopian higher education institutions, the existence of a multi-ethnic and multicultural society is a good opportunity (Abebaw, 2014).

The research literature on diversity in higher education also finds a number of advantages of diversity, which can be categorized into three main groups based on recipients.

Individual advantages, institutional benefits, and social benefits are some of these types (Gurin, Dey, Hurtado, and Gurin, 2002; Gurin et al., 2002; Milem, 2003; Terenzini, Cabrera, Colbeck, Bjorklund, & Parente, 2001; Abebaw, 2014).

Diversity management in a diverse classroom is the practice of addressing and supporting multiple lifestyles, personal characteristics, learning capabilities, and preferences within a defined group of learners. Management activities include educating the group of learners and providing support for the acceptance of and respect for various ethnic, cultural, societal, linguistic, economic, and political backgrounds. Most students consider the existence of a varied student body to be advantageous, as noted by Abebaw (2014), since it gives them the chance to learn from one another's cultures, languages, religions, and experiences. However, there are various theories that describe both the positive and negative effects of students' ethnic, linguistic, and religious diversity on cooperative learning and social functioning. Theories that describe positive effects include macro-structural theory (Blau, 1974), contact theory (Allport, 1954), and intellectual and moral development theory (Gurin, Dey, Hurtado, and Gurin, 2002; Piaget, 1965). Conversely, the "Constrict" theory (Putnam, 2007) and "Conflict" theory (Blalock, 1967) describe the negative effects of students' ethnic diversity on schooling and social functioning. In this study, the researchers focused on diversity management and its link to learning processes in Southern Ethiopian colleges.

## **2. Theoretical Underpinnings of Diversity Management and Cooperative Learning**

### *2.1 Diversity Management Models for Educational Organizations*

In response to increasing diversity in postsecondary institutions in the United States of America, the country has taken various measures in its general public regulations in general and higher education institutions in particular. One of its approaches included allocating resources across their campuses to guarantee that the priorities were reached as well as working with commercial and public sector partners to identify and prioritize the skills their students should have to accept diversity and be successful graduates.

The instructional leaders should be aware that, while students from different backgrounds are learning together, non-majority students frequently find it difficult to fit in with the majority culture or have no interest in doing so. As a result, they may feel frustrated and alone on their postsecondary campus (Weicheng, 2003, as cited in Chen, 2017). Because these instructional states offer formal chances for minority and majority students to connect with one another and learn from one another in various circumstances, it requires teachers to have good diversity management abilities.

The complex interaction of numerous factors, both academic and social in nature, that have an impact on cooperative learning among various groups of learners both directly and indirectly is required to create a pleasant campus and classroom environment.

### *2.2 Assimilation Model*

The assimilation model suggests that new people who come into the educational organization will adapt to existing organizational norms. The assimilation and integration theories primarily advocate for the viewpoint that non-dominant groups should disregard their cultural identity and embrace or at least integrate into the dominant culture (Olsen and Martins, 2012; Jonna, 2013).

Since the focus of these approaches in postsecondary education is on integrating non-dominant groups into the dominant culture, they hardly ever contribute to the reciprocal intergroup interaction that supports the advantages of cooperative learning.

### *2.3 Diversity-Inclusivity Model*

Diversity-Inclusivity Model is a different student diversity management strategy used in a diverse cooperative learning group. Nelson Laird (2010, 2014) developed a model that identified a diversity inclusivity continuum for nine courses based on the theoretical foundations of earlier models of recognizing student diversity, such as multicultural education (Banks, 2007; Grant and Sleeter, 2008), feminist theory (Maher and Tetrault, 1995; McIntosh, 1983 as cited in Nelson Laird, Hurtado, and Yuhás, 2018), and course planning models (Lattuca & Star (Nelson Laird, Hurtado, and Yuhás, 2018)). For instance, course material could be expanded to include material from other linguistic, ethnic, and religious groups instead of just focusing on one ("mono-cultural group") (a "multicultural group"). The model shows that while designing and delivering higher education courses, it is possible to take the diversity of the students into account. Therefore, it is crucial to use this model to show how the pedagogy incorporates diversity in the classroom.

#### 2.4 Multi-Contextual Model for Diverse Learning Environments (MMDLE)

The multiple social identities of students are at the center of the curriculum and extracurricular activities, according to Hurtado, Alvarez, Guillermo-Wann, Cuellar, and Arellano's (2012) Multi-Contextual Model for Diverse Learning Environments. These identities interact dynamically with those of faculty and staff through practices involving both content (or educational programming) and process (pedagogies and forms of practice).

A review of roughly 30 years' worth of research on underrepresented groups in higher education served as the foundation for the concept. The model can then be used to assess student variety and how it relates to the learning process. Campus ethnic Climate Framework serves as the overarching theory for this study (Yen Ling, 2013).

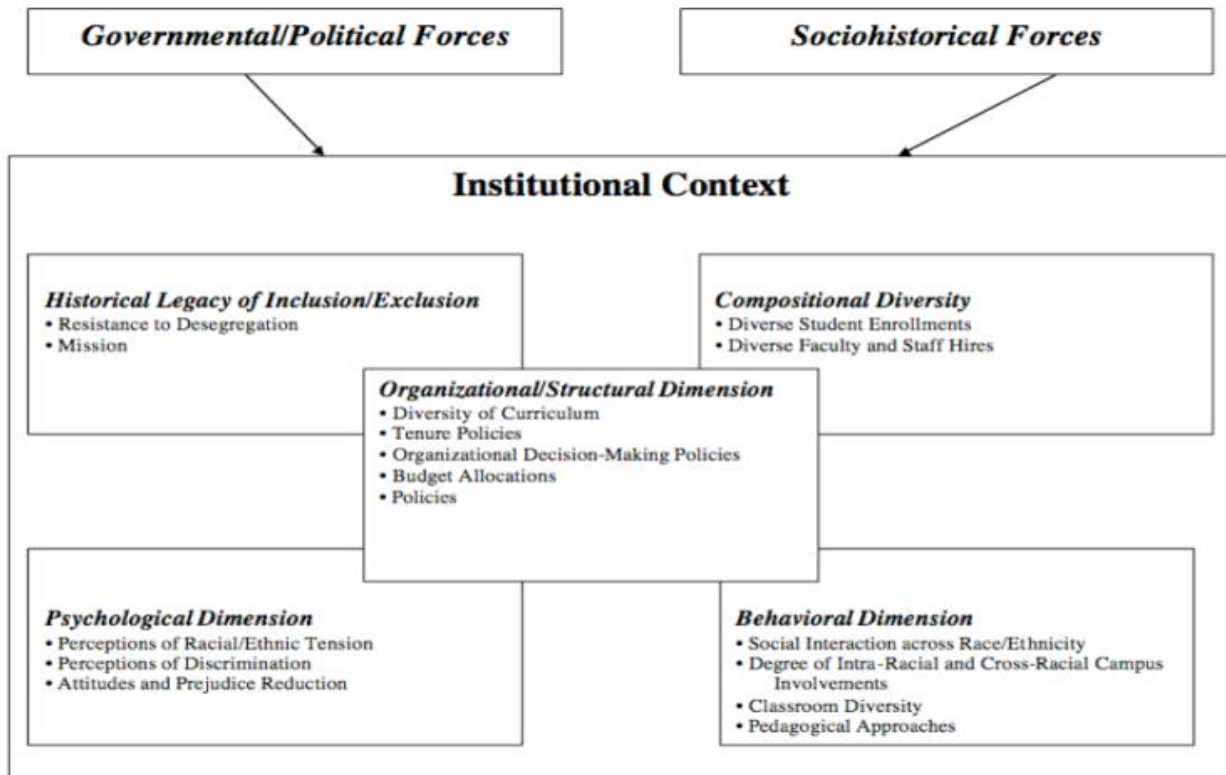


Figure 1. Campus ethnic Climate Framework

Adopted from Milem, Chang, and Antonio (2005), as cited in Hurtado, Milem, Clayton-Pedersen, and Allen (1998, 1999).

The following are the major reasons for the selection of this model to guide the reviews:

(1) It takes into account variety in its entirety, as well as how it is managed at the social (community), institutional, and institutional (institutional) levels.

Additionally, it takes into account the organizational, historical heritage of inclusion, compositional, psychological, and behavioral components of campus diversity. According to Hurtado, Milem, Clayton-Pedersen, and Allen (1998), the campus ethnic environment framework specifies four internal forces: one organizational force, structural (compositional), psychological, and behavioral forces, as well as historical legacies of inclusion and exclusion. A later addition of a fifth dimension, organizational and structural, describes a distinct feature of campuses that focuses on structures and organizations that might promote diversity. It includes institutional rules, procedures, and customs (Milem, Chang, and Antonio, 2005).

(2) It has been found to be a more comprehensive model, accounting for diversity management, institutional climate, educational practices, and student outcomes.

(3) It contributed in light of developments in research and new connections identified in the literature.

(4) As part of the model, the developers positioned diversity management as embedded in the central tasks of educators and trainers, primarily faculty, administrators, and staff in interactions with increasingly diverse students, all of whom possess multiple social identities.

(5) Macro-level forces that influence institutions are presented as a way to integrate a variety of procedures to highlight the multi-contextual nature of educating students in a diverse learning environment and learning cooperatively (Yen Ling, 2013).

### 3. Statement of the Problem

Most of the time, postsecondary education institutions, including TVETs, are known for their student diversity in terms of ethnicity, linguistic group, schooling diligence, socio-economic status, residential backgrounds, and other dimensions. Tertiary education in Ethiopia remains discriminatory, according to the 2019 World Education Statistics Report (WES). The participation rates are highly tilted toward men and urban dwellers. Consequently, a number of non-majority ethnic groups of students willingly or unwillingly enroll in TVET programs in their locality. This is because most of the children of ethnic groups living on the social, political, provincial, and economic margins are less accessible to quality secondary education and are therefore less likely to join university (Fisseha, 2015; Pedersen and Digby, 2013). Postsecondary education diversity management projections begin with the admission of a diverse student body. This study, concurrently, explores the degree of student diversity management and its association with cooperative learning on TVET campuses in the south-west Ethiopian people's region.

The ethnic, linguistic and religious dimensions of diversity make learning accessible to students through their cross-ethnic relationships and interactions (Hailemariam, 2016). Diversity can support a broad range of learning, including active thinking skills and intellectual engagement and democracy outcomes such as perspective-taking, citizenship engagement, and cultural understanding (Abebaw, 2014). Contrarily, the opposite happens if learners' diversity is not successfully managed. If diversity, multi-ethnicity, and multiculturalism are valued and well managed, they can serve as essential resources for maximizing cooperative learning in the TVETs. Managing diversity relates to all the processes addressing planning and organizing students' practices, attitudes and methods in dealing with a diverse group of students (Hailemariam, 2016).

Diversity can support a broad range of learning, including active thinking skills and intellectual engagement and democracy outcomes such as perspective-taking, citizenship engagement, and cultural understanding (Abebaw, 2014). Contrarily, the opposite happens if learners' diversity is not successfully managed. If diversity, multi-ethnicity, and multiculturalism are valued and well managed, they can serve as essential resources for maximizing cooperative learning in the TVETs. Managing diversity relates to all the processes addressing attitudes, methods, and skills in dealing with a diverse group of students (i.e., negotiation skills, conflict management, building mutual trust, living together, etc.). The research literature on diversity in higher education also identifies several benefits of diversity, which can be grouped into three major categories based on beneficiaries: individual benefits, institutional benefits, and societal benefits (Gurin, Dey, Hurtado, and Gurin, 2002; Milem, 2003; Terenzini, Cabrera, Colbeck, Bjorklund, and Parente, 2001).

### 4. Institutional Setting and the Problem

Some local studies portray that ethnic identity-based conflicts arise across Ethiopian higher education institutions at different times (Abebaw, 2016; Tesfaye, 2012; Hailemariam, 2016). Thus, nowadays, student diversity management is a salient issue in educational organizations for the effectiveness of the teaching and learning processes. More specifically, in south-west Ethiopia, the ethnic conflicts that erupted around Sheko-Mezhengir in Bench-Sheko zone, Yeki Woreda (around Tepi town) in Sheka Zone, and Bitta Woreda in Kaffa Zone have caused the loss of lives, destruction of property, and closure of educational organizations until recent times. Although major clashes have subsided, ethnic conflicts and latent tensions have persisted (Sisay, 2007; Semir, 2019). The ethnic and linguistic diversity conflicts are replicated and widespread in educational organizations, including the Tepi Campus of Mizan-Tepi University, TVETs, and secondary schools around these localities. These educational organizations are confronting immense challenges due to a lack of peace and stability, which requires better diversity management skills (Ezega.com, 2018).

Technical and vocational education and training (TVET) institutions in Ethiopia cater to a diverse student population by providing classes ranging from short-term periodic trainings to level V. In other words, students' diversity in TVETs is not merely confined to ethnic, religious, linguistic, and cultural diversity but serves vastly different target groups, including primary education completers, youths with average academic achievement in general secondary education (post-Grade 10 level), students from emerging areas (areas that need special supports and pastoralist areas), learning capabilities, and unemployed people (MoE, 2008). Unlike Ethiopian universities, the composition of numerical minority ethnic groups increases in TVETs in south-west Ethiopia (Wolde-Selassie, 2004). This is because there are such a small number of minority ethnic groups in the South West Ethiopian People's Region as Bench, Me'en, Kafficho, Dizi, Sheko, Suri, Amhara, Wolayita, Kambata, Majang, Chara, Na'oo, Konta.

With regard to the diversity in Ethiopian public universities, students come from each area of the country, which increases the degree of diversity. Although students come from a limited locality, the nature and spectrum of their diversity in TVETs in south-west Ethiopia are different from their diversity in Ethiopia's public universities. As research depicts (Getachew, 2019, 2020), most minority ethnic groups in south-west Ethiopia have less access to university study. Hence, different numeric minority ethnic and linguistic groups join TVET institutions via local government sponsorship (Getachew, 2011; Sarah & Kjetil, 2003). The educational organizations, including TVETs, colleges, and schools in the region, experience highly diversified classrooms. Consequently, it is common to find a mix of students in terms of ethnicity, language, and religion within a classroom. Some of the ethnic groups that attend level I to level IV TVET programs within the same classroom at the TVETs include Bench, Dawro, Kambata, Dizi, Kaffecho, Chara, Na'0, Amhara, Oromo, Sheko, Mezhengir, Shekecho, Menit, Suri/Surma, Wolayta, Konta, etc. Thus, the researchers is interested in the state of diversity management, its relationship with and influence on cooperative learning, and the challenges that both teachers and students face in a diverse classroom.

It has been demonstrated in recent years that the colleges and TVETs of south-west Ethiopia face challenges of ethnic identity conflicts in addition to political turbulence. Tepi TVET is one of the known institutions in the region that experiences frequent opening and closing across different times because of ethnic-based conflicts in the general public and educational organizations. One of the major factors hindering diversity management in educational organizations and other sectors is tokenism on the part of political representatives. That is, by making false promises to the general public and, in particular, the non-majority ethnic group (Getachew, 2011).

From a local perspective, Hailemariam (2016) discovered that institutional service and students' diversity management strategies, as well as collaborative instructional strategies, have paved the way for students' holistic development in a multi-ethnic context at selected Universities. In his case study, Cross group learning experiences refers to a cooperative learning strategy among university students who come from different linguistic, ethnic and religious backgrounds and live cohesively, developing multiple perspectives that enhance the social skills needed to live in a diverse society. However, his study has not shown to what extent diversity management and cross-group learning experiences are correlated with each other.

Moreover, Abebaw (2013b) also qualitatively investigated that the university stakeholders have weak diversity management experiences to support students in developing positive attitudes and promoting diversity, mainly because of a lack of institutional priority as well as poor managers' confidence and diversity management skills. Consequently, these poor student diversity management practices result in adverse effects such as poor language learning and communication skills among diverse ethnic and linguistic groups of higher education students because students more frequently use local languages than the medium of instruction (i.e., English) in instructional processes. But this finding did not determine the degree of the nexus between the students' diversity management and cooperative language learning method. Thus, this study is intended to answer the following research questions:

Research questions: This study was guided by the following research questions:

- (1) What are the perceptions of trainees and trainers towards ethno-structural, ethno-cultural, and ethno-categorical diversity management in applying cooperative learning in Technical and Vocational Education and Training institutions (TVETs) in the South West Ethiopian People's Region?
- (2) How does students' ethnic diversity management affect cooperative learning?

## **5. Research Methodology**

The research methodology is a comprehensive description of the participants, tools, and techniques. In this study, to serve the purpose of the research, we employed a mixed research methodology.

A thorough review and analysis of the past research and literature helped the researchers select an appropriate research design in line with the research questions. Accordingly, the survey design was employed to achieve the purpose of the study. In this methodology, we used cross-sectional survey method in the quantitative study and narrative research approach for the qualitative part of the study.

### *5.1 Sources of Data*

The primary data for this study were collected from trainees, teachers, and instructional leaders selected from the four sample TVETs through a cross-sectional survey questionnaire and interviews.

### 5.2 The Study Population

The research sites were selected by employing the purposive sampling technique based on the levels of TVET programs being initiated (i.e., from level I to level V). The target populations for this study were TVET students enrolled in levels I through V, trainers, and educational leaders in Bonga Poly TVET College, Mizan-Aman Poly TVET College, Mizan ATVET College, and Tepi TVET College.

### 5.3 Sample and Sampling Techniques in the Study

This sub-section identifies the major demographic characteristics of the participants, which are mainly associated with the research objectives, such as their age, gender, ethnicity, language, and religion.

Most of the time, the participants' identification questions are about the ways of determining the sample size from the accessible population. There are several approaches to determining the sample size. From his reviews, Fransua (2019) identified some ways, such as a census for small populations, imitating the sample size of similar studies, using published tables, and applying formulas to calculate a sample size. In the present study, we employed the Yamane formula to determine the sample size of students from each entry year and research site (Yamane, 1967).

In this study, 458 trainees were selected by using the proportional stratified sampling technique in terms of years of the study and institutional population size. This sampling technique helps the researchers collect a proportionate number of questionnaires from different batches (TVET College entry year and research sites) of students and different research sites, and then a simple random sampling method is employed to select the participants.

The proportional stratified sampling technique was employed to select respondent teachers from each research site. Accordingly, applying Yemane's formula (Yamane, 1967), 181 trainers were selected by using a simple random sampling method to take part in filling out the questionnaire. The educational officials of TVETs were selected using a purposive sampling method.

### 5.4 Data Collection Instruments

#### 5.4.1 Questionnaire

In this research, two standardized questionnaires, such as the students' diversity management questionnaire and the Cooperative Learning Application Scale (CLAS), were adapted (modified) and administered.

The students' diversity management questionnaire is adapted from Hampton University diversity management questionnaires (DMQ) and then contextualized with the researchers' variables and settings. Accordingly, the questionnaire encompassed three perception dimensions, namely, the ethno-structural diversity management questionnaire, the ethno-cultural diversity management questionnaire, and the ethno-categorical diversity management questionnaire.

#### 5.4.2 In-depth Interviews

The interviews were carried out with 24 educational officials in Amharic and scheduled for one hour to one and a half hours with each participant. In the semi-structured interview, initially we described the major themes (topics) of the interview by anticipating probing questions associated with each topic under investigation. Nevertheless, the following major themes were considered as a guideline for the probing questions posed after the questionnaire was distributed and analyzed: The first leading question for the interview was, "How do students and teachers perceive ethno-structural, ethno-cultural, and ethno-categorical diversity at technical and vocational education and training institutions in south-west Ethiopia?" The research question, "How does students' diversity management affect the application of cooperative learning?" was also examined using in-depth interviews.

## 6. Results and Discussions

### 6.1 Demographic Characteristics of Respondents

Demographic characteristics were collected as part of the questionnaire to determine the representativeness of the samples to the total population and the degree of heterogeneity among the respondents. Accordingly, background information about trainees' gender, age, TVET level, and ethnic background was collected and analyzed. By the same token, the gender, work experience, educational qualifications, and academic rank of the trainer respondents were also collected and analyzed.

Table 1. Demographic information of the trainee participants

		Frequency	Percent
Sample Polytechnic Technical College	Aman Polytechnic College	97	21.2
	Bonga Polytechnic College	160	34.9
	Mizan ATVET	114	24.9
	Teppi Polytechnic College	87	19.0
Gender	Male	221	48.3
	Female	237	51.7
Age	18- 21	307	67.0
	22-25	124	27.1
	Over 25	27	5.9
	Level I	117	25.5
TVET Level	Level II	12	2.6
	Level III	123	26.9
	Level IV	174	38.0
	Level V	32	7.0
	Kaffecho	201	43.9
Students' ethnic background	Bench	56	12.2
	Shekacho	12	2.6
	Dawuro	12	2.6
	Yem	4	.9
	Konta	3	.7
	Mezhengir	3	.7
	Suri	2	.4
	Mi'enit	4	.9
	Other	163	35.5
	Students' residential background	Rural	207
Suburban		115	25.1
Urban		136	29.7

As can be seen in the above Table 1, a total of 458 trainees took part in the study (i.e., Aman Polytechnic College (97, 21.2%), Bonga Polytechnic College (160, 34.9%), Mizan ATVET (114, 24.9%), and Teppi Polytechnic College (87, 19.0%). Females (237, 51.7%) and males (221, 48.3%) made up nearly equal proportions of the student respondents. The majority (307, 67.0%) of student respondents were between the ages of 18 and 21. The majority of participants were also selected from Kaffecho ethnic groups (201, 43.9%) and came from the rural areas of the region (207, 45.2%).

Table 2. Trainees’ cross-group interaction

Item	Very often		Often		Rarely		Never	
	No	%	No	%	No	%	No	%
1. The frequency of interaction that students have with other ethnic groups in the TVET institution	183	40.0	118	25.8	148	32.3	9	2.0
2. The frequency of interaction that students have with other religious groups in the TVET institution	151	33.0	147	32.1	138	30.1	22	4.8
			Classmates				256	55.9
			Dating field experiences				16	3.5
			Roommate student				34	7.4
3. Applicable settings (situations) in which students interact with other ethnic groups			Neighborhood group organizations				32	7.0
			Hometown				21	4.6
			Church /Mosque				32	7.0
			Group work				27	5.9
			Other places				40	8.7

The data in the above Table 2 portrays that most students experience cross-ethnic and cross-cultural interactions within institutional settings. More than half of the trainee respondents interact with diverse groups of classmates.

Table 3. The trainers' demographics in terms of work experience, gender, educational qualification, and academic rank

Item Category	Frequency	Percent	
Gender	Male	142	78.5
	Female	39	21.5
Work Experience	10 years and above	56	30.9
	5-9 years	91	50.3
	1-5 years	34	18.8
Educational Qualification	MA/MSc and above	7	3.9
	BA/BSc	170	93.9
	Diploma	4	2.2
Academic Rank	Rank A	29	16.0
	Rank B	140	77.3
	Rank C	12	6.6
Total	181	100.0	

Source: Field survey

The trainers' sample was made up of roughly three-fourths (142, 78.5%) males. The average work experience of trainers was between 5 and 9 years (50%). Nearly all (94%) of the sample trainers were BA/BSc holders.



6.2 Trainers' and Trainees' Perceptions of Students' Diversity Management

Table 4. Group Statistics of Participants' Perceptions of Students' Diversity management in the application of cooperative learning

	Respondents	N	Mean	Std. Deviation	Standard Error Mean
Perceptions of students' ethno-structural diversity management	Trainees	458	3.765	.71422	.03337
	Trainers	181	3.615	.82577	.06138
Perceptions of students' ethno-cultural diversity management	Trainees	458	3.803	.75695	.03537
	Trainers	181	3.166	.88915	.06609
Perceptions of students' ethno-categorical diversity management	Trainees	458	3.784	.73625	.03440
	Trainers	181	3.761	.77125	.05733

As can be seen in the above Table 4, we checked the individual-group statistics section first to determine if the count and the mean were reasonable.

With regard to the perceptions of trainees and trainers on students' ethno-structural diversity management in the application of cooperative learning, the above table (4) portrays that the majority of both sample groups rated it positively and agreed that there was a good practice of students' ethno-structural diversity management in the diverse classrooms. (Mean<sub>(trainees)</sub> = 3.765, SD<sub>(trainees)</sub> = .71422; Mean<sub>(trainers)</sub> = 3.615, SD<sub>(trainers)</sub> = .82577).

The standard error of measurement is another statistical tool used in the above table (4) to state the reliability. The standard error of measurement is an estimate of how often one can expect errors of a given size in an individual's rating score. In this variable (perceptions of ethno-structural diversity management), both sample groups have low standard errors of measurements (Std. Error Mean<sub>(Trainees)</sub> = .03337, Std. Error Mean<sub>(Trainers)</sub> = .06138). Hence, a small standard error of measurement indicates the high reliability of the items.

According to the above Table 4, trainees rated more positively on the items of perceptions on managing ethno-cultural diversity practices in their institutions to implement cooperative learning (mean trainees = 3.803, SD = .75695) than trainers (mean trainers = 3.166, SD (trainers) = .88915). However, the perceptions of the majority of the two groups of respondents towards the items of students' ethno-categorical diversity management were positive and relatively close to each other. As a result, participants with lower standard errors of measurement demonstrated greater reliability.

6.3 Perception Difference between Trainees and Trainers on Students' Ethno-Structural Diversity Management

H<sub>1</sub>: There is a statistically significant perception difference between trainees and trainers on students' ethno-structural diversity management.

Table 5. Independent Samples Test for Students' Perceptions of Ethno-Structural Diversity management

Levene's Test for Equality of Variance				t-test for equality of mean								
	Mean	St.Dev		F	Sig.	t	df	Sig.(2-tailed)	Mean difference	Std. error Difference	95% confidence interval of difference	
											Lower	Upper
Trainees	3.765	.714	Equal variances assumed	3.396	.066	2.29	637	.022	.15029	.06562	.02143	.2792
Trainers	3.615	.826	Equal variances not assumed			2.15	292.11	.032	.15029	.06987	.0128	.2878

An independent samples t-test was used to compare trainees' and trainers' perceptions of students' ethno-structural diversity management. There were no significant differences (t (637) = 2.290, P = .022) in the scores for the mean score of trainees (M = 3.7651, SD = .71422) and trainers (M = 3.6148, SD = .82577). The magnitude of mean differences was very small (mean difference = .15029, 95% CI: .02143 to .27915). Hence, H<sub>1</sub> was not supported.

H<sub>1</sub>: There is a statistically significant perception difference between trainees and trainers on Students' ethno-cultural diversity management

Table 6. Independent Samples Test for Student Perceptions of Ethnic-Cultural Diversity Management

Levene's Test for Equality of Variance			t-test for equality of mean								
	Mean	St.Dev.	F	Sig.	t	df	Sig.(2-tailed)	Mean difference	Std. error Difference	95% confidence interval of difference	
										Lower	Upper
Trainees	3.803	.75695	8.004	.005	9.109	637	.000	.637	.06993	.49969	.77435
Trainers	3.166	.88915			8.498	288.553	.000	.637	.07496	.4895	.78456

An independent samples t-test was used to compare trainees' and trainers' perspectives on ethno-structural diversity management in the context of cooperative learning. There were no significant differences ( $t(637) = 8.498, P = .000$ ) in the scores for the mean score of trainees ( $M = 3.803, SD = .75695$ ) and trainers ( $M = 3.166, SD = .88915$ ). The magnitude of mean differences was significant (mean difference = .63702, 95% CI: .48948 to .78456). Hence, H<sub>1</sub> was supported.

H<sub>1</sub>: There is a statistically significant perception difference between trainees and trainers on Students' ethno-categorical diversity management

Table 7. Independent Samples Test for Perceptions of Students' Ethno-Categorical diversity management

Levene's Test for Equality of Variance			t-test for equality of mean								
	Mean	St.Dev.	F	Sig.	t	df	Sig.(2-tailed)	Mean difference	Std. error Difference	95% confidence interval of difference	
										Lower	Upper
Trainees	3.784	.73625	2.523	.113	.349	637	.727	.02289	.06552	-.10578	.15156
Trainers	3.761	.77125			.342	316.81	.32	.02289	.06686	-.10865	.1544

An independent samples t-test was used to compare trainees' and trainers' perceptions of students' ethno-structural diversity management. There were no significant differences ( $t(637) = .349, P = .727$ ) in the scores for the mean score of trainees ( $M = 3.784, SD = .73625$ ) and trainers ( $M = 3.761, SD = .77125$ ). The magnitude of mean differences was very small (mean difference = .02289, 95% CI: -.10578 to .15156). Hence, H<sub>1</sub> was not supported.

### 7. The Influence of Students' Diversity Management on Cooperative Learning

In educational organizations with well-mannered diversity management, all students can benefit from opportunities to learn from and interact with people whose backgrounds and perspectives differ from their own. Providing such learning opportunities requires proper planning, organizing, coordinating, and follow-through at the classroom level and institutional level.

The majority of the interviewees replied that there are a number of advantages to diversity management in higher education institutions' leadership and instruction. Some of these advantages forwarded by the subjects include increased learning opportunities, a maximized body of knowledge about world views, improved problem-solving,

increased creativity and innovation, increased skill variety, an improved organizational reputation leading to increased market share, and improved achievements of the vision, mission, and goals of the institutions.

Most respondents explained that diverse student groups have ample advantages in terms of maximizing cooperative learning: it helps students enhance their critical thinking and analytical skills; it also prepares students to succeed in an increasingly diverse and interconnected world; it mitigates the act of discrimination; and it enables the higher education institutions to fulfill their role in paving the way for students of diverse backgrounds.

If students join and attend TVETs in which ethnically, linguistically, or religiously segregated learning environments exist, they can develop prejudices, but in all research sites, trainees explained that the TVETs in Southwest Ethiopia accommodate ethnically and culturally diverse trainees. Some research participants explained that observing the practices of cooperative learning in heterogeneous groups at technical and vocational institutions, in turn, yields being educated and trained about antidemocratic and counter-discriminatory experiences. Through an understanding of diversity, students are able to make connections from their own lives to the lives of their peers. Teaching diversity and its proper management increases cultural competence, which in turn allows students to be empathetic to the experiences of others.

The findings of an in-depth interview show that enhancing the economic, social, and educational prospects for diverse students requires better management of the diversity of the student population in technical and vocational education and training institutions. Diverse learning environments support students in developing their analytical and critical thinking abilities, preparing them for success in a diverse and interconnected world, dismantling stereotypes, reducing bias, and enabling educational institutions to play their part in providing opportunities for students from all backgrounds.

Management of diversity in higher education helps graduates move up the social ladder by increasing their salary. Managing students' diversity has a direct impact on student performance. Studies show that students in a diverse group achieve a higher average performance. Thoughtfully planned diversity lessons promote depth of knowledge and give students and teachers exposure to new cultures, different religious beliefs, ethnic identities, and languages. It is suggested that students in more ethnically and culturally diverse polytechnical colleges perform better academically than students in relatively ethnically and culturally homogeneous student groups in TVETs in Southwest Ethiopia.

Moreover, the interview results disclosed that culturally diverse classrooms enhance students' communication skills, problem-solving abilities, and teamwork experiences. Cooperative groups are an excellent tool for classroom instruction. In a diverse classroom, students bring various perspectives that challenge their peers to think creatively and cooperate to find an appropriate solution for their group. When students are given the opportunity to work with a diverse group of peers or on topics that discuss diversity, they can confront stereotypes and discover similarities with their classmates. The benefits of classroom diversity and its management are both academic and socio-emotional; educators must prioritize creating diverse learning opportunities for students and teaching about diversity. Exposing students to diverse experiences and people will have a positive impact on their development and a profound impact on society.

## **8. Conclusion**

Student diversity management in applying cooperative learning in a socially and culturally diverse educational setting has multiple benefits for the instructional processes of higher education, including technical and vocational colleges. The teaching and learning processes at technical and vocational institutions found to be cooperative in a way that enables different students to maximize learning outcomes, enhance academic accomplishment, and develop the interpersonal communication skills necessary for teamwork.

Both trainees and trainers had good and practically identical opinions on how students' ethno-structural and ethno-categorical diversity is managed in the application of cooperative learning. Cooperative learning has been found to work better in diverse classrooms from an ethno-structural, ethno-cultural, and ethno-categorical perspective than it does in monolithic groupings.

## **9. Implications**

According to the participants' perspectives in the current study, cooperative learning and student diversity management work well together. As perceived by the research participants, effective student diversity management has immense influence on the application of cooperative learning. Both trainees and trainers have significant and positive perceptions towards the nexus between the student diversity management and applying cooperative learning. Hence, the interaction between student diversity management and the adoption of cooperative learning should therefore be

the subject of additional research. It is advisable to consider that, just as important as managing students' diversity, trainees should come across opportunities to work in diverse groups.

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