

**HIGHER EDUCATION INSTITUTIONS PRACTICES IN
IMPLEMENTING EDUCATIONAL INNOVATIONS IN ETHIOPIA:
THE CASE OF COOPERATIVE LEARNING**

KETEMA HAILE GELETA

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APPROVED BY THE BOARD OF EXAMINATION

_____	_____	_____
Chairman, Department Committee	Date	Signature
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Advisor	Date	Signature
_____	_____	_____
External Examiner	Date	Signature
_____	_____	_____
Internal Examiner	Date	Signature

Dedication

I dedicate this study to my late mother W/o Tenagne Demisse and Brother Lieutenant Teshome Haile, whose enduring love and care laid the foundation for my existence. Mom, although I miss you, your love and immense contributions to pursue my education will remain in my heart forever.

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First, I would like to acknowledge the Lord for giving me the strength and courage to complete the journey to attaining a doctor of philosophy degree. During times of stress and uncertainties, the Lord gave me strength to carry on as I sought to extend my learning and develop myself personally and professionally. I always feel and enjoy His presence with me. Besides, in writing this dissertation I have received support from several sources because like so much in life, what one individual has "accomplished" is really the result of a cooperative process.

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Ketema Haile

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Table of Content

Contents	Page
Dedication	i
Acknowledgements.....	ii
Table of Content	iv
List of Tables	ix
Acronyms and Abbreviations	xii
Abstract.....	xiii
 CHAPTER ONE	
INTRODUCTION.....	1
1.1. Back ground to the Study.....	1
1.2. Rationale and Justification.....	4
1.3. Statement of the Problem.....	4
1.4. Objectives of the Study.....	7
1.4.1. General objective.....	7
1.5. Research Questions.....	7
1.6. Significance of the Study	8
1.7. Delimitation of the Study.....	8
1.8. Limitations of the Study.....	9
1.9. Structure of Parts of the Dissertation	10
1.10. Theoretical Framework of the Study	10
1.10.1. Implementation theory.....	11
1.10.2. Constructivist theory.....	14
1.10.3. Social learning theory.....	16
1.11. Definition of Terms.....	18
 CHAPTER TWO	
REVIEW OF RELATED LITREATURE.....	19
2.1. Introduction.....	19
2.2. Understanding Innovation.....	19
2.3. Educational Innovations.....	20
2.4. Conceptualizing Cooperative Learning.....	21
2.5. Basic Elements of Cooperative Learning.....	23
2.6. History Cooperative Learning.....	26
2.7. Theoretical Foundation of Cooperative Learning.....	28

2.7.1. Social interdependence theory	28
2.7.2. Cognitive developmental theory.....	30
2.7.3. Behavioral learning theory	30
2.7.4. Motivational theory	31
2.8. Empirical Evidence in Support of Cooperative Learning.....	32
2.9. What Is and Is Not a Cooperative Effort.....	34
2.10. Types of Cooperative Learning.....	35
2.11. Benefits of Cooperative Learning	37
2.12. Principles of Cooperative Learning	37
2.13. Methods of Cooperative Learning	38
2.14. Implementation of Educational Innovations	39
2.14.1. Implementation Frameworks	39
2.15. Implementation of Cooperative Learning	41
2.16. Issues with Implementing Cooperative Learning	43
2.16.1. Pre- implementation issues.....	43
2.16.2. Issues during implementation stage.....	47
2.16.3. Post implementation activities.....	47
2.17. Challenges with Implementing Cooperative Learning	48
2.18. Implementation Practices of Cooperative Learning in Ethiopian Public Universities.....	50
CHAPTER THREE	
RESEARCH DESIGN AND METHODOLOGY	51
3.1. Introduction.....	51
3.3. Why Use Mixed Methods?	53
3.4. The Research Design	54
3.4.1. Research method and design for the case study research.....	55
3.4.2. Research method and design for the survey research.....	57
3.5. Data Analysis Procedure in Exploratory Mixed Methods Design	57
3.6. Sampling Techniques and Respondents of the Study	59
3.6.1. Selection of cases for the Qualitative case study.....	59
3.6.2. Population, sample size and sampling technique for the Quantitative study	60
3.7. Methods and Procedures of Data Collection and Analysis for the Qualitative Study	62
3.7.1. Data Collection instruments for the Qualitative study	62
3.7.1.1. Pilot case study	63
3.7.2. Deciding on the unit of analysis	64

3.7.3. Data Collection procedures for the Qualitative study	64
3.7.4. Method of data analysis for the Qualitative study	65
3.7.5. Ensuring research Quality	67
3.8. Mixing data	67
3.8.1. Development of survey questionnaire	68
3.8.2. Pilot testing.....	68
3.8.3. Maintaining the quality criteria for the quantitative study.....	69
3.8.3.1. Reliability of the scales.....	69
3.8.3.2. Validation of the survey questionnaire	70
3.9. Methods and Procedures of Data Collection and Analysis for the Quantitative Study	71
3.9.1. Data collection procedures for the Quantitative part.....	71
3.9.2. Method of data analysis for the Quantitative study	71
3.10. The second mixing of data set.....	72
3.11. Ethical consideration.....	72
3.12. Conclusion	74
CHAPTER FOUR	
Ambo University Cooperative Learning Implementation Practices	75
4.1. Introduction.....	75
4.2. University overview	75
4.3. Knowledge and Perception about Cooperative Learning.....	76
4.4. Purposes of implementing cooperative learning in the university	81
4.5. Blessings and Opportunities of Cooperative Learning	84
4.6. Attitude towards Cooperative Learning.....	87
4.7. Actual Cooperative Learning Implementation Practices	89
4.8. Cooperative Learning Implementation Practices Status	100
4.9. Obstructing Factors in Cooperative Learning Implementation Practices	102
Summary	105
CHAPTER FIVE	
Addis Ababa Science & Technology University CL Implementation Practices.....	107
5.1. Introduction.....	107
5.2. University overview.....	107
5.3. Knowledge and Perception of Cooperative Learning	109
5.4. Purposes of Cooperative Learning Implementation.....	112
5.5. Blessings& Opportunities of Cooperative Learning	115

5.6. Attitudes towards Cooperative Learning	118
5.7. Cooperative Learning in Action.....	119
5.8. Cooperative Learning Implementation Practices Status at AASTU	127
5.9. Challenges in Cooperative Learning Implementation.....	130
Summary	133
CHAPTER SIX	
University of Gonder Cooperative Learning Implementation Practices	135
6.1. Introduction.....	135
6.2. University overview	135
6.3. Knowledge and Perception of Cooperative Learning	137
6.4. Purposes of Cooperative Learning.....	141
6.5. Blessings& Opportunities of Cooperative Learning	143
6.6. Feelings towards Cooperative Learning	147
6.7. Cooperative Learning Implementation Practices at University of Gonder	149
6.8. Cooperative Learning Implementation Practices Status	162
6.9. Curses in Implementation Practices	164
Summary	167
CHAPTER SEVEN	
Higher Education Institutions Implementation Practices of Cooperative Learning (Cross Case Analysis)	169
7.1. Introduction.....	169
7.2. Participants knowledge and perception of CL	170
7.3. Benefits and Opportunities of Cooperative Learning	174
7.4. Cooperative Learning Implementation Practices and Status of the Practices	180
7.5. Obstructers in CL Implementation Practices	196
CHAPTER EIGHT	
Quantitative Data Presentation, Analysis and Interpretation	202
8.1. Introduction.....	202
8.2. Demographic Data of Participants	202
8.3. Analysis and Interpretation of Main Data	205
CHAPTER NINE	
DISCUSSION	240
9.1. Brief Description of the Study	240
9.2. Summary of the Major Findings	241

9.3. Discussion of the Findings.....	242
9.3.1. Implementation Practices of CL in the case universities.....	242
9.3.2. Participants’ knowledge and conception of CL.....	247
9.3.3. Participants’ attitude toward CL and its implementation practices	252
9.3.4. Challenges of CL implementation practices of the sample universities.....	254
CHAPTER TEN	
CONCLUSIONS AND IMPLICATIONS	256
10.1. Conclusions.....	256
10.2. Implications.....	258
References.....	261
Appendices.....	278

List of Tables

Table 1: A pragmatic alternative to the key issues in Social Science Research methodology	53
Table 2: Mixed method design data analysis & interpretation procedures.....	58
Table 3: Number of interviewees per institution	60
Table 4: Sample respondents.....	61
Table 5: Reliability analysis.....	69
Table 6: Summary of challenges of CL implementation at AU	104
Table 7: Summary of challenges of CL implementation at AASTU.....	133
Table 8: Challenges CL implementation practices (UoG).....	167
Table 9: Inconsistent understanding and perception of CL strategy.....	170
Table 10: Benefits and opportunities of CL strategy	175
Table 11: CL implementation practices.....	180
Table 12: Obstructors in CL Implementation Practices	197
Table 13: Sex composition of respondents	203
Table 14: Students' experience in using CL	203
Table 15: Demographic characteristics of Instructors	204
Table 16: Multiple Comparisons	211
Table 17: Groups' comparison.....	213
Table 18: Multiple response analysis.....	214
Table 19: Instructors related issues.....	216
Table 20: Multiple Linear Regression analysis on CL implementation practice (PRC)	219
Table 21: Table of Correlations	222
Table 22: CL implementation status	224
Table 23: Analysis of relations between CL implementation and dependent variables	229
Table 24: Benefits of CL implementation	231
Table 25: Provision of facilities.....	233
Table 26: Challenges of CL implementation	238

List of Figures

Figure 1: Conceptual frame work	17
Figure 2: Schematic representation the exploratory research	54
Figure 3: The visual model of qualitative analysis for this study	66
Figure 4: Students working in groups in class rooms at Ambo university	99
Figure 5: Medical students working in group (UoG-college of medicine &health sciences)	155
Figure 6: Students working together under Shades (UoG –Maraki -Main campus). .	155
Figure 7: Students working with peers under Tree shade (UoG -Maraki- main campus)	156
Figure 8: Average score of respondents for CL implementation practices	209
Figure 9: Assumption testing.....	218
Figure 10: Relationship between CL and dependent variables	221
Figure 11: Attitude of students	235
Figure 12: Attitude of instructors.....	235
Figure 13: Average score of challenges.....	236
Figure 14: Perception of challenges among sample universities	237

List of Appendices

Appendix-A.....	278
Appendix-B.....	279
Appendix-C.....	281
Appendix-D.....	282
Appendix-E	283
Appendix-F	284
Appendix-G.....	288
Appendix-H.....	289
Appendix-I	292
Appendix-J.....	293
Appendix-K.....	294
Appendix-L	295
Appendix-M.....	296
Appendix-N.....	298

Acronyms and Abbreviations

ANOVA =Analysis of Variance

AASTU = Addis Ababa Science and Technology University

AU = Ambo University

CL=Cooperative Learning

EMoE= Ethiopian ministry of education

ESC = Education Strategy Center

HE = Higher Education

HEIs = Higher Education Institutions

HDP= Higher Diploma Program

PS=pilot study

SPSS= Statistical Package for Social Sciences

UoG =University of Gonder

Abstract

The purpose of this study was to explore higher education institutions practices of implementing cooperative learning strategy as educational innovation. The study was conducted in three public universities in Ethiopia and the study sites were selected using maximum variation sampling technique. The theoretical framework used in this study was a composite of three theories: implementation, social learning and Constructivist theories. The Academic Vice Presidents, college/institute deans, department heads, university reform directors and experts from Ethiopian ministry of education (EMoE) reform directorate education strategic center were participated in the qualitative phase of this study while instructors and students were participated in the quantitative part. Semi-structured interview, document analysis and observation were used to collect qualitative data. Questionnaires were used to collect quantitative data. It was distributed to 36 randomly selected instructors and 120 randomly selected students. Out of these, responses from 35 instructors and 117 students were used for analysis. Thematic analysis was used to analyses the qualitative data. Descriptive, multiple regression, ANOVA, chi-square, t-test analyses were used to analyze the quantitative data. Seven categories/themes of CL implementation practices emerged from this study: Knowledge and Perception of cooperative learning, purposes of cooperative learning, blessings and opportunities of cooperative learning, attitude towards cooperative learning, cooperative learning implementation practices, status of the implementation practices and challenges /curses/ in CL implementation. Three major conclusions were drawn from this study: (1) One of the conclusions drawn from this study is that there were lack of necessary preparations including implementation planning, trainings for instructors, technical support and coordinated work among all parties that played the major role was not satisfactory; (2) The respondents conceptualize CL as an accepted and preferred strategy comparing to individual or competitive approach but the actual implementation practices of the strategy was poor. On the other hand, there were research participants who perceive CL as governments political tool in academic institutions; (3) there was no adequate provision of resources and facilities which better facilitates the implementation practices of the pedagogical innovation in the case universities.

Key words: higher education institutions, educational innovation, cooperative learning, CL implementation practices

CHAPTER ONE

INTRODUCTION

1.1.Back ground to the Study

The way teaching and learning carried out in modern educational environments has been transformed through the advent of cooperative learning (Johnson & Johnson, 2009). Because how learning takes place and quality teaching and learning is the cornerstone of education and no education system can function without effective teaching and learning.

According to Slavin (1999) cooperative learning (CL) has recently been hailed as one of the greatest success stories in the history of educational innovation. An examination of numerous research studies has suggested that cooperative approaches to learning lead to higher academic achievement than individual or competitive approaches (Johnson, Johnson & Stanne, 2000). In addition, it has been found that CL (cooperative learning) has positive social and motivational effects (Littleton & Hakkinen, 1999; Sharan, 1980).

Cooperative learning has been defined differently by different researchers. For example, Slavin (2011) defined CL as instructional methods in which teachers organizes students into small groups, which then work together to help one another learn academic content. Sharan (1994) also defined it as a group-centered and student-centered approach to classroom teaching and learning. On the other hand, Johnson and Johnson (1990) refer CL as the instructional use of small groups so that students work together to maximize their own and one another's learning. Although researchers have not used the same official definition of this term, all of them refer to CL as a set of methods in which students work together in small groups and help one another to achieve learning objectives (Johnson & Johnson, 2009).

Moreover, cooperative learning as a form of pedagogy is claimed to promote learning through social contexts (Adams & Hamm, 1994). According to Tsay and Brady (2010) cooperative learning is one of the most commonly used forms of active learning which takes place through an individual's interaction with his or her environment and peers. CL is an old idea in education, which has experienced substantial revival in educational research and practice in the past few years

and in general, the term refers to classroom techniques in which student's works on learning activities of small groups and receives rewards or recognition based on their group's performance (Slavin, 2017; Johnson, Johnson & Holubec, 1998). CL also understood as a teaching approach in which small groups, each with learners of diverse levels of capability, use a range of educational activities to enhance their comprehension of a topic to accomplish shared goals (Dyson & Casey, 2012; Gullies, 2007). In other words, cooperative learning is the pedagogy within which students are active constructors of knowledge in the learning process instead of passive receivers of any given knowledge (Liang, 2002).

In general, from all these definitions the one most widely used in higher education is probably that of David Johnson and Roger Johnson. According to the Johnson & Johnson model, cooperative learning refers to work done by student teams producing a product of some sort (such as a set of problem solutions, a laboratory or project report, or the design of a product or a process), under conditions that satisfy five criteria: (1) positive interdependence, (2) individual accountability, (3) face-to face interaction for at least part of the work, (4) appropriate use of interpersonal skills, and (5) regular self-assessment of team functioning (Johnson & Johnson,1983).

According to Johnson, Johnson, and Smith (2006) there are basically three ways in which cooperative learning may be structured in the university classrooms. Instructors may use formal cooperative learning, informal cooperative learning, and cooperative base groups. On top of this, though the CL strategy is being implemented its benefits are not automatic, however, and if imperfectly implemented, the method can create considerable difficulties for instructors, most notably dysfunctional teams and student resistance or hostility to group work (Dyson & Casey, 2012).

Cooperative learning has a long history and many philosophers and educators had promoted it through the ages. In the first century, a Greek Philosopher Quintillion argued that students could benefit from teaching one another. The Roman philosopher, Seneca also advocated cooperative learning through such statements as, "Qui Docet Discet" (when you teach, you learn twice). On the other hand, in the late 1700s Joseph Lancaster and Andrew Bell made extensive use of CL groups in England, and the idea was brought to America when a Lancastrian school was opened

in New York City in 1806. However, competitive and individualistic learning was given due emphasis in the early 1900s, but CL and the research into it were given renewed attention in the 1980s (Johnson & Johnson, 1998; Slavin, 1991). The work of Deutsch (1949a) had laid the framework of cooperative learning and his theory has served as the major conceptual structure for this area of inquiry.

CL as a student-centered, instructor-facilitated instructional strategy in which a small group of students is responsible for its own learning and the learning of all group members has recently been hailed as one of the greatest success stories in the history of educational innovations (Slavin, 1999). An examination of numerous research studies has suggested that cooperative approaches to learning lead to higher academic achievement than individual or competitive approaches (Johnson, Johnson & Stanne, 2000). In addition, it has been found that CL has positive social and motivational effects (Littleton & Hakkinen, 1999; Sharan, 1980).

Ethiopian universities similar to their counterparts across the globe are tasked by the country's higher education proclamation with the fundamental missions of undertaking teaching and learning, research and community service (FDRE, 2009). They are responsible for preparing mature graduates with the knowledge, skills and attitudes to thrive after university. Among the instruments that could better help them in preparing mature graduates one is implementation of modern teaching and learning methods that promote active learning of students (EMoE, 2013b).

The traditional teacher-centered method of teaching has been criticized for its lack of active learning of students. In traditional teaching and learning method, education is conceived as a process of transmitting knowledge, facts rules, or action (Tanner & Tanner, 1980, Amare, 1998). The teacher is considered as the center of everything while the learner remains a passive receiver. These days, however, as the result of the impact of educational research and the development of new educational innovations, new methods are advocated for better learning and it is these factors that forces Ethiopia to advocate new teaching approach and has been the major framework for reform and transformation. The education and training policy proclaimed in 1994 promotes active learning and problem-solving approaches to overcome the shortcomings of the traditional method

of teaching and learning. One of the strategies of active learning is cooperative learning (TGE, 1994 & MOE, 2002, 2014b).

Thus, currently in Ethiopia CL strategy (in the form one-to-five group formation) is being implemented in higher education institutions through direct involvement of students in active learning approaches as a means of rectifying the differences in their educational backgrounds and improvement of student's academic performance. However, very little research has been carried out in exploring the issue of implementation practices of cooperative learning in higher education institutions. Hence, the researcher believes that this study will be helpful to fill the existing gap in current research and aims to explore the implementation practices of cooperative learning as active learning approach in Ethiopian public universities. The results of this study may provide information on the level of implementation practices of cooperative learning; attitudes of instructors and students towards the strategy and challenges currently experienced in implementing cooperative learning approaches at the public Universities of Ethiopia.

1.2.Rationale and Justification

The topic of this thesis is timely and has the potential to alter how learning and teaching takes place in Ethiopian public universities. In the Chapters that follow it will become clear that cooperative learning is a well-researched pedagogy that has been shown to have a positive impact in a number of areas. In Ethiopia the higher education system was in transition and move towards a curriculum that requires more students' engagement and interaction. This research attempts to clarify in what ways a pedagogical approach (implementation of CL) supporting the endeavor in Ethiopian public universities. In other way how the implementers understand and perceive and practice the pedagogy is an issue. I think there has not been formal research completed in Ethiopia about HEIs implementation practices of cooperative learning strategy and this research aims to bridge the gap. This thesis provides information about HEIs implementation practices of cooperative (CL) as a teaching and learning strategy.

1.3. Statement of the Problem

The challenge in education today is to effectively teach students of diverse ability and differing rates of learning (Iksan, 2007). Therefore, universities are adopting different pedagogical innovations to improve students' learning that will in turn contribute to the development of wider

societies. Cooperative learning is one of those innovations that have been adopted long ago and still implemented in higher education since it has diversified advantages for students (Johnson & Johnson, 1998).

Pertaining to its advantages Nuntrakune (2008) stated that CL strategies enhance students' cognitive development and social development such as knowledge building, meta-cognition, self-esteem and positive peer relationship. Moreover, Hannon and Ratliffe (as cited in Nuntrakune, 2008) explained that in the traditional competition-based classroom low achieving students may feel embarrassed and humiliated in their struggle to keep up. On the other hand, in some institutions CL is seen as cheating because the educational pedagogy recognizes and rewards individual effort and competition and discourages cooperation among students (Oregon University, 2013).

Cooperative learning has been well documented in the educational research as a successful pedagogy to improve students' academic achievement. It is a fundamental principle of cooperative learning that group members are linked together in such a way that they cannot succeed unless everyone succeeds, they will actively assist each other to make sure that the assignment is done and the purpose of the group is achieved (Deutsch, 1949a). They acquire this by providing help and cooperation to each other, sharing resources, and encouraging each other's efforts. As a result, group members who work in cooperative groups outperform students who work by themselves or in competition with each other (Johnson & Johnson, 2004).

In the 20th century, studying with someone else was taken as an indicator of dependency, but today learning together and asking for help is considered among the best strategies for learning to teach (Chen, 2002). Because in the era of what we call information society, one of the most important skills seems is cooperation. According to Chen common mind is better than the single best mind. The common mind is more effective in creating acceptable change in society.

Millis and Cottell (1998) have also argued that CL is able to stimulate deep approach to learning in higher education students and in recent years CL has become increasingly popular at the university level (Cavanagh, 2011; Hammond, Bithell, Jones, & Bidgood, 2010; Hillyard, Gillespie, & Littig, 2010). Scholars such as Biggs and Tang (2011) and Fink (2003) have recommended cooperative learning as an important teaching and learning activity for university students. Hattie

(2009) also found CL as one of the more effective means of instruction compared to a plethora of other factors influencing academic achievement.

According to Millis (2002) higher education's most challenging goals include: enhancing critical thinking, promoting deep learning, encouraging both self-esteem and the acceptance of others, and improving interpersonal effectiveness (with emphasis on team skills). Therefore, the current emphases given for cooperative learning increases is since it has multiple advantages for students. But, due to several challenges these advantages are not easily harvested in the teaching & learning process. Implementing cooperative learning in the classroom is more complex and demanding for the instructor, as well as the student (Kaufman, 1997). In addition to this, Paulsen and Faust (as cited in Jones, 2008) note that there is still a resistance and hesitation in higher education to transform traditional college classes into cooperative learning environments. Several research findings like Dionigi (2013) pin-pointed that teachers' understandings about CL strategies and students' behavior are some of the factors that affect the effectiveness of cooperative learning.

Ethiopia introduced CL to universities in 2013 through one-to-five formation strategy (1+5) (EMoE, 2013a). The student network seems similar with cooperative-base groups, where students of different academic achievement, sex and ethnic background work in small groups for a relatively long period of time (Weldemariam & Girmay, 2015). The student network is used for activities within and outside of the classrooms. Within the classroom, the students sit in their network groups and support each other on projects given by instructors (Weldemariam & Girmay, 2015). While giving the activities, instructors are expected to provide clear guidelines about how students will complete the group activities and what individual student participation will look like. Instructors are also expected to assess and provide feedback after the students worked through the activities.

¹In general, the one-to-five group formation strategy (CL) is being implemented as an instrumental strategy to improve students' academic achievement and quality of education in universities. However, its practice along the objectives, the five principles of cooperative learning, basic elements (positive interdependence, individual accountability, group processing, group skills and face to face interaction) and its foundational science the implementation practices and the status

¹A student with a very good academic performance leads other five students assigned to the group as a member (EMoE, 2013b)

of implementation in the teaching and learning process is not adequately investigated. Therefore, little is known whether it is a learning method that resembles CL, pseudo-CL or is a cooperative learning itself. The researcher also experienced that the one-to-five group formation as a CL strategy practical application in teaching learning process is not satisfactory. This implies as there is some gap between predetermined expectations and actual practices. In order to fill this gap, it is very important to conduct a study on cooperative learning implementation practices in Ethiopian public universities.

1.4. Objectives of the Study

1.4.1. General objective

The major objective of this study is to understand higher education institutions' practices in implementing cooperative learning strategy by focusing on the following objectives:

1. Identifying the current status of the implementation practices of cooperative learning method,
2. Explore the advantages of implementation of cooperative learning on curriculum implementation and improvement of quality of education,
3. Comparing and contrasting the cases regarding the implementation practices of CL and enduring its consequences,
4. Explore which components of cooperative learning are strong and which are not strong and seek alternative strategies used to improve the implementation practices of the strategy.
5. Identify the major determinant factors affecting the implementation practice of cooperative learning strategy.

1.5. Research Questions

Thus, in relation to the above-mentioned objectives, this study was attempted to address the following research questions:

1. How do higher education institutions implement cooperative teaching & learning strategy at curriculum level?
2. Which cooperative learning methods are mostly practiced in teaching and learning process?

3. How do instructors and students in the university context experience CL?
4. Does the implementation of CL strategy benefits students?
5. Do universities and Ministry of Education support implementation of cooperative learning by putting more resources and provisions of technical supports?
6. What are the opportunities and challenges that CL is facing? And how will cooperative learning implementation practices be improved for the future?

1.6. Significance of the Study

This study is believed to yield the following benefits for stakeholders like: students, instructors, university management and educational authorities. To begin with, the results of the study may help to: raise the awareness of EMoE experts, the institutions officials and instructors about cooperative learning and its implementation practices; the results of the study may also help to improve instructors' and students' attitude towards cooperative learning method in terms of its relevance, management and enhancing students' learning within their university context.

In general, information from the study might help policy makers, researchers, university officials, university board, legislatures and instructors to understand the status of the implementation practice of cooperative learning method and apply appropriate intervention strategies that further accelerate effective implementation of the strategy in line with its principles and goals which in turn contribute to quality implementation of the curriculum and for the long term effect of the reform efforts. On top of this, as a result of the findings from the study, further research may evolve, especially from researchers who are interested in conducting similar studies in this area.

1.7. Delimitation of the Study

The study was limited on investigating the implementation practices of cooperative learning method in Ethiopian public universities. For this purpose, out of the 44 public universities in the country the study was delimited to only three universities: University of Gonder, Ambo University and Addis Ababa Science & Technology University. Therefore, it is confined to explaining: the state of essential elements necessary for implementation of one-to-five group formation as cooperative learning strategy; indicate where existing implementation practice is found, approaches used by the university management in implementation of cooperative learning and

commitment and collaboration of all stakeholders, key barriers and impact of the implementation of CL on curriculum implementation.

The study is only focused on undergraduate program graduating class students with the assumption that these students have stayed relatively for long period of time in the university and have experience and knowledge to rightly explain about the implementation of CL in their respective universities in general and in their departments in particular.

Finally, the study limited to public universities up to third generation believing that the 4th generation universities may lack experience in using CL as strategy. It also limited to only three outcomes of CL namely: academic achievement, socialization, tolerance and respecting of differences. Further the study also limited to staff training, equipment/facility and political conditions and instructors and students' perception & knowledge, physical environment & class room condition, resource provision and leadership as internal factors and external factors that influence/determine the efficacy of implementation process of CL though many other factors are there.

1.8. Limitations of the Study

This study is faced with some limitations. This is not necessarily negative, as awareness of limitations can be a cause for enrichment. Firstly, the study is limited to a population of graduate class. A more comprehensive overview of the implementation practices of cooperative learning would have been gained if other year levels were also included in the sample.

There may be inherent error that may have occurred by participants (particularly student) answering a certain way because it was what was desirable by their peers (social desirability). On top of this, the data that have been reported in the current study are mainly based on the perceptions of the research participants through self-reporting. While perceptions and self-report data are not always unrealistic, they may be decorated by vested interest and bias, and may not reflect existing realities. This study suggests that investigating the implementation practices of CL strategy by employing different data collection methods like focus group discussion and by increasing the sample size of universities as well as the research participants.

Also, when assuming that the cause (cooperative learning) leads to the effect (social skills, academic achievement and respecting& tolerance of others idea) it is important to keep in mind

that there may be other confounding factors not explored in the studies (teaching and learning styles, previous experiences). The results should therefore be interpreted in the light of all these limitations. Regardless of the limitations, this research is expected to serve as a launching pad for a more extensive study on the topic.

1.9. Structure of Parts of the Dissertation

This exploratory sequential mixed methods research was presented in ten chapters. Chapter one provides background to the study, rationale and justification, statement of the problem, objectives and research questions of the study, significance of the study, delimitation of the study, limitations of the study, organization of the study, theoretical framework and definition of terms. Chapter two reviews the relevant literature on issues related to CL. Critical discussion of the literature has been carried out to provide clear direction and ensure a solid grounding of this research. Chapter three gives an overview of the research design I used for this study. It includes: The research design of the study in general and, research method and design for both the qualitative and quantitative strands, a description of the processes used for selection of the cases and samples, and the gathering and analysis of data are examined as well as issues related to validity and reliability.

Chapters four through seven are the case studies of the three universities involved in the research. They begin by describing the universities, a lesson they taught, and an interview using quotations from my field notes. To complete each case study, data from all the observations and interviews of each university are summarized according to seven coding categories and chapter seven summarizes and analyses data across the cases and includes conclusions and recommendations which I have inferred from the data. The quantitative data and its analysis part of this research project are presented in chapter eight. Chapter nine contains summary of the major findings and discussion of the results. Finally, chapter ten contains conclusions and implications for improved practice and further studies.

1.10. Theoretical Framework of the Study

The theoretical framework is a blueprint or guide that is often ‘borrowed’ by the researcher to build his/her own house or research inquiry (Grant & Osanloo, 2014). This research used three theories as a theoretical framework.

Lovitts (2005) empirically defines criteria for applying or developing theories to the dissertation that must be appropriate, logically interpreted, well understood, and align with the question at hand. Thus, implementation theory, constructivist and social learning theories were employed together as theoretical frameworks for this study.

1.10.1. Implementation theory

At the simplest level, implementation theory is concerned with the examination of organizational compliance with particular policy directives (Yudof, 1981). Mazmanian & Sabatier (1983) define implementation as the carrying out of a basic policy decision, usually incorporated in a statute but which can also take the form of important executive orders or court decisions. A policy decision identifies the problem(s) to be addressed, stipulates the objective(s) to be pursued and structures the implementation process (Sabatier & Mazmanian, 1980). This shows that passing policies does not guarantee success on the ground if policies are not implemented well. Pressman and Wildavsky (1984) were the first ones to show that implementation dominates outcomes.

It is difficult to say which factors or conditions facilitate successful implementation since so much depends on the political, economic and social context of institutions. For instance, local factors (e.g. size, institutional complexity) matter for policy responses (McLaughlin, 1987). In this vein, Payne (2008) argues that only looking for general solutions and not acknowledging the particular context can lead to incoherent implementation efforts. Therefore, no 'one-size-fits-all' policy exists. However, this has not stopped some scholars from trying to come up with the most important factors for certain policy areas. To take the example of education policy, according to Payne (2008), successful implementation has been evidenced in educational institutions where there is: coherence, stability, peer support, Training and engagement.

Successful system reform means that a small number of powerful actors are interacting to produce substantial impact (Fullan, 2009). Successful implementation implies that agencies comply with the directives of the statutes, agencies are held accountable for reaching specific indicators of success, goals of the statute are achieved, local goals are achieved or there is an improvement in the political climate around the program (Ingram & Schneider, 1990). Local capacity matters for policy success; adequate resources and clear goals are important too (McLaughlin, 1987).

Even if policy implementation appears to be successful, Fullan (2000) points out that there is no guarantee that success will last. In terms of the change process in schools, there has been strong adoption and implementation, but not strong institutionalization. Fullan (2000; 2007) further notes that both local educational institutions development (which engage instructors and students) and quality of surrounding infrastructure are keys for lasting success. Changing policies is not sufficient if there is no “re-culturing” of classrooms (Fullan, 2000; 2007). As a result, a number of conditions need to be satisfied to enhance the change of successful and sustainable implementation, though these conditions vary across systems. This adds to the difficulty of the whole process. According to Winter (2003) two schools of thought developed for studying and describing implementation: top-down and bottom up.

Top-down and bottom-up approaches of implementation

A widely used concept in the policy implementation (and change) literature distinguishes between top-down and bottom-up approaches. The two approaches vary in a number of areas, such as the role of actors and their relationships and the type of policies they can be applied to.

Top-down approach

Top-down theorists see policy designers as the central actors and concentrate their attention on factors that can be manipulated at the central level (Matland, 1995). The most detailed top-down approach was presented by Sabatier and Mazmanian (1979) who identified a number of legal and political variables and then synthesized them into five conditions needed for effective implementation ranging from clear objectives, causal theory, legal structure of the implementation process, committed officials, supportive interests’ groups to no undermining of changing socio-economic conditions. In terms of policy areas, ‘top-downers’ usually prioritize clear policies (Matland, 1995).

Therefore, the top-down implementation approach implies that adequate bureaucratic procedures should be established to ensure that public policies are executed as accurately as possible. To this end, public institutions should have sufficient resources, established implementation system, clear responsibilities and hierarchical control to supervise the actions of the implementers (Pulz & Treib, 2010).

Bottom- up approach

Bottom-up theorists emphasize target groups and service deliverers, arguing that policy is made at the local level (Matland, 1995). These scholars (e.g. Barrett & Fudge, 1981, Elmore, 1979) thus criticize top-down theorists for only taking into consideration the central decision-makers and neglecting other actors. The bottom-up approach, developed by Hanf, Hjern and Porter (1982) identifies the networks of actors who are involved in service delivery in one or more local areas and asks them about their goals, strategies, activities and contacts. It then uses the contacts in order to develop a networking technique to identify the local, regional and national actors involved in the planning, financing and execution of relevant governmental and non-governmental programs. This provides a mechanism for moving from local actors and decision-makers such as instructors or doctors up to the top policy-makers in both the public and private sectors (Sabatier, 2005).

Combined approach

Increasingly, the literature has focused on combining (micro-level variables of) bottom-up and (macro-level variables of) top-down approaches in implementation research in order to benefit from the strengths of both approaches and enable different levels to interact regularly (Elmore 1985; Fullan, 2007; Goggin et al., 1990; Matland, 1995; O'Toole, 2000; Sabatier and Jenkins-Smith, 1999; Barret, 2004). Building on Matland (1995) Suggett (2011) develops a framework distinguishing area by the level of political conflict about goals or intent of a policy, and the level of uncertainty about the means or actions to achieve the goal.

Combining the two approaches might thus draw on their main strengths while minimizing their limitations. Policy implementation often takes place because a wide range of stakeholders interact between different levels – thus both central policy-makers and local actors on the ground are important for successful implementation. In addition, this combined approach allows for differentiating between various policy areas. For instance, while the suggested framework by Suggett (2011) in its current form could be further elaborated, it is a good start for differentiating between implementation strategies. It matters whether health care or education policies are considered. Even within policy sectors, implementation strategies are not the same for higher education and secondary education policies, for example (see Gornitzka, Kyvik & Stensaker, 2005). As a result, implementation varies according to different content and type of policies.

1.10.2. Constructivist theory

Constructivism philosophical paradigm described by Honebeinas as an approach asserts that people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences Honebein (1996). Constructivism is based on the analogy (basis) that people construct (form) much of what they learn through experience (Cashman et al., 2008; Hein, 1991). Therefore, to the constructivist, constructing meaning is learning; there is no other kind. This invalidate the traditional concept of learning in a “chew, pour, and forget” thus, learning because of examination with less or no motivation on the application of the learned experience in real life settings.

The constructivist philosophy depicts the idea that learning does not just happen from the traditional method of instructors standing in front of the class and lecturing. On the other hand, to the constructivist, learning occurs only when the learner discovers/find out the knowledge through the spirit of experimentation and doing (Kalender, 2007). The core idea behind this kind of philosophical approach is best described in Confucius, the renowned Chinese philosopher’s quote: “I hear and I forget. I see and I remember. I do and I understand.”

Therefore, the constructivist approach provides the framework for investigating the implementation practice of cooperative learning by instructors in real classrooms. Traditional constructivist approach is rooted in the beliefs that knowledge is constructed (i.e., built on prior knowledge) and that knowledge is acquired through interactions with the environment (Perret-Clermont, Perret, & Bell, 1991; Vygotsky, 1978). At its most basic, constructivism is a theory of knowing. It rejects the idea that knowledge can be transmitted from one individual to another or that knowledge can be passively received. Meaning has to be constructed by the individual by relating new experiences to existing knowledge and previous experience (Entwistle, 2009). Hence, learning is an active and to some extent an idiosyncratic process often described by the metaphor of constructing knowledge (Tynjälä, 1999; von Glaserfeld, 1995; Pritchard & Woollard, 2010). While the construction of knowledge happens within the individual student, learning is heavily influenced by the individual’s interaction with the social world (Jonassen et al., 1993).

A constructivist approach suggests that in the process of implementation, instructors are engaged in the active construction of knowledge about cooperative learning. Newly developed concepts

will be reflected when CL is used in the classroom. Thus, for cooperative learning to be in line with constructivist pedagogic principles, the particular task given to students should be one of understanding rather than memorizing or merely reproducing. CL in itself is an 'empty' structure only likely to promote deep approaches to learning if the subject matter or the task embedded in the cooperative structures is one requiring understanding (Slavin, 1996),

On the other hand, when instructors trained to use CL as a teaching and learning strategy, their understanding is influenced by their existing knowledge of teaching practices and instructional methods and by their previous knowledge of current teaching contexts, including curriculum, and student characteristics. Through the mechanism of assimilation, they should reorganize the information that they receive about cooperative learning to fit their existing schema of teaching. In addition, the teaching schema should include cooperative learning. As a result of changes in their mental frameworks, instructors could use new methods in the classroom and they should internalize the resulting classroom experiences so that those experiences contribute to their further understanding of the strategy as a pedagogical innovation/ tool for active learning. In some cases, instructors' understanding and subsequent use of cooperative learning may need to be altered to accommodate new information obtained through experiences. Therefore, a constructivist approach suggests that instructors' understanding of CL and the enactment of cooperative learning in their classrooms are related.

The constructivist instructor can employ instructional strategies that direct the teaching and learning processes, learner centered rather than instructor centered. Woolfolk (2010) suggests that some of these instructional strategies as reciprocal questioning, jigsaw and structured controversies. The students thus become "experts" on one part of a group project and teach it to the others in their group. Learning thus becomes an active process in which the learner uses sensory input and constructs meaning out of it. The crucial action of constructing meaning of the content is mental. The constructivist instructor must also provide activities which engage the mind as well as the hands of the learners. This is what John Dewey refers to as "the reflective activity" (Kim, 2005).

Furthermore, instructors who employ the constructivist approach to teaching have to adapt to the role of facilitators and not teachers (Bauersfeld, 1995). While an instructor gives a didactic lecture

that covers the subject matter, a facilitator helps the learners to get their own understanding of the content. Thus, in the former scenario, the learners play a passive role and in the latter scenario the learners play an active role in the learning process. The emphasis thus turns away from the instructor and the content, towards the learners (Gamoran, Secada, & Marrett, 1998).

1.10.3. Social learning theory

Bandura (1977) the prominent theorist of social learning theory, briefly illustrated that much learning occurs by observing, modeling and imitating models. Similarly, Shaffer also noted that people learn from one another, through: observation; imitation; and modeling (Shaffer, 2005).

Social learning theory (Bandura, 1986) is grounded on the assertion that children learn by observing the actions of others and the consequences that emanate from those actions. Very similar to Vygotsky (1978, 1986) the work of Bandura gave an emphasis on learning that takes place in a social setting. For Nabavi also social learning theory is based on the idea that we learn from our interactions with others in a social context (Nabavi, 2014).

Bandura believes that not only does environment cause behavior; behavior causes environments as well, through reciprocal interaction. He further argues that the development of the personality is the result of continuous reciprocal interaction between three components: the environment, behavior, and one's psychological processes. These interactions impact the learner's self-efficacy. Self-efficacy beliefs of learners determine their goals, and effort in the face of failure and setbacks (Bandura, 1997). This theory exemplifies human behavior as it relates to collaboration with others, praise, and incentives. Trawick-Smith (1997) explained that educators could employ the ideas of the social learning theory by allowing students to network supportively in an expected manner.

Social learning theory (or observational) states that children learn more by observing and imitating the desired behaviors of others, a strong connection has been found between social learning theory and the practice of cooperative learning. Consequently, social behavior and the actions of effective learners in the cooperative learning groups are expected to be modeled and adopted by other students through the interaction between observed behaviors, cognitive factors, and external environments (reciprocal determinism). In general, according to Schunk and Shaffer the major premise of social learning theory is that learners can improve their knowledge and retention by

observing and modeling the desired behaviors, attitudes and reactions of others and human thought processes are central to understanding personality (Schunk, 2007; Shaffer, 2005).

Therefore, to explore and explain what is actually happening in the practices of a cooperative learning strategy: implementation theory, constructivist theory and social learning theories were adopted as a guiding framework for case study part of this research. Based on the above theoretical framework and review of literature I designed the following conceptual framework to view the implementation of cooperative learning, factors influence its implementation practices and the outcomes of using different CL strategies in the teaching and learning process.

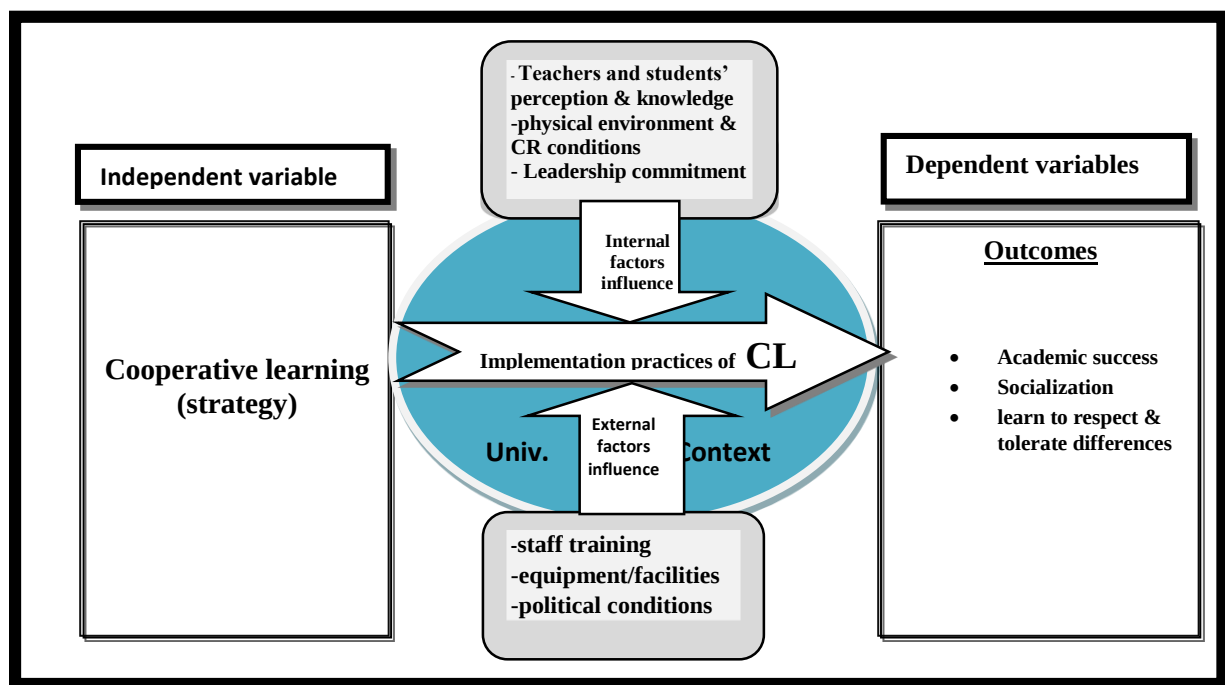


Figure 1: Conceptual frame work

A conceptual framework also called research framework is used in research to outline possible courses of action or to present a preferred approach to an idea or thought. It gives the research an overview of how various issues in the research work are conceived, and their relationships. In addition, the conceptual framework also gives an opportunity to specify and define concepts within the problem (Luse, Mennecke, & Townsend, 2012). According to Luse, Mennecke, and Townsend the conceptual frame work is not simply a string of concepts, but a way to identify and construct for the reader researcher's epistemological and ontological worldview and approach to researcher's topic of study.

On the other hand, Sawang and Unsworth (2011) believed that through the issues developed in clarifying the conceptual framework, the research study gets a better understanding of the whole process under investigation. It also illustrates a set of coherent concepts organized in a manner that makes easy to communicate to others. Miles and Huberman summarized conceptual framework as a system of concepts, assumptions, and beliefs that support and guide the research plan. Specifically, the conceptual framework “lays out the key factors, constructs, or variables, and presumes relationships among them” (Miles & Huberman, 1994).

Thus, the conceptual framework is designed to view the relationship between implementation of CL strategies and its outcome and depicts internal and external factors influence the implementation practices of CL. The proposed conceptual frame work also assumes that the dependent variables: Academic success, Socialization, and learning to tolerate and respect differences are influenced by a range of other variables, including: - teachers and students’ perception, physical environment & class room condition, leadership commitment and provision of resources and etc.

1.11. Definition of Terms

The following terms have been defined for the purpose of clarity in the presentation of this study:

Jigsaw: Students are placed into teams to work on material that has been divided into sections (Aronson, Blaney, Stephan, Sikes, & Snapp, 1978).

Reciprocal determinism: In social learning theory reciprocal determinism is used to indicate that personal influences, environmental forces, and behavior function as interdependent rather than autonomous determinants.

Reciprocal Questioning: involves students working together to ask perplexing questions concerning the content to be studied while searching for answers through research (Woolfolk, 2010).

CHAPTER TWO

REVIEW OF RELATED LITREATURE

2.1. Introduction

The purpose of this literature review is to give an overview of the body of literature informing this research and to establish a framework in which this research project is positioned. The literature review is also used here to establish and clearly communicate the need for the research project. Thus, various ideas in relation of cooperative learning (CL) strategy were discussed. I begin by discussing what educational innovations are. Next, the anchor to history of cooperative learning, theoretical foundation of cooperative learning, benefits of CL, principles and methods of CL. Following, the study explore implementation of educational innovations, issues in implementing CL and Finally, I discussed challenges with implementing cooperative learning strategy and the practice of one-to-five group formation as a CL strategy in Ethiopia.

2.2. Understanding Innovation

There are plenty of definitions of the term “innovation”, which means the problem actually lies in choosing which definition to work with and in applying the definition to what is taking place on the ground. By comparison, the literature around innovations in higher education is still relatively limited and, therefore, definitions of innovation in higher education are frequently drawn from the literature on innovations in industry and other sectors. This means, therefore, that whenever one discusses an innovation one must keep in mind and actually indicate the domain of the innovation. Domain here refers to the discipline or sector within which the innovation occurs, which might include education, art or medicine (IMN, 2001).

Rogers defined innovation as an idea, practice, or object that is perceived as new by an individual or group. According to Rogers, it matters little, so far as human behavior is its first use or discovery. The perceived newness of the idea for the individual determines his or her reaction to it. If the idea seems new to the individual, it is an innovation (Rogers, 1983).

Similarly, Morison (1984) defined an innovation as it can be a new concept. Alternatively, it can be thought of as a combination of existing concepts that, when brought together, make a particular

activity possible for the first time. Traditionally, an innovation is a relatively discrete practice, product, process, or organizational arrangement that is to be diffused, disseminated, or introduced to users throughout the system.

In the literature, “technology” and “innovation” are often synonymous and conceptually, each may connote an association with an original idea, a novel process, a new product, or invention. Rogers (2003) defined a technology as a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome.

In summary, therefore innovation is about gradual or dramatic change, and about intended or real improvement. It involves creation, adoption or adaptation of new ideas and practices. Innovation in universities might then be defined as the planned implementation or application of new ideas, practices and services, which arise through creativity, interaction and insight, with the aim of improving an existing situation, practice or service, and thereby bringing about change (Rogers, 2003).

2.3. Educational Innovations

Educational / Pedagogical innovation can also be called scholastic innovation, in education or in training. Pedagogical innovation calls for one-off, measured and sustainable positive change Walder (2014). According to Béchard (2000) pedagogical innovation corresponds to a change that he defines as, an intentional action that aims to introduce something original into a given context, and it is pedagogical as it seeks to substantially improve student learning in a situation of interaction and interactivity. In a university context, pedagogical innovations are often described as everything which is not lecturing, the method still used by the overwhelming majority of professors (Béchard & Pelletie, 2001).

For Huberman (1973) pedagogical innovation is an intentional, measurable and sustainable improvement that is unlikely to happen frequently. It entails implementing, securing acceptance of and widely using a change that must survive without losing its initial characteristics. Innovation lies in integrating an institutional plan, a method, a process, a technology, etc. that is transferred, imported or borrowed from elsewhere (Cros & Adamczewski, 1996; Cros, 2001; Béchard, 2001). It is also how something new is perceived by the actors of a previously well-established system (Rogers and Shoemaker, 1971). For Charlier & Peraya (2003) it is a transformation, an actual

change and not only the idea or the plan to change. This transformation can be brought about by different actors and carried out at a local or global level. This transformation must have positive effects (improvements to system efficiency). Whilst innovation allows a state to be improved, it does not constitute the solution to a problem, but demands creativity and originality (Cros, 2007). It is creativity, inventiveness and initiative through the renewal of an institutional measure, a method or a process (Cros, 2002).

Finally, innovation aspires to positive change brought about by an intentional and precise act of creation (Walder, 2014). Innovation engenders the performance of a better understanding, a 'better way of doing', and also a 'better being' containing the applied knowledge and expectations of efficiency and profitability (Cros & Adamczewski, 1996). According to Bécharde (2001) innovation entails changing intellectual approaches, attitudes and behaviors. Pedagogical innovation in a university context is therefore characterized by an intentional action that aims to improve university students' learning in a sustainable manner. Thus, the technological, financial and social changes of today's university require greater performance from the instructor, which is assessed by their peers' and students' qualitative criteria (Walder, 2014).

2.4. Conceptualizing Cooperative Learning

Cooperative learning is one of the most popular and important educational innovations of recent years. With the growing interest in cooperative learning, researchers have carried out hundreds of studies about different aspects of cooperative learning. The findings support the efficacy and desirability of cooperative learning methods (Philip, 1991).

Cooperation is working together to accomplish shared goals (Johnson & Johnson, 1989, 1999; Johnson, Johnson, & Smith, 2006). According to these authors within cooperative activities, individuals seek outcomes that are beneficial to themselves and beneficial to all other group members. Likewise, cooperative learning is an educational situation (Siegel, 2005); structured, systematic instructional technique (Slavin, 1991) an instructional use of small groups (Deutsch, 1992; Johnson & Johnson, 1989, 1999; Johnson, Johnson & Smith, 2006); teaching method (Johnson, Johnson & Smith, 1991); a form of pedagogy is claimed to promote learning through social contexts (Adams & Hamm, 1994); where Students work together in groups to

accomplish shared goals, or a pedagogical practice Gillies (2016). Cooperative learning therefore, involves students working together in small groups to accomplish shared goals. (Gillies, 2007).

Thus, cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning. It may be contrasted with competitive (students work against each other to achieve an academic goal such as an excellent grade that only one or a few students can attain) and individualistic (students work by themselves to accomplish learning goals unrelated to those of the other students) learning. In cooperative and individualistic learning, student efforts evaluated on a criteria-referenced basis while in competitive learning you grade students on a norm-referenced basis. While there are limitations on when and where competitive and individualistic learning may be used appropriately, any learning task in any subject area with any curriculum may be structured cooperatively (Johnson & Johnson, 1989, 1999; Johnson, Johnson, & Smith, 2006; Johnson & Johnson, 2009).

Cooperative learning should not be confused with small groups that instructors often compose for the purpose of intense, direct instruction for example, reading groups (Cohen, 1994). Furthermore, according to Tsay and Brady (2010) cooperative learning is one of the most commonly used forms of active learning which takes place through an individual's interaction with his or her environment and peers. A substantive body of research has supported the value of cooperative learning in building self-worth, academic achievement, active learning, social skill development and classroom equity (Cohen, 1994; Gillies, 2006; Johnson & Johnson, 2009; Slavin, 1996; Tsay & Brady, 2010). Moreover, the cooperation among students creates interdependence which may lead to increased motivation and cognitive processing. Collaboration among students in the learning process is a fundamental principle of effective undergraduate teaching (Antil, Jenkins, Wayne, & Vadasy, 1998; Astin, 1993; Chickering & Gamson, 1987; McKeachie, 1999; Pascarella & Terenzini, 2005; Tinto, 2003). Studies have also shown that cooperative learning influences gains in personal development, understanding the sciences, appreciating art, and improving analytical skills (Cabrera et al., 2002).

Cooperative learning's basic premise is that students construct knowledge through interaction with other students (Johnson et al., 1991). In such cases, students work together to fill individual gaps that instructors may not recognize. The most critical element of cooperative learning is that students must work together to achieve common interdependent goals (Johnson et al., 1991). Such

goals require each student to achieve individual goals in order for other students to achieve their own goals. Instructors who use cooperative learning should design activities and assignments that require students to rely on each other to complete the work. The interdependence of group members provides the advantage of cooperative learning over more traditional group discussion approaches. For Gillies (2016) Cooperative learning is widely recognized as a pedagogical practice that promotes socialization and learning among students from pre-school through to tertiary level and across different subject domains. It involves students working together to achieve common goals or complete group tasks goals and tasks that they would be unable to complete by themselves.

Cohen (1994) indicates that cooperative learning encompasses a wide range of methods for promoting academic learning through peer cooperation and communication. As the term “cooperative learning” implies, students help each other learn, share ideas and resources, and plan cooperatively what and how to study. The instructor does not dictate specific instructions but rather allows students varying degrees of choice as to the substance and goals of their learning activities, thus making students active participants in the process of acquiring knowledge. Cooperative learning encourages, and is in fact built upon, the contributions of group members (Sharan & Sharan, 1987).

In nutshell, as one can observe, though several definitions of cooperative learning have been formulated the one most widely used in higher education is probably that of David J., Roger J. and Smith K. According to their model, cooperative learning is instruction that involves students working in teams to accomplish a common goal, under conditions that include: Positive interdependence, individual accountability, Face-to-face promotive interaction, appropriate use of collaborative skills and group processing as basic elements (Johnson, Johnson & Smith, 1998).

2.5. Basic Elements of Cooperative Learning

Academic learning success for each individual and all members of the group is one feature that separates cooperative learning groups from other group tasks (Slavin, 1990). In order for an activity to be cooperative, five basic elements are essential and need to be included (Johnson & Johnson, 1989; Johnson, Johnson, & Holubec, 1998a; Johnson & Johnson, 1987, 1999; Johnson, Johnson, Smith, 1991, 2013). The five essential elements are: Positive interdependence, individual accountability, face-to-face promotive interaction, social skills and group processing.

1. The heart of cooperative efforts is positive interdependence, is the perception that you are linked with others in a way so that we cannot succeed unless they do (and vice versa). Their work benefits us and our work benefits them (Johnson & Johnson, 1992). Within every cooperative lesson, positive goal interdependence must be established through mutual learning goals (learn the assigned material and make sure that all members of the group learn the assigned material).

Millis and Cottell (as cited in Davidson & Major, 2014) and Johnson, Johnson, Smith (2013) suggest that positive interdependence may be established and strengthened as students achieve: (i) mutual goals, such as solving specific problems or creating a team project; (ii) mutual rewards, such as individually assigned cooperative learning points that count toward a criterion-referenced final grade (points that only help, but never handicap); (iii) structured tasks, such as a report or complex problem with sections contributed by each team member; and (iv) interdependent roles, such as group members serving as discussion leaders, reader, elaborator, organizers, checker, encourager, recorders, and spokespersons. The main idea in all the CL approaches is that students work and learn together actively in small groups to accomplish a common goal in a mutually helpful manner. Cooperative learning combines active learning and social learning via peer interaction in small groups on academic tasks.

In general, as to Johnson, Johnson, Smith (2013) the type of interdependence structured among students determines how they interact with each other, which, in turn, largely determines instructional outcomes. Structuring situations cooperatively results in students interacting in ways that promote each other's success, structuring situations competitively results in students interacting in ways that oppose each other's success, and structuring situations individualistically results in no interaction among students. These interaction patterns affect numerous instructional outcomes, which may be subsumed within the three broad and interrelated categories of effort exerted to achieve, quality of relationships among participants, and participants' psychological adjustment and social competence.

2. The second basic element is individual accountability, exists when the performance of each individual student is assessed and the results given back to the group and the individual (Johnson & Johnson, 1989). Each group member has a personal responsibility for completing one's share of the work and facilitating the work of other group members. In this case group members also need to know (i) who needs more assistance, support, and encouragement in completing the assignment

and (ii) that they cannot “hitch-hike” on the work of others. The purpose of cooperative learning is to make each member a stronger individual in his or her right. Students learn together so that they can subsequently perform higher as individuals. To ensure that each member is strengthened, students are held individually accountable to complete assignments, learn what is being taught, and help other group members do the same. Individual accountability may be structured by (i) giving an individual test to each student, (ii) having each student explain what they have learned to a classmate, or (iii) observing each group and documenting the contributions of each member. As Onwuegbuzie, Collins and Jiao (2009) point out, individual accountability is key to the success of the overall group and helps to prevent “social loafing” or reduced individual effort resulting from too much dependence on other group members.

3. In face-to-face promotive-interaction individuals promote each other's success by helping, assisting, supporting, encouraging, and praising each other's efforts. Certain cognitive activities and interpersonal dynamics only occur when students get involved in promoting each other's learning. These include orally explaining how to solve problems, discussing the nature of the concepts being learned, teaching one's knowledge to classmates, and connecting present with past learning. Accountability to peers, ability to influence each other's reasoning and conclusions, social modeling, social support, and interpersonal rewards all increase as the face-to-face interactions among group members increase. To obtain meaningful face-to-face interaction, the size of groups needs to be small (2-4 members) (Johnson, Johnson & Smith, 2013).

4. The fourth essential element is the appropriate use of social skills (Johnson & Johnson, 1989). Contributing to the success of a cooperative effort requires interpersonal and small group skills. Leadership, decision-making, trust-building, communication, and conflict-management skills have to be taught just as purposefully and precisely as academic skills.

5. Group processing exists when group members discuss how well they are achieving their goals and maintaining effective working relationships. Groups need to describe what member actions are helpful and unhelpful and make decisions about what behaviors to continue or change (Johnson, Johnson & Smith, 2013). It is the examination of the process members are using to maximize their own and each other's learning so that ways to improve the process may be identified (Johnson & Johnson, 1989). Instructors need to focus students on the continuous improvement of the quality of the processes students are using to learn by asking group members

to: (i) describe what member actions are helpful and unhelpful in ensuring that all group members are achieving and effective working relationships are being maintained, and (ii) make decisions about what behaviors to continue or change. Group processing may result in (iii) streamlining the learning process to make it simpler (reducing complexity), (iv) eliminating unskilled and inappropriate actions (error-proofing the process), (v) improving continuously students' skills in working as part of a team, and (vi) celebrating hard work and success. According to Junko Shimazoe and Howard Aldrich (2010) there are stages key to successful group processes in CL:

Stage 1: *design and development stage*: (i) establish group goals and rewards, e.g. thoroughly explain process to students, and create positive interdependencies (ii) control group composition, e.g. determine optimal diversity and team size (iii) develop students' social skills, e.g. via training before classroom activities actually begin, and team building, acting as positive role model.

Stage 2: *operation stage*: (i) design task & transparent reward systems, e.g. start with simple assignments, and clarify expected outputs (ii) monitor group performance, e.g. through peer evaluation and feedback, and intervene quickly when problems arise, e.g. rearrange groups' memberships.

Stage 3: *output and disbanding stage* : (i) provide prompt feedback and take groups' outputs seriously, discuss output in class (ii) maintain consistency in the reward system: satisfy individual as well as collective needs, e.g. give individualized feedback to each student.

In general, understanding how to implement the five essential elements enables instructors to: (1) structure any lesson in any subject area with any set of curriculum materials cooperatively, (2) fine-tune and adapt cooperative learning to their specific circumstances, needs, and students, and (3) intervene to improve the effectiveness of any group that is malfunctioning (Johnson, Johnson & Smith, 2013).

2.6. History Cooperative Learning

There is a rich tradition of cooperative learning in higher education (. Johnson, Johnson & Smith, 1998). Professors have used cooperative learning throughout history. For thousands of years it has been understood that in order to understand the Talmud, (book of Jewish law) one must have a

learning partner. Socrates taught students in small groups, engaging them in dialogues in his famous “art of discourse” (Johnson, Johnson, & Smith, 2013).

As early as the first century, Quintillion a Greek Philosopher argued that students could benefit from teaching one another. The Roman philosopher, Seneca advocated cooperative learning through such statement as “Qui Docet Discet” (when you teach, you learn twice). Johnson Amos Comenius (1592-1679) believed that students would benefit both by teaching and being taught by other students. In the late 1700s Joseph Lancaster and Andrew Bell made extensive use of cooperative learning in England, and the idea was brought to America when a Lancastrian school was opened in New York City in 1806.

Within the common school movement in the United States in the early 1800s there was a strong emphasis on cooperative learning. In the last three decades of the 19th century, Colonel Francis Parker (1837–1902), brought to his advocacy of CL enthusiasm, idealism, practicality and an intense devotion to freedom, democracy and individuality in the public schools. His fame and success rested on his power to create a classroom atmosphere that was truly cooperative and democratic. Parker’s advocacy of cooperation among students dominated American education through the turn of the century. Following Parker, John Dewey promoted the use of CL groups as part of his famous project method of instruction. In the late 1930s however, interpersonal competition began to be emphasized in schools and in the late 1960s individualistic learning began to be used extensively. In the 1980s, schools once again began to use CL (Johnson, Johnson & Smith, 1998).

Continuing this rich history, according to Johnson et al., (1998) there are several colleges in which cooperative learning is being used today in exemplary ways. Florida community college at Jacksonville, for example, has implemented cooperative learning on a wide-scale basis. Michigan State is implementing CL throughout the whole university. To help practitioners, James Cooper at California State University-Dominguez Hills publishes learning at the college level.

In general, the growing interest in CL is reflected in the number of presentations at conferences on the topic. In addition, there are related areas of work that validate the use of cooperative learning, including work on collaborative learning, problem-based learning, learning communities, and retention of students until graduation. To increase the use of cooperative learning, however, it is

necessary to understand the ways in which it can be used in college and university level classrooms and in the future universities have to do much on this through trainings and workshops.

2.7. Theoretical Foundation of Cooperative Learning

Cooperative learning is based on a clearly formulated theory and four theoretical perspectives have guided Cooperative learning. They are :(a) Social interdependence theory (b) Cognitive-developmental theory and, (c) Behavioral theory and (d) Motivational theory.

2.7.1. Social interdependence theory

According to Johnson, Johnson, and Smith (2013, 2015) the use of cooperative learning in university classes has its roots in the creation of social interdependence theory. Theorizing on social interdependence began in the early 1900s, when one of the founders of the Gestalt School of Psychology, Koffka, proposed that groups were dynamic wholes in which the interdependence among members could vary. Koffka also claimed people's views were based on the idea that human events were connected to a larger whole rather than merely isolated occurrence. One of his colleagues, Lewin refined Koffka's notions in the 1920s and 1930s while stating that (a) the essence of a group is the interdependence among members (created by common goals) which results in the group being a "dynamic whole" so that a change in the state of any member or subgroup changes the state of any other member or subgroup, and (b) an intrinsic state of tension within group members motivates movement toward the accomplishment of the desired common goals.

For interdependence to exist there must be more than one person or entity involved, and the persons or entities must have impact on each other in that a change in the state of one causes a change in the state of the others. From the work of Lewin's students and colleagues, such as Ovisankian, Lissner and Mahler, it may be concluded that it is the drive for goal accomplishment that motivates cooperative and competitive behavior (Johnson, Johnson, & Smith, 2015).

In the late 1940s, one of Lewin's graduate students, Morton Deutsch, extended Lewin's reasoning about social interdependence and formulated a theory of cooperation and competition (Deutsch, 1949a, 1962). Interdependence among individuals can exist in three forms: positive

interdependence, negative interdependence and no interdependence (Johnson & Johnson, 1989; Johnson & Johnson, 2009; Deutsch, 1962).

1. Positive interdependence (cooperative goal structures) results in promotive interaction as individuals encourage and facilitate each other's efforts to learn. Positive interdependence (cooperation) exists when individuals' goal achievements are positively correlated. Positive interdependence claims that individual success depends on others' success and cooperation within groups tends to improve productivity resulting from achieving common goals (Deutsch, 1949b; Deutsch, 1962; Johnson et al., 1991). Thus, positive interdependence promotes and rewards cooperation among group members, a fundamental element of CL. In general, positive interdependence can result from students who fear they will let others in the group down, or from students who thrive on helping others succeed. Deutsch advanced Kafka's social interdependence theory by suggesting that groups and group members can improve performance through the addition of positive interdependence among group members.

2. Negative interdependence (competitive goal structures) negative interdependence is the opposite of positive interdependence, and presumes that achieving individual goals is dependent on other members of the group failing to achieve their own individual goals.

Negative interdependence is often a result of too much internal competitiveness, which could lead to hostility and insecurity among group members who are driven to succeed at the expense of other group members (Johnson & Johnson, 2009). As group members compete for limited degrees of success or power, negative interdependence may cause members to undermine each other, which subsequently undermines group goals. This competitiveness is consistent with more competitive approaches to education that only reward individual efforts. Effectively designed group goals and rewards reduce negative interdependence by eliminating personal gains which result from too much emphasis on individual success.

3. No interdependence (individualistic goal structures) typically results in no interaction as individuals work independently without any interchange with each other. When a situation is structured individualistically, there is no correlation among participants' goal attainments; each individual perceives that he or she can reach his or her goal regardless of whether other individuals attain or do not attain their goals - that is individuals' goal-oriented efforts have no consequences for others' goal accomplishment. Thus, no interdependence exists when the individual's

achievement of his or her goals is unrelated to the efforts and achievement of peers (Johnson & Johnson, 1989; Johnson & Johnson, 2009).

In general, the basic premise of social interdependence theory is that the type of interdependence structured in a situation determines how individuals interact with each other that, in turn, largely determine outcomes (Deutsch, 1962; Johnson, 1970; Watson & Johnson, 1972). Therefore, in cooperative situations, collaborators' actions tend to substitute for each other, collaborators invest positive emotions in each other, and collaborators are open to being influenced by each other. In competitive situations, competitors' actions do not substitute for each other, competitors invest negative emotions in each other, and competitors are closed to being influenced by each other. In individualistic situations, there is no substitutability, cathexis, or in educability (Johnson, Johnson, & Smith, 2015).

2.7.2. Cognitive developmental theory

The cognitive developmental perspective is grounded in the works of Jean Piaget (1959) and Lev Vygotsky (1978). Others such as Bell (Bell, Grossen, & Perret-Clermont, 1985), Ames and Murray (1982), and Kuhn (1972), as well as the Johnsons (Smith, Johnson, & Johnson, 1981) have also done work in this area. Piagetian perspectives suggest that when individuals work together, socio cognitive conflict occurs and creates cognitive disequilibrium that stimulates perspective-taking ability and reasoning. Vygotsky's theories present knowledge as a societal product (Johnson, Johnson, & Holubec, 1998). They both emphasize the importance of peer interaction and the value of social context for generating cognitive development and effective learning.

Thus, students who work in cooperative teams collectively learn and adapt to environmental changes. Using a social constructivist approach, learners create their own sense of reality through their own interpretation of these experiences (Jonassen, 1991). Therefore, social constructivist theory supports the cooperative learning approach to education, which may lead to the development of need for cognition.

2.7.3. Behavioral learning theory

Behavioral learning theory explains some of the primary benefits of cooperative learning, where students are motivated to succeed based on either reward or punishment (Johnson et al., 1998 and

Skinner, 1938). Thus, the other major theoretical perspective associated with cooperative learning is the motivational aspect given by Swortzel in 1997. It is considered important because, students perceive that their success or failure is dependent upon their ability to work together as a group. Students are likely to encourage each other to do whatever help the group succeeds. Therefore, cooperative learning increases student motivation to do academic work (Johnson, Johnson, & Holubec, 1986).

In general, behavioral learning theory also explains some of the primary benefits of cooperative learning, where students are motivated to succeed on either reward or punishment (Skinner, 1938). As such cooperative learners may be motivated to achieve group rewards in addition to individual's recognition. An individual's perceived self- efficacy impacts, his or her effort and persistence on learned behavior (Bandura, 1977). The behavioral learning perspective recognizes that people are motivated to achieve positive rewards and avoid negative outcomes from failure.

2.7.4. Motivational theory

Motivational perspectives on CL focus on three elements: goal structures, reward structures and group dynamics (Dörnyei, 1997; Johnson et al., 1998; Slavin, 1995, 2000). It is believed that cooperative goal structures create a situation in which the only way group members can attain their own personal goals is if the group is successful (Slavin, 1995). Thus, group members strive to help one another, and more importantly they encourage each other to make their maximum effort. The reward structure of CL (cooperative learning) is mostly linked to group reward, which means students are assessed as a group based on group performance or the sum of individual performances. Although group rewards are typically considered extrinsic motivators, building in external reasons for students to cooperate can lead to internal motivation to work in groups (Dishon & O'Leary, 1994).

In addition, researchers contend that some features of CL teamwork provide a means of promoting learners intrinsic motivation (Jacobs & Goh, 2007). These features include students' satisfaction from helping others and being part of group effort, their increased sense of control over and ownership of their own learning, and the use of peer evaluation and criterion-referenced assessment. There is a body of contrastive research that suggests that, in comparison with those in traditional classrooms, students in cooperative groups are seldom absent from class, they feel that

their classmates want them to learn and support each other, and consequently they are motivated to try their best (Brown & Thomson, 2000; Jacobs & Goh, 2007; Slavin, 1995, 2000).

2.8. Empirical Evidence in Support of Cooperative Learning

Since the 1960s, over 305 studies have been conducted comparing the relative efficacy of cooperative, competitive, and individualistic learning on individual achievement in university and adult settings. Given the number of relevant studies, meta-analysis seems to be the most appropriate procedure for summarizing the results (Johnson, Johnson & Smith, 2013).

Characteristics of studies: most of the research studies were conducted in the 1960s, 1970s, and 1980s. The studies were conducted in numerous subject areas (science, social science, computer science, English, reading, math, psychology, health, physical education) with a wide variety of tasks (verbal, mathematical, procedural). While most of the studies were conducted in North America, studies were conducted in Europe, the Middle East, and Asia. Different research methodologies were used. While numerous dependent variables were studied, they may be grouped into three categories: effort to achieve, quality of relationships, and psychological health. In addition, there are a number of studies on attitudes toward the university experience (Johnson, Johnson & Smith, 2013).

Academic success: one of the most important influences on the university experience is whether students achieve academically. University attrition is affected in numerous ways by academic success (Tinto, 1993). Some students are dismissed from university due to academic failure. Academic failure may create uncertainty about the relevance of university and the university curricula. Academic achievement may increase the intellectual adjustment and membership in the university as well as integration into academic life. The higher the achievement of students, the more committed they tend to be to completing university education.

Over 168 studies were conducted comparing the relative efficacy of cooperative, competitive, and individualistic learning on individual achievement of individuals 18 years or older. The results of these studies indicated that cooperative learning promoted higher individual achievement than did competitive or individualistic learning. These are significant and substantial increases in achievement. The achievement measures included knowledge acquisition, retention, accuracy and

creativity of problem solving, and higher-level reasoning. These results held for verbal tasks (such as reading, writing, and orally presenting), mathematical tasks, and procedural tasks (such as swimming, golf, and tennis).

There are also studies finding an advantage for cooperative learning in promoting meta cognitive thought, willingness to take on difficult tasks and persist (despite difficulties) in working toward goal accomplishment, intrinsic motivation, transfer of learning from one situation to another, and greater time on task (Johnson & Johnson, 1989). These results are corroborated in a meta-analysis focusing only on university level one science, math, engineering, and technology courses (Springer, Stanne, & Donovan, 1999).

These results have important implications for the findings on university effectiveness (Astin, 1993; McKeachie, et al., 1986; Pascarella, 2001; Tinto, 1993). Astin (1993) found that student-student interaction and student-faculty interaction were the two major influences on university effectiveness (academic development, personal development, and satisfaction with the university experience). He notes that this interaction has to be cooperative, not competitive.

Quality of relationships: the quality of university life may largely depend on the quality of the relationships among students and between students and faculty (Astin, 1993; McKeachie, et al., 1986; Pascarella, 2001; Tinto, 1993). Positive interpersonal relationships may increase the quality of social adjustment to university life, increase the importance of social goals for continued attendance, reduce uncertainty about attending university, increase commitment to stay in university, increase integration into university life, reduce incongruence between students' interests and university curricula, and increase social membership in university (Tinto, 1993).

Psychological adjustment: attending a university can require considerable personal adjustments for many students. In their meta-analysis of the research, Johnson & Johnson found that cooperativeness to be highly correlated with a wide variety of indices of psychological health in a wide variety of university age populations (Johnson & Johnson, 1989). Competitiveness was related to a complex mixture of indices of health and pathology. Individualistic attitudes were related to a wide variety of indices of psychological pathology. One important aspect of psychological health is self-esteem. University level studies indicate that cooperation tends to promote higher self-esteem than competitive or individualistic efforts. Members of cooperative

groups also become more socially skilled than do students working competitively or individualistically (Johnson, Johnson, & Smith, 2013).

Positive attitudes toward the university experience: the more positive students' attitudes toward their university experience, the more likely they are to stay in the university and participate fully in university life. 39 studies have focused on attitudes. Cooperative learning tends to promote more positive attitudes toward learning, the subject area, and the university than do competitive or individualistic learning. There are numerous social psychological theories, furthermore, that predict students' values, attitudes, and behavioral patterns are most effectively developed and changed in cooperative groups (Johnson & Johnson, 2013).

2.9. What Is and Is Not a Cooperative Effort

To use cooperative learning effectively, one must know what is and is not a cooperative group (Johnson, Johnson, & Holubec, 1998b). According to Johnson & Johnson (1999) not all groups are cooperative. There is nothing magical about working in a group. Some kinds of learning groups facilitate student learning and increase the quality of life in the classroom. Other types of learning groups hinder student learning and create disharmony and dissatisfaction.

1. *Pseudo learning group:* Students are assigned to work together but they have no interest in doing so and believe they will be evaluated by being ranked from the highest to the lowest performer. Students hide information from each other, attempt to mislead and confuse each other, and distrust each other. The result is that the sum of the whole is less than the potential of the individual members. Students would achieve more if they were working alone.

2. *Traditional classroom learning group:* Students are assigned to work together and accept that they have to do so. Assignments are structured so that students are evaluated and rewarded as individuals, not as members of the group. They seek each other's information but have no motivation to teach what they know to group-mates. Some students seek a free ride on the efforts of group-mates, who feel exploited and do less. The result is that the sum of the whole is more than the potential of some of the members, but harder working and conscientious students would perform higher if they worked alone.

3. *Cooperative learning group*: Students work together to accomplish shared goals and seek outcomes that are beneficial to all. Students discuss material with each other, help one another understand it, and encourage each other to work hard. Individual performance is checked regularly to ensure that all students are contributing and learning. The result is that the group is more than a sum of its parts, and all students perform higher academically than they would if they worked alone.

4. *High-performance cooperative learning group*: This is a group that meets all the criteria for being a cooperative learning group and out performs all reasonable expectations, given its membership. The level of commitment members has to each other and the group's success is beyond that of most cooperative groups. Few groups ever achieve this level of development. How well any small group performs depends on how it is structured. Seating people together and calling them a cooperative group does not make them one. For example, study groups, project groups, lab groups, homerooms, and reading groups are groups, but they are not necessarily cooperative. Even with the best of intentions, instructors may be using traditional classroom learning groups rather than cooperative learning groups. To ensure that a group is cooperative, educators must understand the different ways cooperative learning may be used and the basic elements that need to be carefully structured within every cooperative activity.

2.10. Types of Cooperative Learning

Cooperative learning is a versatile procedure and can be used for a variety of purposes (Johnson & Johnson, 1999; Johnson, Johnson, & Smith, 2013). CL groups may be used to teach specific content (formal CL groups), to ensure active cognitive processing of information during a lecture or demonstration (informal cooperative learning groups), and to provide long-term support and assistance for academic progress (co-operative base groups) (Johnson, Johnson, & Holubec, 1998a, 1998b).

(1) *Formal cooperative learning*: consists of students working together, for one class period or several weeks, to achieve shared learning goals and complete specific tasks and assignments (e.g., problem solving, writing a report, conducting a survey or experiment, learning vocabulary, or answering questions at the end of the chapter) (Johnson, Johnson, & Holubec, 1998b). Any course requirement or assignment may be structured cooperatively.

(2) *Informal cooperative learning*: consists of having students work together to achieve a joint learning goal in temporary, ad hoc groups that last from a few minutes to one class period (Johnson, Johnson, & Holubec, 1998a; Johnson, Johnson, & Smith, 1998,1999,2013). During a lecture, demonstration, or film, informal cooperative learning can be used to (a) focus student attention on the material to be learned, (b) set a mood conducive to learning, (c) help set expectations as to what will be covered in a class session, (d) ensure that students cognitively process the material being taught, and (e) provide closure to an instructional session.

(3) *Cooperative base groups*: Are long-term, heterogeneous cooperative learning groups of 3-4 members with stable membership (Johnson, Johnson, & Holubec, 1998a; Johnson, Johnson, & Smith, 1998, 1999). Base groups give the support, help, encouragement, and assistance each member needs to make academic progress (attend class, complete all assignments, learn) and develop cognitively and socially in healthy ways. They are permanent (lasting from one to several years) and provide the long-term caring peer relationships necessary to influence members to consistently work hard. The use of base groups tends to improve attendance, personalize the work required and the university/department experience, and improve the quality and quantity of learning.

School and classroom management is enhanced when base groups are given the responsibility for conducting a yearlong service project to improve the school. The larger the class or college/department and the more complex and difficult the subject matter, the more important it is to have base groups. Base groups are also helpful in structuring homerooms and when a teacher meets with a number of advisees (Johnson, Johnson & Smith, 1998, 1999).

Integrated use of all the three types of cooperative learning

These three types of CL may be used together (Johnson, Johnson, & Holubec, 2008). A typical class session may begin with a base group meeting, which is followed by a short lecture in which informal cooperative learning is used. The lecture is followed by a formal cooperative learning lesson. Near the end of the class session another short lecture may be delivered with the use of informal cooperative learning. The class ends with a base group meeting.

2.11. Benefits of Cooperative Learning

Cooperative learning became a commonly used form of active pedagogy in the 1980's, and continues to be a valuable tool for learning in academic institutions today (Johnson, Johnson, and Smith, 2007), as it provides benefits for both students and instructors (Shimazoe & Aldrich, 2010). Slavin (1996) described cooperative learning as teaching methods in which students work together in small groups to help one another learn academic content (For summary of the benefits of cooperative learning method for both students and instructors (please see Appendix-J).

2.12. Principles of Cooperative Learning

According to George Jacobs (2004) many principles have been proposed for cooperative learning. Below is one list of six such principles:

1. *Heterogeneous grouping*: this principle means that the groups in which students do cooperative learning tasks are mixed on one or more of a number of variables including sex, ethnicity, social class, religion, personality, age, language proficiency, and diligence.
2. *Collaborative skills*: Collaborative skills, such as giving reasons, are those needed to work with others. Students may lack these skills, the language involved in using the skills, or the inclination to apply the skills.
3. *Group autonomy*: This principle encourages students to look to themselves for resources rather than relying solely on the instructor. When student groups are having difficulty, it is very tempting for instructors to intervene either in a particular group or with the entire class. But sometimes we may resist this temptation, because as Roger Johnson writes, “instructors must trust the peer interaction to do many of the things they have felt responsible for themselves”.
4. *Simultaneous interaction*: in classrooms in which group activities are not used, the normal interaction pattern is that of sequential interaction, in which one person at a time – usually the instructor – speaks. In contrast, when group activities are used, one student per group is speaking. In a class of 40 divided into groups of four, ten students are speaking simultaneously, i.e., 40 students divided into 4 students per group = 10 students (1 per group) speaking at the same time (Kagan, 1994).

5. *Equal participation*: A frequent problem in groups is that one or two group members dominate the group and, for whatever reason, impede the participation of others. CL offers many ways of promoting more equal participation among group members (Kagan, 1994).

6. *Cooperation as a Value*: This principle means that rather than cooperation being only a way to learn, i.e., the how of learning, cooperation also becomes part of the content to be learned, i.e. the-what of learning. This flows naturally from the most crucial CL principle, positive interdependence. Cooperation as a value involves taking the feeling of “All for one, one for all” and expanding it beyond the small classroom group to encompass the whole class, the whole school, on and on, bringing in increasingly greater numbers of people and other beings into students’ circle of ones with whom to cooperate.

2.13. Methods of Cooperative Learning

Cooperative learning is actually a generic term that refers to numerous methods for organizing and conducting classroom instruction ((Johnson & Johnson, 1995; Hancock, 2004). Almost any instructor can find a way to use cooperative learning that is congruent with his or her philosophies and practices. So many instructors use cooperative learning in so many different ways that the operationalization cannot all be listed. There are various CL learning methods, however, there are a number of "researcher-developers" who have developed cooperative learning procedures, conducted programs of research and evaluation of their method, and then involved themselves in teacher-training programs that are commonly credited as the creators of modern-day cooperative learning.

The following ten have received the most attention: Complex Instruction (CI) (Cohen, 1994b); Constructive Controversy (CC) (Johnson & Johnson, 1979); Cooperative Integrated Reading and Composition (CIRC) (Stevens, Madden, Slavin, & Farnish, 1987); Cooperative Structures (CS) (Kagan, 1985); Group Investigation (GI) (Sharan & Sharan, 1976, 1992); Jigsaw (Aronson, et al., 1978); Learning Together (LT) (Johnson & Johnson, 1999); Student Teams Achievement Divisions (STAD) (Slavin, 1978); Teams-Games-Tournaments (TGT) (DeVries & Edwards, 1974); and Team Assisted Individualization (TAI) (Slavin, Leavey, & Madden, 1982).

As to Sharan (2010) CL is constantly evolving and expanding; new models and procedures, anchored in research findings, are added all the time. Teacher educators for CL today can ‘shop’

in a ‘cooperative learning supermarket’ full of tempting ‘products’. It is now understood that all cooperative learning methods and procedures have their place. Could it be that the rich variety of methods and models may be a source of confusion that leads to a lack of understanding of the differences between approaches and thereby become a constraint to successful implementation practices. Understanding the differences in approaches is crucial to enable instructors to choose the method or procedure that is best suited to their classrooms.

Several attempts to categorize CL methods may guide us in this complexity. The tentative taxonomy presented by Sharan (2002) for example divides the most researched CL methods into three sub-groups, each of which emphasizes a different blend of skills: (1) Models that emphasize mastery of knowledge and motivation (STAD, CIRC, Jigsaw); (2) Models that emphasize social skills and interpersonal communication (Learning Together); (3) Models that include the above and emphasize long-term intellectual inquiry, intrinsic motivation and equal status interaction (Complex Instruction and Group Investigation).

2.14. Implementation of Educational Innovations

According to Ensminger et al., (2004) implementation is the process of introducing an innovation into an organization and fostering its use. At the implementation stage, an innovation is put into practice. However, an innovation brings the newness in which some degree of uncertainty is involved in diffusion. Uncertainty about the outcomes of the innovation still can be a problem at this stage. Thus, the implementer may need technical assistance from change agents and others to reduce the degree of uncertainty about the consequences (Rogers, 2003).

2.14.1. Implementation Frameworks

In response to many of the implementation studies conducted, several frameworks and principles have been developed to describe and guide the complex nature of implementation processes (e.g. Damschroder et al., 2009; Greenberg et al., 2005). Below, several frameworks that have emerged in the past two decades are presented. According to Rogers’ (2003) classic model, implementation is one of five crucial stages in the wide-scale diffusion of innovations:

(1) dissemination (conveying information about the existence of an innovation to potentially interested parties), (2) adoption (an explicit decision by a local unit or organization to try the

innovation), (3) implementation (executing the innovation effectively when it is put in place), (4) evaluation (assessing how well the innovation achieved its intended goals), and (5) institutionalization (the unit incorporates the innovation into its continuing practices).

Several research studies indicate that it is likely that the desired outcomes of effective practices will be achieved when strong core implementation components are well supported by strong organizational structures and cultures (Felner, 2005; Fixsen et al., 2005).

Meyers et al. (2012) identify three key characteristics of implementation: (1) It is a specified set of activities designed to be put into practice, (2) it requires change, which may not occur simultaneously or evenly in all parts of the organization, and (3) it requires capacity building of new knowledge and skills, and shifts in organizational culture. They pinpoint the importance of the what -the essential element of an innovation and the how of implementation, as the nature and level of implementation can affect whether reforms achieve the desired outcomes. Hernandez and Hodges (2003) identify three levels of implementation:

(i) *Paper implementation*: Putting into place new policies and procedures with a theory of change to provide a rationale,

(ii) *Process implementation*: Putting new operating procedures in place to conduct training and provide supervision,

(iii) *Performance implementation*: putting procedures and processes in place in such a way that the functional components of change are used with integrity and are integrated into daily practice.

Based on their review of implementation frameworks, including the interactive systems framework (Wandersman et al., 2008 and Meyers et al., 2012) developed a quality implementation tool (QIT). Components of the QIT include developing an implementation team, fostering a supportive organizational system wide climate and conditions, developing an implementation plan, providing training and technical assistance, engaging in collaboration between practitioners and other experts, and evaluating the effectiveness of the implementation. An important aspect of the QIT is that it's based on the premise that implementation is not about programs or innovation components, but rather a set of features, characteristics, and principles of services or products.

It defines innovations more broadly to include ideas, practices, programs, and structures. Clearly, efforts to improve the science and practice of implementation have evolved and improved. Some scholars believe that what is needed is an implementation perspective on innovation that focuses on the actions of those who transfer innovations into practice, including the processes used to secure and manage the cooperation of individuals, departments, and groups within a system.

2.15. Implementation of Cooperative Learning

Throughout history, cooperative learning has been used. What is new is the systematic development of cooperative instructional procedures based on theory validated by research. It is only recently that the procedures for using cooperative learning have been derived from social interdependence theory and its validating research (Johnson, Johnson & Smith, 2013). CL is the instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson, Johnson & Smith, 2006). Within CL groups students discuss the material to be learned, help and assist each other to understand it, and encourage each other to work hard. Any assignment in any curriculum for any student can be done cooperatively. As indicted above under **2.10** there are basically three ways in which cooperative learning may be structured in the university classroom (Johnson, Johnson, & Smith, 2006). Instructors may use formal cooperative learning, informal cooperative learning, and cooperative base groups.

1. Formal cooperative learning consists of students working together, for one class period to several weeks, to achieve shared learning goals and complete jointly specific tasks and assignments: decision making or problem solving, completing a curriculum unit, writing a report etc. (Johnson, Johnson & Smith, 2006, 2013; Johnson, Johnson & Holubec, 1998b). Any course requirement or assignment may be structured cooperatively. In formal cooperative learning groups' instructors:

(i) *Make a number of pre instructional decisions*: instructors specify the objectives for the lesson (both academic and social skills) and decide on the size of groups, the method of assigning students to groups, the roles students will be assigned, the materials needed to conduct the lesson, and the way the room will be arranged.

(ii) *Explain the task and the positive interdependence*: the instructor clearly defines the assignment, teaches the required concepts and strategies, specifies the positive interdependence and individual accountability, gives the criteria for success, and explains the expected social skills to be used.

(iii) *Monitor students' learning and intervene within the groups to provide task assistance or to increase students' interpersonal and group skills:* the instructor systematically observes and collects data on each group as it works. When needed, the instructor intervenes to assist students in completing the task accurately and in working together effectively.

(iv) *Assess students' learning and helping students process how well their groups functioned:* students' learning is carefully assessed and their performances evaluated. Members of the learning groups then discuss how effectively they worked together and how they can improve in the future.

2. Informal cooperative learning consists of having students work together to achieve a joint learning goal in temporary, ad-hoc groups that last from a few minutes to one class period (Johnson, Johnson & Holubec, 1998a; Johnson, Johnson, & Smith, 1998, 1999, 2006, 2013). During a lecture, demonstration, or film, informal cooperative learning can be used to focus student attention on the material to be learned, set a mood conducive to learning, help set expectations as to what will be covered in a class session, ensure that students cognitively process and rehearse the material being taught, summarize what was learned and precede to the next session, and provide closure to an instructional session. During direct teaching, the instructional challenge for the instructor is to ensure that students do the intellectual work of organizing material, explaining it, summarizing it, and integrating it into existing conceptual structures. Informal cooperative learning groups are often organized so that students engage in three-to-five-minute focused discussions before and after a lecture and two-to-three-minute turn-to-your-partner discussions interspersed throughout a lecture.

(3) Cooperative base groups are long-term, heterogeneous cooperative learning groups with stable membership (Johnson, Johnson, & Holubec, 1998a; Johnson, Johnson, & Smith, 1998, 1999; Johnson, Johnson, & Smith, 2006, 2013). Base groups give the support, help, encouragement, and assistance each member needs to make academic progress (attend class, complete all assignments, learn) and develop cognitively and socially in healthy ways. Base groups are permanent (lasting from one to several years) and provide the long-term, caring peer relationships necessary to influence members consistently to work hard in school. The use of base groups tends to improve attendance, personalize the work required and the school experience, and improve the quality and quantity of learning. Positive development is enhanced when base groups are given the responsibility for conducting a yearlong service project to improve the school.

The three types of cooperative learning complement and support each other. A typical ninety-minute class session, for example, (i) begins with a base group meeting of five to ten minutes in which members welcome each other and check each member's homework to ensure it is completed and understood. (ii) the instructor gives a short lecture with informal cooperative learning to introduce the objectives, schedule and topic of the class session. (iii) the instructor uses formal cooperative learning to conduct an instructional activity focused on the topic of the session. (iv) near the end of the class the instructor summarizes (using informal cooperative learning) what has taken place, interesting ideas generated by the formal cooperative groups, and explains how the lesson leads into the assignment for the next class session. (v) the class session ends with a base group meeting in which students review what they have learned, what homework has been assigned, and what help each member needs to complete the homework (Johnson, Johnson, & Smith, 1998, 1999).; Johnson, Johnson, & Smith, 2006, 2013).

2.16. Issues with Implementing Cooperative Learning

A successful use of CL in the classroom substantively relies on how well the key issues in implementing CL are understood and addressed. According to Johnson, Johnson & Smith (1991) there are several pre, during and post implementation activities to be performed by the instructor.

2.16.1. Pre- implementation issues

(i) *Specify instructional objectives (academic and social) of CL*: the instructor must explain why he/she is using CL, describe its benefits, and the results typically found from using CL.

(ii) *Determine group size and group formation*: the first key issue to address when adopting a cooperative learning approach is group formation. There are three major ways of selecting students to groups: random selection, student selection and instructor selection (Brown & Thomson, 2000; Jacobs, 2006; Johnson et al, 1998). Random selection may create a group of students who do not have the necessary skills for learning tasks and are unlikely to complete tasks. As a result, it is safe to use random selection only when the task involves a low level of academic challenge. Self-selection is attractive to students but does not guarantee the diversity of perspectives and abilities within a group, which are necessary in a cooperative learning environment (Lejk et al., 1999; Stein and Hurd, 2000). Indeed, self-selection may result in the better students getting together to form groups while the weaker students are left to struggle (Gibbs, 1995). Moreover, student-selected

groups often have powerful social agendas that take up their time and attention and results in much off-task behavior (Brown & Thomson, 2000; Lejk et al., 1999).

On the other hand, Cuseo (1992) recommends that groups in a cooperative learning environment should be formed by the instructor on the basis of any of the following: namely academic achievement, students' learning styles, personality profiles, ethnic or racial backgrounds, geographical backgrounds, age, class standing, gender or a combination of these criteria. Moreover, intentional group formation is more representative of a real-world situation where individuals usually have little say in selecting the people with whom they work. Another thing to consider with respect to group formation is group size. Advocates of cooperative learning argue that group size should remain small, ideally three or four members (Gillies, 2003; Oakley et al., 2004), so that there is sufficient diversity of opinion and experiences without the group becoming unwieldy and difficult to manage. Groups composed of five or more members, apart from being more difficult to coordinate, may inhibit the less forthright students from expressing their opinion (Oakley et al., 2004) and give rise to the possibility of “social loafing”, a common consequence of group work.

(iii) *Group duration*: a number of factors need to be taken into consideration when determining how long groups should stay together. First, it depends on the type of group being used. As mentioned in the section on types of CL methods, there are three types of CL group: formal CL group, informal CL group and base CL group (Johnson & Johnson, 1994). As I indicated repeatedly the duration of the formal group may vary from one class session to six weeks or even over ten weeks (Jacobs & Goh, 2007). Many researchers (e.g. Brown & Thomson, 2000; Jacobs & Goh, 2007; Johnson et al., 1998; Jolliffe, 2007) have recommended that formal groups should not be changed too frequently in order that students have time for establishing group cohesion and sorting out problems they may encounter in working with some group members. Informal CL groups are temporary groups, lasting as briefly as a few minutes or up to a class session.

Meanwhile, they also suggest groups should not stay intact for too long so that students have the opportunity to work with and learn from different peers, which is not only conducive to the development of their academic achievement but also their social skills. Base groups are long-term group which last for at least a year and preferably for a few years until all members have graduated (Johnson et al., 1998). Second, group duration also depends on what CL methods or group

activities used different CL methods which can provide activities lasting either as short as a few minutes or as long as several weeks (Kagan, 1994).

(iv) *Functioning as a CL group*: once groups have been formed, the next factor to consider is what strategies can be employed to make groups work well together and enhance group functioning. Effective group functioning mainly lies in good relations (or positive interdependence) of group members and adequate cooperative skills. So, it is advocated that efforts be engaged in fostering the group cohesiveness and developing students' cooperative skills.

(v) *Group management*: group management is essential as students are not born with the project management, time management, conflict resolution and communication skills required for high performance team work Oakley et al., (2004). In the absence of effective group management dysfunctional groups may emerge and produce a learning environment, which is inferior to that of individualistic learning. To address this potential problem, the instructor should act as a facilitator helping students develop social and small group skills and to deal with any contentious issues that may arise in the course of the group work. The instructor should encourage group members to establish a common set of expectations of one another's role before any group work actually begins. These expectations should include group responsibilities, such as preparation for and attendance at group meetings, making sure everyone understands all the materials and communicating frankly but with respect when conflicts arise (Oakley et al., 2004).

Memorandum of understanding should be prepared in written form with each group member signing it to indicate acceptance of these expectations and his or her intended compliance. It is important that all of the group members take collective responsibility for the contents of the memorandum of understanding. Meeting regularly over an extended period of time provides members with an environment within which face-to-face interaction, social cohesion and group identification can develop (Tuckman and Jensen, 1977). This is a feature of cooperative learning that enhances skills development and distinguishes it from other forms of small group work (Cuseo, 1992).

(vi) *Selecting CL methods and techniques*: as mentioned in the section on types cooperative learning methods, the ten major CL methods include numerous techniques and structures. Selecting the appropriate methods and techniques or structures for a particular teaching context is always a critical issue for effective use of CL. First of all, different methods and techniques may

have different anticipated outcomes and expected educational objectives, so the instructor primarily makes selections according to their specific teaching value and aim (Dishon & O'Leary, 1994; Jacobs & Goh, 2007; Kagan, 1994; Sharan, 2002). Some CL methods or techniques are oriented towards mastery of basic skills or memorization of basic facts, while others are targeted at completion of complex team projects or higher order thinking skills.

(vii) *Assign group roles and tasks*: the instructor should make sure that there is a distinct role for each student. Also, the instructor should choose or assist the students in choosing roles that use their strengths and improve their areas of weakness. The students should not be allowed to choose the same role over and over again. Some of the roles that could be chosen or assigned include facilitator, elaborator (on prior knowledge or discussion points), research runner (gets materials), and wild card (does anything else that needs to be done) (Johnson, Johnson, & Smith, 1991).

According to Johnson, Johnson, & Smith (1991) when picking an assessment task (product to be produced), the instructor should choose one standard to address and match it to the learning approach. The cooperative learning group's task should be interesting, challenging, and motivating. It should also be a performance driven and authentic task. The instructor has to clearly explain: procedures for the task provide structure and set a specific time frame for each part and the whole task, question the student to check for understanding of the task and its procedures, should communicate the group work skills that will be evaluated (Johnson, Johnson, & Smith, 1991). As to these authors, a rubric should also be created. Possibly with the student's assistance, this will be used to evaluate the group-work skills as well as the assessment task.

viii) *Structure positive inter-dependence and accountability*: The instructor can achieve positive interdependence by structuring the group task in such a way that group members are dependent on each other and have a vested interest in working together to successfully complete the task. Individual accountability is attained when the instructor includes a mechanism in the cooperative learning structure for holding group members accountable for mastering the material and completing the group task. The instructor should also encourage face-to-face interaction within the group so that members engage in verbal interchanges. This might be achieved by requiring group members to challenge one another's point-of-view, discuss concepts being learned and share knowledge. The group experience should ensure that students are given the opportunity to achieve

or improve social and small group skills such as leadership and oral communication (Johnson et al., 1998).

2.16.2. Issues during implementation stage

During the implementation phase of CL, the students play the most important role. Some of their tasks at this stage include: working together, learning to one another, questioning to one another, keeping records of their work, keeping records of their work and progress, assuming personal responsibility/ being involved in the group and producing the assessment task (product). The instructor has responsibilities during this stage as well. Johnson, Johnson, & Smith (1991) have made a list of several roles an instructor has to take during the implementation stage of CL.

i) *Monitor behavior*: During the implementation of CL, the instructor should circulate throughout the classroom, visiting each group.

ii) *Intervene if needed*: while circulating, if the instructor notices any group conflict or off-task behavior, he/she should intervene. Small group conflict should be resolved as soon as possible, and students should be shown how to prevent the problems in the future. The instructor might use a conflict resolution checklist includes items such as explaining the importance of listening to everyone in the group, defining responsibilities, valuing each person's gifts, modeling excellence, and promoting humor.

iii) *Assists with needs*: while monitoring the groups work, the instructor should assist groups with their needs. This might involve pointing out additional resources and it also includes helping the students reflect on the work they have completed and their progress.

iv) *Praise*: Students need to know if they are completing the assignment in a satisfactory manner, especially if they are inexperienced at working in cooperative groups. So, the instructor should let individual students and groups know when they do something right or well.

2.16.3. Post implementation activities

Johnson, Johnson, and smith (1991) identify three jobs for the instructor to complete after the students have worked together to complete and submit the task:

i) *Provide closure through summarization:* the instructor should reconvene the entire group of students. At this point, the instructor can summarize their work and this helps the instructor to know exactly in which knowledge level the groups are working.

ii) *Assessing students learning:* According to (Cuseo, 1992) another key issue in developing effective cooperative learning is the method of assessment applied to group output. Assessing group work is an integral part of the CL process because students reflecting on their performance in teamwork is universally considered to be one of essential elements of CL. Johnson et al. (1998) state that in CL groups, students learn almost as much from assessing the quality of their own and their classmates' work as they do from participating in the instructional activities.

Generally speaking, assessment in education can be divided into two types: summative and formative (Boud et al., 2001; Harmer, 2007; Johnson et al., 1998), summative assessment is rooted in the positivist assumption that a relatively stable knowledge state exists and can be measured through testing techniques which elicit and analyze evidence of that knowledge (Harmer, 2007). On the other hand, formative assessment derives from the interpretivist assumption that learning is complex and individualized and cannot be judged by a one-off measure.

iii) *Reflect on what happened:* Instructors keep a record of what worked and why it worked each time they undertake a cooperative learning lesson. This information can and should be shared with their cooperative learning support group. The instructor should also adjust their lessons based on the reflection and feedback of the students. This will prevent the stagnation of a cooperative learning unit; it will grow and change with each group of students. After completing the group work assessment task, the student's job is to reflect on the work that was accomplished in their group. What worked and what did not work? What would they change or keep next time they work together? The students should also give feed back to their instructor (Johnson, Johnson, &Smith, 1991).

2.17. Challenges with Implementing Cooperative Learning

i) *Instructors' and students' perception:* instructors' and students' perception of cooperative learning largely depend on the knowledge they adhere. This means that instructors and students who strongly support the traditional method of teaching assume that the instructor is the only

source of knowledge and knows best. To such instructors and students teaching takes predominant role over learning (O'Hara & O'Hara, 1998).

ii) *The physical environment and classroom condition:* According to Sguazzin & Graan (1998) and Lue (2000) the classroom location, size, shape and construction, arrangement and layout, the presence and effective management of different instructional facilities like: furniture, resource center, laboratory and library services have direct bearing in the instructional methods and a lot to promote active learning a clean and well-kept room with appropriate resources and well aired room help to establish a positive contribution to implement active learning.

iii) *Class size and group composition:* it is not suitable to provide different experiments and group works having many students in overcrowded classroom. Sguazzin and Graan (1998) in their study have indicated that schools in many parts of Africa are composed of large number of students. Thus, giving students enough attention and meeting the need of every student so as to engage actively in learning process is difficult. Teaching many students in an overcrowded classroom often not suitable to provide activities and group works for such classes (Lue, 2000).

iv) *The design of the teaching module:* cooperative task structure encourages or required students to work together on the task by coordinating their efforts to complete the task. There are two type of task structure which are task specialization that requires each group member to be responsible for a unique part of the group activities and in the other type group study includes everyone in the group and the task is completed together without separate tasks (slavin, 1983). Modules need to incorporate active or cooperative learning. They should not design in a way to serve one-way instruction. In one-way communication the learner reads what has been written but in no way responds to the material (Leu, 2000).

v) *Problems related to leaders:* refers to the level of ownership and support given by the leaders who will manage the daily activities of those using the innovation. The enthusiasm of these leaders directly affects the motivation of the users of the innovation. Immediate supervisors must provide support and encouragement, answer questions, address concerns, and serve as role models. On the other hand, Puma (1994) verified that the effective implementation of a program is dependent on external factors. He defined external factors to include: (i) tangible resources such as additional funding; (ii) provision for staff training; (iii) new instructional materials and equipment.

2.18. Implementation Practices of Cooperative Learning in Ethiopian Public Universities

The benefits of CL are overwhelming and it is currently being practiced in nations that were predominantly traditional learning oriented. Ethiopia is one of such countries that have depended on traditional learning system; however, CL is emerging. In Ethiopia, traditional learning is still predominant in the education system including Higher education institutions.

Considering all the limitations of traditional learning system Ethiopian ministry of education has already developed and distributed higher education one-to-five group formation guide line and implementation guide manual as of November 2013. Thus, according to Ethiopian ministry of education (2013a) the purpose of implementing one-to-five group formations is to improve: quality of education by improving the quality of class room learning and developing positive sense of competition among students are some to be mentioned. Students are expected to group under a student who has been assigned as a group leader based on his academic performance.

The students' one-to-five group formation is used for both within and outside of the classrooms activities and all group members' work together to improve their learning, understanding, develop social skills, tolerance and minimize disciplinary problems. In the classroom, the students sit in their groups and support each other on issues given by their instructors. While giving the activities, instructors are expected to give clear guidelines, instructions and procedures to be followed when students complete the activities or projects and what is expected from individual student as a group member.

Instructors should also expect to assess students' activities and performance and provide on time feedback on over all group performance in relation to activities or projects given them. The success of the one-to-five group formation is evaluated in terms of individual performance in particular and group academic improvement in general.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

The purpose of this study was to explore higher education institutions implementation practices of educational innovations: the case of cooperative learning strategy. Exploratory sequential mixed methods approach was used in this study to answer the research questions.

This chapter presents the research methodology; examines the rationale for using mixed methods; describes the research design; states the reasons for selecting the study site; explains the selection of participants & respondents and the sampling techniques; describes the data collection methods and procedures; and deals with the development of the survey instruments. It also deals with pilot testing and validation of the survey questionnaire; describes how data from qualitative and quantitative strands of the study are mixed and interpreted; deals with ethical issues; and finally, makes a link between this chapter and the forthcoming chapters.

3.2. Research Methodology

Methodology articulates the logic and flow of the systematic processes followed in conducting a research project, so as to gain knowledge about a research problem. It includes assumptions made, limitations encountered and how they were mitigated or minimized. It focuses on how we come to know the world or gain knowledge about part of it (Moreno, 1947).

The purpose of this study was to investigate the Ethiopian public universities practices in implementing CL and to find out what the current status looks like and how specific university contexts influence the implementation process. Accordingly, this study used a mixed methods research approach, which is a procedure for collecting, analyzing and “mixing” both qualitative and quantitative data at some stage of the research process within a single study, to understand a research problem more completely (Creswell, 2002). Tashakkori and Teddlie (2003) defined mixed method as a types of research design in which QUAL and QUAN approaches are used in types of questions, research methods, data collection and analysis procedures and inferences. In this regard, it would be worth effective to mention Teddlie and Tashakkori (2009) as they say mixed method research provides better inferences and minimizes uni-method bias. Many

researchers select mixed method in order to search out the opportunity for a greater assortment of divergent views.

The rationale for mixing is that neither quantitative nor qualitative methods are sufficient by themselves to capture the trends and details of a situation. When used in combination, quantitative and qualitative methods complement each other and allow for more complete analysis and better understanding of the problem than quantitative or qualitative approaches alone (Green, Caracelli, & Graham, 1989; Tashakkori & Teddlie, 1998; Creswell & Clark, 2007). A mixed method also allows both inductive and deductive investigation to take place in the same project. An advantage of using the mixed methods approach is the flexibility afforded to the researcher to carry out whatever data collection and analysis best suits the research question or problem. This is characteristic of the pragmatism paradigm which accommodates singular or multiple realities (Creswell & Clark, 2007).

A pragmatic approach would encourage researchers who use different methods in different paradigms to place an emphasis on shared meanings and pursuing joint action (Morgan, 2007). In other words, there is an emphasis on developing shared understandings to develop shared lines of behavior. Pragmatism offers an alternative that embraces both of the positivist/ post positivist and constructivist paradigms along with research questions that determine the extent to which quantitative and/or qualitative methods are used (Teddlie & Tashakkori, 2009). That is, it provides a middle position both methodologically and philosophically by offering a mix of quantitative and qualitative methods to answer research questions (Johnson & Onwuegbuzie, 2004; Onwuegbuzie & Johnson, 2006), which has been illustrated by a variety of different mixed methods research designs (e.g. Creswell & Clark, 2011).

Central to the application of mixed methods research in pragmatism is the development of research questions that can be answered by integrating the results of quantitative and qualitative research (Creswell & Clark, 2011; Tashakkori & Teddlie, 1998). Researchers build the knowledge on pragmatic grounds (Creswell, 2003; Maxcy, 2003) asserting truth is “what works” (Howe, 1988). They choose approaches, as well as variables and units of analysis, which are most appropriate for finding an answer to their research question (Tashakkori & Teddlie, 1998). A major tenet of pragmatism is that quantitative and qualitative methods are compatible. Thus, both numerical and

text data, collected sequentially or concurrently, can help better understand the research problem. While designing a mixed methods study, three issues need consideration: priority, implementation, and integration (Creswell, Clark, Guttman, & Hanson, 2003).

Morgan (2007) discusses a simple framework to show how a pragmatic approach differs from each of the quantitative (positivist/post positivist) and qualitative (constructivist) approaches in relation to the connection of theory to data, and making inferences from data. While quantitative and qualitative research connects theory to data using deduction and induction respectively, the pragmatic approach, like critical realism (Modell, 2009), relies on abduction to move back and forth between deduction and induction. While quantitative research is objective and qualitative research is subjective, a pragmatic approach to research challenges the traditional distinction between both of these in the conduct of research.

Table 1: A pragmatic alternative to the key issues in Social Science Research methodology

	Qualitative approach	Quantitative approach	Pragmatic approach
Connection of theory and data	Induction	Deduction	Abduction
Relationship to research process	Subjectivity	Objectivity	Inter-subjectivity
Inference from data	Context	Generality	Transferability

Source: *Morgan (2007, p. 71)*

In general, researchers who use mixed methods employ a research design that uses both quantitative and qualitative data to answer a particular question or set of questions. This combination of methods involves the collection, analysis, and integration of qualitative & quantitative data in a single or multiphase study (Hanson, Creswell, Plano Clark & Petska, 2005).

3.3. Why Use Mixed Methods?

As noted by Greene, Caracelli and Graham (1989) there are five major purposes or rationales for conducting mixed methods research: (a) triangulation (i.e., seeking convergence and corroboration of results from different methods and designs studying the same phenomenon); (b) complementarity (i.e., seeking elaboration, enhancement, illustration, and clarification of the results from one method with results from the other method); (c) initiation (i.e., discovering paradoxes and contradictions that lead to a re-framing of the research question); (d) development

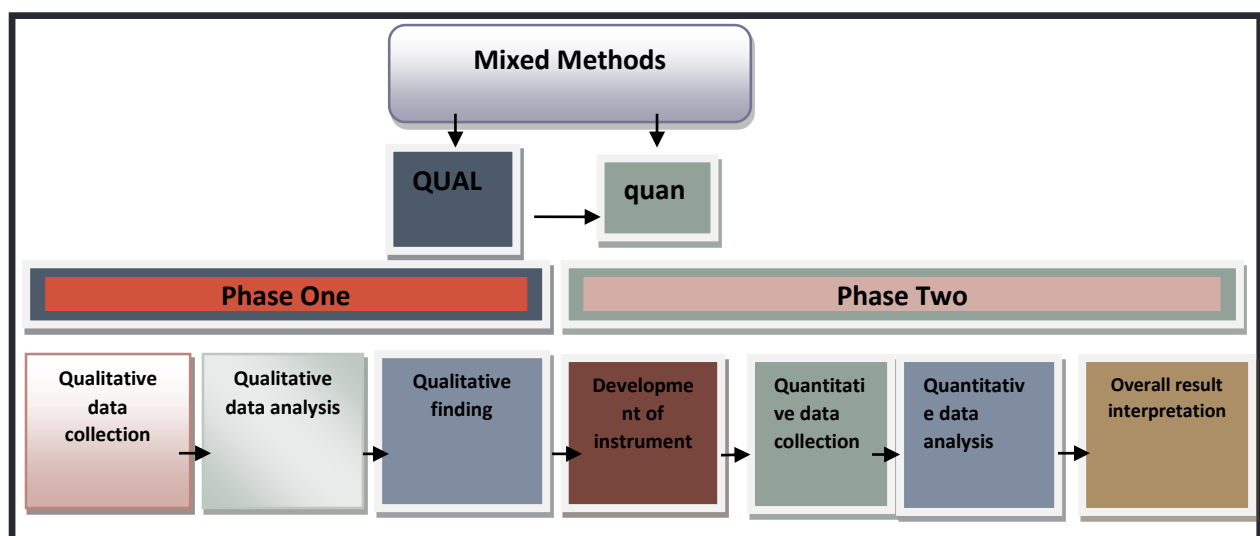
(i.e., using the findings from one method to help inform the other method); and (e) expansion (i.e., seeking to expand the breadth and range of research by using different methods for different inquiry components).

A major advantage of mixed method research is that it enables researchers simultaneously to ask confirmatory and exploratory questions, and therefore verify and generate theory in the same study (Teddle & Tashakkori, 2006). All of these reasons provide strong arguments for the researcher to consider a mixed methods approach.

3.4. The Research Design

This study was used exploratory sequential design type taking three public universities (University of Gonder, Ambo University & Addis Ababa Science & Technology University) as a study site. According to Creswell et al (2002) sequential exploratory research design is conducted in two phases, with the priority generally given to the first phase, and it may or it may not be implemented within a prescribed theoretical perspective. In contrast to sequential explanatory design, this design is characterized by an initial phase of qualitative data collection and analysis and followed by a phase of quantitative data collection and analysis. Therefore, the priority is given to the qualitative aspect of the study. Schematic Representation of the procedure employed in this study is shown in the following diagram.

Figure 2: Schematic representation the exploratory mixed methods research



Adapted from: Creswell et al (2002) and Creswell & Clark (2007)

At the most basic level the purpose of sequential exploratory research design is to use quantitative data and result to assist in the interpretation of qualitative findings. Unlike the sequential explanatory design, which is better suited to explaining & interpreting relationships, the primary focus of this design is to explore the phenomenon (Creswell, Clark, Gutmann & Hanson, 2002). Morgan (as cited in Tashakkori & Teddlie, 2002) suggested that this design is appropriate to use when testing elements of an emergent theory resulting from the qualitative phase and that it can also be used to generalize qualitative findings to different samples. Similarly, Morse (as cited in Creswell, 2002) also indicated that one purpose for selecting this design would be to determine the distribution of a phenomenon with in a chosen population.

The exploratory design has many advantages. Its two-phase approach makes it easy to implement and straight forward to describe and report. It is also useful to the researcher who wants to explore a phenomenon but also wants to expand on the qualitative findings and this design is especially advantageous when a researcher is building a new instrument. On the other hand, the sequential exploratory also requires a substantial length time to complete both data collection phases, which can be a drawback for some research situations. The researcher may also find it difficult to build from the qualitative analysis to the subsequent quantitative data collection. Therefore, the reason for the selection of this design was to explore the implementation practices of cooperative learning and comparing and contrasting the cases regarding their status in implementing of the strategy and enduring its consequences. And also distinguish the major determinant factors affecting the implementation of cooperative learning across the cases.

3.4.1. Research method and design for the case study research

The purpose of this aspect of the study is to investigate the implementation practices of cooperative learning strategy, what the current status of the implementation practices looks like in the specific contexts of universities and determinants that influence the implementation of the strategy. To investigate and understand the implementation practices and to search for multiple realities and meaning in communities of practice, qualitative research is best method to collect real data and doing analysis of a phenomenon in specific contexts.

Qualitative case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources Yin (1994, 2003, & 2006). Yin (2009) further

elaborate that a case study is “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Furthermore, case studies provide a systematic way of looking at events, collecting data, analyzing information, and reporting the results. As a result, case study researchers may gain a greater understanding of why something happened as it did, and what might be important to investigate in future research (Verner et al, 2009). This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood Yin (2003, 2006). Creswell (2013) also noted that in case study research the researcher explores a “real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information.

Within the case study research design, multiple case studies were used because multiple-case studies case study enables the researcher to explore differences within and between cases. The goal is to replicate findings across cases. Because comparisons will be drawn, it is imperative that the cases are chosen carefully so that the researcher can predict similar results across cases, or predict contrasting results based on a theory (Yin, 2003).

According to Merriam, Stake and Yin a multiple site case study is also referred to as a collective case study, which involves collecting and analyzing data from several cases and /or subunits of the original case. Typically, the cases within a collective case study share some common characteristic, or they may be categorically bounded together. Multiple site studies are generally preferable because data gleaned is assumed more generalizable; however, generalizability is not a major goal in case studies as researchers seek to understand a unique phenomenon within a particular context. Both single case studies and multiple site studies can either be holistic or embedded. (Merriam, 2009; Stake, 1995; Yin, 2008). I employed holistic multiple case study because no distinct subunits are identified which are analyzed separately within a case.

The research process was basically guide by the constructivist paradigm because according to the paradigm reality is socially constructed within communities of practice. Constructivist researchers think of study participants as co-constructors of the knowledge generated by their studies. Honebein (1996) describes the constructivism philosophical paradigm as an approach that asserts that people construct their own understanding and knowledge of the world through experiencing

things and reflecting on those experiences. The constructivism philosophical paradigm is associated with the qualitative research approach. This is the case because the paradigm seeks to understand a phenomenon under study from the experiences or angles of the participants using different data collecting agents.

The researcher also constructs meanings from the phenomena under study through his own experiences and that of the participants in the study. Moreover, like the qualitative researcher, constructivists assert that reality is subjective because it is from the individual perspectives of participants engaged in the study and are thus multiple or varied. Stake (1995) and Yin (2003) base their approach to case study on a constructivist paradigm. More, specifically, as reality is understood in mental construction of meaning the constructivist/interpretive framework which is propped by symbolic interaction was used to conduct the case study research.

3.4.2. Research method and design for the survey research

For the quantitative aspect or component of this study, the researcher used survey design. The ultimate goal of this survey design is to learn about a large population by surveying a sample of it (Leedy & Ormrod, 2005). In other instances, a survey is viewed as the research method used to structure the collection and analysis of standardized information from a defined population using a representative sample of that population. In addition, the term ‘survey’ refers to a study that has used a representative sample (Creswell, 2009); otherwise, if the entire population has been involved in the study, it is a census (Pickard, 2007). Sample survey was used for this research to generalize the finding drawn from sample universities and respondents to all universities. In sample survey, as its name indicates, a researcher attempts to infer information about a population based on a representative sample drawn from that population.

3.5. Data Analysis Procedure in Exploratory Mixed Methods Design

Approaches to data analysis need to be sensitive to the design being implemented in a mixed method study (Creswell et al, 2002). Different analysis approaches have been suggested for integrating qualitative and quantitative data that explore how the information might be transformed or analyzed for outlier cases (Caracelli & Greene, 1993). In sequential design the data analysis typically proceeds independently for both the qualitative and quantitative phases (Tashakkori &

Teddlle, 1998; Creswell, 2002). The researcher relies on standard data analysis approach (e.g. descriptive & inferential of quantitative data, coding and thematic analysis of qualitative data).

Table 2: Mixed method design data analysis and interpretation procedures

Type of mixed method design	Analytic procedure
Exploratory Mixed Methods	▪ locating an instrument: ✓ Collect qualitative data and identify themes. Use these themes as a basis for locating instruments that use parallel concepts to the qualitative themes. ▪ Developing an instrument: obtain themes and specific statements from individuals that support the themes. During the next phase, use these themes & statements to create scales and questionnaire. Alternatively, look for existing instruments that can be modified to fit the themes and statements found in qualitative exploratory phase of the study. After developing the instrument, test it out with a sample of a population. ▪ Forming categorical data: site level characteristics (e.g. different ethnic groups) gathered in ethnography during the first phase of a study a categorical variable during a second –phase correlational or regression study, (Caracelli & Greene, 1993). ▪ Using extreme qualitative cases: qualitative data cases that are extreme in a comparative analysis are followed by quantitative surveys during a second phase (Caracelli & Greene, 1993)

In exploratory mixed methods, the emphasis is on the qualitative first phase whose findings are tested in the second phase (Hesse-Biber, 2010; Hanson, Clark, Petska, Creswell and Creswell, 2005); this process can be iterative and predicted outcomes (confirmed) (Stebbins, 2001). It embeds the characteristics of exploratory research within the sequential technique so that unknown variables are both defined and then tested by a hypothesis

Strengths of exploratory mixed methods are described by Creswell and Clark (2007) as straightforward to design, implement and report, and the inclusion of a quantitative element makes qualitative inclusion more acceptable to quantitative biased audiences. Hanson, et al (2005) suggests that such a design is ideal when the variables to be investigated are not known and where elaboration of findings is required. Weaknesses of exploratory design are that it requires considerable time to implement, and analysis of the qualitative data must conclude with findings conducive to subsequent stages. Analysis options include using themes or subthemes for taxonomy development.

3.6. Sampling Techniques and Respondents of the Study

3.6.1. Selection of cases for the Qualitative case study

The population of the study includes the Ethiopian public universities and undergraduate programs. Within these universities: academic vice presidents, university institutional reform directors, colleges/institutes, departments, and class rooms were the population of the study. To conduct the study, representative or typical study units were selected. In representative samples the lesson learned from each case will assumed to be informative about the experiences of the average institution. Accordingly, Maximum variation (heterogeneity) sampling, as discussed by Patton (2002), was used in this study and cases were selected aiming at keeping representativeness of different universities. According to information obtained from EMoE reform directorate and preliminary assessment, the context of the institutions varies in terms of organizational facility and provision of resources, years of experience in teaching (generation), geographical location and fields of specializations and these differences serves as a base for maximum variation sample selection.

Accordingly, three universities namely: university of Gonder (UoG), Ambo university (AU) and Addis Ababa Science and Technology university (AASTU) were selected because of their generation and criteria mentioned above. UoG was considered because it was among frontline universities in implementing CL strategy (EMoE, 2009); and was expected to go some distance in this regard. Ambo University is among second row universities and AASTU is among the third generation Universities. Each of these universities has different colleges/institutes and departments.

From the existing colleges and departments 6 colleges and 6 departments were purposely selected to see what the implementation practices were looks like across different fields of learning in the undergraduate programs. That is from 6 colleges, 2 institutes ,2 faculties and one school UoG has; college of medicine and health sciences (CMHS) and college social sciences and humanities were taken and from CMHS institute of public health of which environmental and occupational health and safety department was selected and from college social sciences & humanities department of history & heritage management was taken; Institute of education and behavioral sciences- department of adult education and community development, from college of Agriculture and

veterinary sciences –dept. of veterinary sciences-from Ambo university; college of electrical & mechanical engineering- department of electrical engineering and from college of biological and chemical engineering department of food engineering from AASTU were purposely selected for this study.

Thus, vice presidents for academic affairs, reform directors, college/institution deans & department heads, EMoE (Ethiopian Ministry of Education) reform director and expert/s from education strategic center (ESC) amounting 20 participants were purposely selected for the interview with the assumption that they could provide relevant information because of the position they held. During the observation session one classroom from each discipline totally 6 classrooms from the three case universities were taken as a sample.

Table 3: Number of interviewees per institution

No.	Institutions	Generation of universities	Number of respondents	Remark
			In-depth interviews	
1.	UoG	1st	2	1 Ac.V.P. and 1 reform director
2.	AU	2 nd	2	‘
3.	AASTU	3 rd	2	‘
5	Dept. heads		6	2 from each university
6	Deans		6	2 from each university
7	EMoE		1	
8	ESC		1	
	Total	1st-3rd	20	

3.6.2. Population, sample size and sampling technique for the Quantitative study

The respondents for the quantitative study survey phase were selected from among the instructors and students of the three sampled universities namely: AU, UoG and AASTU. Since the study was a sample survey, effort was made to collect data from the samples that represent all the subgroups within the population so as to generalize sample survey data to an entire population. For the survey, systematic simple random sampling was used to draw representative sample respondents.

Accordingly, from these universities, six colleges/institutes and six departments that were selected purposely to check variations of implementation practices of CL strategy across different

disciplines instructors and students were drawn. And totally 120 participants from graduating students were selected using systematic simple random sampling technique. Thus, from three universities $3 \times 2 \times 20 = 120$ students were selected as a sample to fill questionnaires for the study. Graduating students were purposively selected because of their experience in cooperative learning implementation in their respective departments and colleges in particular and in their university in general can provide them matured information in filling the survey questionnaire about the scheme.

Likewise, from each two departments in the three universities three instructors were selected by using systematic simple random sampling technique and totally, $6 \times 3 \times 2 = 36$ instructors were selected to fill the survey questionnaire. Totally the research participants are presented as follows:

Table 4: Sample respondents

No.	Name of Universities	Genera-tion	Colleges/insti-tute	Departments	teachers			students			Total
					Pop	Samp.	%	Pop.	Samp.	%	
1	Ambo University (AU)	2 nd	Education and behavioral studies	Adult & Community Development	7	6	85	52	20	38	26
			Agriculture & Veterinary Sciences	Veterinary Sciences	10	6	60	20	20	100	26
2	University of Gondar (UoG)	1 st	Medicine & health sciences	Environmenta landOccupatio-nal Health and Safety	26	6	23	62	20	32	26
			Social sciences & humanities	History and heritage management	12	6	50	29	20	69	26
3	Addis Ababa Science and Technology University (AASTU)	3 rd	Electrical & mechanical engineering	Electrical Engineering	10	6	60	101	20	20	26
			Biological &chemical engineering	Food engineering	12	6	50	36	20	56	26
Total		1 st -3 rd			77	36	47	300	120	40	156

As shown above in Table 4, 156 individuals (from both groups) were involved to fill the survey questionnaire to assess their perception, conceptualization and attitude of CL strategy and views on the implementation practices of CL as teaching & learning instrument in their respective universities.

PHASE- I - QUALITATIVE

3.7. Methods and Procedures of Data Collection and Analysis for the Qualitative Study

The purpose of this case study is to investigate the practices of implementation of cooperative learning method in Ethiopian public universities. Case study is considered to be a suitable research strategy when the proposed research addresses a contemporary phenomenon, which the researcher has no control over; the research is largely exploratory; and it addresses the "how" and "why" questions (Benbasat, et al., 1987; Darke, et al., 1998; Yin, 1994). Furthermore, it is well suited when the contextual conditions are pertinent to the phenomenon of the inquiry (Yin, 1994). This makes the case study approach well suited to the study of cooperative learning implementations practices because context cannot be distinguishable from the cooperative learning phenomenon.

Realizing this purpose demand the use of in depth semi-structured interview, direct observation and document analysis to get an insight about the implementation practice of CL, universities leaderships, reform directorates, college /institutes deans, department heads, EMoE reform directorate and education strategic center (ESC) experts perception and knowledge about the strategy, about the purposes of implementing CL ,their attitude towards CL and level of its implementation practices at the sample universities. This research use both primary and secondary data sources and the data collection instruments were also use to address internal validity issues.

3.7.1. Data Collection instruments for the Qualitative study

The purpose of case study was to explore practices of implementing cooperative learning strategy in higher education institutions. Realizing this purpose was required the use of in-depth semi-structured interview, direct observation and document review.

Interview

In this study semi-structured interview was used to collect data from university top level management, college/institutes deans, department heads and from respondents of EMoE and ESC experts, because semi- structured interview employed for an in-depth treatment of issues and probing during the interview process. In general, I used person-to-person interview for this research. Furthermore, in addition to note taking, as audiotapes certainly provide a more accurate

rendition of any interview than any other methods, up on the permission of the research participants, the interviews were recorded.

Direct observation

Direct observation was employed in this study to perform three tasks: (i) to provide the researcher with a clear picture of the students' participation and instructors role when they involve in cooperative learning activities in classrooms, (ii) students engagement in different CL activities out of classrooms such as in libraries, around dormitories and in any comfortable place like fields and (iii) to see extent provision of facilities and necessary resources. Furthermore, it helps to observe the overall activities carried out in the class room and was able to examine and investigate the reality in the classroom as to how instructors and students participated and interact when cooperative learning method used. On top of this, the observation was conducted around students' dormitories, in the libraries, and in the compounds outside the classroom where the researcher keeps a diary for recording observation. Data obtained through observation was also used to triangulate the interview data which enhanced internal validity of the qualitative data.

Document review

Collecting secondary data involves analyzing national higher education policies, higher education proclamations, Ethiopian Ministry of Education (EMoE) one to five group formation document and implementation guide line, strategic plans, students result document or portfolio and official documents of the universities including: institutional plans, performance reports and other relevant documents.

3.7.1.1. Pilot case study

Pilot test was conducted in Ambo University. This university was selected for pilot study because of its convenience, accessibility and geographic proximity for the researcher. The pilot study covered testing and refining contents of instruments, data collection procedure and methodological issues. Furthermore, the pilot study aimed at identifying any areas of bias or inappropriate direction and addresses these before gathering the detailed data. The aim was to ensure not only the validity of the research undertaken but that should this activity be repeated by a different researcher results

would be comparable. In general, based on lesson learned from the reports of the pilot cases, the research designed, data collection instruments and field procedures were modified for the final research study.

3.7.2. Deciding on the unit of analysis

The unit of analysis is the basis of each case. The unit of analysis may be an individual such as a person who has had an experience of interest to the study, an event such as a decision, a social process, an implementation process, an organization or part thereof (Myers, 2009; Rowley, 2002). As central decision-maker the owner/manager's strategic position serves as 'focal' point, around which all business activities are centralized, including those of information search and assimilation" (Lybaert, 1998). My research is focused on investigating practices in implementing cooperative learning strategy in Ethiopian public universities. Therefore, the unit of analysis in the research project was a university.

3.7.3. Data Collection procedures for the Qualitative study

An ethical approval was obtained from the vice president for academic affairs and the deans of colleges/institutes of each university in order to conduct the interview. Prior to conducting any interview participants were provided with a consent form describing objectives of the study, participants role and their right to remain anonymous, to freely participate in the research, to refuse or to withdraw. Respondents were also assured of confidentiality of their response data.

The semi-structured interviews were conducted to create an atmosphere where each participant can speak more openly than they would if the researcher used a structured interview (Silverman, 2006). Furthermore, as to Silverman semi-structured interview also enable the researcher to guide the interview and keep the participants focused, unlike an open ended where participants are free to speak to a broad range of topics (Silverman, 2006). Patton (1990) also stated that the primary function of the interview guide is to keep the interaction focused and to allow the individual perspectives and experiences to emerge.

The interview protocols were developed for two categories of informants based on their roles in the university as well as implementation of cooperative learning method. The first category of interview protocol guide was created for: (a) vice presidents for academic affairs (b) reform directors (c) college deans and department heads. The second category of interview protocol was

developed for participants from EMoE (Ethiopian ministry of education) and for Education strategic center (ESC). Each interview lasted for approximately an hour and digitally recorded and transcribed by the researcher in an effort to better understand the data. The researcher was also taking short notes while recording each interview. The transcription of each interview was repeatedly being done not to leave any relevant information.

To maintain the quality of the study, I was personally engaged and spent considerable time with research participants in the research settings. The evidences were rigorously examined and triangulated by taking different sources of information through different instruments. As a further matter, as suggested by Stake (1995) and Silverman (2006), the transcribed data were check (verified) by participants to increase trustworthiness by providing each participant with a hard copy of the transcript to confirm whether or not their response was correctly recorded. This member-check took place within a week after the interviews were conducted.

The observation was conducted after permission obtained from a responsible body and it was conducted in class rooms, in the libraries, in the compound outside of the classrooms and around dormitories to see whether CL is limited to classrooms only or if it has life outside classrooms and whether necessary resource provision is there by the university or not and overall organizational climate and contexts were observed as it affects the implementation of CL strategy.

Observation allows the investigator get first-hand information of natural and reliable data in its natural setting and if used properly, it could avoid the inaccuracy and bias of self-report data obtained from interviewees. Moreover, the data obtained from observation was also used to triangulate the interview data which was enhancing internal validity of the qualitative data. Therefore, due to the above-mentioned reasons, direct observation method was chosen to gather the necessary data about the overall implementation of practice of CL both in class rooms and out of class rooms, facility and technical support provision in the university settings.

3.7.4. Method of data analysis for the Qualitative study

Data analysis of this research involves both qualitative and quantitative data analysis. Qualitative data and quantitative data analysis were carried out on separate chapters. The quantitative data collection and analysis is based on the result of the first case study data analysis. In the qualitative analysis, data collection and analysis proceed simultaneously (Merriam, 1998). The steps in the

qualitative data analysis included: (1) preliminary exploration of the data by reading through the transcripts and writing memos; (2) coding the data by segmenting and labeling the text; (3) using codes to develop themes by aggregating similar codes together; (4) connecting and interrelating themes; and (5) constructing a narrative (Creswell, 2002).

To augment the further discussion, the visual data display was created to show the evolving data (Miles & Huberman, 1994). The coding measures enabled the researcher use of the constant comparison method of analyzing the themes within cases and across cases (Yin, 2001). Analysis of the data can be a holistic analysis of the entire case or an embedded analysis of a specific aspect of the cases (Yin, 1994). In this study holistic approach was employed in which first each case was analyzed for themes. Then, all the cases were analyzed for themes that are either common or different.

Therefore, thematic analysis is considered by the researcher to be an appropriate methodological tool and is regarded as a foundational method for qualitative analysis as it is a flexible tool which has the potential to provide a rich, detailed and complex account of the data (Braun & Clarke, 2006). Thematic analysis is a method for identifying, analyzing and reporting themes within data that provides an organization of data. In the final phase, the researcher interprets the meaning of the cases and report the “lessons learned” (Lincoln, & Guba, 1985). In this phase the data obtained from all tools were qualitatively analyzed using textual descriptions. The steps followed in the thematic analysis is depicted like the following figure.

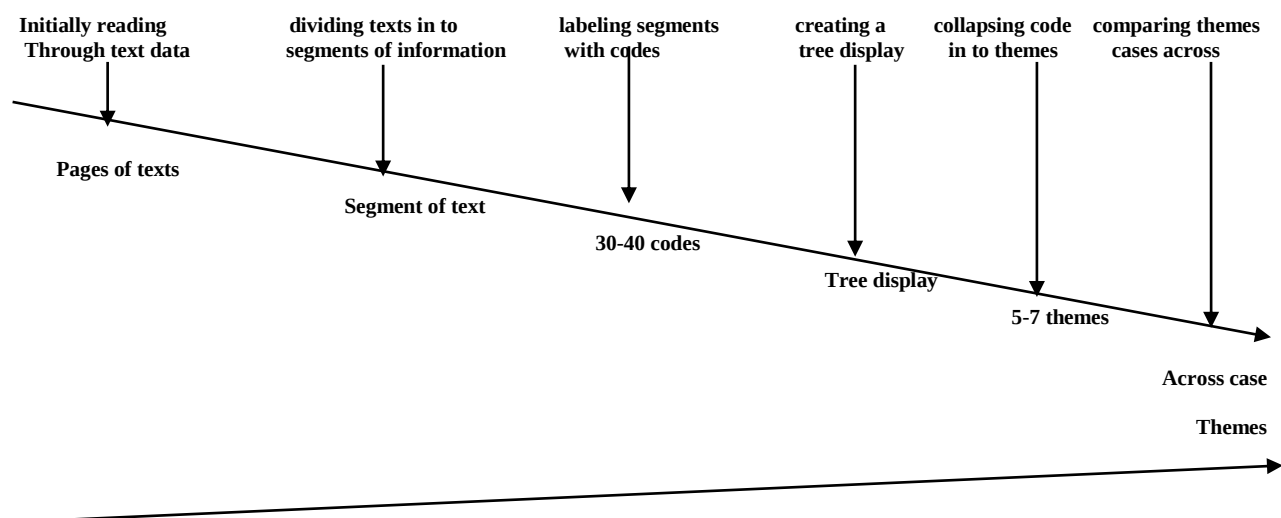


Figure 3: The visual model of qualitative analysis for this study (Adapted from Creswell, 2002 and Lu, 2003).

3.7.5. Ensuring research Quality

The criteria for judging a qualitative (case) study differ from quantitative (survey) research. In qualitative design, the researcher seeks believability, based on coherence, insight, and instrumental utility (Eisner, 1991) and trustworthiness (Lincoln & Guba, 1985) through a process of verification the uniqueness of the qualitative study within a specific context precludes its being exactly replicated in another context. However, statements about the researcher's positions the central assumptions, the selection of informants, the biases and values of the researcher enhance the study's chances of being replicated in another setting (Creswell, 2003).

To validate the findings, i.e., determine the credibility of the information and whether it matches reality (Merriam, 1988), three primary forms was used in the first, qualitative phase of the study: (1) triangulation – converging different sources of information (interviews, documents and observation); (2) member checking – getting the feedback from the participants on the accuracy of the identified categories and themes; (3) providing rich, thick description to convey the findings (Creswell, 2003; Creswell & Miller, 2002).

3.8. Mixing data

Following the data analysis of the first phase (the qualitative part) it was essential to complete a separate step before proceeding on to the second phase of the study (the quantitative phase) and this step is known as mixing the data in the mixed method research (Creswell & Clark, 2007, 2011). Mixing the data in the mixed method research is a process of connecting the two different data sets. In order for a study to be qualified as a mixed method research, the data from both qualitative & quantitative methods must be mixed at some point during the study.

Connecting the data occurs when the analysis of one type of data (qualitative or quantitative) leads to (and there by connected to) the need for the other type of data. This mixing occurs in the way that the two data types are connected. This connection can occur in different ways, such as specifying research questions, selecting participants or developing an instrument (that is transforming qualitative themes in to quantitative items or scales) or other materials (Creswell and Clark, 2007). In this study, qualitative themes were transformed to quantitative scales.

PHASE II - QUANTITATIVE PHASE

3.8.1. Development of survey questionnaire

Questionnaires are doubtless one of the primary sources of obtaining data in any research endeavor. However, the critical point is that when designing a questionnaire, the researcher should ensure that it is “valid, reliable and unambiguous” (Richards & Schmidt, 2002, p. 438).

At the heart of the link between the qualitative and quantitative strands of this study, a survey questionnaire was developed to investigate the level of implementation practice of cooperative learning strategies, understanding and perception of CL strategy, its principles, purposes, blessings & opportunities, implementers’ attitude towards the strategy and challenges of CL implementation in the teaching and learning process.

The primary technique for collecting the quantitative data was a self-developed questionnaire, containing items of different formats: multiple choice and cooperative learning strategy implementation practice assessment items measured on the 5-point likert type from “Strongly disagree” to “Strongly agree” (i.e. Five scale likert ranging from 1 to 5, where, 1= strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree was used to measure the magnitude or level of existence the required behavior or experience.

The survey questionnaire that was used in the current study consisted of three sections. These included (i) demographic data related to instructors and student’s personal data or background information (participants’ age, gender, education level and etc) constitute the first section of the questionnaire (ii) main data which includes items related to: knowledge and perception of CL; purposes of CL; blessings and opportunities of CL; attitudes towards CL; implementation practices of CL; status of CL implementation practices; challenges in CL implementation process and items related to instructors and (iii) part three the multiple choice items only for instructors.

3.8.2. Pilot testing

The survey questionnaire was piloted to identify repeated, ambiguity and misunderstandings or other inadequacies and to assess the reliability and validity of the survey instruments. Becker (2000) noted that 10-20% of the sample size for the actual study is a reasonable number of participants to consider enrolling in the pilot. Pilot testing helped to check that the survey

questionnaire elicited data for analysis on all of the concepts intended by the study, and it allowed the researcher to check for repeated and ambiguous questions and to get an idea of the approximate time the research instrument took to fill. Feedback received during the pilot informed modification of the research instrument and was incorporated to produce the final version of the survey questionnaire.

Accordingly, the survey was piloted on twelve instructors of department educational planning and management and department of curriculum and instructional supervision at Ambo University who were obviously not included in the final sample. As a result, several valuable feedbacks were obtained from the pilot testing. These helped to reconstruct, delete, or modify some of the items. In addition, pilot testing was made by providing instruments for my colleagues and instructors in the departments to ensure content validity. The questionnaires after having been evaluated and checked through pilot test the final form was prepared.

3.8.3. Maintaining the quality criteria for the quantitative study

3.8.3.1. Reliability of the scales

As a first step to assure reliability of a questionnaire, most respondents should give almost the same answers to the target statements. The stability or test-retest reliability of the survey instrument was obtained through the pilot testing of the instrument. Table 5 presents summary of the reliability analysis.

Table-5: Reliability analysis

No	Item category	Cronbach's Alpha	N of Items
1	Knowledge and Perception of CL	.863	6
2	Purposes of CL	.820	4
3	Blessings& Opportunities of CL	.874	8
3B	Socialization	.591	5
3C	Tolerance and respect	.656	5
4	Attitude Towards Cooperative Learning	.727	7
5	CL Implementation Practices	.743	12
6	CL Implementation Practices Status	.629	3
7	Challenges/Curses/ in CL Implementation	.873	8
	Overall	.889	58

As shown in Table 5, the overall Cronbach's alpha was 0.889 that indicate acceptable reliability of the survey questionnaires. This has proven that the likelihood of getting similar result with another

sample was 88.9%. In judging the goodness of internal consistency reliability, Nunnally (1978) suggested to use 0.70 as the minimum threshold for acceptable, 0.80 satisfactory, and .90 for adequate and these criteria was used throughout the study in interpreting the internal consistency reliability coefficients. Internal consistency reliability for the survey instrument was tested using Cronbach's alpha which is the most commonly used tool to measure questionnaire reliability. As per the literature this 0.889 is closer to .90, hence questions that were incorporated in the instrument could be judged as adequate and appropriate and have played their role in acceptable manner.

Furthermore, the researcher has extended the measure the reliability coefficient of seven sections of the research questionnaire. The reliability of coefficient of these seven sections ranged from 0.591 to 0.874. As shown in Table 5 above six sections were above the threshold (0.7), only one section under the threshold. "CL implementation status" have shown relatively lower reliability coefficient than lower threshold (0.7). Fortunately, in one hand 0.629 was not too far from 0.7 and on the other hand the overall reliability coefficient (0.894) was excellent. Hence it is safe to continue to other analysis, because there was no problem in reliability of the questionnaire.

3.8.3.2. Validation of the survey questionnaire

For this study, the researcher assessed the reliability of the instrument first because as observed in the literature reliability is a prerequisite criterion for validity though it is not a sufficient condition for it. Hence factor loading of each item was calculated based on the score in communality statistics. The statistics in factor loading indicate how far each variable contribute for the result obtained. The analysis construct should produce a simple structure, which is characterized by variables with strong loadings and each variable should have a big communality. Here the researcher want to examine underlying variables / factors that explain the pattern of correlations within a set of observed variables.

The result of construct validity depends on measures of extraction communalities. This extraction communalities are estimates of the variance in each variable accounted for by the components. Extraction communalities range from 0 to 1. High communalities (closer to 1) indicates that the extracted components represent the variables well. If any communality is very low (less than 0.4) indicates variables that do not fit well with the factor solution, and should possibly be dropped from the analysis.

All 48 variables in the questionnaire were measured their respective factor loading. The factor loading of all 48 variables ranged from 0.591 to 0.938. The smallest loading observed is 0.591 and the majority (75%) of variables scored above 0.8, which is very good. Therefore, no variable that is subjected to rejection in the analysis because of big communality measures. In this sense the results produced by one's measuring instrument being able to correlate with other related constructs in the expected manner and it is safe to get meaningful and valid result in application of other statistical models. Hence it is safe to continue any other statistical tools which are relevant to the analysis (See Appendix J).

3.9. Methods and Procedures of Data Collection and Analysis for the Quantitative Study

3.9.1. Data collection procedures for the Quantitative part

After validating the survey questionnaire through pilot testing and several analyses of results, the final copy of the survey questionnaire was delivered by the researcher to the department heads (or secretaries in the absence of department heads) so that they could distribute the questionnaire to the randomly selected instructors and students within their departments. Names and phone numbers of both the instructors and students who took the questionnaire were coded and documented by their respective departments. A maximum of three days for students and five days were given for instructors to complete and return the questionnaire to their respective departments and respondents who may not respond within specified time were contacted through phone by the secretaries of their respective departments.

From the 120 copies which were distributed for students and 117 (97.5%) of them were filled out and collected whereas from 36 questionnaires which were distributed to instructors 35 (97.2%) were filled out and copies were collected. This made the response rate to be 97.2 %, which was more than enough for this study.

3.9.2. Method of data analysis for the Quantitative study

For data analysis of the quantitative strand, Percentages, means, grand means and standard deviation were employed for descriptive statistics. Multiple regressions, chi-square independent t-

test, one-way ANOVA and Bivariate Pearson's correlation were used to test the relation between independent and dependent variables and to identify the impact of independent variables on dependent variables. Graphs and charts are also used in appropriate places. The statistical package for social sciences (SPSS) version 24 was used in analyzing the data in order to determine reliability of the instruments and relationships between the independent and dependent variables. The analysis was made based on five scales (strongly agree, agree, undecided, disagree and strongly disagree).

3.10. The second mixing of data set

A study that includes both qualitative and quantitative methods without explicitly mixing the data derived from each is simply a collection of multiple methods (Creswell et al., 2003). The second mixing of data sets was worked after the quantitative analysis. Following the findings of the qualitative and the quantitative strands the second mixing of data sets were carried out in the discussion part of the study.

There are three overall strategies for mixing quantitative data and qualitative data. The two data types can be merged, one can be embedded within the other or they can be connected. The data are merged when the researcher takes the two data sets and explicitly brings them together or integrate them. The researcher could also decide to embed data of one type within a design of the other type (Creswell, Clark, Guttman, & Hanson, 2003). The mixing of data for this study was involved merging both qualitative and quantitative interpretations of the findings. By merging the two data sets the researcher came up with a new set of interpretations that used to answer the central research questions (Creswell & Clark, 2007).

3.11. Ethical consideration

Ethical issues were addressed at each phase in the study and the research was begun after getting approval from all concerned bodies including letter of cooperation from the Department of Curriculum Studies and instruction of Addis Ababa University. Initially the researcher got letter of cooperation from the department and the letter handed over in person to vice president for academic affairs of the sample universities. The office of the vice presidents in turn wrote a consent letter to respective authorities of the universities. The researcher took copies of the consent letter

to office of reform director, college/institutes deans and department heads. The department in turn facilitated the relationship between the researcher and instructors and students in their respective departments.

A letter of cooperation was also written from the department of Curriculum Studies and instruction of Addis Ababa University to ministry of education and education strategic center and the researcher handed by person to concerned directorate of the organizations. Furthermore, the participants had an access to a consent form. The consent form covers issues like: the purpose of the research, who conducts the research, the length of the research, right to confidentiality and anonymity, the participant's right to withdraw from the research and other ethical issues. Those who participated in the interview were given copies of the consent to read and agree by putting their signature. The interview was mainly done by audio taping. On top of this, those who were selected for the survey study was given copies of the consent form together with the questionnaire so that they can read and act accordingly. Observation was carried out with permission and assistance of the concerned authorities.

In order to ensure the ethical principle of the anonymity of the research participants who participated in the interview, the investigator used the following codes which were prepared by merging initial letters of the universities and institutes to which the interviewees belongs with numbers (1 and 2) representing number of interviewees from similar positions.

AUP₁: interviewee from the management of Ambo University

AUP₂: interviewee from organizational reform directorate of Ambo University

AUEB₁: college dean

AUEB₂: department head

AUAG₁: college dean

AUAG₂: department head

ASP₁: interviewee from the management of AASTU

ASP₂: interviewee from organizational reform directorate of AASTU

ASEM₁: college dean

ASEM₂: department head

ASBCE₁: college dean

ASBCE₂: department head

GRP₁: interviewee from the management of University of Gonder

GRP₂: interviewee from organizational reform directorate of University of Gonder

GMSH₁: college dean

GMSH₂: department head

GSSH₁: college dean

GSSH₂: department head

RME₁: interviewee from MoE reform directorate

RSC₁: interviewee from education strategic center

In general, in this study, I made great effort to protect research participants by trying to be sensitive to their views and perspectives. Their identities were kept anonymous. I ensured the confidentiality of information provided by them. The gathered information, transcribed notes and memories were carefully handled. The main ethical consideration in my case study research was to inform about and protect the confidentiality and anonymity of the participants. Furthermore, I was not disclosing names and anything discussed privately by participants.

3.12. Conclusion

This chapter addressed the methodology and methods that were utilized to answer all the research questions and achieve the research objectives. A rationale for using exploratory mixed methods methodology and the specific sampling, data collection, and data analysis procedures used in this study were discussed. The following four chapters discuss the results from each phase of the research. Chapters Four, Five Six and Seven present results of the qualitative study. Chapters Eight deal with the results of the quantitative study. The results obtained from the analyses form the basis for chapters nine and ten.

CHAPTER FOUR

Ambo University Cooperative Learning Implementation Practices

4.1. Introduction

Under this chapter some physical and demographic situations of Ambo University (AU), research participants' knowledge & perception of CL, issues related to purpose of cooperative learning, blessings and opportunities of CL, participants attitude towards CL, cooperative learning implementation practices and status implementation practices were presented and analyzed. Moreover, constraints or obstructing factors of Higher education institutions implementation practices of cooperative learning were included.

4.2. University overview

Ambo University (AU) was established in 1948G.C as school of Agriculture, the first agricultural school in Ethiopia. Passing through various development stages as Ambo agriculture and forestry secondary school, Ambo institute of agriculture, Ambo junior college of agriculture, Jimma University - Ambo College, Ambo University college, it become an autonomous University in 2009 G.C.

Ambo University is one of the foremost higher learning institutions with significant contribution in the country's overall development by producing skilled human resources in various fields. In the years to come, the University has the vision of becoming one of the most prominent universities in the country surpassing in academics, research and community services giving its utmost attention to quality education. Currently, the University runs 48 graduate and 70 undergraduate programs. The programs are classified into nine colleges/institutes/schools and academic departments. Besides the main campus at Ambo, the University has three campuses at Awaro, Guder Mamo Mezemir Campus (College of Agriculture and Veterinary Sciences) and Woliso.

Vision

Ambo University envisions becoming a renowned university of choice in eastern Africa by 2030.

Mission

Ambo University is dedicated to serve the Ethiopian society and the world in discovery, development and application of knowledge in wide range of disciplines. The University is committed to maintain and ensure the provision of quality, cost effective, timely and need based education at undergraduate and graduate levels; engaged in research and knowledge transfer; conduct short term training and consultancy; and offer community services in a professional and innovative manner so as to address the need of stake holders.

4.3. Knowledge and Perception about Cooperative Learning

It was thought that respondents “knowledge, perception and understanding” gives insight about their readiness to support and actively engaged in the implementation practices of one-two-five group formation as a CL strategy in higher education institutions, which is also part of the institutional readiness. Based on this conviction, the university vice for academic affairs, reform director, college dean’s department heads, EMoE (Ethiopian ministry of education) reform directorate expert and an expert from Education strategic center were asked to tell how they perceived and understood the cooperative learning strategy. The qualitative data revealed those respondents’ knowledge and perception’ of CL strategy was not the same or vary a lot. Some of the respondents understand and perceived cooperative learning strategy as a pedagogical approach, while others perceived it as a political tool of government and still others perceived cooperative learning strategy as a source of dependency/corruption. In general, the knowledge and perception of the interviewees have about cooperative learning may be categorized in to two parts:

Cooperative learning as a pedagogical approach

There were respondents who argued that cooperative learning is an accepted and often the preferred instructional procedure at all levels of education. This was clear from the comments given by the respondent during the interview session. Some of the respondents argued that cooperative learning is presently used in not only in their university but also in every part of the world, in every subject area, and with every age student. They also add that currently, it is difficult to find a text on instructional methods, or instructional materials that do not discuss cooperative learning. Cooperative learning is now an accepted and highly recommended instructional procedure.

Others who participated in the interview explained CL as a team learning method and as a pedagogical approach. Other respondents still add that by saying CL is a method that helps students irrespective of their education level to share experience, learn leadership, and support each other. Moreover, interviewee AUEB₁ also added that by saying:

I understand CL as a pedagogical approach or strategy that helps students to openly express their idea to group members. It is also an approach that increases students' participation. The respondent further added that he perceives CL as an instructional tool which helps low and average learners to upgrade themselves using the support, they get from other group members (Interview, December 6, 2018).

Some participants noted that CL is a pedagogical tool through which students learn to interrogate issues, share ideas, clarify differences, and construct new understandings. Interviewee AURP₁ for example argued: ‘Cooperative learning is good because applying the strategy helps students to share different expertise and excels their knowledge or capacities.’

Likewise, another interviewee (AUP₂) said:

I understand cooperative learning strategy as a pedagogical practice focused on team-based learning. It is a strategy by which group members work together in a collaborative way and ended with achieving common educational goals and satisfied all group members (Interview, December 7, 2018).

On the other hand, interviewees RME₁ and RSC₁ explained cooperative learning as:

A formation of five students as education change army aimed at improving student's academic performance and improving quality of education. And it is a way by which students are grouped based on their academic results to support and share experience from each other (Interview, December 13 and December 14, 2018).

It is evident from the above discussion that the interviewees perceived cooperative learning as a pedagogical approach that could make students help each other and gain both academic and social benefits by using the opportunities to interact with others and accomplishing shared goals. And it is this sense of interdependence that motivates group members to help and support each other. It is also clear to see from the comments that the instructors understood the importance of CL and when students work cooperatively, they learn to listen to what others have to say, give and receive help, reconcile differences, and resolve problems democratically. Moreover, when students work cooperatively together, they show increased participation in group discussions, demonstrate a more

sophisticated level of discourse and provide more intellectually valuable contributions (Gillies, 2006).

Thus, the researcher would say these respondents have a knowledge and good perception of cooperative learning strategy (what a cooperative learning strategy mean) and understand the strategy as each member of a group is answerable not only for knowledge what is taught but also for helping other team members to learn, thus developing an environment of success. They also believe that CL strategy gives a chance for students work together from beginning to end their assignments until all group members successfully comprehend and complete it. This means students work in group to gain from each other's efforts to achieve a common goal and if not share a common fate.

Moreover, the respondents also knew that simply placing students in small groups and telling them to work together does not guarantee that they will work cooperatively. Groups need to be structured to ensure that members will work interdependently if they are to reap the academic, social, psychological and other benefits widely attributed to this approach to learning. For example, the interviewee AUEB₁ (college dean) said that:

I understand cooperative learning as an approach that helps university students to share experience, learn leadership, and support each other. I also understand CL as an instructional strategy that helps students to openly express their idea to group members, helps low learner and medium learner students to upgrade themselves using the support they get from the group members. In general, I understand CL as an approach that helps students to increases their participation in their group and classrooms.

On the contrary, interviewee AUEB₂ (department head) for instance argued that as to our university the way implementers of the strategy particularly students& instructors perceive one-to-five group formation (CL) is very different. They perceive it as a way of moving together without hard work or much effort. As to this interviewee the understanding and perception instructors and students may influence the implementation practices of cooperative learning strategy in real sense because they feel that the cooperation among group members was not on equal status. That is the slow learners depend on good learners for their survival.

Generally, it is possible to say that the interviewees had some knowledge of cooperative learning and its contribution for the students and the teaching and learning process in general. This shows that having a clear understanding and conceptualization about the strategy and theoretical perspectives behind the approach is of vital importance for its successful implementation practices because according to Jolliffe (2006) an improvement in teaching and learning requires an explicit understanding of the underlying pedagogy, i.e. instructors need to know not only what to do, but why they do in real sense.

CL as a political tool of government

In the case of Ethiopia where active learning is implemented to improve not only student's academic achievement but also the quality of education and to reach a more learner-centered educational system using the strategy other than its fundamental purpose by the government or other body was a big challenge which created an influence that hinders the effectiveness of the implementation practices.

The top-down approach to implement the CL strategy in Ethiopian higher education institutions faced resistance and hatred from the side of implementers from two perspectives: first the decision was not participatory which was solely made by government (the government was both the source of the innovation and the decision maker to implement at education institutions); and it was not research based; the second was the university community thought that strong interest of the government to implement one-to-five group formation as a CL strategy emanated from the interest of using one-to-five group formation as a political tool in the academic environment.

Those interviewees who commented on using CL in the form of one-to-five group formation serves government as a political tool in the academic environment reported that CL was not only implemented in universities for better learning and better academic achievement of students but serving government's interest. Interviewee AUEB₂, AUEB₁, RME₁ and RSC₁ for example, noted:

*The idea of using one-to-five group formation as a cooperative learning strategy in higher education institutions was originated from government (ministry of Civil Service wrote a letter to EMoE and then ministry of education also wrote to all universities to implement as education change army accompanying by one-to-five group formation guideline manual and implementation guide line-see **appendix-N**). The government made one-to-five group formation*

to be implemented uniformly across all public universities in the country. By then it was taken as a government political tool in educational institutions and development direction of the education sector. It was being implemented in universities with similar fashion of all other government sectors without considering peculiar characteristics of the education sector.

Furthermore, interviewee AUP₁ added:

Science it was started in political context from government there was high resistance from instructors, the university management, deans and department heads. And we have said let's change its name to CL strategy and after some research output presented on cooperative learning there was an improvement on the conceptualization of the strategy. For example, in my case I read different literatures & understanding of the strategy came gradually (Interview, December 10, 2018).

Therefore, it is evident that the government forced public universities across the country to implement the one-to-five group formation as cooperative learning strategy with similar context of other sectors like health and agriculture without considering special characteristics of the education sector; with no research on the context of implementation and without making universities part of the decision. On top of this, it was a top down approach decision made by the government and Ethiopian ministry of education (EMoE) wrote a letter to implement the one-to-five-group formation as an instructional strategy as of December 2013 with the target of making university teaching and learning process more interactive. But the fact on the ground was the completely different from this. The implementation mainly seems for political advantages. In line with this, interviewees AUEB₁, AUP₁, AUP₂ and AUEB₂ commented:

Government decided to implement one-to-five group formation as CL strategy in universities for its own political interest. The university management gave responsibility to colleges/institutes and departments to must implement one-to-five group formation forming the groups mixing one good achiever student, two average students and other three low Lerner students and the good achiever student become a group leader. It was ministry of education that supervises and follows up the overall implementation process. The university didn't have any involvement in the decision to implement the one-to-five- group formation as an active learning methodology. Though there were some activities of implementing by instructors due to the influence of the university management. One-to five group formation was politicized right from its introduction and this became a source of resistance of instructors and good achiever students.

The data from the interview also revealed that the university community perceives the one-to-five formation (CL) similar to government structure or one-to-five group formation at village level. Interviewee RME₁ (from ministry of education) commented that: “There was a high resistance by instructors, students and university management on naming and call one-to-five group formation

CL strategy. Ministry of education on the other hand encourage universities to implement getting rid of ‘quarreling on naming if its end purpose is enabling students to support each other, to learn from one another and excel their learning.’”

In nuts shell, it is safe to say there was high resistance from the implementers’ side in relation to implementing of one-to-five formation as a CL strategy since it lacks participatory decision neglecting the main actors in the implementation process. Governments’ hidden agenda of using the groups for regulating the political atmosphere of the institutions and structuring the groups ignoring the peculiar characteristics of higher education institutions was the main sources of resistance.

4.4. Purposes of implementing cooperative learning in the university

Implementing CL as a teaching and learning strategy has various pedagogical purposes that are expected to be achieved by students, instructors, educational institutions and government. Thus, the interviewees assumed that improving students’ academic achievement and improving quality of education were the purposes of CL implementation in the university.

Improving Students’ Academic Achievement and Social Skills

As it was repeatedly said, the main purpose of cooperative learning is to actively involve students in the learning process; increasing the level of student empowerment and serving as a tool to improve students’ academic achievement which is not possible in a lecture (traditional) format. Some interviewees posited their idea with regard to the purpose of implementing cooperative learning strategy in the teaching and learning process in their university like the following. For example, interviewees AUEB₂, RSC₁ & RME₁ said:

The overall purpose of implementing cooperative learning strategy in their universities is to improve the academic achievement or performance of slow learners and medium learners using CL as a tool.

There were also interviewees who argued that the overall purpose of implementing is more than improving students’ academic performance. Interviewees AUEB₁ & AUP₁ for instance commented:

The purpose of implementing CL as a teaching and learning strategy was more than improving students' academic result but to make students self-learner, engaged in learning process and related activities, develop ideas and reach on conclusions by him-self/her-self. In addition, using CL helps teaching students not what to learn but how to learn and it also has target on developing students' creativity and problem-solving skills.

The other interviewees AUP₂, RME₁ and RSC₁ argued:

Even though the implementation practice of cooperative learning strategy in the university has many limitations and gaps from the side of instructors, students and university management the main purpose of implementation was serving as an instrument of improving students' communication skills, social skills (socialization) & enabling them to share their experiences.

On the other hand, according to some interviewees, cooperative learning strategy has the purpose of helping student to become cognitively capable of constructing their own knowledge without teachers feeding the knowledge to learners which ended with improving students' academic performance. By its very nature if CL properly implemented it discourage rote learning. The role of the instructor here is to play the role of facilitating the learning process instead of imparting the knowledge to learners which strongly supports the constructivist approach to learning. This promoted mainly the cooperative learning principles of interdependence and accountability.

In general, university students were increasingly being asked by their instructors and the university management to work co-operatively besides the interest of the government and international trend. This increased emphasis on cooperative learning was due to the known advantages that students get. Due to this, the university implemented the strategy targeting different purposes like mentioned above by the respondents. In line with this, Deutsch (1949) noted that CL has been well documented in the educational research as a successful pedagogy to improve students' academic achievement. The fundamental principle of cooperative learning is success of all group members.

Therefore, it is imperative that instructors should provide maximum opportunities for learners that could better facilitate conditions to help them to acquire and practice skills they need for efficacy of the implementation practices of CL that in turn helps to the improvement of students' academic performance, social skills, and other outcomes of cooperative learning. Because cooperative learning classrooms are an ideal environment in which learners can obtain maximum support from their peers and the instructors through collaborative and discovery learning.

CL as a tool of improving quality of Class room learning, education system and students' communication skills

Most of the interviewees reported that:

Active learning is a learner-centered approach of education whereby students are actively involved in the lesson and subject matter. They learn through discussions with the teacher and peers, collaboration and presentations. CL as a chosen pedagogical strategy promotes quality of class room teaching and learning process in particular and that of quality of education in general. The fact that effective implementation of CL strategy basically requires instructors to have high awareness and good knowledge about ways of student' learning. This could improve students' learning, establish a learning environment where students interact positively, share their knowledge & experience which have a tremendous effect on the quality of education.

Interviewee AUEB₁ also added that:

I think using CL strategy in classroom environment could help to improve quality of classroom teaching and learning process and could help to make the classroom environment more attractive, interactive and the improvements takes place in the class room would contribute to the improvement of the quality of the education system.

Furthermore, interviewee AUEB₂ noted that in CL strategy students work together to attain shared goals that cannot be obtained by working independently or competitively. Thus, in cooperative class room structure CL helps to improve the quality of teaching and learning because students discuss subject matter, help each other to learn and encourage groups which would contribute to the improvement of quality of education.

In general, CL makes students acquisition of knowledge and competencies efficiently, effectively and changes students to active learners rather than being passive learners. Because active learning requires students to work in small groups to conceptualize, analyze, synthesize and evaluate during discussions. In discussions, the students construct new cognitive structure or access their existing ones to subsume the new information and experience. These all things could contribute to the improvement of quality of class room learning in particular and improvement of quality education in general.

4.5. Blessings and Opportunities of Cooperative Learning

Improving students' academic performance and, socialization, respecting and tolerate differences

Implementing CL as a teaching and learning strategy has many positive effects on students and students learning. In relation to this idea for example interviewee AUEB₁ noted that:

In our college implementation of CL is used by making students to know each other's culture, idea and life style and help them to establish friendly relationships among each other, it also helps students to develop leadership skills, to learn respecting and tolerate differences, to speak their minds, sharing experiences, and performing better in their learning both as an individual and as a group.

In the same way most interviewees (AUP₁, AUP₂, RME₁, RSC₁ and AUEB₂) noted that they welcomed CL implementation as a blessing and opportunity for the teaching and learning processes in the public universities. These interviewees advocated the benefits of CL in education from two perspectives: one was from the side of tertiary level education and the other was from the side of students. Those interviewees who expressed cooperative learning's benefit from the tertiary level education perspective noted that, implementation of CL helps to improve the quality of teaching and learning process by fostering student-centered approach in universities. These interviewees contended that CL had brought the opportunity to teach a lesson effectively which would have been impossible otherwise. For instance, interviewee from Ethiopian ministry of education (RME₁) & Interviewee from education strategic center (RSC₁) said:

EMoE believes that implementation of one-to-five- group formation as CL strategy was appropriate and effective for tertiary level education. Implementing CL as a teaching and learning strategy in Ethiopian public universities pave the way to improve quality of classroom teaching and learning in particular & that of quality of education in universities in general. Thus, using interactive education approach is appropriate according to the current world education context. If universities didn't use CL, Ethiopia's tertiary education will find it difficult to compete with the rest of the world tertiary education and will not able to produce competent graduates that will play their own part with the country's development spectrums. And theses all things make the advantages of using CL in tertiary education is multi-dimensional.

Those interviewees who advocated the benefits of CL in education from the side of students on the other hand reported that:

Using cooperative learning strategy has multiple benefits for students. It helps them to perm well in their learning, improve their social life, communication skill, and help them to appreciate and respect differences and to be competent graduates.

From what has been mentioned above it can be understood that some interviewees perceived Positively, especially in relation to its appropriateness to tertiary education and its importance to improve the quality of the teaching and learning process and the difficulty that will face in producing competent graduates unless CL is used as a teaching and learning strategy. Furthermore, it also has many advantages for students when CL used in higher education institutions.

Various researches carried out in different parts of the world indicated that CL has a positive effect on students learning and matches with the results of this analysis. For example: researchers like Cockrell et al. 2000; Hiltz 1998; Johnson et al. 2000; Slavin 1992 have shown that group learning promotes student learning and achievement. It also increases the development of critical thinking skills (Brandon & Hollingshead 1999; Cockrell et al. 2000), and promotes greater transfer of learning (Brandon & Hollingshead 1999). Group learning also aids in the development of social skills such as communication, presentation, problem solving, leadership, delegation and organization (Cheng & Warren, 2000).

Generally, it has been learned from the interview data that the interviewees perceived the teaching and learning environment that employed CL gives different benefits not only to the learners but also to the entire education system. The interviewees welcomed the implementation of Strategy as a blessing and opportunity in promoting students' learning, improvement of their communication skills, in increasing their conflict management skills and in improving quality of education. Overall, even though the institution has tried implementing CL as a teaching & learning strategy, the data suggests that a lot has to be done to make sure that the usage and institutionalization of the strategy in the teaching and learning process of the institution's class rooms and students' out of class rooms' activities.

On top of this, in CL classroom students' work together to attain common goals that could not be attained by working individually or competitively. Because in CL classroom structure, students discuss subject matter, help each other learn, and provide encouragement for member of the group. Furthermore, cooperative learning experiences promote more positive attitudes toward the instructional experience than competitive or individualistic methodologies. CL should result in

positive effects on students' achievement and retention of information (Dishon & O'Leary, 1984; Johnson & Johnson, 1990; Slavin, 1991).

Makes students active, engaged and minimize conflicts

There were instructors who argued that implementation of cooperative learning strategy in classroom could help students to be motivated, active and engaged in the lesson. On top of this, effective implementation of CL creates conducive teaching and learning environment that could enable students to acknowledge and tolerate differences and minimizes the possibilities of conflicts that would be happen within the group. These all things will help students to experience success and maximize their learning. These interviewees further argued that, the full engagement of students in their learning help students to establish a learning environment where students interact with each other and share their knowledge and experiences.

Likewise, interviewee AUEB₂ also said:

Proper implementation of CL not only play a role on the improvement of quality education, help students acknowledging and tolerate differences which resulted in minimizing the possibility of conflicts to happen but also make them active and engaged in their learning.

Other interviewee from ministry education also strongly believed that wise use of CL strategy will be result in many benefits and advantages in the education sector particularly for university students. It helps them to know each other's culture (language, dressing style and various religious practices and festivals). This makes students to have a strong bond among them, active and engaged in their education and even in their social life. The interviewee also noted that student's engagement in their learning and the strong relationship between them help students to deal with conflicts or problems created effectively that may have a positive effect on making the environment of teaching and learning in the university peaceful and attractive and will enable the university to play its own share in the development activities of its locality and the country to.

Here one can easily see that effective implementation of CL strategy has different outcomes both for the university and for the students as well. From the side of the university it helps to create a peaceful academic environment that would better facilitate the teaching and learning process minimizing the possibilities conflicts that will be created among students helping them to build the culture of acknowledging and tolerance of differences. By the side of the students CL can serve

as a tool of making students active and engaged in their learning through building spirit of cooperation and cohesiveness among group members. In relation to this, Interviewee AUEB₁ for example noted:

I think using CL as teaching & learning strategy increases student engagement which in turn increases students' effort to complete the learning of tasks successfully, being focused, curiosity about the task and its content, persistence, and the use of cognitive strategies. The engagement may be: behavioral engagement (attending class, doing homework), cognitive engagement (effort to understand information and master complex skills), and emotional engagement (positive reactions to classmates, academic task and materials, teachers, and so forth) (Interview, December 6, 2018).

It is evident from the above qualitative data that implementation of cooperative learning strategy has different benefits and opportunities for students and for the teaching and learning system in general. Working cooperatively with classmates to solve a problem is far more effective than competing with classmates or working independently to solve the problem. Cooperative learning structure promotes students to engage cognitively and emotionally with other students and the task assigned. This allows students to construct, discover, and transform their own knowledge and improve their academic performance (Bowers & Finders, 1990). Students maximize their learning when they learn cooperatively or in groups. Therefore, effective CL implementation practices of cooperative learning strategy would result in better students' engagement in their learning; develop positive peer relationship which will help in minimizing conflicts.

4.6. Attitude towards Cooperative Learning

Implementers' feelings and commitment

Positive or negative CL related feelings that instructors, students, the university management and other stakeholders have would highly influence the success of its implementation practices. Thus, it is possible to say the success of the implementation CL strategy is strongly related to implementers' related factors. It was learned from the interview data that some of the instructors are implementing one -to-five formations as a cooperative learning strategy since it was only the interest of government and the university management forced them to do so.

Interviewee AUEB₂, for example, said that: *'Instructors consider CL implementation as an imposition from government and their commitment, feelings and interest towards using CL was very poor.*

Interviewee AUEB₁ also reported that:

The university management and instructors were not as much committed to implement CL because they feel implementation of CL as an imposition from government on universities with the interest of using CL as political tool within the university community.

As it can be inferred from the interviews, implementers' feelings and attitude of CL strategy varies, the first group of interviewees reported that the university management, instructors, students and other stakeholders feel that implementation of CL was politicized by government and as it was government's imposition on them. And hence their attitude towards CL strategy is negative which in turn influenced effective implementation of the strategy. Instructors, the university management and students consider resisting implementing CL strategy as a means to oppose government's political influence and interference on universities autonomy and instructors' academic freedom. The second group had a positive attitude towards CL but the political context/external environment influences them to effectively implement the strategy in their university. They preferred to externalize the problem to the outside political environment and political affiliations of instructors and the university management. Interviewee AUEB₂, for example, reported that: *'Most of the university management and instructors didn't have positive attitude regarding the implementation of CL. They feel as the government imposes on them to implement it.'*

Interviewee AURP₁ also said that:

The commitment and attitude they have differs from individual to individual. Most of them feel as it was politicized and government's interest to implement one-to-five group formation as a teaching and learning strategy in the academic environment. The interviewee also said that instructors associated one-to-five group formation as similar to one-to-five group formations in kebeles' and any villages both in purpose and structure ignoring special characteristics of universities in particular and education system in general. The interviewee also argued that implementation of one-to-five formation as a CL strategy seems a loss for the education system (Interview, December 10, 2018).

Due to this, there were instructors who highly resisted CL implementation in some colleges. The interviewee also reported that there was a resistance from some students particularly from good achievers. On top of this, interviewee AUP₂ reported the university management and most of the instructors were reluctant and seasonal to implement CL and its implementation practice was very poor in the university.

Here it can be seen that the introduction of CL strategy to the university was not supported with all the necessary preparations and inputs: research to understand things on the ground and identify

opportunities and the would-be challenges; planning on how to implement and for resource provision was not carried out. On top of this, awareness creations programs and trainings for all stake holders was not sufficiently given; implementation guideline that is appropriate for university education and take in to account specific characteristics of the university environment was not developed. Fulfillment of these all things might help to improve or increase the willingness of the implementers to accept and implement CL as a teaching and learning strategy and minimize the negative attitude connoted to it.

To sum up, according to current world context implementing CL strategy is very important. Thus, the ministry science and higher education and other stake holders must do their best on awareness creation and training schemes focusing on the advantages of using CL strategy as a teaching and learning approach in higher education institutions in particular and for the country's education system in general.

4.7. Actual Cooperative Learning Implementation Practices

Believing that it is appropriate and important Ethiopian ministry of education (EMoE) decided to implement cooperative learning strategy in the form of one-to five group formation in public universities of the country. Basically, CL was implemented in classrooms and by its very nature the classroom is a dynamic environment, bringing together students of different backgrounds with different abilities and personalities. Thus, effective implementation practices of CL strategy require careful planning, awareness creation and trainings for instructors and to all parties that were directly or indirectly involved in the implementation of the strategy. In relation to CL implementation practices at Ambo University three issues (categories) were emerged/ identified to be discussed from the interview data: planning and familiarizing CL strategy; role of implementers and current practices of CL implementation across all colleges.

Planning and familiarizing cooperative learning strategy

When new educational innovations like cooperative learning strategy introduced to universities, planning for implementation and familiarizing it to implementers and other concerned parties contributes a lot for the efficacy of the implementation practices. Familiarizing and training programs should be initiated and given by the university and the ministry of education to create an

awareness and knowledge about the strategy which resulted in building willingness, positive attitude and increases acceptance of CL and commitment of the implementers.

Regarding awareness creation and trainings given to instructors, students and management of the university the qualitative data revealed that opposite ideas were raised from the interviewees. This was evident from what interviewee AUPB₂ and interviewee AUEB₁ reported. Interviewee AUEB₂ (department head) said:

I didn't see a training specifically focused on CL and given to the university management, instructors and students. But for new instructors the department was given a very short brief about CL, group formation and etc. and currently even these things were also not much active. Yearly there is an induction training given for newly employed instructors. The induction training was lasting 7-10 days. The training was very comprehensive which is focused on many issues including active learning method. But up to my knowledge there was no planned and organized training only focused on CL strategy given to instructors or any other body either by the university or by the ministry of education (Interview, December 5, 2018).

This shows that necessary preparations that could better facilitate the implementation of CL strategy were not carried out by the university and there was no pre-planning on how to implement, no enough training was given particularly for instructors who play the major & irreplaceable role in the implementation process. Here what one has to bear in mind is that, the induction training was only focused on newly employed instructors and not only focused on cooperative learning. No refreshment trainings for senior instructors. In addition, awareness creation on how to take a role in the implementation of cooperative learning strategy was also not given to students.

Contrary to the above interviewee, others reported that as there were all necessary preparations & enough amount of training was given to all who take part in the implementation process. For example, interviewee AUEB₁ (college dean) said:

I think, there was enough amount of training given for new employed instructors. On top of this, there is also a yearlong HDP training for instructors from different departments.

Interviewees AURP₁ and AURP₂ also added:

There was training given for instructors on CL. The reform directorate of the university yearly gives training for instructors on what CL is; its importance and scientific back grounds, groups' size and so on. Besides, different literatures and scientific research results were also presented on the trainings. The reform directorate of the university is a responsible body to follow up, gives technical support and collects reports from all colleges on the implementation practice of CL though not to the expected level.

These interviewees reported as the university was prepared a training and awareness creation sessions for instructors and other bodies who have taken a role in the implementation of CL strategy. According to these interviewees the training was focused on general issues that instructors and others who took part in the implementation process must know. Furthermore, interviewee RME₁ noted that:

Ministry of education has already developed one-to-five group formations and implementation guide lines and gave trainings on it to all concerned individuals from each university and the university in turn had also gave training to its instructors and appropriate bodies who take part in the implementation of the strategy. The training was given each year but its implementation is not effective as intended.

But as the staff member of the University for more than Seven years I witnessed that I didn't came across when the university has given trainings on CL strategy to the university community and instructors as the respondents said. No research papers and scientific literature presented on it. But rather, the induction training which had active learning methodology as one training theme was being given for newly employed instructors by the institute of education in collaboration with the university each year. In general, independent training which only focused on CL was not given for instructors and other bodies that took part in the implementation process.

This interview data has implication that the endeavor of implementing CL was not based on effective planning and the amount of training given for the implementers was not enough and this negatively influenced the efficacy CL strategy implementation practices which in turn had its own impact on students' academic performance and quality of education. Similarly, it had also an influence on instructors' knowledge, perception and on their attitude towards the strategy. In general, these could be the reason why the status of the implementation practice of cooperative learning strategy was not to the expected level.

To sum up, taking in to account the results of researches on co-operative learning clearly CL can be served as a powerful strategy resulted in many benefits including increasing student academic performance and improving the quality of classroom learning in particular and education system in general. But fulfilling this potential depends on the provision of professional development (training) for instructors that are focused on the approaches most likely to make a difference. Thus, all responsible bodies of the university and the ministry of education have to give a due attention to give appropriate, continuous and enough amount of training and awareness creation programs

prepared to make the CL implementation practices more effective. Besides, the university has to plan all its activities in relation to the implementation of CL and has to execute it accordingly. Because, cooperative learning strategy has established itself as a practical alternative to traditional teaching, and has proven its effectiveness in hundreds of studies throughout the world (e.g., Puma, Jones, Rock, & Fernandez, 1993).

Implementers' role

Parties that could take a part in the implementation of CL have their own roles to be fulfilled effectively in a coordinated and collaborative way that would highly determine the effectiveness the implementation practices of the strategy. It was learned from the interviewee of ministry of education that participating all stake holders was very important for successful implementation practices of CL but according to the interviewee, EMoE was not successful in this case. The ministry do not participate all stakeholders on awareness creation programs and trainings on: purpose, benefits, scientific foundations of the strategy; on the assessment and evaluation of CL implementation practices in universities.

Most of the interviewees reported that EMoE didn't give technical support as per the interest of the universities. The ministry was mainly focused on getting reports. EMoE got a feedback from the university about the implementation practices of CL in two ways: paper-based reporting and the second was supervision which carried out twice a year. And then ministry prepare a general report which shows the strength, limitations and exemplary activities of the institutions in relation to their practices of implementing as a teaching and learning strategy and reported the overall picture of all universities to concerned government body. But there was no as such strong technical support given to universities.

In the same way interviewee AUP₁ reported:

Planning, guiding, giving orientations and trainings on the how to implement CL, providing resources, supporting and giving feedback were the roles of the university. This interviewee further added that the university was not play its role to the expected level though a lot was expected from the management to exert its maximum energy for better implementation of CL across all colleges and departments.

It was also learned from the interview with AUP₂ (Reform director) university's role was planning, guiding, giving trainings and orientation, providing resources, supporting and giving feedback.

Similarly, another interviewee a college dean (AUEB₁) commented:

The role of the college was: giving orientation for both instructors and students about CL, on how to implement it and its benefits, making the departments to assign a mentor for each batch and group; follow-up the implementation process and giving technical support for departments when there was a demand and giving feedback.

It was also commented by AUEB₂ (department head) that:

The role of the department was: planning, giving orientation for both instructors and students. And assigning a mentor for each group that could help students in group formation, giving a technical support, helping the group members in giving solution when a conflict arises, follow up the implementation practice, reporting to the college, and carrying discussions with both instructors and students about the implementation of cooperative learning (Interview, December 5, 2018).

This gives the impression that the university management, colleges and departments have an idea on what is expected of them for better CL implementation practices. However, they didn't change it to practice and due to this the effectiveness of implementation of CL as an instructional methodology was not to the expected level which puts the endeavor of fulfilling their share under question mark. Regarding the role of instructors and students in the implementation practices of CL strategy some of the interviewees reported that:

The role of instructors was shifted from the presenter of information to the designer of active learning processes, environments, and experienced to maximize student engagement and learning. Because, the more active a lesson is, the more students tend to be engaged intellectually and emotionally in the teaching and learning activities. Besides, interviewee AURP₁ 'said in CL strategy the role of the students was working together to attain group goals that cannot be obtained by working alone or competitively, discussing the subject matter, help each other learn, and providing encouragement for group member'.

In general, cooperative learning, as an instructional approach it provides various opportunities for students and help them develop skills in group interactions and in working with others that are needed in their academic life in particular and today's world in general. In addition, effective implementation practices of CL strongly demand careful implementation planning, continuous familiarization and trainings that equip the implementers with all necessary information and skills to effectively implement the strategy.

On top of this, each body that take part in the implementation practices of cooperative learning in the university should exert its maximum effort and play their role to the maximum level that results in positive effects on student achievement and retention of information. Active learning approach

subsumes students engaging intellectually and emotionally in the learning activities. The continuum of student engagement (both intellectually and emotionally) has disengagement (off-task behaviors, negative emotions, learning experiences promote more positive attitudes toward the instructional experience than competitive or individualistic methodologies. Thus, the university management has to play the leading role by encouraging colleges, departments, instructors and students and creating an enabling environment to make all bodies play their role in a better way.

Cooperative learning in action at Ambo University

Implementation practices of CL strategy require a lot of thought and careful preparation and planning of the academic institutions. CL can be a rewarding experience, but it doesn't just happen because success in implementing cooperative learning taking place in stages over an extended period. It needs teaching conflict management skills, assigning specific roles, and giving continuous support and students learning to work in cooperative groups. Cooperative learning exercises can be as simple as a five minute in class exercise or as complex as a project which crosses class periods. CL can also be used across a wide range of classroom settings ranging from small to large lecture, as well as in all courses.

In relation the implementation practices of cooperative learning at Ambo university interviewee AUP₁ said:

A CL implementation practice in the university is not as such good due to regular interruption of the academic calendar and instability of the external (social context) and internal environments of the university (university context). But there were colleges that exhaustively implemented the strategy. On top of this, the implementation practice of CL in the university varies across all colleges and departments. In some colleges for example in Technology College using CL as a teaching and learning strategy were not yet started (as to December, 2018).

Likewise, interviewee from EMoE (RME₁) also said:

CL implementation practice was not attractive in universities and was not to the expected level. The implementation of CL was not on the same board across all colleges and departments in the universities.

It was learned from the above comments that the implementation of CL strategy in the university was not satisfactory. The implementation was not well-planned and organized. The pre-preparations were not also satisfactory. This highlights the importance of prior planning and

preparations (provision of facilities, giving appropriate trainings and preparation of awareness creation programs) which help to establish specific conditions that could be necessary for effective CL implementation practices. On the other hand, contrary to the above ideas the interview data with college dean (AUEB₁) revealed that:

I believe, in our college there was a good habit of working together and students always favor working in groups. Independent work was not appreciated by the students. I think this is due to a good conception of students and instructors about cooperative learning.

In relation to group formation Interviewee AUEB₂ commented that the group formation and implementation had its own guide lines developed and distributed by EMoE. The group was composed of: high achiever, medium achievers and low achiever students. The high achiever student is assigned as a leader of the group. The groups life span was a year and above or depends on course nature. In the same way, a college dean (AUEB₁) reported that the CL groups of fresh students were formed mainly in second semester assuming their first semester academic performance.

Interviewee AUEB₁ also added that group formation considers ethnic diversity and geographic diversity and forming groups was the responsibility of department and the departments also assign one instructor for each group as a focal person or mentor which supports the group by giving different technical assistance and in solving problems or conflicts. Thus, the college was trying to fully utilize all CL elements. This is how practically CL was being implemented in the college. Shifting of group members was possible due to conflicts among members and, based on group performance. Other cases of rearrangement of groups includes in effectiveness and dysfunctionality of CL groups.

On the other hand, interviewee AUP₂ reported that:

I didn't know whether a guideline was there for both group formation and implementation of CL. In the same way, interviewee AURP₁ (VP for academic affairs) also reported that 'implementing one-to-five group formation as CL strategy didn't have any guideline'. Whereas the university reform director introduces how the CL should be implemented to colleges and departments and distributed the group formation manual and implementation manual to all colleges and the implementation process was commenced in the university.

It was evident from the above comments that some of the respondents (interviewees) e.g. AUP₁& AUP₂ even didn't know as EMoE developed and distributed the one-to-five group formation and implementation guide lines which seems very unfamiliar in relation to the position they hold in

the university management (they are among the top officials of the university) and this much lack of information which was a common knowledge for others may strongly influenced the effectiveness of the implementation practices of the strategy.

Furthermore, from the above presented interview data one can easily infer that there was no clear communication among the university management, colleges and departments and they didn't have a common understanding and knowledge about CL particularly in relation to one-to-five group formation & implementation guideline though they were trying to implement it. On top of this, how a college dean and department head knew that EMoE had developed and distributed the one-to-five group formation and implementation guidelines without the knowledge of university officials. This shows how random, unplanned and uncoordinated activities were being carried out within the university which greatly hampers the efficacy of CL implementation process. On the other hand, interviewee from EMoE (RME₁) said that:

The ministry agreed with all universities that to form groups based on students' academic performance which should include (fast, medium and slow learners and each group must-have its own plan which is approved by their mentor/focal instructor and they act as per each group's plan with the support of their mentor). The interviewee also commented that, though the ministry sent the same group formation and implementation guide lines for all universities, the implementation practices of CL is varying from university to university and within universities it varies from college to college and even within one college its implementation practice and status varies from department to department due to various influencing factors (Interview, December 13, 2018).

Regarding the principles that serves as the base for the effective implementation practices of CL, interviewee AUEB₂ noted that each instructor didn't know the principles on which the implementation practices of CL is based on. Other interviewees also reported that they didn't know the principles that make the performances of CL groups more effective. These interviewees complained that the ministry and the university officials believed on paper-based reports and they did not see what was happening on the ground due to lack appropriate trainings and refreshments for instructors and other concerned bodies who take part in the implementation of CL strategy. Interviewee AUEB₁ (a college dean), for example, reported that:

Due to lack of appropriate continuous and enough amount of training and follow up from higher University officials and EMoE, some instructors were wrongly implemented the strategy considering CL simply a collection of students which didn't have any principles that guides its

implementation and role to be played by each group member and this was leading the implementation of CL and teaching-learning process to harsh situation.

Effective and efficient implementation of cooperative learning strategy demands a coordinated effort and continuous technical support from EMoE (Ethiopian ministry of education), ESC (education strategic center), the university management and other concerned bodies. With respect to coordinated efforts required from CL implementers and technical support that should be given for the success of CL implementation practices the majority of interviewees who were interviewed agreed that there was no coordinated activity among all parties within the university and ministry of education. Besides, there was no timely technical support from the university and the ministry and this have influenced the implementation practices of CL in particular and the quality of class room learning and education system in general. They were also agreed that in previous times there was one department established by the university that follows up CL implementation activities but now not active since 2017.

Furthermore, the structural and personnel changes happen repeatedly in the university have had their own influence. They also added that the implementation of CL seemed simply due to imposition of government and top officials of the university. The commitment of the university management was not as such good and they mainly focused on communicating what comes from EMoE through letter to colleges/institutes and collecting paper-based feedbacks on CL implementation practices without checking whether what was reported is actually on the ground or not. Mainly things were hanged on the activities of departments. Meaning, if departments believed implementing the strategy is useful, they tried to implement if not they simply become reluctant and send a fake report to respective body as CL was being in use in their departments. Nobody asks anyone and no one was responsible for it.

In general, it is possible to say that there was much less commitment of the university management and instructors in the university. Thus, it seemed CL implementation mainly determined by on individual's interest & commitment.

It was learned from the interview that lack of coordination, necessary technical support and absence of responsible body influenced proper and effective implementation of cooperative learning strategy and made the endeavor of CL implementation to be hanged on individual commitment and interest which was a loss for the university and the country as well. There were

only few interviewees who believe that there was coordination between implementers and the technical support was given from the university and EMoE once or sometimes twice a year and this was not enough to implement CL effectively as a teaching and learning strategy.

For example, interviewee RME₁ argued that:

EMoE supports the implementation of CL in giving trainings, technical assistance, and supervision and tried to work in a coordinated way as per government plan though couldn't fulfill the interest of universities and these things could facilitate the implementation of cooperative learning strategy.

It was also learned from the interview data that one of the plans of the university in implementing CL in the teaching-learning process was not to limit only to classrooms and enforce students to use CL out of classrooms. Interviewees were told that the implementation was on and off and had life only up to the time the assignments/projects completed. Its life was very limited outside the classrooms because students didn't have interest to be together and work on their assignments. Interviewees AUEB₁ (college dean) and AUEB₂ (department head) commented:

Life of CL strategy out of classrooms was not as such strong. Mainly CL activities were very limited to classrooms. Currently leave alone activities outside the class rooms, implementation of CL strategy in class rooms is very poor. This poor implementation practices were due to less commitment, less amount of trainings and absence of follow up and technical support.

From my observation conducted in two different classes (veterinary science dept. and adult education & community development dept.) for an hour each in two different courses. I observed that instructors tried to use CL by simply putting students in groups. Besides, they didn't play a facilitation role but they simply sit on a chair till students finished their work and around the end of their period they asked groups to present what they did to their classmates. During their activity in most groups only one or two students speak the entire time while other group members were passive listeners. In addition, students have low language ability and can't participate freely in their cooperative groups and almost all students were discussing/sharing ideas on the issue given them in Amharic though Amharic itself was not a common language for many students but they wrote their report in English and presented to the class using both English & Amharic. What surprising is that students' skill for both languages was very poor.

The instructors didn't interfere in this case to make students to use English as a media of instruction and communication which already written in higher education proclamation. Higher Education

Proclamation No. 650/2009 under article 20 No. 1 says: *The medium of instruction in any institution, except possibly in language studies other than the English language, shall be English.*

This shows that there is a language barrier among students for effectiveness of CL implementation practices. Furthermore, the instructors and the students didn't have a positive attitude towards CL. I think instructor's pedagogical belief matters much and I observed that instructors more valued independent work and favor teacher-centered approach than using cooperative learning. The other challenge is some students do not need to work in groups and they prefer competitive or individual learning particularly the group leaders who are good achievers. (December 10 and 11). However, the physical set-up of the classrooms was good and well organized.



Figure 4: *Students working in groups in class rooms at ambo university-AECD (December 10, 2018)*

It is evident from the report that the implementation of CL in the university was not only poor or ineffective but also its life was mainly tied to classroom activities. Students should work cooperatively in libraries and around dormitories too for the betterment of their academic performance, peer relationships, development of their communication and life skills.

The other issue raised by interviewees in relation to CL implementation practices was about the communication system among the university management, colleges, departments and instructors and whether any system of getting feedback about CL implementation practices was there in the

university. Most of the interviewees reported that the communication among all these implementers was based on paper reporting. The university management gets feedback about the implementation of CL through reports from colleges and departments. It was also learned from the interview with the college deans that there is meeting at college level and there was a discussion and exchange of experiences among departments about CL implementation practices.

Here there was also coordinator that coordinates and follows up the overall activities in relation CL implementation at college level and gives technical assistance for instructors and timely solutions when problems arise.

Interviewee AUEB₂ also reported that:

Departments communicate with instructors and gets feedback about what is going on in relation to CL implementation was only paper based reporting. There was no way of visiting class rooms except reports from departments and instructors. There was a regular discussion between the department and instructors and through this way departments know whether the CL group is active or not, problems encountered and together tried to give solutions that could help to minimize problems.

This gives the impressions that there was no regular and planned supervisory service that can serve to assess and test problems on the implementation of CL that could help to give timely solutions that may better facilitate the implementation process. Supervision is one way of giving technical support and getting feedback about CL implementation practices and status of the strategy.

4.8. Cooperative Learning Implementation Practices Status

Poor implementation practices

Although CL has been implemented widely in the university as of 2012 the program has not been effective to the expected level along with the following points withdrawn from the qualitative data: knowledge and perception, attitude and feelings of implementers towards the strategy. Implementing one-to-five formation as a cooperative learning approach was not widely accepted since it was considered by many implementers as a political tool of government and imposition from ministry of education with no compromising by top-to-down command. Due to these all things many implementers including instructors and talented student didn't have positive feelings towards the CL strategy which highly influenced its implementation Practices. In general, these

all things resulted in making the status of implementation of cooperative learning strategy very poor in the university.

It was also learned from the interview with AURP₁, the one-to-five group formation and its implementation practice as CL strategy became a source of corruption and dependency. Slow learner and medium learner students get good grades without much effort since high achievers work the projects/ assignments and share for them and the slow learners sponsor them financially and with materials. These conditions mismatch with Ethiopian higher education objectives and international practices. The interviewee further said “*as to me implementing one-to-five formation as a CL strategy seems a loss for the education system.*” On the other hand, CL implementation practice in the university was not good due to regular interruption of the academic calendar. Moreover, the instability of both external and internal environment of the university was not conducive to peacefully implement CL to the expected level. On top of this, all parties didn’t play their roles as expected. Likewise, AUEB₂ (department head) commented:

Groups were composed of high achiever, medium achievers and low achievers’ students. The high achievers work each project or group work and the other group members didn’t know what the group work/project and even how they have been worked it out. The assumption of CL implementation was that each member has to contribute its own share for the effectiveness of the strategy and improvement of each member’s academic performance which contributes to the achievement of a common goal as a group. But the reality was not like this. Being dependent on one or two students was growing fast. If CL was rightly implemented it helps a lot the slow and medium learners a lot. The low achievers were engaged themselves not in cooperative learning but in contributing money and give it to the high achiever in turn/exchange of the projects to be worked out. Meaning they sponsor the high achievers financially; the high achievers work everything and present the assignment and everybody get equal marks unless instructors forced every member to present the assignment and this was the very dangerous part of one-to-five group formation implementation as CL in our department and even in our university. In our university and in our department CL strategy is highly abused or misused which is an indication of poor implementation practice (Interview, December 5, 2018).

During my class-room observation in almost all groups only few in most cases one student dominated the discussions and the other students were passive listeners and contribute nothing. This shows that there was high dependency of many students on one or two students in the group and this might be an indication of poor implementation practices in the university.

The above comments generally indicate that the status of implementation practice of the university was not at good level. This shows that CL was not properly implemented based its foundational

science. Because this may be due to lack of knowledge, poor perception and negative attitude of the implementers. Especially instructors and students who do not have sufficient knowledge of CL strategy supported by personal negative feelings/attitude may find it difficult to effectively integrate it in the teaching-learning process.

4.9. Obstructing Factors in Cooperative Learning Implementation Practices

Though cooperative learning strategy have many salient features for improving students' academic achievement, teaching and learning process in particular and quality of education in general, however, it was not practiced to the expected level due to many reasons. For effective implementation of the strategy, the university management, instructors and other concerned bodies have to be well-informed about the problems encountered in the implementation processes and they should have the energy to minimize the problems by giving appropriate solutions on time. Interviewees raised different challenges that were influenced CL implementation practices in the university like: lack of commitment & coordination of the implementers, poor planning and preparation, poor provision of facilities and technical assistance, implementers related feelings and dependency were among others.

Absence of implementation planning and preparation, lack of coordination, poor commitment and provision of resources, implementers' related feelings and dependency

Interviewee from education strategic center (RSC₁) for example commented:

The problem lies on the way we implement it. The instructors, students, the university management and other stakeholders didn't play their role to the expected level. I think the university management had a problem in relation to knowledge and perception of CL, commitment and giving solutions for problems faced in the endeavor of implementing CL strategy. There was also poor coordination among implementers with in the universities.

Interviewee RSC₁ also added that:

There were problems of planning ahead and providing the universities with some basic facilities that could better facilitate the implementation of the strategy from the side of EMOE. On the other hand, the ministry of education strongly influenced the institutions to implement the strategy. There were also problems of coordination and commitment from the side of the ministry of education and universities management.

The interviewee from the ministry of education reform directorate also commented on the challenges CL implementation practices faced and said:

No special resources were provided to universities in relation to the CL implementation and I think it influenced the implementation practices of the strategy. On top of this, there was no as such strong technical support to universities given by ministry of education. There were also attitudinal and perception problems from the side of instructors, students and management of universities. Regarding the CL strategy they all feel as it was apolitical weapon of the government to control activities of the faculty, students, and the university community in general.

Interviewee AUEB₁ also commented that the way CL implemented in the university was not as per the foundational science of the strategy and the goals and targets set by EMOE. The interviewee further commented the students weren't only ready to work together but also, they were not ready even to learn. Students want to get good grades without working hard and even they feel getting good grades as their right without much effort which is a clear indication of dependency on very few committed students. This dependency was manifested when instructors tried to rearrange groups there was high resistance from the majority of group members and they said why we change our groups, but the hidden agenda was getting good grades almost with no effort. And I think the implementation of CL strategy was not in line with its foundational science of the strategy and hence the implementation practice of CL in the university was not successful.

Interviewee AUEB₁ also further commented that:

Most students need grouping not for real learning but the groups made the road easy for them to get good grades and graduate. Thus, I can say there is high dependency of many students on very few committed and hardworking students.

Interviewee AURP₁also noted that:

Each party not played what was expected of it to the expected level. Mainly it was based on seasonal works and paper focused reporting.

In general, according to interviewee AUEB₂ there was no systematic and organized effort made by the university management and other body rather than seeking mainly fake reports and this was the leading challenge for effective implementation of CL strategy in the university. On top of this, majority of the participants agreed that though the success in using CL requires support and commitment; in this respect there was no support, commitment, facility provision and follow up from both university management and ministry of education which particularly focused on implementation of cooperative learning strategy.

The other challenge that influenced the effectiveness of CL implementation was students' background. It was obvious that students come to university from different localities having different backgrounds and these things currently become a problem when forming groups because students want to form a group with student from their locality. Interviewee AUEB₂ (department head) for example reported:

Informing CL groups' students ethnic, religion and language back grounds were creating problems. So, if the university implements CL properly it could help to minimize conflicts that might be created due to difference of back grounds. The interviewee also commented that the university didn't create any forum that could enable students to come together and know each other and enable to share experiences. Students get each other either in the classes, library or cafe. No other alternative. The university has to create conducive environment in which student participate in different co-curricular activities which better pave the road to develop their relationships.

In general, most of respondents agreed that the barriers or obstructing factors that influenced the efficacy of CL implementation practices were grouped in to two major parts: internal and external challenges.

Table 6: Summary of challenges of CL implementation at AU

Internal challenges	External challenges
-lack of commitment and high resistance from instructors and university management - Resistance of high achiever students because they consider participating in CL groups as time killing. -Absence of clear implementation and group formation scientific guide lines - Lack of students' commitment, interest and beliefs for education - Preference of instructors to use the lecture method - Students didn't prefer work hard due to easy way of getting passing marks -Absence of green space, shades and appropriate places for out of class CL works - Bad behavior and mis-understandings of students on CL -Instructors experience difficulties in knowing how to embed this practice into their teaching curricula/courses -Large class size and poor facilities	- Poor coordination between EMoE and the University -External political situation and instabilities in the university resulted in regular interruption of academic calendar - EMoE's ignorance to participate of the academics while formulating different teaching and learning strategies

It was evident from the above comments that there were challenges that influenced the implementation practices of CL from both internal and external environments of the university. This highlights the importance of minimizing these all challenges in collaboration with the

university management, EMoE, instructors and other stakeholders for betterment of the implementation practice and achievement of its purposes.

Summary

Placing students in groups and expecting them to co-operate will not necessarily promote co-operative learning. It is only when members understand that they are dependent on each other and cannot succeed unless others do that, they learn to coordinate their efforts and actively work together. Group cohesion develops as a direct consequence of members' perceptions of their interdependence and their willingness to facilitate and encourage each other's learning. In CL, each student is required not only to complete their part of the work but to ensure that others do likewise. The technical term for this dual responsibility is 'positive interdependence', and it is the most important element of co-operative learning (Deutsch 1949). Positive interdependence exists when students perceive that they cannot succeed unless others do and they must learn to co-ordinate their efforts to ensure that this occurs. When positive interdependence is understood, each member's efforts are indispensable to the success of the group (Johnson & Johnson 1990).

Thus, successful cooperative learning implementation practices should include ensuring that group members understand that they are each responsible for contributing to the academic performance. Encouraging each other as a group member is also very crucial for the success of each group member for the group as a whole in particular and for success co-operative learning strategy in general. Continuous and timely trainings have to also be given for instructors, university management, students and other stakeholders that take part in the implementation process to minimize the knowledge gap, build positive perception and enable to share experiences of the implementation of active learning in Ethiopian public universities.

However, there were different practical challenges, either from the internal or external environment of the university that influences the effectiveness of the endeavor of implementation practices. These make the implementation of the strategy challenging, because instructors, students and other implementers didn't able to fully implement the strategy due to the influences of these challenges and hence, instructors often prefer to lapse back into traditional teaching methods.

Besides, CL is a pedagogical practice that promotes students better learning across different courses and classroom settings. Though the benefits of implementing CL are widely acknowledged, the university management, instructors and other stakeholders still experience difficulties in implementing CL strategy to the expected level in the university. Furthermore, the university tried to implement the strategy in the form of one-to-five group formation without research on the context of implementation which was only based on the political interest of the government.

In general, though the Ethiopian government tried to implement active learning widely across all public universities but it was understood by few, as Tabulawa (2003) argues that implementation problems are caused by a lack of research by those who implement active learning in local contexts of developing countries. These challenges can be overcome by research and involvement of university expertise and experience in the designing or reshaping of educational policy.

CHAPTER FIVE

Addis Ababa Science & Technology University CL Implementation Practices

5.1. Introduction

Under this chapter some physical and demographic situations of Addis Ababa Science & Technology University (AASTU) research participants' knowledge & perception of CL, purpose of cooperative learning, issues with blessings & opportunities of cooperative learning, implementers attitude towards cooperative learning, actual CL implementation practices, status of CL implementation practices in the university is presented and analyzed moreover constraints of cooperative learning Implementation were also included.

5.2. University overview

Established in 2011, Addis Ababa Science and Technology University (AASTU) is a public higher education institution located in the large city of Addis Ababa. Officially accredited and/or recognized by the Ministry of Education, Ethiopia, Addis Ababa Science and Technology University is a coeducational higher education institution. AASTU offers courses and programs leading to officially recognized higher education degrees such as bachelor degrees in several areas of study. The university has six colleges namely: College of Architecture and Civil Engineering, College of Biological and Chemical Engineering, College of Electrical & Mechanical Engineering, College of Social & Natural Sciences and College of Applied Sciences.

AASTU is one of the new public universities of the country to play as a forefront changing actor in the technological transformation of the country by creating strong linkage with industries. In line with the given strategic direction of Ethiopian development, the university has a mission to be problem solver of the industry, leading in the nation research, recognized in continental and international community. To achieve this mission, the university has given special attention to strength the university –industry linkage (UIL). Strong university- industry linkage is the core point to bring change in the national development. AASTU is committed to strengthen and work with industries to bring mutual benefit for both industries and the university. Furthermore, AASTU aims at conducting demand-driven research in science and technology to address the challenging issues in the country's development plan. The outputs from the researches are to bring academic

excellence and with an entrepreneurial spirit to transfer into the commercial domain, thus strengthening the links between the university and the local community, as well as benefiting the wider society. Therefore, AASTU has been working with industries and communities in the following collaborative areas: Consultancy projects, Joint researches and Technical trainings.

The concept of Addis Ababa Science and Technology University (AASTU) had a direct and reasonable connection with the Five-Year Growth and Transformation Plan (2010-2015) of the government of the Federal Democratic Republic of Ethiopia. As it was stated in the plan, the establishment of well institutionalized and strong science and technology universities and institutes of technology will serve as a cornerstone to build an economically developed and industrialized state of Ethiopia. As a result, AASTU was founded in 2011 under the Directive of the Council of Ministers No. 216/2011 by admitting the first batch (2000 students) in November 2011.

Currently, the university has enrolled more than 8000 undergraduate (under regular and continuing education program) and close to more than 700 postgraduate students under its nine applied sciences, technology, engineering and ICT focused schools. AASTU is a university in the making, and much of its short-term plans aim at establishing academic infrastructures and facilities, staff recruitment and manpower development.

Vision and mission of AASTU

Mission

- Delivering world-class education and training in strategically priority science and technology disciplines based on national economic demand,
- Conducting problem-solving applied research to support the productivity and competitiveness of industries: Serving as a center for knowledge and technological adaptation, innovation and transfer, Building technical and managerial capabilities of industries, and becoming a national hub of science and technology.

AASTU'S vision is to be internationally recognized Ethiopian hub of science and technology with a strong national commitment and significant continental impact by 2025.

5.3. Knowledge and Perception of Cooperative Learning

Successful implementation practices of CL in any course demand instructors' good understanding and perception of CL and its elements to effectively control time and students work towards effective learning and teaching. In any cooperative group work, everyone is a part of the team and each member's active participation is needed. The instructor should set/establish conducive classroom environment, prepare adequate learning resources, motivate and encourage students for active participation and engagement to achieve the academic performance.

It was thought that instructors' knowledge and perception of cooperative learning strategy gives insight about their readiness to use CL in the teaching-learning process. Based on this conviction, interviewees were asked to tell how they understand and perceive CL strategy. The qualitative data revealed that interviewees' understand and perceive differently. Some of the interviewees perceived the cooperative learning strategy as a pedagogical approach to active learning, while others perceived it as a research team and still others understand it as a political tool of government.

CL as a pedagogical approach to active learning and a research team

Cooperative learning is an instructional model/approach of active learning in which students work together as a team toward a common goal. Research has clearly shown that cooperation results in higher levels of achievement. Although students may be a part of a CL environment, they are also responsible for their own individual achievement.

There were interviewees who argued that CL is a strategy that groups are formed according to one-to-five group formation guideline developed & distributed by EMoE which is composed of three types of learners. This was evident from the comments given by the interviewees during the interview session. Some of the interviewees argued that CL is a way by which six students with one leader from them grouped together to facilitate the active learning strategy. Others who participated in the interview reported that cooperative learning is a method by which students study together, work together and support each other being two, three or four and find solutions for their academic challenges. Some interviewees also noted that it is a form of group learning aimed at supporting slow learners and bring them forefront. They further argue that CL is a strategy that helps students to develop a sense of supporting and helping each other. Other interviewees said it

an approach that makes the teaching and learning process more active. Interviewee ASRP₁, for example reported:

CL is a teaching and learning approach which is focused on maximizing university students' academic performance. It is also a strategy brought change in other countries. Our country also planned to achieve good results implementing the strategy in public universities by improving students' way of learning though the strategy didn't bring what the country planned for (Interview, January 1, 2019).

Interviewee ASBCE₂ also argued that

I understand CL as a pedagogical approach to active learning which is being implemented in our college. CL is an approach composed groups contains six students of which one student at least a good achiever and the rest four or five students are low or medium achievers and then work together and support one another for the success of all group members towards common goal (Interview, December 31, 2018).

Likewise, interviewees RME₁ (from ministry of education and RSC₁ (expert at Education strategic center) also noted:

CL strategy is a formation of six students as education change army aimed at improving students' academic performance and improving quality of education through active learning approach. It is a way by which students are grouped based their academic results to support and share experience from each other.

On the other hand, contrary to what mentioned above some interviewees understand cooperative learning strategy as a research teams formed based on sub specialization of students. Interviewee ASEM₂ for example reported that since many instructors won't to use the name one-to-five formation and to challenge the imposition from government and university management we established a research group based on sub-specializations under the main department because after completion third year students continued under sub- specialization of their choice and carried out group activities but we didn't want to implement CL strategy in one-to-five formation form purposely. And I think CL was not yet implemented in our department (up to December, 2018-interview day) and even students are not willing to accept and implement it due to the hatred on the politicization of the strategy. But we report to the university management as the strategy was implemented in the college which is mainly fake report. And this is the way CL strategy is being understood and perceived in the department by instructors and students.

Thus, it can be understood from what has been mentioned above that some interviewees had perceived CL as research teams that help students to work together. The research teams were

formed as per the interest of instructors and students just against EMoE one-to-five group formation and implementation guideline. The other thing is that there are different groups formed by different instructors in one class and the size of groups varies and may compose around ten students.

CL as a political tool of government

In this study the term CL as a political tool of government is used to refer to the government interference in educational institutions in this case Ethiopian public universities to use these CL groups for the sake of government's political interest in the academic environment. The interview data revealed that it is the government that politically decided to implement one-to-five formation as a CL strategy in universities with no need assessment, consultation of the universities for its appropriateness and pre-planning. Universities have no part on the decision to implement one-to-five group formation as a CL strategy. Interviewees ASEM₂, ASBCE₂, ASP₁ and ASP₂, for example, reported that the idea of using one-to-five group formation (students networking) came from government and the government made universities to implement it as a CL strategy. The government propagated that if universities accept one-to-five formation and implement as a team approach the teaching and learning process would become very effective and efficient because it brought tremendous change in other countries.

It was reported by some interviewees that philosophically it is academics but the government and some individuals associated it with politics. I think the problem is from politicians they wanted to politicized it otherwise practically CL is a method by which students works together, study together and support each other and we understand as it is purely academics. In relation to the above-mentioned ideas interviewees RSC₁ and RME₁ noted that:

Implementing on-to-five formation as a CL strategy was a government agenda. The government has a direction to implement one-to-five group formation as a strategy of development in all government organizations including public universities and all administrative structures up to village level. Regarding its source some said CL is government's political direction and interest. Some also said the idea was taken from health package, and others said from agriculture package, others still said from EPRDF magazine which was called "RAIYI" that is the former Ethiopian PM Melese's idea.

So from the above interview data one can easily conclude that the implementation one-to-five formation as a CL strategy in the environment of academia was not research based, participatory

and the decision not made by higher education institutions but rather it was purely emanate from the government political interest without taking in to consideration the peculiar characteristics education institutions and the education system which was resulted in endless resistance and hatred from the side of implementers particularly instructors, the university management and some good learner student which highly influenced the effectiveness and quality of the education through replication corruption that was manifested itself in getting good grades by lazy students almost with no effort.

They also added that these conditions give much free time for these dependent students and open a wide door for them to actively engage in non-academic activities like: chewing chat, smoking cigarettes and “shisha” and these young boys and girls suddenly got themselves being immersed in addiction and this condition particularly made girls to face additional problem of pregnancy which forced them to withdraw their education and unexpectedly found themselves as a sex worker in bars. It is obvious that this condition contributed in decreasing the retention rate of girls in higher education initiations.

Besides, this will be an additional problem in influencing the countries education system major goal of producing competent, employable and disciplined graduates. Thus, these all things strongly demand that the government has to revisit the way currently public universities are being implementing the CL strategy be it in one-to-five formation or in other forms and plan for the future.

5.4. Purposes of Cooperative Learning Implementation

Working in groups is a nature of human beings and CL strategy is one approach that could create a platform for students to work together and improve their academic performance. The issues are a matter of systematizing and organizing different efforts so that easy ways would be happened for the success of implementation practices and achievement of its purposes. Based on this belief, interviewees were asked to tell why they implement CL strategy in their university, college or department. The qualitative data revealed that interviewees knowledge of the purpose of CL implementation vary from each other. Some of the interviewees reported maximizing students’ performance was the purpose of CL implementation while others said serving as instrument of improving quality of education.

Maximizing students' academic performance

The interview data revealed that some of the interviewees believe that CL improves students' academic performance because they always study together and work together; slow learners benefited a lot from this approach. Interviewee from ministry of education (RME₁) reported that the main target of implementing CL in public universities was in general to improve students' academic performance. In the same way, interviewee ASEM₂ also reported that the overall purpose of CL was improving students' academic result by making students to support each other, sharing their experience and knowledge. Other interviewees for example ASBCE₁, ASEM₁ and ASBCE₂ noted that:

Be it in any form, implementation of CL in our college or university was to enable students to help one another and improve their academic performance by forming a group from the three categories of learners particularly targeting on slow and medium learners. Thus, its overall purpose was the improvement of students' achievement because the strategy makes students to support each other and contributing different ideas which may result in building innovative and new ideas. While discussing issues of different perspectives synergized together and help students to come up with new ideas which is related to constructivist and social theories of learning because students construct ideas which helps them to better understand their courses that may ended with better students' achievement and this makes student more active and engaged in their learning. In general, if the CL strategy implemented well it really serve as a tool to improve students' academic achievement. But in practice this was not happened in our university since it was not implemented properly.

Some interviewees also reported that the effort of implementing the strategy was targeted at achieving multiple purposes which were coincide with the objectives of ministry of education (the country). Interviewee ASBCE₂ for example reported that implementation of CL was targeted on enabling students to help one another and improve their performance by forming a groups from the three categories of learners particularly targeting at slow and medium learners. Interviewee ASRP₂ also noted that using the CL had an impact on improving students' result if instructors plan it well and implement it purposely.

From the above interview data, it is possible to conclude that the interviewees had some knowledge why the CL strategy was planned to be implemented in all public universities including AASTU. The problem was that the implementers had hatred on one-to-five group formation begging from its name and they believe as it was politicized by the government. They also consider as an

imposition from the government and the university management. Thus, both the instructors and students were unable to accept the one-two-five group formation and implement though they know the advantages of implementing the as CL strategy in academic institutions.

Cooperative learning as an instrument of improving quality of education

Cooperative learning (CL) has been suggested as the solution for wide arrays of educational problems. It is often cited as a means of emphasizing thinking skills and improving quality of education; and as a way to prepare students for an increasingly collaborative and productive work force. In relation to this interviewee ASBCE₁ for example reported that:

In my view cooperative teaching and learning strategy is a very important method that could help to improve the quality of class room teaching and learning process in particular and that of the education system in general. Thus, CL can serve as a method of for improving quality of education in the university which in turn contributes to quality improvement of the entire higher education system of the country (Interview, December31, 2018).

Other interviewees like ASBCE₂ also reported that the main purpose of implementing CL strategy was to enable students to help one another and improve the quality of class room learning and the entire education system of the country. Similarly, another interviewee ASRP₂ gave the following comment:

According to me the overall purpose of implementing CL strategy in higher education institutions including public universities was to improve the quality of education.(i.e. by improving students' knowledge, skill, attitude and interest of working as a group and learning).The problem lies on its implementation- both instructors and students were not implementing the strategy according to its implementation science and that is why the implementation practice of CL strategy almost was non-existent in our case (Interview, January1, 2019).

Thus, it was evident from the above comments that though the purposes of CL implementation theoretically clearly known by the respondents due to hatred and resistance from instructors, students and the university management to implement the one-to-five formation as a CL strategy as one could understand from the interview data the implementation of CL was non-existent or very poor. This highlights the importance of giving continuous trainings after identification of need gap and awareness creation on the strategy. Trainings which are given without assessing the needs of the trainees may not be relevant. The comment also implies the need to give sufficient training that helps the implementers to put it into practice to the expected level.

5.5. Blessings& Opportunities of Cooperative Learning

Cooperative learning as a tool to improve students' academic achievement, socialization, self-esteem, psychological health

Most studies agree on the many social and academic benefits of cooperative learning environments. To achieve all these benefits students have to take in to account the fundamental belief of the strategy that all group members are equally accountable for their success. Education specialists endorse the view that student learning can be maximized, thus academic performance improved, by developing a sense of "we are all in the same boat together," a basic tenet of cooperative learning (Akhtar et al,2012).

In relation to the benefits and opportunities of using cooperative learning strategy the majority of respondents who were interviewed agreed that if CL properly implemented as per its principles it has various benefits that students can get. For example, they may get academic, social and psychological benefits. They also agreed that If CL may have blessings like: developing critical thinking, problem solving abilities, thinking in different directions. But in our case, we didn't achieve these all results. Because the implementation practices of CL strategy were not on a good track. There were also other interviewees who further elaborate different blessings & opportunities that students and even instructors can get due to the implementation cooperative learning. For instance, interviewees ASBCE₁ and ASBCE₂ said that:

Working in groups is a human is a nature. If CL strategy was being implemented properly it may have blessings and opportunities like: developing critical thinking, problem solving abilities, good results, and socialization. Furthermore, it would have blessings like: improving students' results, problem solving ability and skills of working as group and increase students' critical thinking ability, developing capacity to effectively grasp the subject matter, creating a conducive environment for students to support each other & share experiences, develop intimate relationships, developing a good future citizen, improve their self-esteem. The issue is a matter of systematizing and organizing different efforts so that effective implementation practice could happen. But in case of our university we are much far than these all blessings due to unplanned, uncoordinated and very poor willingness and commitment to implement.

Furthermore, interviewees ASRP₂ & ASBCE₂ noted that:

CL helps students to develop problem solving skills, creates opportunity of working together& tolerance of different views, create opportunities to share experiences, appreciating diversity of culture, acknowledging and respecting differences and helps to develop the culture of

supporting and helping each other, builds self-esteem of students, improve their academic achievement, socialization, psychological well-being& develops skills of solving problems collaboratively, commonly discussing on issues and help them to understand gender equality since they always work with their female group members and reduces attrition particularly of female students.

Furthermore, interviewee ASRP₂ also reported that using CL as a teaching and learning strategy in our university had the purpose of supporting students with different academic knowledge backgrounds, skill and learning capacity learn together in one class was to minimize the gap between these learners and making all students productive in their education by maximizing their performance. At the end interviewees ASEM₁ & ASEM₂ agreeing that implementation of CL as a teaching and learning strategy obviously has academic, social and psychological advantages but the implementation practice now seen in our universities is almost symbolic. It was only for the sake of reporting. No real implementation of the strategy in our colleges and departments.

It was learned from the interview that almost all interviewees theoretically knew some of the blessings and opportunities (the positive effects) that CL strategy had on students especially on girls and on the education system in general. It is important, however, to note that cooperative learning does not mean simply putting students in a group enable harvesting all these benefits. Besides, making students to be academically engaged is when cooperative learning is carefully planned, structured and executed. In the same way, Pillay (2000) noted that cooperative learning has also been shown to develop a liking for school, reduce absenteeism and promote discipline, self-esteem and better understanding of the curriculum.

Cooperative learning makes students active & engaged

Instructors in the university environment have often tried to motivating and actively engaging students in the classroom. In line with this, interviewee ASEM₁ reported that CL approach gives equal opportunity and plat form for all group members to speak, debate on issues and equally shouldering responsibilities and accountability. These things create favorable conditions for slow and average learners to air their views equally with that of higher achiever students and enable them to build good relationships not only with their group members but also with their classmates too. I think the same is true for our student because they are highly active and engaged while

laboratory group works. Thus, using CL strategy makes students active in their work and engaged in their learning.

Similarly, interviewee ASRP₁ reported that by its very nature cooperative learning strategy assumed to give common and equal floor for all group members so that enhance students to be active and engaged in their learning. This suggests that CL is a strategy that would serve all equally for academic and other benefits and this is can be evident from what interviewee ASRP₂ said:

Employing CL strategy has different valuable uses. It helps to teach social and interpersonal skills. Cooperative learning also provides an opportunity where social skills are modeled through the interaction among group members. Students in CL practicing to acknowledge diverse viewpoints and consider others' thoughts and feelings while working their projects. It helps to make all types of students more active and engaged in their learning. Therefore, for the desired behaviors and performances to be happened systematic implementation of cooperative learning approach is mandatory for Ethiopian higher education institutions. Furthermore, CL has also an advantage for instructors too in saving their time (Interview, January 1, 2019).

Different research out comes have also showed that using CL strategy has a multiple benefit. Springer et al. (1997) for example used meta-analysis techniques to determine the efficacy of CL on student achievement, student attrition and student attitudes. Bowen (2000) attempted to answer the question "Is cooperative learning more effective than traditional instruction in promoting academic achievement, persistence, and attitudes among undergraduates in science, mathematics, engineering, and technology courses?" by conducting a meta-analysis of thirty-seven (37) research studies involving 3500 students. His results showed that, on average, using aspects of cooperative learning enhanced chemistry achievement for high school and college students. Furthermore, according to Mutch, (1998) cooperative work has resulted in multiple outcomes: higher achievement, more caring, committed relationships and greater psychological health, social competence, and self-esteem.

Generally, it can be argued that from the above interview data the interviewees have a theoretical knowledge about the benefits of cooperative learning. It is possible to say that the interviewees have also knowledge and understanding of the cognitive and affective growth results from cooperative learning strategy. They earmarked that employing CL strategy has various benefits for

students like: academic and social benefits, making students active and engaged and in their learning, higher level of self-esteem and be a good citizen for a country.

However, having theoretical knowledge about the benefits of CL didn't make them implement the strategy but as it has been revealed from the qualitative data instructors form and use different groups individually based on the nature of their own courses which resulted in forming many groups in one class with different group size totally ignoring the basic ideas of cooperative learning strategy. For the above explained benefits to be realized the university management, instructors, students and other stakeholders need to be well acquainted with CL approach to implement it to the expected level so that students, instructors the university and the country benefited from the positive effects of CL implementation.

5.6. Attitudes towards Cooperative Learning

Human related feelings

The interview data revealed that both instructors and students were not comfortable with implementing one-to-five group formation as CL strategy. Interviewee ASRP₁, for example, said: no instructor have any interest and commitment to implement one-two-five group formation as CL strategy because they feel as it is politicized and imposed on them by the university management and government. Other interviewees ASBCE₁ & ASBCE₂ also reported that both instructors and students are not comfortable with implementing one-to-five group formation as CL strategy. It is visible that both instructors and students have negative feelings because they feel government's political strategy to control the academic environment.

Two interviewees who participated in the interview witnessed that they had negative attitude towards the use CL as a teaching and learning strategy. One of them said that the feelings, motivation and interest of instructors to implement CL are poor. According to him, instructors have negative attitudes about CL because they feel as it is politicized by government particularly after 2015 election.

Interviewee ASBCE₁ said:

Instructors always challenge using cooperative learning (one-to-five group formation) as a teaching and learning strategy. They feel as it is politicized by the government. Students are also not as such interested to participate in the formed groups.

Furthermore, interviewee ASEM₂ also said that:

In average instructors are not committed in implementing CL and they had no as such good feelings to use in their classrooms as a teaching and learning strategy (Interview, January 2, 2018).

Here one can easily see that interviewees feel as the implementation of cooperative learning strategy is an imposition from government which focuses on using CL as a political tool in the academic environment.

5.7. Cooperative Learning in Action

It is true that CL is much more than placing students in small groups and requiring them to learn together, but it demands each of the group members responsible for their and the group's outcome. Each individual group member is accountable for learning the course/material and also for helping the other members of the group learn. Based on this fact, ministry of education underlined the importance of implementing cooperative learning approaches in teaching in education institutions of various levels to promote students learning (EMoE, 2002).

However, from experience and the researcher's personal observations, it is understood that instructors seem to lack the basic techniques and commitment to implement cooperative learning as a teaching and learning strategy. Besides, instructors ask a question of the appropriateness of the strategy to universities. Thus, based on the above firm belief interviewees were asked what AASTU carried out for effective implementation cooperative strategy. The qualitative data revealed that appropriateness, trainings and workshops and practicing the strategy in class rooms and out of class rooms were sub themes identified under the major theme discussed below.

Appropriateness, trainings and workshops

Regarding the appropriateness of implementing cooperative learning strategy in higher education institutions an interviewee from the ministry of education said EMoE believe that implementation

of one-to-five formation as CL is appropriate and effective for tertiary education according to current international trend and various research results conducted abroad. But I think the ministry has no local research-based evidence for its effectiveness at university level teaching and learning. An interviewee from education strategic center reported that:

It is appropriate and important implementing CL in universities. The problem lies on how we implement it. According to the current world education context using active learning strategy which is based on students' interaction is the true instrument to improve students leaning, develop social skills and minimizing attrition rate of students particularly that of girls.

There were interviewees who argued that no training provided for instructors in relation to implementation of CL strategy. They said we implement some sort of group learning based on our special interest group or special research interest. What we did as college was focusing on research teams and we only speak about research and there is a tradition considering and reporting these teams as cooperative learning groups.

Others who participated in the interview reported that up to my knowledge no training provided or given for instructors and other implementers about CL in particular and way of implementing CL as a teaching and learning strategy in general. No HDP program in the university but there is a plan to start giving trainings for instructors in the future. No induction trainings for newly employed instructors and even students. In relation to this, interviewee ASBCE₂, for example, expressed his concern that instructors and other bodies who take a part in the implementation CL strategy didn't get any training. Strengthening this idea interviewee ASRP₁ noted that:

I don't think no former training was given to instructors in relation to the implementation of cooperative teaching and learning strategy. The university management used to talk much about one-to-five group formation (CL) strategy on meetings and consider this as if CL is being implemented in the university. But on the ground no implementation practices of CL strategy for example in my department. The university and the college strongly focused on collecting fake reports for the sake of elongating their office life. Besides, no HDP center in the university and no induction trainings (Interview, January1, 2019).

On the other hand, opposing what has been reported above interviewee ASRP₂ (Reform director) said:

There is an initial training given to instructors about CL strategy, and about its implementation process. The familiarization training was focused on general knowledge about active learning and CL, different method and adjectives of CL implementation in the university etc.

Likewise, an interviewee from ministry of education (RME₁) said EMOE has already developed one-to-five group formation and implementation guide line and had gave training on it and each university has given the training to its instructors and appropriate bodies. The training has given each year but its implementation is not effective as intended. As to this interviewee ministry of education is responsible for the overall training, provision of resources, supervision and giving feedback, solving problems, and evaluation of the implementation practice of CL in universities.

It is evident from these comments that though very few respondents reported as there were trainings given on CL strategy which seems not true, most of the interviews agreed that there were no trainings on CL in the university. Thus, it is possible to say the CL strategy was not implemented in the university. Instructors, college deans, department heads and other bodies who take part in the implementation of the strategy didn't get any training in relation CL and its way of implementation. Due to this case colleges simply followed their own way and form what they call "research teams" and consider these teams as cooperative learning groups. The surprising thing is that colleges report to the university management these research teams as a purposely formed cooperative learning groups and the university management doing the same thing and report these teams as CL groups to ministry of education and other concerned bodies.

It is also evident from the interviewees' comment that no induction training in the university for newly employed instructors as well as no HDP (higher diploma program) in the university. Furthermore, as one can see above interviewees gave totally opposite response for the same question targeted to identify whether training opportunities were facilitated to instructors or not. In this case, most of the interviewees reported that there were no trainings given to instructors in relation to cooperative learning strategy while an interviewee from the university's reform directorate reported as there was provision of training for instructors by the university. This shows that there is no planned and coordinated activity carried out by the university and no necessary attention given to the implementation of CL strategy as a pedagogical instrument to improve students' performance and quality of education.

This shows that instructors mostly teach using a lecture format and this seems the norm in the university though student-learning theories as well as student learning styles have changed, traditional teaching techniques have not evolved past the "chalk and talk" instructional strategy. Accordingly, this has the implication that constructivist and social learning pedagogical beliefs

didn't inculcated in the minds of university management and instructors and still insisted on using the traditional approach than active learning in Science and Technology University while most of the courses given are practical and depend on laboratory works.

So, this could have a tremendous influence on the quality education in the university as well as on the competence and employability of the graduates.

Actual practices in using cooperative learning as a teaching & learning strategy

Cooperative learning can take many forms; the most prevalent teams being formed within the college classroom with group members working collaboratively towards a common objective. During CL students are combined into small teams and accomplish different activities to improve their learning. Each group member is responsible to learn what is being taught on his/her own. In addition, students are responsible to help group mates learn. The environment created in a CL is one that promotes academic performance of all students. In relation to the above issues implementation practices of cooperative teaching and learning model interviewee ASEM₁ reported that in the implementation of CL strategy the first thing to be performed is group formation and the groups could be formed randomly or alphabetically by the department or by the course instructor and there are no strict criteria that is followed by all departments or instructors. CL groups span of life is may be semester based, or a yearlong.

Interviewees ASEM₂ and ASBCE₁ also reported that theoretically, the groups are formed based on student's academic achievement which is composed of high learners, medium learners and slow learners. Maximum group's span of life is a year or some times more than a year or it could be rearranged on a semester base. But to speak the truth up to my knowledge in our department no real CL groups were formed. Instructors form groups based on their interest and no purposely CL groups formed considering cooperative learning foundational science and EMoE one-to-five group formation and implementation guide lines. Departments simply report taking groups formed by one instructor for his/her own course as CL groups formed by the department.

Thus, there are different groups formed by different instructors and as a department no one stable groups that serve all instructors across all courses for CL strategy. Besides, the group size varies as per the instructor's interest. Some instructors make the group size of seven students, some eight and others twelve. There were no criteria used to form the groups like academic achievement and

so on. Sometimes students get the chance to group themselves. The real thing is that there was some sort of team-based learning as per the interest of instructors mainly in LAB sessions in the university though the size of the groups and their span of life vary across colleges and department and even across various courses. These are what AASTU called CL groups.

Similarly, interviewee ASP₂ said:

The groups are formed based on student's academic achievement. And groups life span is a year and above. Department heads form groups and assign mentors for each group that support and help them in solving challenges they face. And an instructor can form other groups depending on the nature of his/her course and problems / issues to be discussed. This is temporary groups only formed for specific purpose or project works. But groups that are formed by the department head serve all instructors and its life span is more than a year.

As it can be inferred from the interview data, real CL groups were not formed and as per ministry of education one-to-five group formation and implementation manual. Rather various groups were formed by different instructors with different group size and the groups mainly active on laboratory works. Thus, it is safe to say no CL groups formed and engaged in active learning but what un-denied is that there was some sort of different groups formed by different instructors and engaged in group learning(what they call research teams) and this does not mean CL is being implemented because CL is different from a collection of students engaged themselves in working any type assignment or project together with no clearly structured and assigned tasks and with no clear accountability, face to face interaction and processing as a group.

Regarding whether a coordinated activity among all parties that would facilitate the implementation of CL is there or not and the commitment and motivation of implementers most of the interviewees reported that:

First of all, CL strategy is not in use in the university but students being in some sort of group tried to carry out activities according their instructors plan. In general, whatever the group is the university management lacks commitment and there is no coordinated effort among all parties in the institution that could facilitate effective implementation cooperative learning strategy. They always seek to get reports only and colleges sent fake reports. No as such additional material and resources provision and we utilize what already there. This is a problem because unless the management get involved in the implementation process it is impossible to make anything real to the expected level. Besides, the commitment and initiation to implement CL strategy by students and instructors is very poor.

An interviewee from ministry of education reform directorate also noted that for that success in using cooperative learning strategy requires support from EMoE, university management and other concerned bodies. It is very important to participate all stake holders for successful implementation of the strategy but EMoE was not successful in this case it didn't participate all stakeholders of education when giving trainings on the purpose, how to form groups, implement and assess and evaluate CL implementation practices effectiveness. But there was an endeavor by ministry of education to support the implementation of one-to-five group formation as CL in giving trainings, technical assistance, supervision and provision of resources though it was not satisfactory.

Interviewee RSC₁ also reported that since education is a huge investment it requires strong support and participation of all stakeholders through supervision and giving technical support, creating a forum for sharing experiences and giving solutions for problems encountered while implementing cooperative learning strategy.

On the other hand, some interviewees reported that truly it is possible to implement CL across all departments and the majority of courses which is the advantage of cooperative learning strategy. To implement the strategy to the expected level facilities that could help to implement both in class rooms and out of classrooms should be provided and established by the university. In relation to this issue two interviewees who participated in the interview witnessed that the practice of CL strategy outside the classrooms requires facilities like shades, seats, greening the surroundings to make the university compound more interesting and attractive so that that attract student to come together and dealing on different issues.

In this case these facilities are not yet established and no as such activities outside the classrooms which are considered as informal cooperative learning. By its very nature informal CL groups would operate based on students' interest and the bond between them is not as such strong and the life of informal CL group members' interaction limited to classrooms only. But it is clearly written that on the CL (one to-five group formation) guideline the CL implementation practice should extend up to dormitories, libraries and etc. and the actual implementation the so called "research teams" or "different groups" formed by different course instructors in the university was only limited to classrooms. Interviewee ASBCE₂ said:

Up to my knowledge whatever the type of groups formed in most of the colleges of the university their activities mainly limited to classrooms. After the end of class rooms, students do not have

any interest to come together and share their ideas, discuss on issues and work on projects. I don't know they may meet out of classrooms (around dormitories, libraries and etc.) for academic purposes but I didn't come across yet.

Regarding the provision of facilities and resources that could better facilitate the implementation of CL this study indicated that there were variations of ideas among the interviewees. Some said resources are provided to universities by the ministry of education and no problem with the resource provision. The other group of interviewees reported that no enough resource provision in relation to the implementation of CL and even there is a problem of quality of resources and distribution. An interviewee from Ethiopian ministry of education (RME₁) reported that no special resource provision to universities specifically in relation to the facilitation of implementation of CL and this is also seen as a challenge of effective implementation of cooperative learning strategy across all public universities in the country.

Majority of the interviewees agreed that no way that enables to collect information directly from classrooms through supervision but there is a meeting on colleges and gives a room to exchange information about implementation practice and status of CL. There is also a paper-based report from colleges on quarter base or on months as required. Interviewee ASRP₂ for example, reported that:

No classroom supervision, the groups are discussing the activities and give reports to the department head, the department head also discuss about the implementation practices of CL strategy at classroom with the department's instructors focusing on the strength, limitations, problems faced and solutions given and compiling reports send to the college dean. The college dean also organizing all departments report and send to all vice president for offices. And vice presidents discuss about the issue with the president of the university every month. The five vice presidents evaluated by the university president about the implementation of one-to-five group formation (CL strategy). And vice president for academic affairs delivers his report, based on the feedback given to him from the participants of the meeting again the academic vice president gives feedback and future direction to all college and the same thing cascaded down up to the instructors (Interview, December 31, 2018).

Likewise, the interviewee from ministry of education reported that:

The ministry of education can get a feedback about the implementation practices of CL in two ways: through paper-based reporting and through supervision which carried twice a year. And EMOE prepared a general report which shows the strength, limitations and exemplary activities of the institutions in relation to the implementation one-to-five group formation as CL strategy. Besides the ministry gives a rank for universities based on their performance otherwise, there

is no as such strong technical support to universities given by EMoE rather than focusing on collecting reports from the universities.

This is a clear indication of no direct supervision being in a class to observe the students while working cooperatively either by the university management, college deans, department heads or by EMoE experts. They follow up CL groups activities only through meetings and paper-based reports. These conditions didn't give any opportunity to see the live activities of interaction, managing conflicts and giving leadership. And this might result in emergence of dysfunctional groups and reporting them as they are functioning. These all things show that the university management, college deans and head of departments including the EMoE couldn't play their roles expected of them.

Regarding the roles to be played by these parties' interviewee ASEM₂ reported that the department has several duties to be performed from undergraduate to graduate programs on top of reporting whether CL groups are active and working in the colleges or not. Interviewee ASRP₂ also reported that giving necessary support, facilitating the provision of facilities is among the roles of the university management. On the other hand, the majority of interviewees who were interviewed agreed that college's role is advising and assisting departments, monitoring and giving feed back to the university management.

In addition, colleges support the departments to understand the importance of CL strategy and then follow up and monitor their implementation practices; support the departments to properly assign mentors for the groups, monitor the level of implementation of the strategy; coordinating the overall activities of departments, giving technical support when challenges are there and reporting to the management.

Furthermore, according to interviewee ASME₁ the support from ministry in relation to implementation practices of CL is giving trainings, provision of resources as per government plan and providing technical assistance. Regarding consideration of CL principles when implementing the strategy, the interviewees reported that most of them did not know the principles of CL, but they consider students "academic achievement" as one of the most important CL principles which is not correct and this reflects the absence of training and readings.

It was evident from the above comments that the university management, college deans, department heads and the ministry of education didn't play their role in the implementation of CL.

College deans and department heads particularly though they know that instructors and students didn't truly engaged themselves in CL implementation rather than forming groups according the science of CL and even manuals of ministry of education prefer to keep silent and reporting the formation the so called 'research teams' as a true CL groups to the university management which misleads both the university management and the ministry of education. The university management rather accepting what the colleges report they didn't try to check whether they really engaged in implementing the strategy.

These all things show that implementation of CL strategy was not there in AASTU in its true sense but some sort of team learning in unstructured way which resulted in the establishment of different groups in one class for different courses varying in size, span of life and even purpose. Besides, no technical support was given to the instructors and even the interviewees didn't have idea on some basic sciences of cooperative learning strategy.

In general, it was learned from the interview data that AASTU was not implementing cooperative learning strategy as a teaching and learning approach and unfortunately students were un able to get the benefits cooperative learning strategy due to the negative attitude& feelings of the staff and students towards the use of one-to-five formation as CL in education.

5.8. Cooperative Learning Implementation Practices Status at AASTU

Poor implementation practices--CL implementation as a factor of instructors' reinforcement and commitment

The way teaching and learning approaches implemented might influence its practice, outcomes and level of implementation practices and the same is true for CL strategy implementation in Addis Ababa Science and Technology University. What matters here is that the extent of the implementation practices of strategy because this could affect its outcomes. In relation to the status of implementation practices of CL strategy, most of the interviewees reported that in engineering fields team learning is already there in previous times. Student after having a lecture they go laboratories and in laboratories they work being in a group and they discuss problems and issues. The group size varies based on the issue to be discussed and their duration too. But in some colleges the group could stay relatively for a long period of time. The "group learning" has no

uniformity across different colleges and departments. Some department or instructors didn't use any criteria to establish the groups.

It is clear that from this interview data, some departments and colleges report to the university management as if these groups are cooperative learning groups and CL is being implemented in their colleges and departments. Other colleges and departments reported research groups as a cooperative learning group. I think the instructors consider any group of students as a CL groups which shows either a misunderstanding about cooperative learning strategy or doing purposely.

Generally, the implementation and student's participation in the groups mainly depend up on instructor's strength, commitment and follow up. When instructors support & follow up is strong each group member works hard and present it to the class and if the follow up is weak only good achiever students carried out all activities and all students get equal marks and I can say the marking should be based on each group member contribution and performance. From my observation in their laboratory work (02/02/2019 and 04/02/2019) almost nine students were silent and every activity was carried out by one student including the presentation to the classroom, the instructor simply sat down on a chair no facilitation role, follow up and controlling after explaining what expected of students. I think if their instructor is committed to guide and follow each member's activity and contribution may increase which may resulted in increasing students' performance. In general, whatsoever the type of the group is their level of performance is very poor. Interviewee ASRP₂ from reform directorate, for example, said:

The implementation of "cooperative learning" across all colleges and department is of very low. But we have to know that the status of implementation of "CL" is varying across colleges and departments. I am saying this mainly based on colleges report. In general, the status of "CL" implementation practices in the university is very poor.

Interviewee ASRP₁ also added:

Nothing different happened on the education system and on the quality of classroom teaching and learning process of the university due to the implementation of "cooperative learning strategy". It was only for telling the number of groups formed, members and etc. It is only for reporting issue. Nothing special on the ground but for one thing instructors resist the implementation of CL. They believe that it comes from the government it is a political tool of the government for them. That is why practically the status of implementation practices of the so called "cooperative learning" is very poor.

Whenever asked about CL implementation practices, majority of the interviewees said that it is obvious groups thoughts are better than of individuals. New ideas, views may come or arise from groups or CL. If all implementers willingly and positively accepted and properly implemented, using CL has a number of advantages. At this level CL implementation practice is on problem in our university since instructors feel as is politicized and the government imposition on the university for its political purpose, we (instructors and the university management) do not have positive attitude towards the strategy. Implementing cooperative learning strategy is always a hot issue of discussion in many colleges of the university.

If CL properly implemented as per its principles and foundational science it could contribute for improving students' academic performance, socialization and in increasing engagement in their education. But in our case CL was not being implemented in the right way and so that didn't yield the expected benefits both for the students and the university as a whole.

Interviewee ASRP₁ further added that student didn't contribute their share and challenging each other when engaged in group works only one student shouldered others. They depend on one student for every activity. Thus, there is much dependency even their result is depending on one student which acts as a group leader. Thus, from this it is possible to say that both the ministry of education and the university management were focused on false reports rather than on real implementation practices. The implementation practice of CL is mainly symbolic.

These all things show that trying to implement the strategy in all universities across all fields using the same implementation guide line is impossible. I think it is to be according to specific contexts of university and higher education institutions have to be autonomous in this regard.

An interviewee from ministry of education reform directorate (RME₁) said:

Implementation practices of CL are varying from university to university and even within universities it varies from college to college and even within one college its implementation status varies from department to department.

It is evident from the report that the sampled colleges and departments were not implementing CL strategy but some kind of group learning in some colleges as a research team and others groups mainly focused on laboratory works. Furthermore, different groups were formed by different instructors within the same department. No uniformity and principles which the group formation process is guided by. Whatever the type of group is, its implementation practice and the level of

implementation of the strategy were very poor. This implies that the university was not implementing cooperative learning strategy which might have its own influence on the quality of class room learning and student's achievement because the traditional way teaching still influencing which seems goes parallel with nature of the courses given in the university that mainly demands working in a group and practicing than focusing on theory. These make the true implementation of CL strategy must in the 21st century teaching and learning of Science and Technology University.

5.9. Challenges in Cooperative Learning Implementation

Faculties resist the transformation from the traditional lecture format to a cooperative learning arrangement because they fear loss of control, unease with the format and structure, or work load. The faculties have to be aware that student learning modes have evolved over the years due to external and environmental factors. Thus, using cooperative learning strategy as student centered approach is the current practice of student learning in higher education institutions. There are many factors that can influence successful implementation practices of cooperative learning strategy in education institutions like universities. Some of these are: human related factor and others related to environment influence. Generally, two types of challenges of CL implementation practices in the university were emerged from the interview data: implementers related factors and external environment influence.

Implementers related factors

There were interviewees argued that in AASTU the problems with implementing CL are mainly associated with college deans, department heads and instructors not students as such. They were not willing to accept implementation of the strategy. This seems that implementers related factors mainly influenced not only the success but also the attempt of implementing the strategy. This was evident from the comments given by the interviewees during the interview session. They reported that the endeavor of implementing of CL strategy was highly challenged in the university assuming that it was not only a top down approach but also highly politicized by the government and instructors and the university management become offensive by this.

Others who participated in the interview argued that instructors were not feeling good by implementing one-to-five formation as a CL strategy and they said implementation of one-to-five group formation developed dependency of slow learners on good achievers. They also added that “We feel that it a place where students exercise corruption and we are not developing self-learner students but we were supporting them to get good grades without deserving it. Universities are not building the capacity of students but rather freely let them to graduate.”

In relation to this, interviewee ASEM₂, for example, expressed his concern that “cooperative learning” approach gives much opportunity for good learner students developing their communication skills, dealing with problems and shouldering much responsibilities of the group. The interviewee desperately expressed his concern that dependency of other students on the active student increased from time to time and this may influence quality of classroom learning and quality education too.

IntervieweeRME₁ (from EMoE reform directorate) also commented that the problem lies on the way we implement the strategy. The instructors, students and the management of the university and other stakeholders didn’t play their role to the expected level. Likewise, RSC₁ (from education strategic center) also commented that the problem lies on the way the university implemented it and problems arise from implementers’ misunderstandings and hatred. The interviewee also added that instructors, students and the management of the university and other stakeholders didn’t play their role due to the influence of their negative attitude and feelings towards the strategy and these highly influenced the endeavor of implementing the strategy in full scale and in its true sense.

Interviewees ASEM₁, ASBCE₁ and ASBCE₂ also reported that:

There was a problem of commitment and material provision and we use what already there. The commitment and initiation to implement CL strategy by the university management, instructors and students is very poor. The university management always demands a lot for reports without follow up, technical support and even with no knowledge of whether CL or any type of group learning is being implemented. No coordinated activity among all parties in the university. Besides, no shades and green areas that attracts student to come together and dealing on issues out of the class rooms.

Interviewee ASEM₂ added that:

The endless reporting procedure with unknown end-result is very tedious and creates problems consuming much time than grouping students and implementing CL strategy as per plans of colleges and departments and forced them to prepare fake reports (Interview, January 2, 2019).

It is evident from the above comments that whatever the type of groups is formed implementers' related feelings and attitudes highly influenced its implementation practices. As to the interviewees lack of commitment, absence of technical support from the university management and the ministry of education, poor provision of facilities together with negative attitudes and feelings of instructors and students highly influenced the implementation attempt of team learning strategy as active learning approach. It is also evident from the comment given that if CL strategy was properly implemented it could have improved students' performance and academic achievement.

The problem was that cooperative learning strategy was not implemented as to EMoE group formation and implementation guides as well as per cooperative learning strategy foundational science. Accordingly, this has the implication that constructivist pedagogical belief was not inculcated to implementers' knowledge and understanding and they didn't use CL strategy properly as a constructivist learning tool in the science and technology university where it could contribute a lot.

External environment related factors

Economic, social and political environment at which the university is operating could have a tremendous effect on the teaching and learning process and implementation practices of CL strategy. In relation to this, most of the interviewees reported that the regular interruption of academic calendar due to political condition of the country had an influence on the implementation of CL in their university. For instance, interviewees ASEM₁ and ASEM₂ said:

External political conditions influenced the implementation of “cooperative learning” strategy. Interruption of academic calendar was a result of external political conditions and this regular interruption of the academic calendar was one of the challenges of the implementation practices of the strategy (Interview, January 2, 2019).

It was also reported by some interviewees that making the university a platform of politics and other hot issues influenced the teaching and learning process of the institution. Furthermore, there was

a coordinated effort between some internal and external bodies who works to interrupt the teaching and learning process. On top of this, government interference to use the implementation of one-to-five formation as a political tool has also its own share in problematizing the implementation of the “cooperative learning” across all collages of the university.

Other interviewees also commented that since the university is found in Addis Ababa the environment outside the compound attract students to waste much time in different activities and lesser their time to group works outside classrooms. In addition, most students were not boarding and always go home and this also very much minimize their time of participation in groups on top of their negative attitude. These and other external environment related factors highly influenced the implementation CL strategy in the university.

In general, the challenges that face the university in implementing one-to-five group formation as cooperative learning strategy summarized like the following:

Table 7: Summary of challenges of CL implementation at AASTU

Internal problems	External problems
-Absence of follow up, coordination and provision of technical assistance -Fake grouping (reporting as if groups were established for EMoE and management of the university without forming real CL groups -Lack commitment and interest on the part of university management, college deans, department heads and instructors, -Resource limitation e.g. lab. Facilities, -Absence of stable CL group/existence of a number of groups in one department, -Highly centralized university’s management system, problems of planning, -Problems of coordination and commitment	-Political conditions of the country, -Influence external groups on students make them to actively participate in political activities, - Interruption of academic calendar, -University location, - Students engagement in drugs like “shisha” and ‘chat’

Summary

Groups were formed by different course instructors for different purpose having various group size and span of life which called in some departments a “research team” with no principles of formation to be considered and basic elements that we expect with the implementation of these groups. So AASTU call these groups cooperative learning groups and through the entire chapter when we talk about implementation of cooperative learning, I am referring to these groups

(research teams). The university management didn't try to look at what is going on rather than seeking for fake reports from the colleges and reporting the same thing to the ministry of education and other bodies.

Besides, lack facilities both inside and outside classrooms like shades, benches on the fields and making the fields green and attractive to sit there and discuss with friends. Furthermore, the university management, instructors and students have a negative attitude towards the one-to-five formation and they consider it as a true political tool of government in the academic environment and this attitude make them not to implement "CL" in its true sense.

In general, these all things make the university and students not to get the expected benefits from the implementation cooperative learning strategy as a student-centered approach fixing itself to the traditional format of classroom learning in science and Technology University. I think this could highly influence the quality of class room learning and quality of education as well which influences the employability of graduates.

CHAPTER SIX

University of Gonder Cooperative Learning Implementation Practices

6.1. Introduction

Under this chapter some physical and demographic situations of University of Gonder (UoG) research participants' knowledge & perception of CL, purpose of cooperative learning, blessings & opportunities of CL, research participants attitude towards cooperative learning, actual cooperative learning implementation practices and implementation practices status, Moreover, constraints/curses of CL implementation practices were included in the discussion below.

6.2. University overview

Located in the historic town of Gondar, Ethiopia, the University of Gondar is one of the oldest and most well-established higher education institutions in the country. The University was established in 1954 as a Public Health College and Training Center (PHC & TC) in joint effort between the Imperial Ethiopian government, WHO, United States Operation Mission to Ethiopia, and UNICEF. Dictated by the pressing health needs that existed in the 1940s and 1950s the PHC & TC quickly became established as a pioneer center for public health practice serving as a key source of Ethiopia's health professionals. It remains the Ethiopia's oldest medical training institution.

This was also the era that gave birth to the philosophy of team approach and community-based teaching of health professionals. During the 1950s all 2nd year clinical nurses, sanitarians and 3rd year health officers would go out into the community and provide health promotion as well as preventative, curative and rehabilitative services. This early work has developed and evolved into the team training program (TTP) within the current college of medicine and health science.

Run by the Ministry of Health until 1960, the Training Center joined Haile Selassie I University – now known as Addis Ababa University, in 1961 by the act of internal decree known as “Charter of Haile Selassie I University”. In 1978, by bilateral agreement between Karl Marx University in Germany and Addis Ababa University, a medical faculty was established within the Training Center – a major milestone in the established of medical education in our country. During the

following years the university has evolved according to the changing needs of Ethiopian society and endeavored to tailor the institution to the address the urgent needs of our country. In 1980/81 the Training Center was renamed Gondar College of Medical Sciences (GCMS).

Medical training was provided at the College by German medical experts, creating opportunities for the subsequent training of Ethiopian staff in Germany. GCMS gained autonomy from Addis Ababa University in 1992. In 2001 the first new Faculty, the Faculty of Management Sciences and Economics, was created. The spring of 2003 saw the next phase of development, changing the name from GCMS to Gondar University College and creating three new faculties. In 2004 the institution was converted into University of Gondar and through subsequent years the University opened 4 more academic units.

Through its many incarnations the University of Gondar maintained a steady commitment to quality education, focused research and relevant community services. Currently the University is made up of the College of Medicine and Health Sciences, the Faculties of Agriculture; Veterinary Medicine, Business and Economics Social Sciences and Humanities and Natural and Computational Sciences, and the Schools of Law, Technology and Education. The university offers 56 undergraduate and 64 postgraduate programs in regular, extension, distance and summer programs (including a Public Health PhD program which is handled in collaboration with Addis Continental Institute of Public Health).

The University of Gondar, with its long and proud history of providing innovative needs led education, is committed to ensuring that all our students have the most rewarding learning experience. Currently the universities have over 21,000 students enrolled onto our 56 undergraduate and 64 postgraduate programs. With a proud tradition spanning 6 decades, the University of Gondar remains dedicated to contributing to the sustainable socio-economic development of the nation through the provision of societal needs tailored education, undertaking problem-based research and rendering relevant community services. The Academic Units are at the core of our activities home to our staff, students, academic programs, and research and community activities. The university has 9 academic units spread across our 4 campuses 1500 members of academic staff, 21636 undergraduate and 1829 postgraduate students and 56 undergraduate and 64 postgraduate programs.

The Mission of UoG is to contribute to the sustainable socioeconomic development of the country by providing vibrant, compassionate and responsible citizens through social needs tailored curricula; conducting problem solving research; and strengthening community engagement, and technology transfer. The vision is to be the leading societal problem-solving university in the country by 2020.

Core values University of Gonder

Quality at all: Strong commitment to high standard in all aspects of its educational activities, research, community engagements, and support services, and uses feedback from its participants and supporters to enhance its programs competency in an efficient way.

Customer first: UoG Put the good of customers first and seek to develop responsible citizens committed to the common good.

Solidarity and Teamwork: Enhancing unity and forming cohesive teams determines our future success. Thus, UoG values solidarity and encourage team work in our process.

Sustainability: Promotes diversity in its policies and practices to prepare its learners to live and work successfully in an increasingly diverse society.

Invention and Innovation: Creativity and innovation as hallmark of our efforts, UoG is in a higher education industry where creativity and adaption to its changing environment and responds to the needs of the community.

Care for Staff: Success of the university is based on attracting, hiring, developing and training best employees.

Faithful to ethics: UoG is comply with legal, social and professional ethics and norms which is crucial for our development; practices of accountability, transparency, fairness, honesty, and objectivity in dealing with its constituencies.

6.3. Knowledge and Perception of Cooperative Learning

Knowledge and perceptions of all implementers of cooperative teaching and learning strategy can generally determine whether a particular instructional strategy is successful in the classroom and it is these same attitudes and beliefs that Parr & Townsend (2002) conclude are affected by peer context. Thus, if cooperative learning strategies are perceived by some implementers as

ineffective, wasteful, or inefficient and government's tool, these same attitudes may influence others to poison the atmosphere of the implementation practice to this instructional approach.

It is thus imperative that to understand the prevailing implementers' knowledge and perception about in order to better structure and implement CL strategies may help to better achieve the objectives of CL implementation. Furthermore, it was thought that implementers' knowledge and perceptions of the strategy gives insight about their readiness to blend in to CL in the teaching-learning process, which is also an indication of readiness of the university. Based on this belief, interviewees were asked to tell how they understand and perceive cooperative learning strategy. The qualitative data revealed that interviewees' knowledge (understanding) and perceptions of CL strategy was not the same. Some of the interviewees understand and perceive CL as a pedagogical approach to student-centered learning, while others perceived it as government political tool.

Pedagogical approach to student- centered learning

There were interviewees who argued that CL as a pedagogical approach to student-centered learning which contribute to the achievement of different educational objectives. This was evident from the comments given by the research participants during the interview session at University of Gonder. Some of the interviewees argued that CL is an approach to student-centered learning resulted in the interaction of students targeted at improving students' academic learning. Others who participated in the interview reported that CL is an approach that helps students strengthens their relationship, share experience and skills of solving problems. It is also a process by which students with different back ground work and study together to achieve a common goal. Interviewee GRP₁ for example, said:

It is a very good pedagogical approach to student-centered learning by which students work their projects, assignments and LAB activities being in a team. Colleges and departments support them while they engaged in their group activities. In our university since one-to-five group formation is assumed as it is politicized by government the instructors and students re-name and called it cooperative learning strategy. The university is now working to make all colleges and departments effectively integrate it in the teaching and learning process. The university has 11 colleges and faculty education has been given an assignment by the university and the college is working now accordingly (Interview, February 8, 2019).

But the faculty of education didn't yet (up to February8, 2019) begin implementing CL strategy. So how it takes the mandate from the university to follows up and supports others without implementing the strategy by itself.

Likewise, interviewee GSSH₁ also reported that:

It is a very good student-centered approach which resulted in active-learning and helps students to get good academic results. CL strategy has a variety of names like: team learning and one-to-five group formation of ours. Thus, in our context one-to-five group formation is highly politicized. Instructors assume as a political instrument of government and they didn't consider as it is one of the student-centered approaches with a great contribution for students, instructors and in general for improvement of the quality of education. As to our college there is a good understanding about the advantages of using CL and we are trying to build awareness of our instructors on what is CL, its advantages and so on by inviting expertise. As a college we encourage instructors to use CL strategy because using CL strategy pedagogically right. when students work together, they share responsibility, knowledge which help them to have common understanding, exchange their culture, exercise leadership role, motivate them to share their ideas equally, improve their language skills, in addition to grasping the content of the subject matter (Interview, February 6, 2019)

Other interviewees also reported that from its name we understand that it is a student-centered approach by which students support each other, learn from one another and improves their results. When we take one-to-five group formation as a CL strategy and we were practicing it in the university since 2011. We understand CL as a teaching and learning strategy which enables students to help and support each other as an active learning approach and implement it expecting that when students work together, they share their best experiences and socialize each other. These interviewees further added that if CL properly integrated in the teaching and learning process it may help student to have better knowledge and skills. Since students come to the university with diversified experience working together their projects or assignments may help them getting an opportunity to know and understand each other, develop skills and confidence of expressing their view or idea in front of their friends, their instructors and help them to play and develop a leadership role.

Regarding the source of one-to- five formation and decision made to implement in universities including UoG some of the interviewees reported that it comes from the government. It was introduced to the university in 2011G.C. by the government as education change army accompanying by two manuals: one is how to form one-to-five education change army and the second is its implementation guideline. I think that's why the hatred comes and the introduction of the concept as a strategy was not also participatory and followed the top-down road. Interviewee RME₁, for example said:

It came not as a pedagogical instrument or strategy. Its source is not either from education experts, education stakeholders or from ministry of education or universities but it is from government through the EMoE.

Interviewee RSC₁ also added that:

It is government's direction. The government has a direction to implement one-to-five group formation in all government organizations including universities. The source of CL is government's political decision. Others said the source of one-to-five formation is from the health sector of the country.

Similarly, some interviewee felt that:

The government used a very centralized approach to implement CL. The decision made by the government was not participatory and it didn't consult universities and I think the ministry of education was not also consulted and its part was only to make universities to implement the strategy. All of them were simply Implementers. But before the decision of the government to implement one-to-five group formation as a CL strategy in public universities, in our case there was a culture of working together assignments, projects and etc. but it was not in a systematized way. The government now put a direction on how to form groups and its implementation procedure. And it was implemented considering as a CL strategy and an idea liked by departments.

Therefore, from the above evidence, it is possible to realize that an important number of interviewees believe that cooperative learning strategy is an approach to active learning in the university context. They also feel as the government made the university to implement CL strategy and the decision was solely made by the government without participating universities, carrying out prior need assessment and planning for implementation.

Cooperative learning as government political tool

When first introduced to universities the university community was not willing to accept and implement as a teaching and learning strategy because they thought as it is government's political weapon to control the community of the university. Due to this case, there was a high resistance by instructors, students and university management. And call its name cooperative learning strategy instead of one-to-five group formation and the ministry said we do not quarrel on naming if its end purpose is enabling students to support each other, to learn from one another and as a result improves their academic performance. In relation to this interviewee GSSH₁ noted that:

CL strategy has variety of names like: team learning, students networking and one-to-five group formation of in our case. Thus, in our context one-to-five group formation is highly politicized and

instructors assume as a political instrument of government and they didn't consider as it is one of the active learning approaches which has great benefit for students, instructors and improvement of quality of class room learning and quality of education. As to our college we tried to build awareness of our instructors on what CL is, its advantages and so on by inviting expertise. As a college we encourage instructors to use CL strategy because using CL strategy pedagogically right. When students work together, they share responsibility, knowledge which help them to have common understanding, exchange their culture, exercise leadership, motivate them to share their ideas equally in addition to grasping the content of the subject matter.

Likewise, some instructors felt that CL as government's political tool and they would not like to accept it believing it is established to fulfill the government political interest. Interviewee GMHSS₁ reported that:

The implementation of one-to-five group formation as a CL strategy in HEIs was not research based and mainly unplanned. Its implementation seems an interest of government which was focused on using as a political tool in academic institutions.

It is evident from these comments that one-to-five group formation was introduced to education instructions not only for academic issues but as a tool of government in the academic environment. It was also not research based, participate the institution on the decision to implement and unplanned. Using one-to-five group formation as a CL strategy was not only serving as a constructivist learning tool but also to disseminate government's ideology in public universities.

6.4. Purposes of Cooperative Learning

Improving student's academic achievement and quality of education

Three interviewees (GRP₂, GSSH₁ and RME₁) reported that the overall purpose of using CL approach is helping students to improve their academic achievement filling their gaps from their peers. Thus, CL implementation's overall purpose is to improve students' academic achievement and result. That is CL serves as a tool to improve students' academic achievement and make them active learners. Besides, there were interviewees who argued that the overall purpose of CL strategy is improvement of the quality class room learning and quality of university education in particular and that of the country in general and also contributing in producing competent graduates that could serve the country in different development sectors. Thus, CL could serve as a tool to improve quality of class learning & quality of education system as a whole. Supporting this interviewee GMSH₂, for example said:

The overall purpose of implementing CL as a teaching and learning strategy in our department for example help us to change the teaching and learning process from independent learning to interactive learning and improves the quality of teaching and learning process. Furthermore, it also serves to upgrade students' capacity in every direction and to produce competent and problem solvers graduates after years of stay in university.

In the same way interviewee GMHS₁ noted that:

I believe one of the purposes of using CL approach is improvement of the quality of education at higher education institutions and making the students more responsible for their education as a good citizen (Interview, February 7, 2019).

It is evident from the comments that the respondents felt that using CL strategy have the purpose of improving the quality of teaching and learning in their respective colleges and departments and contributing in the production of good citizens. Besides, some of the interviewees also reported that implementation of CL strategy has the purpose of making the teaching and learning process more interactive and help the them constructing their own learning and contributing to the improvement of deteriorating situation of quality of education in the University.

Improving students' social skills

Effective implementation of cooperative learning strategies in universities might have various social benefits. In using CL students with different learning skills, ethnic and cultural background, attitudes and personalities interact with each other which ultimately results in the development of social skills like sharing, cooperation, integrity, leadership, decision making and division of labor.

When implementing the CL approach there is basically three different ways grouping students: formal groups (which may last from a single class to various weeks), in-formal groups (for a particular activity), and base groups (for a semester or academic year). These three types are different in their implementation as well as in the results of social learning. Johnson & Echeita (1995), or Lobato (1997) for instance, state that the existence of social skills among group members determines the efficacy and results of the CL methodology. Accordingly, some of the interviewees reported that one of the most important purposes of implementing cooperative learning strategy in universities is to develop / strengthens students' social skills among group members which could benefit them a lot to become more tolerant toward their companions, to respect them and to pay them more attention.

Likewise, there were interviewees who reported that since implementation of CL strategy creates a conducive environment to maintain the groups with the same members over time and develops feelings of belonging and social skills and the development of social skills made the students to be effective and have workable relationships with their group members, classmates, have a mutual support and become more effective in their team learning. Interviewees GRP₁ & GMSH₂, for example, reported that:

CL helps students to obtain more information than work independently. It is able to increase their communication skill because they always make contact with their group members and with each other in the classrooms and this condition may have a positive influence on students' social skills development. They further added that when CL strategy properly used students' social skills will developed otherwise, if students and group members lack the social skills necessary for appropriate interaction cooperative groups are then become ineffective and this can occasionally lead to miscommunication and conflict which might hamper the effectiveness of implementation practices of cooperative learning strategy in universities.

Generally, simply placing students in groups and telling them to work together does not produce cooperation and certainly not the higher achievement and positive social outcomes that can result from cooperative learning groups. Placing students in groups must help the students to produce cooperation and communication with the group member must end with achieving the purposes for why CL strategy implemented in universities like improvement of students' academic achievement and development of their social skills because CL is a pedagogical approach that encourages students' by working in a small group to increase their learning and reach their planned objective.

On top of this, the teaching of social skills to students is not only important in creating a successful cooperative learning environment in universities, but also, they are a necessity to other aspects of life. It helps students to behave responsibly while working in groups, respect and accept diversities and show concern for the common good by helping others. Providing students with social skills might improve their interaction and promote success in their learning.

6.5. Blessings& Opportunities of Cooperative Learning

Using cooperative learning as an active learning strategy in classrooms has several benefits. Some of the interviewees said improving academic achievement & socialization, tolerance and respecting of others idea, decreasing attrition rate particularly female students and help to increase

students learning motivation are some of the benefits of cooperative learning implementation while others said CL would serve as a tool to produce competent students for market demand.

Improve students' academic achievement & quality of education, socialization, tolerance and respecting of others view, decreasing attrition, increase students learning motivation and self-esteem

Regarding the benefits of cooperative learning most of the interviewees reported that using CL strategy is very important because it is a strategy which has many blessings and opportunities. Among its importance: enables students to support each other & share their experiences, socialize them, helps them to better understand issues, solve problems and etc. They also said implementing CL as teaching and learning approach helps to improve students' academic achievement, increase their learning motivation, and effectively use their time. According to these participants to come up with these all advantages or benefits of cooperative learning instructors have to plan on how to effectively implement or use CL strategy. If instructors use diversified methods of CL it creates an opportunity for the student to be independent learner and benefited from the implementation of the strategy.

Most of the interviewees also agreed that the positive effects of using CL strategy outweigh its limitations/drawbacks. Interviewee GMHS₂, for example said:

I think implementing CL in the education system as a teaching and learning strategy is very important. It helps to improve students' academic performance and improve quality of the teaching and learning process. And also students would have an opportunity to get additional ideas from their peers and this may enable them to cooperatively work for a common goal (Interview, February 7, 2019).

Moreover, interviewee GSSH₁ added that CL actively involve students in the learning process and enhances their intrinsic motivation to learn by giving them more control over their learning experiences and deeper understanding of the learning material. The interviewee further added that CL is an approach to active learning and maximizes the learning and satisfaction that result from working on a high-performance group. The interviewee also reported that CL better promotes socialization (better promotes the development the skills that required for functioning successfully in society), tolerance and respecting of others idea and decrease attrition particularly of girls,

increase their reasoning and problem-solving skill and more positive and supportive relationships with peers and higher self-esteem.

Ajaja (2010) stated that peer interaction is central to the success of CL as it relates to cognitive understanding. CL strategy, when used appropriately and effectively can enable students to move beyond the text or course material, memorization of basic facts, and learning lower level skills. This strategy which results in cognitive restructuring leads to an increase in understanding of all students in a cooperative group. Furthermore, CL has also been found to promote self-esteem, interpersonal relationship and improved attitudes toward school and students (Johnson & Johnson, 1996). The academic achievements of students have been found to be enhanced by the use of cooperative learning (Ajaja, 2010).

Moreover, interviewee GMHS₂, GSSH₁, reported that:

CL helps to improve the quality of education in general and that of the teaching and learning in particular. Departments have discussions with students every three months about the implementation practices of cooperative learning strategy focused on its implementation strengths and weaknesses so that corrective measures can be taken. On top of this, it also helps students to improve their problem solving and reasoning abilities improvement of socialization efforts and so on. CL strategy can also help contribute in creating peaceful academic environment and for improvement of students' psychological and mental health.

The interview data also revealed that there is an awareness on the various benefits that implementation of CL could give much blessings for students and university education system. Interviewee GRP₂, for example, said:

I believe in using CL as a teaching and learning strategy because it would benefit the students in different aspects. Among the blessings of using CL strategy some are: increasing the intimacy of students', improvement of academic performance, enable to learn respecting each other and improving student's problem solving and reasoning ability and so on. My department has a discussion with students every three months to see whether CL properly implemented and contribute in creating peace full academic environment (Interview, February 8, 2019).

Based on the ideas indicated above, it is possible to conclude that if CL is carefully structured and implemented, students can exhibit an increase in academic engagement which resulted in students' academic performance improvement, development in social skills and can contribute for tolerance of differences. The findings from numerous research studies on cooperative learning support these research participants' ideas. For example Wilson-Jones & Caston study show improvement in

academic achievement, behavior and attendance, motivation, and school and classmate's satisfaction (Wilson-Jones & Caston, 2004). Cooperative learning has been researched and implemented in classrooms around the world since the 1970s. Research has proven that this instructional strategy can be effective in encouraging student relations and motivating student academic involvement in school and positive effects on academic achievement. Also, 87% of the studies that used the cooperative learning strategy observed positive effects on learning achievement (AL-Rifae, 2006).

Cooperative learning as a tool to produce competent graduates

Compared with traditional learning methodologies, cooperative learning is an active instructional strategy that fosters higher academic achievement. Moreover, CL enhances learning outcomes and paves the way to produce competent graduates for market demand and which play an active role in nation building. Further elaborating the above idea, some of the interviewees noted that:

One of the advantages of implementing CL in public universities is to enhance the quality of the teaching and learning processes by changing from self-learning to more interactive learning and producing competent graduates in different disciplines that could easily win the skill and competence demand of the labor market and absorbed by it. Furthermore, CL also help to upgrade student's capacity in every direction and produce competent problem solver graduates and creating opportunities that could help them to learn and develop different life skills.

Furthermore, Information from discussion with interviewees shows the following:

The interaction between the weaker students and better performer students results in improved and efficient learning relative to traditional learning (i.e., with instructor-centered lectures, individual assignments, and competitive grading), cooperatively taught students tend to exhibit higher academic achievement, enhanced self-esteem and greater persistence through graduation.

Other interviewee GRP₂ for example said using CL strategy has benefits to students, for the country's entire higher education system and particularly for female students by making them academically stronger and competent graduate on the face of employers and increase their employability.

In general, it can be understood from what has been mentioned above that some interviewees understand that positive effects of using CL as a teaching and learning strategy especially in relation to students' academic achievement and making them competent in work place. Several

researches have been carried out on the effectiveness of CL strategy clearly showed this. For example, in their meta-analysis examining over 168 studies of undergraduate students, Johnson et al. (2014) determined that students learning in a collaborative situation had greater knowledge acquisition, retention of material, and higher-order problem solving and reasoning abilities than students working alone. There are several reasons for this difference. Students' interactions and discussions with others allow the group to construct new knowledge, place it within a conceptual framework of existing knowledge, and then refine and assess what they know and do not know. This group dialogue helps them make sense of what they are learning and what they still need to understand or learn (Ambrose et al. 2010; Eberlein et al. 2008).

In addition, teamwork creates more opportunities for critical thinking and can promote student learning and achievement. It also enhances communication and other professional development skills. Estimates indicate that 80% of all employees work in group settings (Attle & Baker 2007). Therefore, employers value effective oral and written communication skills as well as the ability to work effectively within diverse groups (Finelli et al. 2011). Team work gives students the opportunity to engage in process skills critical for processing information, evaluating and solving problems, as well as management skills through the use of roles within groups, and all of these skills are critical to successful teamwork both in the classroom and the workplace.

Therefore, it safe to conclude that integrating cooperative learning approach in universities teaching and learning process would result in multidirectional positive effects by giving ownership of their learning instead of passively accepting information. The empowerment created by the CL approach leads to increased motivation, positive attitude and resulted with both social and interpersonal benefits mentioned above. According to Robert Slavin (1980), cooperative learning in school prepares students for an increasingly collaborative work force.

6.6. Feelings towards Cooperative Learning

Implementers related feelings

Implementers particularly Instructors' feelings could influence the efficacy of CL implementation practices. Thus, implementers negative feelings might have prevent proper implementation of

successful CL and teaching strategy both in classrooms and out of classrooms which highly influence the achievement of planned goals. For instance, interviewee GSSH₂ said:

The feelings and conception of instructors are not on the same board. It varies but, in my case, this was not the only reason behind the resistance and negative feelings. Since most of them feel as CL was politicized right from its name 'one-to-five group formation' and government controlling mechanism in the universities. Feelings of most implementers towards implementing one-to-five group formation as CL strategy is not good.

Other interviewees GSSH₁ and GRP₁ also reported that instructors had negative feelings toward one-to-five group formation as CL strategy because they feel that CL implementation was government's interest and it was purposely politicized by the government. Furthermore, those instructors who commented on the feelings of implementers in relation to CL use in the teaching-learning process reported that they are not comfortable with the name one-to-five group formation.

Interviewee GMHS₁, for example, noted:

Instructors were not interested to hear the name one-to-five group formation due to their negative attitude to it and even students' feelings was also not good. Instructors and students feel as that the government purposely politicized it. On the other hand, all the university management, instructors and students do not have any problem with cooperative learning. I think it is better to say cooperative learning groups rather than one-to-five group formation and we did this.

One major reason that instructors raised for their negative feelings towards one-to-five group formation was with the terminology used and hatred of government. They thought as it is politicized by government for controlling purposes otherwise, no problem with implementation of the strategy. For example, interviewee GSSH₂ noted that in our department most of the instructors have good feelings about CL but the question is whether they implementing it correctly as per its science. Other interviewee GMHS₂ contrary to other interviewees reported that on average the feelings and commitment of instructors regarding the implementations is good. It is positive.

Those instructors who have a positive feeling in relation to the implementation of one-to-five formation as CL strategy noted that CL has made teaching simpler and effective, and made delivery of knowledge to a large group of students simpler. These instructors contended that CL had brought the opportunity to teach a lesson effectively which would have been impossible otherwise by creating a floor of constructing their own knowledge for the students.

In nuts shell, it can be understood from what has been discussed above that some interviewees perceived CL positively, especially in relation to its capacity to simplify teaching and creating opportunities for construct and own their o learning. Nevertheless, there were interviewees who argued against this comment having negative feelings of one-to-five group formation as CL strategy and they thought as it is politicized purposely by the government for controlling the academic environment. Otherwise most of them have no problem with CL strategy. Cooperative learning has been shown to develop positive student-teacher attitudes (Johnson & Johnson, 1985).

6.7. Cooperative Learning Implementation Practices at University of Gonder

Considering its importance as a vehicle to improve the social, academic climate and quality of education CL has received more attention in recent years. It may also be considered an intervention of use in promoting appropriate behavior and in creating a positive behavioral climate in schools, therefore preventing violence (Miller and Peterson, 2002). According to Peterson and Skiba (2000) the most important element being that students work together as a team, helps them learn something of value from the cooperative activity and these benefits appear to positively influence the school's academic and social climate as well. Special attention should be given for the effective implementation of the strategy so that the mentioned benefits will be obtained. Thus, Issues that would contribute for the effective implementation will be discussed as sub themes below.

Planning and familiarization of cooperative learning strategy

Prior implementation planning and familiarizing the CL strategy for implementers particularly instructors are a big input for effectiveness of the strategy. Thus, CL implementation practices actually have to start with prior planning on how to effectively implement CL considering resources needed for both in and out of classrooms activities and trainings of implementers so that instructors get trained before using it as a teaching and learning strategy. Implementers should become sufficiently trained regarding the ideas underlying CL and the different kinds of procedures for implementing it that they possibly select techniques that are appropriate to their particular classrooms. According to Johnson and Johnson (1999) training about cooperative

learning is a process aimed to improving instructor's expertise in using CL effectively. In the training process there are three steps to be in focus:

(i) Pre-training: Preparing for training by creating the necessary conditions for success. (ii) training: conducting sessions so that participants master both the conceptual framework and the actual procedures for and using cooperative learning. (iii) post- training: here according to the authors three things needs to be considered (a) providing support for transfer of what about cooperative learning in the sessions to the use of cooperative learning in the classroom.

(b) Providing long-term support for maintenance use of cooperative learning. (c) Institutionalizing CL as a standard instructional practice. The qualitative data revealed that in the implementation practices of CL strategy in UoG there were two major activities carried out: familiarizing the strategy and the actual implementation activities. No strong and continuous support during the actual implementation and to make the strategy part the routine activities of the university. Interviewee GRP₁, for example noted that:

There is an induction program for newly employed instructors. Besides, each year there is fifteen days long pedagogical training for all instructors which is purely focused on active learning methodology. On top of this, there are different short-term trainings for instructors by different colleges based on their own plan in collaboration with different sponsoring NGOs. But as a university there is no as such a well-planned, scheduled and organized trainings purely focused on CL implementation except the fifteen days. As other universities here also, there is also a yearlong HDP training program for instructors each year that targeted on different active learning techniques. On the other hand, there is no as such strong pre-implementation planning in the university (Interview, February 8, 2019).

Interviewee GMHS₂ also added:

There is training given for instructors and induction training for newly recruited instructors mainly focused on disciplinary issues and about their respective campuses' overall environment. The fifteen days training entitled "active learning" is being given by the university each year for all instructors. Besides, there is HDP for instructors and here active learning methodologies are a part of the training. Further, I didn't see any prior planning on CL implementation rather than sudden works and institutionalizing CL as a standard instructional practice in colleges of the university.

Likewise, some interviewees reported that there were also very specific methodological trainings given particularly for college of medicine and health sciences in collaboration with different partners like JAPAICO that works on health sector. But there is no special training focused only

on CL given to both new and experienced instructors in the university and any prior planning focused on what has to be done each year in relation to CL implementation, resources required, instructors training, planned solution for problems that may arise and so on.

The above qualitative data demonstrate that the amount of trainings given on the conceptual framework and the actual procedures for using cooperative learning for instructors and other bodies take part in the implementation the learning strategy was not enough. As we all know effectiveness of the implementation process requires conducting continuous sessions of trainings so that participants master both the conceptual framework and the actual procedures for and using the strategy. On top of this, the efficacy of the strategy further needs post-training long term support that could help to transfer of what about cooperative learning in the sessions to the use of CL strategy and institutionalize it as an instructional practice across all colleges of the university.

The qualitative data also revealed that there was no prior planning by the university as well as colleges on how to implement CL strategy, how to technically support and get feedback and how different bodies in the university coordinated and organized for effective implementation, provision of facilities and etc. Further, no effective, and continuous training purely focused on CL strategy for all instructors in collaboration with partners and post- training activities which is focused on: giving support for transfer of what about cooperative learning in the sessions to the use of cooperative learning in the classroom, providing long-term support for maintenance use of cooperative learning and routinizing CL as a standard instructional practice in the university.

Actual implementation practices of cooperative learning strategy

Once different bodies or parties including instructors have a solid understanding about CL strategy foundational science, principle, elements and what they consist of, it would contribute to change instructors understanding and views from negative to positive and make the endeavor of implementing the strategy effective. Groups' needs to be formed based on group formation principles and continuous support to avoid the possibility emergence of dysfunctional groups. According to Johnson and Johnson (1987) Lobato (1997), and Domingo (2008) for the work in a cooperative group to be effective, five basic components must be present: positive interdependence (to sink or swim together), positive interaction (the members of the group encourage and support one another), clearly perceived individual accountability and personal responsibility to achieve the

group's goals (each of us has to contribute and learn), cooperative abilities (leadership, communication, conflict management, etc.) and frequent and regular group processing of current functioning to improve the group's future effectiveness (reflecting on how well the team is functioning and how to function even better). That could help to correct possible malfunctions, and finally considerable promotive (face-to-face) interaction.

Furthermore, three basic requirements must be met in order to be able to speak of cooperative learning: The existence of a task that must be carried out in a group, the resolution of that task or problem and that the group's resources be sufficient to maintain and take forward its activity (Johnson and Johnson (1989), Slavin (1990), and Barco and Latas (2007)). In relation to all these things interviewee, GRP₁ said that departments are responsible to form groups based on student's academic achievement. The groups are composed of six students (one-to-five group formation) from top learners, average learners and slow learners. A coach was also assigned for each group that could support them in solving problems and make the group more effective in their activities. The coach also helps the group through their course work. Many respondents didn't know when exactly CL implementation begins in the university. Some say in 2011 others said in 2016.

Some interviewees reported that groups which composed of 6-8 students were formed based on students' academic achievement and departments were responsible to form groups which are composed of the three types of learners with the purpose of enabling students to learn from each other. The interviewees further added that there was no guideline about CL group formation and implementation strategy we simply implement CL by ourselves. Likewise, interviewee GMHS₂ also noted that the group size differs from course to course. I know the size does not matter much. Forming groups in fresh programs is a problem in our case because the department didn't know students' academic background. But groups were formed based on students' first semester result. The criteria we use to form groups: academic result, sex for equity matters and class participation. In our case the group members select their group leader. The department gives orientation on the group formation criteria, its purpose; how to nominate their leader and other things, thus students have clear understanding when they form groups so that students do have common goals.

A coach from instructors assigned for each group that would support the group with different aspects. In groups students discuss not only educational issues but individual issues also like: how to cop up with the university environment and etc. In my case I didn't come across the guide line of group formation and implementation of one-to-five group formation either from EMoE or the university; we used HDP manuals to form the groups and different CL methods in classrooms. In our case all group members share responsibilities and the leadership. The life span of the groups is four years and group's activities are revised every semester. In addition to these, standing groups' instructors can form different groups that serve specific course purposes. On the other hand, some interviewees also reported as there is a group formation guide line and implementation guideline which was developed and distributed by the ministry of education and they use these guide lines while forming groups in their departments. Interviewee GSSH₂, for example said:

It is obvious that EMoE dispatched both group formation guide line and implementation guide line for one-to-five group formation. I don't know whether the guidelines distributed for all colleges and other concerned bodies. And in my department, I used these manuals to form one-to-five groups as a CL strategy. I didn't see written guide line in relation to implementation and formation rather than these guidelines and even no clear information given both for colleges and departments.

It is evident from this comment that the CL groups were formed based on students' academic performance and it was the departments' responsibility to assigning mentors to support and guide groups during difficulties. It is also clear from the qualitative data that EMoE has already distributed the group formation and implementation guideline of one-to-five group formation but what surprising is that some of the interviewees knew as EMoE distributed the guidelines and they were used it while others knew nothing about the guide lines though they are within the same university with their colleagues and used HDP formats to form CL groups. This shows as there is communication gap among university management, colleges, departments and instructor and lack of good amount of training for all instructors.

Regarding the principles on which implementation CL strategy is based on most of the interviewees noted that there are principles that should be considered when implementing the CL strategy. For instance, interviewees GSSH₂, GMHS₁ and GRP₁ said:

Collaboration, sharing responsibility and being accountable for their work are among the principles of CL strategy. Because each group member has to equally share the responsibility, accountability and all have to equally participate while performing activities. But practically the slow learners and average learners are dependent on the good achievers. So, it is impossible

to say all members of CL groups are equally contributing ideas and equally share responsibilities.

The interview data also revealed that there was a coordinated effort in the university to carry out activities of the teaching and learning process including the implementation of CL strategy. The interviewees reported both the academic and the administrative wings were working together to achieve the goals to which the university established for. From all universities UoG (university of Gonder) relatively is on a good status in implementation of CL. The qualitative data also show that in the university in general and in colleges and departments in particular the commitment of the university management, instructors and students was good. Besides, to identify the extent of effectiveness of implementation of CL continuous follow up was being carried out and based on the results obtained colleges and departments plan for interventions to make students more benefited from the implementation of cooperative learning.

Regarding the actual implementation of CL there were interviewees who reported that it is possible to implement CL strategy in almost all departments and course types based on the nature of the course. Interviewee GSSH₂, for example said: *'Though different courses may require using different CL methods I think it is possible to use different methods across all courses given in the university.'*

Interviewees GSSH₁ and GRP₂ said that using CL as a strategy was not limited to class rooms only. CL groups work together in libraries, fields under shades, around dormitories and in open classrooms. This may help students to better understand what they have learned in class rooms and contribute to the effectiveness of CL implementation in the university. According to my observation, at University of Gonder most of the facilities were established for out of classroom activities for example in the main campus (Maraki campus)and at medical college and students were working together sitting under shades purposely built for collective work and on the green fields. In relation to this, interviewee GMHS₂ also added that because projects and assignments did not complete in classrooms alone the group work moves to libraries, dormitories and this creates opportunity for students to work together being in dorms, fields, libraries and under shades relatively for long time.



Figure 5: *Medical students working in group on their project (UoG-college of medicine &health sciences) (February 5, 2019).*



Figure 6: *Students working together under Shades purposely built to support out of class activities including CL (UoG –Maraki /Main campus). (February 5, 2019).*



Figure 7: Students working with peers under Tree shade (UoG -Maraki- main campus) (February 5, 2019).

On the other hand, some of the interviewees reported that for the success in using CL requires strong support and commitment of university management. Regarding CL implementation in UoG some interviewees reported that the implementation was backed by commitment and support of the university management. Interviewee GMHS₂, for example said: *'I think there is a support and commitment from the university management that could better facilitate the success of implementation of CL in the university.'*

It was reported by a couple of interviewees that the door of the university management was open for them to get all support according to the capacity of the university. The issue was the extent to which we effectively use the resources provided for colleges and departments. Thus, there was a good collaboration among all parties and the university management has good commitment to support the implementation of cooperative learning across all colleges and departments. There was a good implementation practice of CL and in 2018/19 the university was ranked first from all public universities in the country. Hence, we do not have resource problems and we get every resource we claim at any time.

The interviewee from the ministry of education also added that it is very important to participate all stake holders for successful implementation of CL but EMOE was not successful in this case it did not participate all stakeholders of education. The ministry supports the implementation of CL in giving trainings, technical assistance, supervision and provision of resources as per government plan. I think the problem is the ministry didn't give much technical support as per the interest of universities.

In short, all these evidences show that there was a workable atmosphere in UoG due to the support and commitment of the university management in relation to the implementation of cooperative learning strategy. But during my stay in the university I understood that the college of education was not yet started implementing CL strategy but they plan to start implementing strategy as of September 2019/2020 and this was surprising because some interviewees highly exaggerate the endeavor of implementing CL strategy in the university while college of education didn't yet start walking the walk.

The success in using CL requires of provision of necessary facilities and recourses from both the ministry of education and the university itself which better facilitates the implementation strategy. Regarding this, contrary to the above interviewees other research participants made it clear that poor provision of facilities is a critical problem. Lack of facilities and other necessary resources in the university make instructors to be highly loaded in teaching and hence influenced them not to use the CL. The interview that I made with the interviewees emphasized this. For example, interviewee GRP₁ noted:

No special resource provision and special activity carried out both by ministry of education and the university management in relation to CL strategy implementation. But to create a conducive environment for students for out of class CL activities and enough number of shades with sittings were prepared.

In relation to this, I observed the shades with sittings though they are not enough comparing to students' number. Thus, it is possible to say there was good provision of field facilities and students use the shades while working in groups. Besides, I also observed that class rooms were also always open and students use it during night and weekends. Besides, class rooms' particularly smart classrooms were well furnished relatively with smart boards, chairs and other things.

Interviewee GRP₂ also added:

Though the purchasing is very central, delayed and performed by the ministry, resources necessary for CL implementation are well provided, e.g. smart classrooms, smart boards, chairs and other things. The library is well furnished with most of necessary books. Furthermore, there are workshops, laboratory facilities and so on. In general, there is a good work in the university to make the teaching and learning process more fruitful.

There were interviewees who noted that in relative ways there was resource provision. The question is should be how much we effectively utilized them.

Thus, as the above interviewees' responses demonstrate that there were opposite ideas raised. The first group of interviewees reported as resources necessary for the implementation of CL was well provided while the other group reported no special resources and facilities were supplied to the university. Others also reported that the issue was not the provision of new resource but the extent of effective utilization of the already existing resources. In general, these are among a number of other elements that contribute to the success of cooperative learning implementation. The university still has to do more to make the implementation practices of the strategy more effective and efficient backing it with provision of all necessary resources that equates the number of students and demand of instructors.

Regarding CL methods that were commonly being implemented in the teaching and learning process majority of the interviewees reported that different methods were used by instructors based on the nature of their courses and even problem styles. One of the interviewees (GMHS₂) reflected his views as:

We use different CL method according to the nature of our courses e.g. jigsaw, brainstorming and so on. and since the departments already developed competence-based curriculum it was already listed out the type of CL method an instructor should use while teaching each chapter and topic of the course and so possible to use different CL strategy across all courses. The instructor also has a freedom to use CL method that is more comfortable to the content he is teaching. So, instructors' creativity in using the methods is important.

In similar way, interviewee GSSH₂ provided the following explanation: variety of CL methods like micro teaching, cross over, jigsaw and others were used in my college and simply putting students in groups and giving them projects or assignments to work in groups is not using CL strategy.

It is evident from these all explanations that these interviewees do have understandings about various CL methods. It is also evident from the qualitative data that the importance of instructors' creativity in using CL methods and increasing student's engagement and academic performance through making active participant in their learning. Accordingly, this has the implication that university's management knowledge, understanding and positive feelings plays a major role in facilitating effective implementation of cooperative learning strategy and has its own role in building positive attitude towards constructivist pedagogical belief which lead to the use of CL as a constructivist learning tool.

Furthermore, supervision is very important for effective implementation of CL strategy because groups are supervised to: identify whether they are functioning properly or not, give technical support to dysfunctional groups if any and give timely feedback. Most of the interviewees reported that there was no way to directly observe being in a class. Interviewee GMHS₂, for example said:

There was no direct observation the implementation of CL activities and students in class rooms while they are working in groups. Information about cooperative learning implementation practices obtained from colleges and departments through reports, meetings, in-formal discussions, during LAB work and practice programs and from students themselves.

Feedback about the performances of cooperative groups from colleges/institutes and departments mainly obtained through paper-based reports and meetings at college and academic vice president/reform directorate level. Interviewee GRP₂ for example, argued that the feedback about the implementation of CL was obtained in the university in two ways: through discussion on meetings and paper-based reporting starting from the departments. A discussion held on all issues including the implementation practices of CL every fifteen days by the universities top level management (by academic council) and the feedback was given to the colleges and departments through the academic vice president office like a check list as activities to be performed next time and colleges/departments will be evaluated based on the check list. Moreover, interviewee GRP₁ added that there was a reporting system starting from instructors through department to college and then to the office of academic vice president that would enable to know what is going on in relation to CL implementation activities.

There was also a discussion forum every fifteen days which was called academic and research forum about cooperative learning and the teaching and learning process and on the extent to which it actively engages students among deans, vice presidents and directorates which was led by

academic and research vice presidents. There was also a discussion on the strengths and limitations identified and direction will be set out and forwarded to colleges to plan and work on it. But no specific agenda set out only on the implementation practices of CL but mixing with other issues and discussion conducted in line with the agenda formulated.

The supervision was carried out not specifically to evaluate implementation of CL but together with observation of other activities of the university. It was a general supervision which was focused on: what the teaching and learning process looks like, if students actively engaged in the teaching and learning process, whether a continuous assessment is on use, about exam process are all looked (supervised) together. And solutions for problems are made to be given by all concerned departments. In general, no direct supervision or observing entering in classrooms. It was a form of discussion among AVP₂, reform director, colleges and departments. The university also repots to all concerned bodies every three months.

On the other side, most of the interviewees complained that the university management gets feedback not through directly observing/supervising what was going on in the classrooms but only through semester based repots and meetings conducted twice a month. The meetings not only focused on the implementation practices of CL but also on other administrative and academic issues. For example, interviewee GSSH₁ said:

There was a meeting every fifteen days both within departments and between departments and top-level management to discuss on issues related to the teaching and learning process including the implementation practices of cooperative learning strategy and there is a communication flow starting from the groups up to the top-level management. There is also a paper-based reporting starting from the CL groups to the top-level management.

Two interviewees GSSH₂ and GMHS₂ also added:

Departments organize a semester-based reports about the implementation practices of CL based on the feedback obtained from CL groups & instructors. There was also meeting at college level with all departments and quality director twice a month and based on the information obtained from the meetings again the college gives feedback to departments which could better facilitate the implementation of CL strategy.

According to interviewee RME₁ ministry of education gets feedback about the implementation practices of CL strategy in two ways: the first is paper based reporting and the second is through supervision which carried twice a year by the experts of the ministry. Besides the ministry also

prepare a general report which shows CL implementation practices as a teaching and learning strategy at universities, its strengths, limitations and exemplary activities of the institutions.

It is evident from the above qualitative data that the main sources of information about implementation practices of CL for both the ministry of education and the university management was from paper-based reports and meetings. Generally, this was the system by which colleges, university and the ministry got information about the implementation practices of CL and give feedback to the implementers.

The university's management, colleges and departments role in the implementation of the CL strategy is very crucial and each party has to play its role that would contribute for the efficacy of the implementation of the strategy and they have to play their role in a coordinated way to the maximum level for the success of the strategy in the teaching and learning process. It was learned from the qualitative data that among the roles to be played by the university were: provision of resources, technical support, giving long or short-term trainings that could help to create common understanding, creating different forums to discuss on CL strategy and helping instructors and student to come to common understanding in relation to the importance of the implementation of CL strategy.

Interviewee GMHS₁, for example, said:

Our role includes: planning on how to better implement the strategy together with departments, giving technical support for departments and instructors, conducting discussions about CL implementation strengths & limitations, giving solutions for problems raised, coordinating activities of CL implementation at college level and giving feedback to the university management.

It was also reported by some interviewees (department heads) that planning on how to implement the strategy, forming groups, follows up their activities together with group mentors and instructors, conducting discussion on issues that might rise from students, collecting feedback from mentors and instructors and compiling and sending to the college and other concerned bodies, providing instructors and class rooms with necessary resources were among the duties performed by them in the course of implementation of the strategy.

Thus, one can easily infer that the interviewees knew what is expected from them for successful implementation of the strategy though they were not played their role to the expected level and in

a coordinated way which is assumed to be a corner stone for successful implementation of the strategy in the university in general and in their respective colleges and departments in particular. During my class room observation while the students engaged in group work activities the instructors involved with cooperative learning strategies play the role of facilitator and as a resource person for the CL groups.

Besides, CL strategies demanded instructors to do extensive initial planning and researching of what was to be learned. Once the cooperative process began, instructors circulate among the groups listening to their deliberations and noting that students were able to manage their work and responding in a non-judgmental fashion, and encouraged equal participation among all group members. As in all effective teaching scenarios, the instructor is the key actor to successful teaching and learning process. At the outset and at key times during CL processes, instructors' voices were those which most urgently need to be heard and during my classroom observation the researcher noticed that these things from instructors which is an exemplary activity for other case universities.

6.8. Cooperative Learning Implementation Practices Status

Cooperation is side-by-side at the same table to talk with each other as they do their individual assignments. Cooperation involves much more than being physically closer to other students, helping, or sharing material with other students to improve their knowledge and skills. Generally, cooperation is not assigning a report to a group of students where one student does all the work and the others put their names only on the product. Madumere-Obike & Nwabueze, (2012) emphasized that CL requires students to communicate with others, share knowledge, ideas and take responsibility for their own learning. Group processing requires members to periodically assess how well they are working together and how they could improve to ensure successful and efficient completion of their academic tasks, as well as score high in examinations.

Hence, each group comes together and source for information based on their specific areas, and come together in the classroom to share their various ideas and experiences. Departments or instructors should be taken care of in forming groups because appropriate grouping ensures that each group contains members with various attributes such as good team spirit, confidence and trust to strengthen problem-solving and social skill building of all group members.

Thus, these (things mentioned above) and other factors would determine the level or status of CL implementation practices in an institution. The qualitative data showed that most of the interviewees perceived a good CL implementation practice environment which contributes for the improvement of quality of education in the university.

Good implementation practices

The university implemented the CL strategy based on its principles across all courses, both in class rooms and outside of the class rooms using different CL strategies. There was good coordinated effort and implementation practices- the university won prizes in relation to effective CL implementation practices.

In relation the status of implementation practices of the CL strategy in the university across all its colleges most of the interviewees reported that:

In our university there is a culture of openness for new innovations, practices and systems though with some resistance. The same is true for CL strategy before changing its name from one-to-five group formation to cooperative learning. Cooperative learning strategy is considered as a change instrument in the teaching and learning activities in our university. The overall implementation practice of the university is good. Further they have reported that proper implementation of CL could enable to narrow the academic achievement gaps between students particularly between female and boy students and since girls are benefited well from CL their attrition rate was decreased. Currently in our university most of the students are on good track with respect to their learning.

Likewise, interviewee GRP₁ also reported:

CL implementation in our university is very good. There is also a research carried out on how CL strategy helps to improve students' academic performance by some colleges like college social science and humanities. But no research is carried out to put its general picture of its implementation in our university (Interview, February 8, 2019)

Some interviewees on the other hand felt that CL implementation in the university was not strong. Its overall implementation practices are just at the beginning after the name has changed from one-to-five group formation to cooperative learning strategy. Interviewee GSSH₂, for example said: 'our current CL implementation practice of is more of traditional. The department though planned to implement more seriously we are not working well according to the plan.'

Moreover, interviewee GMHS₂ complained that CL was not fully implemented in my department because; there is an attitudinal problem with some instructors and students. In relation to what is said above (under 6.3 paragraph 4) I the researcher personally witnessed during my visit of faculty of education together with dean of one of the colleges of the university (Feb.8/2019-8:30) and asked faculty of education dean through telephone about the status of CL implementation though the faculty was not my sample I got an answer which says '*faculty of education was not yet begin to implement CL as a teaching and learning strategy and there is a plan to use it as of September 2020*'.

Furthermore, the observation data revealed that some CL groups' members were committed; seem equally responsible for the group work and all group members share responsibility while very few groups 'members simply sat around table and only one student tried to explain all things for others. The researcher suggest that the instructor has to be alert enough and motivate students to make them equally engaged in group work and facilitate things. Because simply placing students around the same table and calling them a cooperative group does not make them one and equally engage in group works. Besides, mentors and instructors have to be serious when forming groups and be sure that all groups are active, assist groups to be a high-performance cooperative group and avoiding pseudo groups.

It is clear from these comments that the status of CL implementation practices varies from college to colleges and from departments to departments of a college. In fact, the overall performance of the university in implementing the CL strategy was good. Thus, the university management together with other stake holders has to exert their maximum effort to equally implement the strategy across all colleges and departments of the university.

6.9. Curses in Implementation Practices

There were various problems and challenges that influenced the success of the implementation practices of cooperative learning strategy in the university. Implementers particularly instructors and students would often hold a variety of misconceptions and negative feelings about cooperative learning especially when instructors have little experience in using CL as a strategy of teaching and learning they often view it negatively and this could affect their willingness to use it. Besides, the internal environment and external political condition which was manifested by the interruption

and disturbance of the teaching and learning process have their own influence on the efficacy of CL implementation in the university.

Mis-conceptions and negative-feelings

Most of the interviewees felt that the advantages using CL as a teaching and learning strategy overweighs its limitations. Interviewee RSC₁ for example said:

I think implementing the strategy has many benefits but the problem lies on the way we understand the strategy and the negative feelings the university management, instructors and students have that was influenced the effectiveness of implementation practice of the strategy. Thus, due to this, all the implementers didn't play their role to the expected level.

Interviewee RME₁ also added:

Problems related to attitude and mis-conceptions of instructors, students and management of the university were among the challenges that limited the success of the implementation practice of the strategy. Particularly instructors feel as CL was the political tool of government in universities.

It was also reported by some interviewees that misunderstandings and attitudinal problems of instructors, students and even from top level managers were the major obstacles that hindered the effectiveness of CL implementation process in the university. Since attitudinal problems are very strong for the future, it was planned to solve this problem by giving continuous trainings on the strategy. Other interviewees also noted that the negative attitude of the implementers resulted from the way it was introduced to universities. CL strategy was not introduced as a pedagogical instrument or strategy. Its source was not either from education experts, education stakeholders or from ministry of education or the university but it was from government through ministry of education as a political tool of government in teaching and learning environment. On top of this, there were misconceptions and mis-understandings created due to lack of enough amount and continuous trainings to all concerned bodies particularly instructors and students. Interviewee GSSH₁ also said the one-to-five group formation was everywhere there was no difference among one-to-five groups formed in any organizations and one-to-five formation groups formed in the university in their purpose for the government. it was a politicized group formation.

Thus, instructors and students assume one-to-five group formation as a government structure introduced to universities to control the university community activities as a group and as an individual. And due to this case, the university management, students and instructors were not willing even here the name one-to-five group formation and due to this case, we influenced the university management to change its name to cooperative learning strategy. This shows that for successful implementation of any educational innovation implementers' positive attitude and good understanding of it is very mandatory. Meanwhile, as can be learned from the above qualitative data, the university management, instructors and students didn't have positive attitude and if there is mis-understanding on the basic foundational science of the pedagogical innovation it may highly influence the its implementation practices in the academic institutions.

In sum problems like instructors' and management' belief, attitude, professional experience, motivation, personal commitment, training in general and particularly instructors' understanding of innovation and pedagogical belief were among the factors that affect the implementation practices of cooperative learning strategy. On the other hand, students' knowledge of how CL is implemented and what is expected of them highly influence the application of it. Hence, to minimize these and other obstacles all stakeholders have to collaboratively work in a planned way by giving continuous trainings on the strategy and on how to effectively use it as a teaching and learning strategy both in and out of classrooms for better success.

Internal environment and external political conditions

Internal environment of the institution and external political conditions would highly influence effectiveness of CL implementation in all public universities of Ethiopia like university of Gonder. Interviewee RSC₁ for instance reported that absence of research-based implementation planning ahead and absence of provision of the universities with all necessary facilities, lack of continuous training, absence of participation of all stakeholders and lack of timely technical support influenced departments, instructors and students to better implement the strategy. The ministry of education also didn't play its role in an effective way rather than demanding for reports. On top of this, ministry has no any coordinative effort to provide them with necessary resources and technical support that could better facilitate the implementation of CL. There was also lack of commitment from the side of university management and instructors.

There were interviewees who reported that situational consternates and the physical environment were considered as challenge that influenced the implementation practices of CL in the University. This was evident from the comments given by the interviewees during the interview session. Some of the interviewees argued that situational constraints like: group composition, group cohesiveness, friendship, gender, discipline, ethnicity, religion, language proficiency, etc. hampered the normal implementation process of the strategy. Others who participated in the interview said the physical environment (class room arrangement, furniture arrangements, clean rooms with appropriate resources and well aired rooms etc.) has a positive contribution for effective implementation of cooperative learning strategy.

Moreover, interviewee GMSH₁ complained that perception problems with students and instructors, resource problems, large class size and class arrangements, training problems, and external political situations were among the problems from which the implementation process CL strategy suffers. Most of the interviewees were also agreed that the implementation practices of CL were highly influenced by external political condition. Interviewee GRP₂ for example said:

The external political environment which was manifested by interruption of the academic calendar and absence of peace of the locality or town in which the university established was highly influenced the effective implementation of CL by affecting the commitment and effort of the university management, instructors and students.

In nut shell, the challenges and problems the university faced while implementing the CL strategy summarized in the following table.

Table 8: Challenges CL implementation practices (UoG)

External problems	Internal problems
- Stakeholders didn't play their role - Lack of revision of the curriculum - External political environment and interruption of the academic calendar -Absence timely provision of resources -Government's interest on CL	-Problems of planning a head -Absence regular technical support -No any coordinative effort and lack of commitment -Attitudinal and perception problems -Politicization of CL -Focusing only on paper-based reports

Summary

Implementers' knowledge, perception and attitude can generally influence and determine the success of the implementation practices of cooperative learning strategy and achievements of its

purposes, the production of competent and problem-solving work force which is the mission of the education and training police of 1994. Because some see CL as a government tool while others see as a pedagogical approach to active learning. On the other hand, if CL properly implemented it have various blessings or benefits not only for individuals but also for the country: by improving students' academic performance, quality education and so on.

Success of CL implementation can be influenced by implementers' related feelings, provision of resources, and commitment of the implementers. Cooperative learning strategy implementation practices in UoG was relatively good and there was prior plan on how to implement CL except some colleges and trainings that could help better implementation of the strategy in the university. On the other hand, there was no technical support in the university and there was only focus on paper reporting.

There were also internal and external challenges that were highly influenced the success of CL implementation practices for example student's engagement in different political affiliations. And implementers believed that the best way to use cooperative learning is to replace individual work, which in traditional lesson cycles happens after lessons and before assessments because if CL used properly, it is an exciting way for all students to learn. Research finds that if instructors make the five elements of CL part of group learning, students learn more, feel more successful, love school, and enjoy the subject they're studying and like and accept one another (Roseth et al., 2008; Slavin, 2013; Webb, 2008).

CHAPTER SEVEN

Higher Education Institutions Implementation Practices of Cooperative Learning

(Cross Case Analysis)

7.1. Introduction

According to Yin (2009) a cross-case analysis is performed in case study research if the study consists of two or more cases. Cross-case analysis involves aggregating and synthesizing findings over multiple cases. Merriam (1998) express the need for multiple case studies to be performed in two steps: first the within-case analysis followed by cross-case analysis. Data were gathered and analyzed, conclusions derived, and results reported independently. Once the analysis of each case is completed, cross-case analysis begins. According to Merriam (1998) a qualitative, inductive, multi-case study seeks to build abstractions across cases. The researcher attempts to build a general explanation that fits each of the individual cases, even though the cases vary in their details (Yin, 1994). Likewise, Miles and Huberman (1994) also described cross-case analysis as tricky and requiring a careful look at complex configurations of processes within each case.

Multiple case study approach allowed the researcher to compare and contrast among case universities, and gave me an opportunity to examine the state of implementation practices of cooperative learning strategy across the case universities and bring experiences to the research questions of the study. Hence by attending participants' knowledge and conception of: cooperative learning strategy, its purpose, blessings & opportunities, perceptions and observed practices of cooperative learning implementation; and constraints that hamper the efficacy of implementation practices of the strategy in each case universities.

Therefore, in this study I performed a cross-case analysis after the development of all the cases. For my study, this synthesis involved finding similarities and differences among cases and explaining the potential reasons for those similarities and differences based on the contextual factors. Thereby, four themes were derived: research participants' knowledge and perception of CL strategy, purpose; benefits of implementation of CL as a teaching and learning strategy; actual

implementation practices of the strategy and implementation status; influencing factors in the endeavor of implementing the strategy.

The way the themes manifested in the case universities was different. Hence examples from participants of each case university were included to give a sense of how participants expressed that theme. In general, in the cross-case analysis I want to consider in what areas the three cases suggest the same points, where they differ, and where the three cases conflict. When comparing the cases I will focus on:

7.2. Participants knowledge and perception of CL

Under this theme, four sub-themes, of different perceptions of cooperative learning strategy were identified from the research participants' interview data. The first perception was understanding/perceiving CL as a pedagogical practice; the second was perceiving the strategy as a political tool of government; the third perception was understanding CL as approach to active learning; and the last was perceiving the strategy as an approach to student -centered learning

While the second perception was reflected in all the case universities, the first was observed in AU and the third type of perception was observed in AASTU and the fourth was only visible in UoG. But what we have to bear in mind is that the first, third and fourth perceptions have the perceiving of CL as “pedagogical approach” was an idea raised in common.

Table 9: Inconsistent understanding and perception of CL strategy

Cases and themes of comparison	CL as a pedagogical practice	CL as political tool of government	CL as a research groups	A pedagogical approach to student-centered learning
AU	√	√	x	x
AASTU	x	√	√	x
UoG	x	√	X	√

The research participants from Ambo University (AU) understand CL strategy as an accepted and often the preferred instructional procedure at all levels education system in any country. This was evident from the comments given by the respondent during the interview session. Some of the

respondents for example, expressed their perception of the strategy saying that cooperative learning is presently used not only in their university but also at all levels of schooling, in every subject area, and with every age student as a pedagogical practice across the world. They further added that currently, it is difficult to find a text on instructional methods, or instructional materials that do not discuss cooperative learning. CL is now an accepted and recommended pedagogical practice.

Moreover, interviewee AUEB₁ also added that by saying “he understands CL as an approach that helps students to openly express their idea to group members. The respondent also added that he perceives CL as a pedagogical practice that helps low and average learners to upgrade themselves using the support from other group members. Likewise, interviewee AUP₂ also noted that ‘I understand cooperative learning strategy as a pedagogical practice focused on team-based learning. It is a strategy by which group members work together in a collaborative way and ended with achieving common educational goals and satisfied all group members.’

On the other hand, research participants from Addis Ababa science and technology university (AASTU) have started to express CL is an instructional model of active learning in which students carry out their assignments/projects together as a team toward a common goal. Some participants also reported that CL as an approach by which students’ study together, share information and help each other being two or more and find solutions for not only academic related problems but also for their common social challenges in their campus or university.

Other interviewees on the other hand, perceive cooperative learning as a strategy that could help students to develop a sense of supporting and helping each other and serve as a group learning strategy which aimed at supporting and bringing slow learners’ and average learners’ forefront. For instance, Interviewee ASRP₁, said: ‘CL is a teaching and learning approach to active learning which is focused on maximizing students’ academic performance.’ Cooperative learning is one active learning approach documented as effective in achieving student learning goals (Smith et al., 2005).

In the same way, some research participants believe that CL is an instructional approach to active learning in which students work together as a team toward a shared goal. They further argue that CL is an approach that makes the teaching and learning process more active. Interviewee ASRP₁, for example said: ‘cooperative learning is a teaching and learning approach which is focused on

maximizing students' academic performance. Ethiopia also planned to improve students' results implementing the strategy in public universities through improving students' way of learning.'

Contrary to what mentioned above a good number of interviewees understand cooperative learning strategy as a research teams formed based on sub specialization. Interviewee ASEM₂ for example reported: "since many instructors won't to use the name one-to-five formation and challenging the imposition from government and university management they established a research teams based on sub-specializations under the main department because after completion third year students continued under sub-specialization of their choice and carried out group activities but we didn't able to implement CL strategy in the one-to-five formation form purposely. And I think CL was not yet implemented in many department and even students were not willing to accept and implement it due to the hatred that both instructors and students had on the politicization of the strategy. But we reported to the university management as the strategy was implemented in different colleges which are mainly fake reports. And this is the way CL strategy is being understood and perceived in the university by instructors and students.

Thus, it can be understood from what has been indicated above that some interviewees had perceived CL as research team that helps students to work together. The research teams were formed as per the interest of instructors and students just against the ministry's one-to-five formation and implementation guideline.

Other interviewees from other case University, UoG perceive CL strategy as a pedagogical approach to student-centered learning resulted in the interaction of students targeted at improving students' academic learning. Interviewee GRP₁ for example, said: 'It is a student-centered learning approach by which students work their projects, assignments and LAB activities being in a group. Colleges and departments support them while students engaged in their group activities.'

In University of Gonder since one-to-five group formation was assumed as it is purposely politicized by government instructors re-name and called it cooperative learning strategy. The university is now working to make all colleges and departments to effectively implement CL as a student-centered strategy in teaching and learning process. Likewise, interviewee GSSH₁ also perceive CL strategy as a very good strategy which make students the center of the teaching and

learning process that resulted in active learning approach and helps students to get good academic results.

On the contrary, all participants in the three case universities agreed that CL strategy was implemented in universities as a political tool of government. They noted that one-to-five group formation is highly and purposely politicized by the government. Instructors and students believed as a political instrument of government in the education environment with the hidden agenda of controlling situations in the institutions. Furthermore, the interviewees didn't consider as it is one of the active learning approaches which has a great contribution for students, instructors and a strategy that play a role improving the quality of education but, with the primary target of controlling political situations in HEIs. That is why the implementation of one-to-five group formation as a CL strategy faces high resistance from the university management, instructors and good achiever students.

Besides, since the government forced all public universities across the country to implement the one-to-five group formation as cooperative learning strategy with similar context of other sectors like health, agriculture without considering special characteristics of the education sector and since it was a top down decision there was a resistance from the side of the implementers. In relation to this, most of the interviewees commented that the implementation of one-to-five group formation as a CL strategy in higher education institutions was not research based, planned and government's encumbrance in educational institutions. Though participants from the three case universities perceived the CL approach differently and gave it different names all of them perceive the strategy as it could made student to be more participant in the teaching and learning process and help the them to construct their own knowledge minimizing the role of the instructor and plays the role socialization.

On top of this, participants knowledge and understanding of why the CL strategy was being used is also slightly varies. For instance, participants from Ambo University believed that the overall purpose of using CL as a teaching and learning strategy is to improve students' academic achievement, self-esteem, improving classroom learning and students' communication skills. On the other hand, participants from the other case university (AASTU) noted that though they implement CL as a research team the planned target was to maximize students' academic

performance and improving the quality of education in general. Likewise, interviewees from university of Gonder also said that the goal of implementing CL strategy in their university was to help students develop their social skills that could make students to better fit to their society and be a good citizen.

In general, implementing and establishing a cooperative classroom call for understanding the underlying theories in order to select effective teaching methods. Leamnsen (1999) make more noticeable that a good pedagogy selects what is appropriate and is not wedded to a method, no matter how innovative or popular. Similarly, Palmer (1996) reminds that, the challenge is not to reduce good teaching to a particular form, model, methodology, or technique, but to understand its dynamics at the deeper levels, the underpinnings, to understand the dynamics that make connectedness a powerful force for learning in whatever forms it takes.

Therefore, to effectively implement the CL strategy implementers should have a well-structured knowledge base. This does mean engaging and reshaping the concepts of implementers: instructors, students, university management and other stakeholders. Because the more fully the concepts of CL strategy connected with implementers particularly instructors prior experience and existing knowledge, the more they will be interested and committed to use the strategy which might greatly help students to achieve their goals both as an individual and as a group.

7.3. Benefits and Opportunities of Cooperative Learning

The inter-case analysis confirmed the existence of blessings and opportunities of using CL as a strategy in the case universities. It was observed that with a cooperative learning approach, students work together in small groups to accomplish tasks that promote positive interdependence. Learning activities are to be structured so that achievement is both beneficial to individual students and also to the group as a whole. Successful CL strategies promote student engagement with the material, individual accountability, and teamwork-building skills. Cooperative learning also promotes regular, formative assessment of student learning, higher order thinking, and builds classroom community (Smith et al. 2005). Deep learning and CL fit perfectly when instructors

capitalize on the underlying theories by among other things - assigning motivating projects that get students involved with the knowledge base.

The views of 20 interviewees involved in this research were examined to determine their understanding about the benefits of CL as a methodology, and how and to what extent they had achieved success in its implementation in classrooms. The findings reveal that these interviewees have understood the advantages of cooperative learning and the positive effects from its implementation in comparison with traditional teaching practice. Indeed, the ability to work with others within a group and to develop social skills, improvement of academic achievements, engagement for learning, improvement of acknowledging and tolerance of differences and development of conflict management skills may be justification for using CL strategies.

Mismatches were observed on the conception of benefits of CL strategy among the case universities and the participants. Some believe the benefit or advantage of using cooperative learning is to improve students' academic achievement, self-esteem, psychological health and social skills which was reflected by making students active & engaged at AU & AASTU; help to minimize conflicts only at AU; improve quality of education, socialization, tolerance and respecting of others view, decrease attrition rate of students, increase students learning motivation and serve as a tool of producing competent graduates for the labor market demand reflected at UoG as presented in the following matrix table.

Table 10: Benefits and opportunities of CL strategy

Cases and themes of comparison	improving students' academic achievement, self-esteem, psychological health and social skills	Making students active & engaged	help to minimize conflicts	Improve quality of education, socialization, tolerance and respect ion of others view, decrease attrition rate of students, and increase students learning motivation	Serve as a tool of producing competent graduates for the labor market demand
AU	√	√	√	X	X
AASTU	√	√	X	X	X
UoG	X	X	X	√	√

Interviewees affirm strongly that CL as a strategy has various benefits to the students and improvement of quality of education while the implementation practices were not to the expected level. For instance, participants from Ambo University (AU) belief that using as a teaching and

learning strategy has many positive effects on students as well on students learning. Thus, most interviewees welcomed implementation of CL as a blessing and opportunity for the teaching and learning processes in their university. The interviewees advocated the benefits of CL strongly. AUEB₁ for example noted that CL is used by making students to share their cultural practices, ideas, experiences and help them to establish friendly relationships, improve their social life as well. It also helps students to learn respect and tolerate differences, speak their minds, and performing better in their learning.

Cooperative learning also has tremendous positive effects on student academic achievement. Furthermore, it would help students have more self-esteem with a very important consideration of female students, psychological health and social skills. These interviewees contended that CL had brought the opportunity to teach a lesson effectively which would have been impossible otherwise.

In relation to the benefits and opportunities of implementing strategy most of the participants who were interviewed at AASTU agreed that if CL properly implemented as per its principles and foundational science it would benefit students in many ways. For example, they may get academic, social and psychological benefits. They also agreed that it may have blessings like: developing critical thinking, problem solving abilities and thinking differently. But these interviewees underlined that in their university these benefits were not achieved because CL was not implemented. There were also other interviewees who further elaborate the positive effects of CL: developing capacity to effectively grasp the subject matter, creating conducive environment for students to support each other & share experiences, developing a good future citizen.

On the other hand, most of the participants from university of Gonder reported that using CL strategy has many blessings and opportunities. Among its importance: helps to improve quality of education, socialization, tolerance and respecting others view and diversities, decrease attrition rate of students particularly of female students, and increase students learning motivation and serves as a tool of producing competent graduates for the labor market. According to these participants, to come up with these all benefits of cooperative learning instructors have to plan on how to effectively use the strategy and implement it accordingly. If instructors use diversified

methods of the strategy it would create opportunities for students to be independent learner and benefited a lot from the implementation of the strategy.

The interviewees further agreed that using CL as a teaching and learning strategy has many positive effects on students' academic outcomes. Interviewee GMHS₂, for example said: 'I think implementing CL in the education system as a teaching and learning strategy is very important. It helps to improve students' academic performance and improve quality of the teaching and learning process because students would have an opportunity to get additional ideas and information from their peers while working in groups on different issues of their courses.'

Other interviewee like GRP₂ for instance reported that, using CL strategy has many benefits to students particularly for female students by making them academically stronger and competent graduate on the face of employers and increase their employability. The interviewee also added that to be competent in the labor market, the graduates should have the necessary skills that would help them to work cooperatively with other workers in the employer organization. According to this participants CL could serve as a tool of producing competent graduates for the labor market demand. In relation to this, Slavin (1980) noted that cooperative learning in school prepares students for an increasingly collaborative work force.

Various research results also directly correlate with the views of the participants of the three case universities raised regarding the positive effects that cooperative learning strategy has on students and students' learning. For instance, (Tran, 2014; Karacop, Doymus, Dogan, & Koc, 2009) noted that CL positively affects the academic success of the students at university level. When the effect of CL is analyzed more deeply, though, it is clear that the favorable effects (motivation, social cohesion, and developmental and cognitive elaboration) of CL are realized at university level (Artut & Tarim, 2007). The research reports also indicate that cooperative learning facilitates the process of learning (De Baz, 2001; Lazarowitz, Hert-Lazarowitz, & Baird, 2006). But the school system seems to over- emphasize academic attainment of students without considering much how the learning process done: meaningfully done, or by rote.

Though, EMoE, the university management, instructors and even students focus on students' academic performance in-terms of letter grades which are not purely a result individual student effort and engagement. It may be a result of copying from each other as many interviewees reported. I think managers of the educational system, instructors and other stakeholders have to equally pay attention to other opportunities created by implementing CL strategy and making students learning more meaningful by increasing instructors and universities management understanding of CL as a methodology, how and to what extent they had achieved success in its implementation in the classroom. Because the extent to which implementers have understood the benefits and opportunities of CL and the positive effects from its implementation in comparison with traditional teaching practice determines the success of the implementation practices of the strategies in Ethiopian public Universities.

Implementing CL in HEIs (higher education institutions) as a strategy that has many justifications indeed, the ability to work with others within a group to develop interpersonal skills, psychological health, acknowledging and tolerance of differences and self-esteem may be are justifications for using cooperative learning strategies. In universities studies in which cooperative learning strategies are used for a semester or for a whole academic year or more than a year should be conducted to determine if its implementation practices effective and benefits students and the entire education system. This research supports the view that good implementation practices of CL promote positive attitudes toward the instructional experience and provide opportunities for students to develop skills in group interactions and in working with others that are needed in today's world in addition to improvements in academic performance which is the primary focus of implementation of one-to-five formation as a CL strategy in Ethiopian public universities.

More specifically, cooperative learning strategy helps students tend to exhibit higher academic achievement, better high-level reasoning and critical thinking skills, deeper understanding of learned material, greater time on task and less disruptive behavior in class, lower levels of anxiety and stress, greater intrinsic motivation to learn and achieve, greater ability to view situations from others' perspectives, greater psychological adjustment, having responsibility for their own learning, develop more positive and supportive relationships with peers, more positive attitudes toward learning and the university, and higher self-esteem (Felder & Brent, 2007; Megahed &

Mohammad, 2014; Zuheer, 2008; Khalil, Tajudin, Tajuddin, Mamat, & Abd Hadi, 2014; (Johnson et al., 1998, Slavin, 1991; Farrell & Farrell, 2008; Whicker et al., 1997; Kilic, 2008; Bertucci et al., 2010).

There are various evidences to show the effectiveness of CL in university classrooms. It also fosters tolerance and acceptance among students, which improves quality of everybody's life in universities and outside academic environment including students' villages and home towns. Thus, it is very important to implement CL properly to attain the maximum benefit.

Similar findings have also been noted in studies (Yamarik, 2007; Kilic, 2008; Doymus, 2008a & b; Adeyemi, 2008; Sahin, 2010; Doymus, Karacop & Simsek, 2010; Bertucci, Conte, Johnson, & Johnson, 2010; Slavin, 2011) which report that students in CL groups have higher adjusted post-test mean scores than those in conventional lecture groups. The findings of the above research studies have led to strong arguments by various authors that cooperative learning is an effective teaching pedagogy for schools. Furthermore, cooperative learning has also been linked to a range of positive social, affective and psychological outcomes, including social support, the quality of student relationships, attitude to learning, learning skills, and self-esteem.

In addition, the results of some studies (Johnson & Johnson, 2005; Johnson & Johnson 2006; Bertucci et al., 2010) show that in cooperative learning situations students displayed a higher perception of social support, both personally and academically, than students in competitive or individualistic situations. CL also promotes more positive relationships among CL group members than does a competitive learning environment or individualistic learning (Johnson & Johnson, 2005). And such good relationships among CL group members would result in an increase in motivation, productivity, personal responsibility for achievement and commitment of working toward the achievement of the shared goals (Johnson & Johnson, 2006; Slavin, 2011; Chambers, 1996). In conclusion, it is possible to say that cooperative learning provides a tool to the educators to incorporate values in providing quality education. To achieve the full benefit of this tool, the instructor should be in tune with the learning needs of students.

7.4. Cooperative Learning Implementation Practices and Status of the Practices

Preece (2013) and Tabulawa (2003) argue that active learning is often implemented without or with limited research on the context of implementation. This shows Ethiopia's HEIs pedagogic, social and cultural contexts are to be studied before directly implementing the CL strategy to minimize problems that would be raised during the actual implementation of the strategy. Carrying out implementation study would help to maximize the effectiveness of the implementation practices of the strategy in higher education institutions.

Among the other key issue that could be considered for successful implementation practices of CL strategy in universities is aligning it with learning objectives of courses. It is obvious that using cooperative learning strategy activities are essential steps toward optimal learning. Some topics could include concepts that will be emphasized on the examinations, big ideas for the day, items that are difficult for students to master, current local and global issues to be known well and so on. The better integrated these activities are, the easier it would be to select approaches that meet overall course objectives.

In relation to CL implementation practices in the case universities various activities or sub-themes were manifested: Planning and familiarizing CL strategy, Appropriateness, CL in action in the Universities (actual use of CL strategy in class rooms and out of class rooms) and status of the implementation practices (poor CL implantation practices, good CL implantation practices).

Table 11: CL implementation practices

Cases & themes of comparison	Planning and familiarizing CL strategy	Appropriateness of CL, trainings and workshops	CL in action	Poor CL implantation practices	Good CL implementation practices
AU	√	x	√	√	x
AASTU	X	√	x	√	x
UoG	√	x	√	x	√

Believing that it is appropriate and important that ministry of education was decided to implement cooperative learning strategy in the form of one-to five group formation in public universities of

the country as student-centered learning approach targeting most importantly at improving students' academic achievement. Basically, effective CL implementation practices require deciding if CL implementation is appropriate at tertiary level, carrying out need assessment and planning for implementation; awareness creation and trainings for instructors and to all parties that directly or indirectly take part in the implementation process of the strategy.

In relation to planning, awareness creation and familiarizations given to instructors, students and management of the university opposite ideas were raised from the interviewees of the case universities as usual. This was evident from what interviewee AUPB₂ and interviewee AUEB₁ reports. Interviewee AUPB₂ (department head) for example reported that: *'There were no trainings specifically focused on CL strategy given to the university management, instructors and students.'* But as a matter of fact, what was going on in the university in relation to CL implementation for new instructors' departments was given a very short brief about: group formation, follow up and for whom they report and etc. and currently these things were also not much active. On the opposite the other thing which is very familiar in the university was induction training given for 7-10 days annually for newly coming instructors taking active leaning as one thematic area up on which the induction training was given. On top of this, the training was very comprehensive and focused on many issues including active learning method. According to the interviewee there was no planned and organized training specifically focused on CL strategy given to instructors or any other body either by the university or by EMOE.

This shows that necessary preparations that could better facilitate the implementation of CL were not carried out by the university and there was no pre-planning on how to implement the strategy, no enough trainings given particularly to instructors who play the major & irreplaceable role in the implementation process. The amount of training was not enough for both new and experienced instructors teaching. Besides, there were no refreshment trainings too. In addition, awareness creation on how to take a role in the implementation of CL strategy was not also given to students.

Contrary to the above interviewee, others reported that as there was enough preparation & enough amount of training given to all who take part in the implementation process of CL in the university. For example, interviewee AUEB₁ (college dean) reported that there was appropriate and enough amount of training given for the implementers and on top of this, there was a yearlong HDP

training given for instructors. The other exaggerated response from one interviewee indicated that *'various literatures scientific research presented for trainees on the trainings.'* But as the staff of the university the researcher didn't able to confirm this issue and it seems not true.

In the other case university, university of Gonder, the qualitative data revealed that in the implementation practices of CL strategy two major activities were carried out: familiarizing the strategy and the actual implementation activities. In relation to this, interviewee GRP₁ for example, noted: that there was an induction program for new comer instructors. Besides, each year there was also 15 days pedagogical training for instructors which is purely focused on active learning methodology. On top of this, there were different trainings focused on instructors in different colleges based on their own plane top of a yearlong HDP (higher diploma program) training program for instructors which targeted at different active learning techniques.

Another interviewee also added that, there were trainings given for instructors and there is also an induction training for newly recruited instructors mainly focused on disciplinary issues and their expected duties as an instructor. There is fifteen days training entitled "active learning" which is being given by the university each year for all instructors besides, the yearlong HDP training. Thus, the amount of trainings given on the conceptual framework and the actual procedures for using cooperative learning for instructors and other bodies who take part in the implementation of the learning strategy was not enough because efficacy of the implementation process requires conducting continuous sessions of trainings so that participants master both the conceptual framework and the actual procedures for and using cooperative learning. These all things contribute to relatively implement the strategy as an instructional practice across all colleges of the university except very few colleges.

On the other hand, there was no prior planning by the university as well as colleges on how to implement CL strategy, how to technically support, get feedback, how different bodies in the university should be coordinated for the effective implementation, provide facilities and etc. Therefore, as a university there was no as such a strong, well-planned, scheduled and organized training purely focused on CL strategy but the university's overall implementation practices of the strategy across all its colleges and institutes is relatively good.

Interviewees from ministry of education and education strategic center noted according to the current world education context and experience using active learning strategy which is based on students' interaction is the true instrument for effective tertiary level education has multiple benefit and it is appropriate to implement in the context of one-to-five group formation.

On the other hand, participants from the third case, Addis Ababa Science and Technology University (AASTU) believe that the implementation of one-to-five group formation as a CL strategy in Ethiopian public universities is inappropriate. These interviewees further argued that besides its inappropriateness the implementation was not research based and no training provided for instructors in relation to implementation of CL strategy. They said CL strategy is not properly implemented in the university. Colleges and departments were established research teams and they only speak about research and in AASTU there is a tradition of considering and reporting these groups as a cooperative learning group.

Others who participated in the interview reported that there was no any training provided for instructors and other implementers about CL in particular and way of implement it as a teaching and learning strategy. On top of this, there was no higher diploma program (HDP) training and induction trainings for both newly employed instructors and even fresh students in the university. Strengthening this idea interviewee ASRP₁ for instance reported that no former training given to instructors and other bodies who take part in the implementation of the strategy in relation to the implementation of cooperative teaching and learning strategy.

It is evident from the above comments that most of the interviewees in AASTU reported that there was no training given to instructors, college deans, department heads and other body who take part in the implementation of CL strategy in the university. Besides, there was no induction training for newly employed instructors as well as HDP (higher diploma program) in the university. Due to this case, colleges and departments simply form what they call "research teams" and consider these teams as cooperative learning groups. What is surprising is that colleges report to the university management these research teams as cooperative learning groups and as they use the CL strategy in their colleges /departments and the university management also did same thing to ministry of education and other bodies. Thus, from this it is possible to say that the CL strategy was not implemented in the university as per the interest of EMoE.

In general, when new educational innovations like CL strategy introduced to universities planning for implementation and familiarizing it to the implementers and other concerned parties contributes a lot for the efficacy of the implementation practices. Familiarizing and training programs should be initiated and given by the university and the ministry of education to create awareness and knowledge about which resulted in building willingness, positive attitude, and increases acceptance of CL strategy and commitment of the implementers. But it is clear from the above comments of interviewees of the three case universities; strong attention was not given for prior implementation plan, trainings of instructors and other bodies who take part in the implementation process. The target was mainly on reporting which greatly hamper the effectiveness of the implementation of the strategy and decrease the motivation of the instructors.

There has been a paradigm shift in the teaching learning approaches in recent years, which has moved away from teacher-centered to student-centered learning (D'Souza et al., 2014). Due to this and other issues with the leadership of the Ethiopian ministry of education, Ethiopian public universities enjoyed themselves in implementing CL strategy focusing on active learning approach to learning. Thus, though the level and effectiveness of implementation practices vary there was an endeavor of implementing the CL strategy in the form of one-to-five group formation across all public universities including the three case Universities.

In the perspective of interaction and knowledge sharing, analysis, interpretation, a large and rapidly growing body of research confirms the great utility and effectiveness of CL in higher education (Felder & Brent, 2007; Mehta & Kulshrestha, 2014; Noohi et al., 2013; Włoszczak-Szubzda & Jarosz, 2012). It was argued that CL is one of the learning methods that have social as well as academic benefits (Mehta & Kulshrestha, 2014; Włoszczak-Szubzda & Jarosz, 2012). Therefore, I think CL strategy should be seen as a key part of each lesson in university class rooms and the best way to use/implement CL is to replace individual work because individual and isolated practice seems boring and ineffective for most students.

According to Johnson et al., (2006) no matter what the setting is, properly designing and implementing cooperative learning involves five key steps. And following these steps is critical to ensuring that the five key elements differentiate cooperative learning from simply putting students into groups are met:

- (i) *Pre-instructional planning*: prior planning helps to establish the specific cooperative learning technique to be used and lays the foundation for effective group work. Plan out how groups will be formed and structure how the members will interact with each other;
- (ii) *Introduce the activity to the students*: introducing the activities to the students- students need to get their "marching orders; then structure the cooperative aspects of their work with special attention to the components of positive interdependence and individual accountability;
- (iii) *Monitor and intervene*: this is where the instructor let the groups run while he/she circulate through the room to collect observation data, see whether they understand the assignment, give immediate feedback and praise for working together. If a group is having problems, the instructor can intervene to help them get on the right track;
- (iv) *Assessment*: Some informal assessment is to be done while instructors are monitoring the groups during the exercise. However, once the group finishes their project, work should be assessed by both instructor and group;
- (v) *Process*: group processing involves asking the groups to rate their own performance and set goals for themselves to improve.

In general, in actual implementation of CL strategy especial attention should also be given when forming groups. Because cooperative learning groups present important opportunities and benefits for instruction, assessment either as an individual or as a group, evaluation and reporting on top of enabling achieving personal, organizational and educational goals of the country.

Thus, regarding the actual implementation practices of the CL strategy for instance Ambo university interviewee AUP₁ said: '*CL usage as a teaching & learning strategy in the university is not satisfactory and not found as such in good status due to regular interruption of the academic calendar, instability of the external (social context) and internal environments of the university.*'

The implementation practice of CL strategy in the university varies across all colleges and departments. In some colleges for example in Technology College using CL as a teaching and learning strategy was not yet started as to December, 2018. On top of this, interviewee from the

ministry of education reported that CL implementation practice was not attractive in universities including AU and even there is a great difference among colleges/ institutes and departments of the same college or institute. In general, CL implementation practices of AU (Ambo University) were not well-planned and organized. Besides, the pre-preparations were not satisfactory, coordinative activities and supports given were not to the expected level.

On the other side, though an interviewee from education strategic center (ESC) and most interviewees from AASTU believe as it is appropriate and important implementing CL in universities and the problem lies on how it is implemented; contrary to this idea there were interviewees who argued using CL as teaching and learning in universities particularly in science and technology universities like AASTU is inappropriate because it highly consumes brilliant students' time and energy. In AASTU colleges are implementing the strategy in their own way of forming groups called 'research teams' and its implementation practice was not uniform across colleges even if the university acts as if CL strategy was fully implemented. But what the qualitative data revealed is that the implementation of CL was almost non-existent in AASTU.

In the other case university, university of Gonder the implementation practices of cooperative learning strategy were good and in 2018/19 the university was ranked first from all public universities in the country. The interviewees further reported that there is a good coordination and commitment of all parties that take part in the implementation process including the university management, instructors and students. On top of this, to identify the extent of effectiveness of implementation practices of CL continuous assessment was used and based on the results the university plan for interventions. That is both the academic and the administrative wings were working together to achieve the goals the university stands for. The interviewees also noted that there were also no problems in relation to resource allocation and provision of facilities both in class rooms and out of class rooms that could better facilitate the implementation of CL strategy.

For the effectiveness the implementation practices one that contributes much is the way groups are formed and utilized. In Ambo University two ideas were reported. This is of course, what one was repeatedly observed in all case universities. The first group of interviewees reported that there was guide lines/manual about group formation and implantation developed and distributed by the ministry of education and CL groups in the university was formed based on their academic merit

composed of six students from high achievers, medium achievers and low achiever and one student will be assigned as a group leader (one-to-five group formation).

Other interviewee added that the university also considers ethnic and geographic diversities and group formation was mainly the responsibility of departments and departments assign one instructor for each group as a focal person or mentor who support the group providing technical assistance and in conflict management. There was a rearrangement of groups mainly due to conflict, when groups are in effective and dysfunctional (when pseudo groups created). Cooperative learning groups were active up to one year and most of the time the groups will be active till their graduation day-meaning base group formation mainly used in the case universities.

In the same way, interviewee from university reform directorate said the reform directorate introduced CL group formation and implementation guideline to colleges and departments and distributed it to all colleges and institutes though there were some interviewees who didn't witnessed the existence of the manuals. For example, interviewee AURP1 said the implementation of one-two-five group formation as CL strategy didn't have any guideline and I didn't come across even. In AU groups were formed based on students' academic result and locality and lasts till graduation time. These are stable groups and serve across all courses.

Interviewees from AASTU (Addis Ababa Science & Technology University) believe that CL can take many forms; the rifest teams being formed within the college classroom with members working conjunctively towards a common objective. Interviewee ASEM₁ for example reported that in the implementation of CL strategy the first thing to be performed is group formation and the groups could be formed randomly or alphabetically by the department or by the course instructor and there are no strict criteria that was followed by all departments/instructors and cooperative learning groups span of life could be a semester based, or a yearlong.

Other interviewees from AASTU (ASEM₂ & ASBCE₁) added that theoretically, groups are formed based on student's academic achievement which should be composed of all groups of learners. Maximum group's span of life according to these respondents is a year or some times more than a year and sometimes it could be rearranged on a semester base. But to speak the truth up to my knowledge in our department no real CL groups were formed. They are fake groups only for

reporting. In AASTU instructors form groups based on their own interest and no groups formed to implement CL groups targeting at using different CL methods in the teaching and learning process giving careful consideration to cooperative learning foundational science and ministry of education one-to-five group formation and implementation guide lines. Therefore, in AASTU various groups formed by different instructors with in the same department and as a department no one stable CL groups that serve instructors across all courses and the group size varies as per the instructor's interest from 7 to 12.

I think in AASTU's 'research teams' are like pseudo groups because from my class-room observations I noticed that members do not take responsibility for anyone's achievement other than their own. Their achievements are individually recognized. Some members would be better off (achievement-wise) working alone. Members block or interfere with each other's achievement, communicate and coordinate poorly and seek a free ride. The interaction among group members detracts from individual learning without delivering any benefit. The result seems that the sum of the whole is less than the potential of the individual members. In general, I didn't observe a group whose members commit themselves to the common purposes of maximizing their own and each other's success like the true cooperative learning groups. Besides, instructors didn't play any facilitative roles.

Furthermore, for effective CL implementation practices provision of facilities both in classrooms and out of classrooms are crucial. In this case, two interviewees witnessed that the practice of CL strategy outside the classrooms requires facilities like shades, seats, greening the surroundings to make the university compound interesting and attractive so that that attract student to come together and dealing on issues. Regarding this, nothing was established in AASTU and AU for outside classrooms activities except UoG which have by far better facilities purposely established for team learning activities outside of classrooms. I think in order to facilitate student's effort achieving mutual goals, ministry of education and the university's management has to give better attention for the establishment of these outside class room facilities.

On the other hand, at University of Gonder departments were responsible to form groups based on the criteria like: academic result, sex for equity matters and class participation and the group members select their group leader. Departments give orientation about group formation criteria,

its purpose; how to nominate their leader and other things and due to all these students have clear understandings about CL groups formation and about CL groups common goals. The groups are composed of six students from top, average and slow learners. A coach from instructors is also assigned for each group that could support them in solving problems and make the group more effective in their activities. The qualitative data revealed that many interviewees didn't know when exactly implementing one-to-five group formation as CL begins in their university.

Though group formation and implementation guide line were in the university, it was not made available for all colleges and they use the HDP manual to form CL groups to select different CL methods that will be used in classrooms. On the other hand, other interviewees reported as a CL implementation guideline distributed to universities including university of Gonder. The problem lies on communicating to all implementers. Interviewees in the university also reported that it is possible to implement CL strategy in medicine and health science varying the group size from of 6-8 students. Interviewee GMHS₂ for example noted that the group size differs from course to course. Groups' span of life in the university ranges from a semester to graduation.

To sum up, regarding group formation which plays the major role for the actual implementation some case universities tried to consider various factors like students' academic status, geography/region and so on. The researcher observed multiple times the classrooms and out of classrooms of the case universities to get the real picture of actual implementation practices of CL strategy. The researcher wanted to gain an idea of how students and instructors used the pedagogical innovation (CL), roles to be played by each student in a group, role of instructors, group members commitment to the common purposes of maximizing their own and each other's success, composition of groups, whether the principles of CL was being practiced and coronation between members of the groups and the instructor.

Thus, in most groups I didn't observe the believe that "if one of us fails, we all fail," hold each other accountable for doing the work, promote each other's success, use social skills, and process group effectiveness. I didn't also observe students concerned about each other's learning and the five basic elements of cooperative learning utilized while working together to get a job done in a classroom. Thus, the five basic elements of CL didn't exist and implementation of CL cannot be succeeding unless they are fully utilized (Tinto, 1994).

In other way, instructors were not fully played their role of facilitating. They consider as all members of groups actively listen, forward ideas and participate common group success. But simply because students work in small groups does not mean that they are cooperating to ensure their own learning and the learning of all others in their group (Johnson, Johnson, and Holubec, 1993).

I think there is a great difference between having students work in groups and structuring the groups to work in a cooperative exertion. What the instructors both in AU and AASTU did was they break students into teams for class discussion or group work and made work assignment related to lecture and report to the class. In AU some instructors made students work in temporary teams to work on assignments related to the lecture and present it for the entire classroom discussion. In the three case universities except 4 classes of UoG the instructors were not play roles expected of them. They didn't facilitate the groups' activities, support them, ask the group if problems are there and try to give solutions.

Furthermore, the instructors were not observed whether all group members equally and actively participate, responsible for their work, coordinated and communicate to the expected level and processing as a group. During their activity I also observed that in most groups one or two students dominate talking the entire time and the other group members were passive listeners. The instructors didn't influence other students to speak and play their own role and contribute to the achievement of group goal. This shows that there was much dependency in groups. Among the problems of implementation CL in the university was in most cases its limitation to classrooms and students didn't have much interest to work together outside of classrooms.

Thus, I think these sorts of ad hoc teams are not what cooperative learning is all about though. And a good number of instructors were not playing their roles that greatly contribute for effectiveness of CL implementation practices. This is why studies find that most instructors don't use cooperative learning regularly, despite extensive research supporting it (Gillies, 2014; Roseth, Johnson, & Johnson, 2008; Slavin, 1995, 2013; Webb, 2008). It is the "learning" in cooperative learning that is too often left out. In general, in CL approach, the instructor acts more as a facilitator, rather than as a lecturer. With type of instruction, students are encouraged to work together as group, to discover the knowledge and to help each other teach (Walters, 2000).

Therefore, special attention should be given when forming groups and the role instructors play in establishing cooperative learning in the classroom is critically important for its success. This involves being aware of how to structure cooperative learning in groups, including their size and composition the type of task set; expectations for student behavior; individual and group responsibilities; and the instructor's role in monitoring both the process and the outcomes of the group experience is very important and colleges and departments should give special attention in motivating and empowering instructors for success of the implementation practices of the strategy.

Regarding the utilizations of the principles that serves as the base for the effective implementation practices of CL, some interviewees noted that due to lack of appropriate training and follow up from the university management and ministry of education instructors were not using the underlying principles of CL and implement the strategy as expected. They consider the strategy simply a collection of students which didn't have any principles to guide its implementation; role to be played by each group member, instructors and this condition led the implementation of CL and teaching-learning process to harsh situation.

Interviewee AUEB₂ for instance, noted that each instructor didn't know principles the implementation of CL is based on. Other interviewees further elaborated that most instructors didn't know how of the principles that make the performances of CL groups more effective. In the same way, interviewees in AASTU asserted that most of them did not know the basic principles of CL strategy, for example, they consider students' academic achievement as one of the most important CL principles. This shows that poor knowledge of implementers about CL in general and its foundational sciences in particular misleads the implementers and highly influences the endeavor of the implementation practices diverting them from taking responsibility and being accountable for their work which resulted in fake reporting.

From my class room observation particularly at AU and UoG, I also noticed that instructors were sometimes mistaken that they were using the cooperative learning model. They often times feel that just telling students to "work together" or putting groups of students in teams for assignments means that they are utilizing cooperative learning techniques. Merely because students work in small groups does not mean that they are cooperating to ensure their own learning and the learning of all others in their group (Johnson, Johnson, & Holubec, 1993).

With regard to coordinated activities expected from each body who take part in the implementation of the strategy and technical support that should be given by EMoE, university management and other concerned bodies for the success of CL implementation practices most of the interviewees of AU agreed that there was no coordinated effort among all bodies within the university and ministry of education. On top of this, there was no timely technical support from both the university and the ministry of education which have its own share in influencing the efficacy of the implementation practices other strategy in particular and the quality of class room learning in the university and education system in general.

Opposing the above idea, only few interviewees believe that there was coordination between implementers and the technical support from the university and EMoE. For instance, interviewee RME₁ (from ministry of education) argued as EMoE supports the implementation of CL in giving trainings, technical assistance, and supervision and tried to work in a coordinated way as per government plan.

On the other hand, coordinated activities in AASTU were almost non-existent to implement what they called “research teams”. What was there is that the top management always seeks to get reports. Further, no as such additional material and resources provision and instructors were using what already provided. The interviewees confirmed that university’s management involvement in the implementation process is very poor. Besides, the commitment and initiation to implement CL strategy by students and instructors was also very poor. In relation to this, interviewee RSC₁ (from education strategic center) reported that since education is a huge investment it requires strong support and participation of all stakeholders but what we are seen at AASTU is the opposite. Through supervision, giving technical support, creating a forum for sharing experiences and giving solutions for problems encountered during implementation of CL among all parties who take part in the implementation process it is possible contributes a lot for the success of the implementation process.

In sum, the university management spoke of their claimed being implementing CL strategy while their actual practices were different. This shows that AASTU has been using more of lecture method to teach students. Instructors and management of the university were not attentive to implementation of CL strategy. The instructors were more focused on knowledge transition than

collaborative teaching-learning process, though their students were sitting in groups. Students were passive recipients of the instructors' explanations in Technology University which expected to be more focused on practical and cooperative work.

In university of Gonder according to the qualitative data there was a much better coordinated effort among all parties that help them to carry out activities of the teaching and learning process including the implementation of cooperative learning strategy. The interviewees reported that both the academic and the administrative wings were working together to achieve the goals to which the university working for. UoG relatively is on a good status in implementation practices of CL. They were also added there was a continuous assessment focused on identifying extent of effectiveness of the implementation of CL and based on the results obtained intervention plan that better improves implementation practices of the strategy were developed. Interviewee like GMSH₂, for example noted that it is possible to implement CL strategy across all courses give in the university using different methods.

Thus, it possible to learn from the above interviewees idea that lack of coordinated effort, absence of technical support and responsible body that follows up the implementation of CL strategy influenced the effectiveness the implementation process and made the implementation practice to be hanged on individual's commitment and interest which resulted in poor implementation practice and limited its implementation only to classrooms.

With respect to communication among the implementers which facilitates the effective implementation, as usual different ideas were raised from the interviewees of the case universities. For example, in AU most of the interviewees reported that the communication was mainly paper based on quarter or semester base and others said implementers exchange information on meetings at department, colleges and university management level. There was no way of visiting class rooms except reports from the instructors. Thus, there was no way of giving technical support for instructors which may better help instructors by giving timely solutions for problems that may occur during the actual implementation process.

Though successful implementation of CL demands the skills of cooperation, leadership, team work and division of labor (role) among the implementers which help them to be efficient in their

endeavor of implementation of the strategy in AU: strong emphasis was not given for communicating each other, giving timely solution for problems based on combined effort of knowledge and manpower but mostly it was focused on quarter or semester based reports without ensuring whether what have been written on papers is actually happened on the ground or not. This shows that the necessity of strong follow up and provision of technical support (i.e. directly observing what is actually happening both in classrooms and out of classrooms through supervision) for instructors, students, departments, colleges and other bodies who take part in the implementation process of CL as a teaching and learning strategy.

In the same way, AASTU's experience in this regard, was not much different. Majority of the interviewees agreed that information was not directly from classrooms through supervision but through meetings on colleges and the university's management level. There is also a paper-based report from colleges and departments on quarter base or on months as required. Interviewee ASRP₂ for instances, reported that: No classroom supervision, the groups give reports to the department head and the department head also discuss the implementation practices/process with instructors focusing on the strength, limitations, problems faced and solutions given and compiling reports send to the college dean. In turn colleges compiling all reports collected from departments send it to all vice president offices. And vice presidents discuss the issue with the president of the university every month. And the five vice presidents evaluated by the president about the implementation of one-to-five group formation (research teams according to AASTU) as a CL strategy. AASTU here make itself buskin serious sequential steps of report collection without implementing the strategy.

This shows that the university management used to talk much about one-to-five formation (CL) strategy on meetings and consider this as if CL is being implemented in the university in real sense. But on the ground no implementation practices of CL strategy that is different groups formed by different instructors in same department what some called it "research teams". Meaning no group formed as a department that serves all instructors commonly. The university and the college strongly focused on collecting fake reports for the sake of elongating their office life.

Differently from other case universities in UoG good communication among implementers of CL strategy was observed. In UoG also there was no direct observation of CL implementation

activities in a class rooms while they are working in groups. Performance information about CL implementation practices obtained from departments and colleges through reports, meetings, informal discussions, during LAB work and practice programs. They also get information about instructors' endeavor of CL implementation practices from students. In general, according to interviewee GRP₂ feedback about the implementation practices of CL was obtained in the university in two ways that is (i) through discussion on meetings carried out every fifteen days by the university's academic council and the feedback was given to the colleges and departments like a check list as a direction and next time colleges and departments evaluated based on the check list. (ii) paper-based reporting starting from instructors to the academic vice president office.

In the same way, the ministry of education (EMoE) gets a feedback about the implementation practices of CL in two ways: through paper-based reporting and the second is through supervision which carried twice a year. And then EMOE prepare a general report which shows the strength, limitations and exemplary activities of the institutions in relation to the implementation CL as a teaching and learning strategy. Besides the ministry gives a rank for universities based on their performance. On top of this, there is no as such strong technical support to universities given by EMoE rather than focusing on collecting reports from the leadership of the university.

In sum, though the forms, interest and commitment of the implementers are different, no need assessment and implementation planning carried out, no coordination among all parties in real sense, absence of technical support and absence of out of class room facilities were observed in the case universities except UoG. Repeatedly contradicting views about an issue also reflected from interviewees; though in one case university: colleges /departments and instructors formed different groups based on their own interest without considering what CL is and due to hatred of implementing one-to-five formation as a CL was reflected. The status of the implementation practices of the strategy varies among the case universities even though an endeavor of using CL as as a teaching and learning strategy was there in UOG and AU.

Hence, the inter case analysis, regarding the implementation practices of CL strategy in the three case universities affirmed that instructors mentality of implementing one-to-five formation as a CL strategy was equipped with two conceptually contrasting ideas: one is 'blind' hatred considering it as a government political tool and government interest to influence universities; and

the second is ‘current international and national trend to move teaching and learning in universities towards student-centered approach taking CL as a pedagogical tool than traditional methodology which makes instructors the sole knowledge providers in classrooms’.

The hatred issues observed in the case universities were manifested by different indicators: Some were manifested by implementers (universities’ management, instructors and even good achiever students) actions such as not accepting/rejecting the name one-to-five group formation, reluctance and being unwilling to use the strategy particularly by instructors. Besides, instructors and university management have been orally expressed their hatreds towards government interference in academic environment through one-to-five group formation, good achiever students consider the approach as a time killer and become unwilling to participate in group works; and students’ hatred towards to their education and instructors who tried to use the approach most of the time.

Concurrently, un-necessary dialog created between instructors and departments and even colleges when colleges and departments forced instructors to use one-to-five group formation as a CL strategy. These conditions were mostly observed in AU and ASSTU and slightly in UoG. particularly in AASTU these resulted in forming fake CL groups which they call it ‘research teams’ and in this study, implementers particularly instructors concern about one-to-five group formation was identified as a barrier for better implementation practices as a CL strategy.

7.5. Obstructers in CL Implementation Practices

The inter-case analysis confirmed the existence of various challenges the case universities faced. The challenges were different among the case universities and three types of challenges were identified as major and common for the case universities. The identified challenges are: absence of need assessment & planning, poor familiarization, inadequate resource provision, human related factors and external environment related factor were observed in the three case universities as presented in the following table.

Table 12: Obstructors in CL implementation practices

Universities/ cases	Absence of need assessment and planning, absence/poor familiarization, inadequate resource provision	Human related factors	External environment related factors
AU	√	√	√
AASTU	√	√	√
UoG	√	√	√

Implementation practices can fail for many reasons, but the most common causes are inadequate training of instructors and poor preparation of universities with regards to planning, provision of facilities, technical support and so on. Instructors would-be benefited from trainings, workshops and coaching so that they can practice skills and improve their ability to implement CL strategy both in and outside classrooms. Cooperative learning can also fail if students do not possess necessary communication skills, social skills, how to settle conflicts and how to deal effectively with group members for successful group work.

In this study, on top of poor conceptions and lack of knowledge about CL, lack proper, enough amounts and continuous training, there was mismatch between what are reported and actual implementation practices of the strategy in the case universities. The diverse challenges encountered each case university from both the internal environment and external environment may also contribute for the mis-match of actual status of implementation practices and what is reported. The inter-case analysis surfaced out that lack of commitment & coordination of stake holders, absence of planning, inadequate provision of facilities and technical assistance, implementers related feelings and dependency were among the challenges faced the implementation practices of CL strategy in the case universities.

For instance, In Ambo University, absence of implementation planning, lack of coordination, poor commitment and provision of resources, implementers' related feelings and student's dependency were considered as barriers of effective CL implementation. In this regard, Interviewee RSC₁ also added as there were problems of planning a head, lack of provision of some basic facilities that would better facilitates the implementation of the strategy and on the other side, and ministry of education strongly influenced the institutions to implement the strategy though the ministry lacks strong coordination and commitment.

In the same way, research participants from University of Gonder reported that attitudinal and misconceptions of instructors, students and management of the university were among the challenges that limited the scope of success of implementation of the strategy. Particularly instructors feel that as the strategy was the political tool of government in universities. They also added that attitudinal and misunderstandings of instructors, students and even top-level managers were the major obstacles that hindered the effectiveness of CL implementation process in their university.

On the other hand, interviewees from AASTU argued that it is human related factors (negative feelings & attitude and low commitment) that mainly influenced the implementation practices of the strategy. The interviewees further added that the implementation of CL strategy was not only a top down approach it was also highly politicized by the government & this was very offensive for instructors and due to this case instructors were not feeling good and they said implementation of one-to-five group formation developed dependency in slow learners and it is a place where students exercise corruption. They also reported that “we are not developing self-learner students but supporting them to get good grades without deserving it. Universities are not building the capacity of students but rather freely let them to graduate.”

The inter-case analysis confirmed that it was human related factors highly influenced the efficacy of the implementation practices of the strategy in the case universities though the hatred issues observed were manifested by different indicators. For example, the qualitative data from AASTU clearly indicated that it was the negative attitude of instructors, students and individuals from the university’s management influenced the implementation practices of group learning.

I think this is also the problem of the other case universities. On top of this, the qualitative data showed that all interviewees from the three case universities agreed that dependency of slow and some average student on top students is among the great challenge CL implementation endeavor faced.

It is not fair and very frustrating if one group member does not contribute as much as the others do. They need to recognize that he/she needs to add more to the group (Middlecamp, 1997; Bower & Richards 2006). These authors consider dependency as a drawback of successful implementation of cooperative learning. The inter-case analysis of this study has additionally proofed that there was no prior need assessment and implementation plan in the three-case

universities that could better enable them identify expected challenges and prepare them in a better way to overcome the problems.

The inter-case analysis also showed that each body who take part in the implementation of the strategy didn't play their role to the expected level. Interviewee AUP₁ and ASEM₁, ASBCE₁ for example commented that "Each party didn't play what was expected of it to the maximum level particularly the university management mainly was focused on seasonal works and seeking paper-based reporting.

On top of the above curses, the external environment in which the university operating was also highly influencing their effort of implementing CL. For instance, interviewees from AASTU & UoG, (ASEM₁, ASEM₂ and GRP₂) reported that "regular interruption of the academic calendar was a problem from external political conditions resulted in regular interruption of the academic calendar which highly influenced the effective implementation of the strategy. "Similar to other case universities this problem was also demonstrated in AU. As it is perceived and observed by interviewees, the environment at which the university situated was blamed as one major factor for the lack of success in CL implementation.

In sum, though the case universities were different in their performance level, attention they give and management commitment as reveled by the qualitative data, nearly similar behaviors (from conception to practice) were observed across the universities. Particularly, the case universities were not able to give appropriate training except with slight difference of UoG, there was no technical support, coordinative activities and give high value for paper reports even without checking what is actually happening on the ground. What is special for AASTU is that they reported these challenges as a barrier though actual CL implementation practices was not yet begin. In general, implementers related factors (negative attitude & feelings, poor commitment) and regular interruption of the academic calendar due to external environmental conditions were among the major challenges influenced the endeavor of using CL strategy as an active learning approach.

Besides, though CL strategy has those well documented benefits still it didn't effectively utilize by many learning institutions and even instructors do not prefer to use this pedagogical practice in classes. IN general, the aim of active learning is to give students responsibility about their own

learning process and, therefore, create flexible, creative and proactive thinkers (Campione, Shapiro & Brown, 1995; Prince, 2004).

Thus, in order to increase the CL groups' performance, instructors must know how to recognize pseudo and traditional groups and know how to provide a cooperative structure. Instructors and the university management have to identify challenges related to the external environment, internal environment, instructors, and students, as a CL group and timely solutions must be given to facilitate situations for better performance of groups both in the classrooms and out of classrooms.

The qualitative data and my observation data of classrooms in the three case universities revealed that there were many problems hindered CL implementation practices effectiveness. Potential barriers to cooperative learning effectiveness include:

(i) *Groups lack of heterogeneity*: They said groups formed were heterogeneous but practically homogenous-composed of students from the same locality. Groups must develop the right heterogeneous mix. (Observed in AU and UoG)

(ii) *Lack maturity and experience*: Due to various reasons CL groups members lack experience working together to develop into an effective group. (Observed in all cases universities)

(iii) *Dependency*: It is a sort of free-riding or high interest of getting something for nothing. Some interviewees express CL groups as a place where students exercise corruption. (Observed in all case universities)

(iv) *Problems related with teamwork and social skills*: Groups with members who lack social skills often underperform their most academically able members. (Observed in all case universities)

(v) *Size of the groups*: The larger the group, the fewer members that can participate, the less essential each member views their personal contribution, the more teamwork skills required, and the more complex the group structure (Johnson & F. Johnson, 1994). (Observed in AASTU & UoG particularly for Lab. works)

(vi) *Lack of taking responsibility and accountability*: Randall (1999) found fault in the basic premise on which the method is based; that the members of the group are responsible for each other's learning. When one person is stuck doing all of the work it is unfair for the group to get the

credit. Mentors and instructors need to be very diligent in the monitoring of the process to make sure that all members are contributing. (Observed in all case universities)

Overall, since the benefits of cooperative learning seem to outweigh the problems all concerned parties must diligently monitor the activities of CL implementation process and give the necessary support and thus, many of these problems can be overcome and the universities and country be in a better position to achieve the stated national higher education targets.

CHAPTER EIGHT

Quantitative Data Presentation, Analysis and Interpretation

8.1. Introduction

The purpose of this research project was to explore higher education institutions practices in implementing cooperative learning strategy. It is important to bear in mind that this research project was conducted in two phases. The first phase was the qualitative study phase and the second phase was the quantitative study phase. The results of the qualitative study helped to develop the survey instruments based the seven categories identified. Following this, the quantitative study was carried out to determine if the results from phase one (the qualitative phase) can be generalized to a population of instructors, students and university management at the study sites and answer research questions.

This chapter deals with the presentation analysis and interpretation of the survey data collected from respondents in three sample universities. The quantitative analysis comprises two main parts: demographic characteristics of the respondents and analysis and interpretations of the main data. The questionnaires were prepared for university instructors and third year students. The data are presented in numerical figures and in table formats.

8.2. Demographic Data of Participants

In this part of analysis, the researcher focuses on demographic factors of the research participants. The empirical data were from individual sample universities and the research participants personally completed the surveys with the sample size of 35 instructors from three sample universities and 117 students from three sample universities having 3-5 years of university education.

The researcher wanted to confirm that this research was blessed with high return rate. Of total respondents 97.3 % and 97.5% return rate observed for instructors and students' group respectively. That means almost 97.4 % of respondents filled the questionnaires and returned them for the analysis.

The demographic characteristics contained nine items for the instructors and six items for students. The items covered by the survey to obtain demographic characteristics from instructors include their university, faculty, area of specialization, gender, age, education qualification, academic rank, and total university teaching and experience in using CL strategy. Similarly, students' demographic data included their university, faculty, gender, year level and experience in using CL strategy. Tables 13 to 15 show the instructors' and students' demographic data.

Table 13: Sex composition of respondents

*Sex * university Cross tabulation							
		Students		Instructors		Total	
		Count	% within Sex	Count	% within Sex	Count	% within Sex
Sample universities	UoG	39	33.3%	12	34.3%	51	33.6%
	AASTU	38	32.5%	11	31.4%	49	32.2%
	AU	40	34.2%	12	34.3%	52	34.2%
Sex of respondent	Female	49	41.9%	10	28.6%	59	38.8%
	Male	68	58.1%	25	71.4%	93	61.2%
Total		117	100%	35	23.0%	152	100.0%

As it is observed in Table 13 above, the researcher has selected almost equal number of instructors in all sample universities. The majority of respondents' groups (71.4% of instructors and 58.1% of students) were males. This makes clear that there is a male dominance and gender gap that exists in the public universities in instructors and students which seems narrowing the gap is a clear assignment of ministry of Science & higher education and universities.

Table 14: Students' experience in using CL

*Students*year experience in using CL Cross tabulation			
		Frequency	Percent
Valid	0 year	8	6.8
	1 year	43	36.8
	2 years	1	.9
	Total	52	44.4
Missing		65	55.6
Total		117	100.0

Table 14 depicts students' experiences in using CL strategy. With this regard, the majority (55.6%) of students have refused to respond for this question. This refusal may indicate that either they were not

exposed formally to use CL as a teaching and learning strategy or they did not know exactly what cooperative learning means. Of those 52 (44.4%) respond to this particular item, 36.8% of them had only a one-year experience, while 6.8% of students totally had no exposure to the strategy. This would indicate that overwhelming majority of the students have little, no experience or have no clear understanding about cooperative learning model.

Table 15: Demographic characteristics of Instructors

*age*year experience in using CL* Year/s of teaching in University* level of teaching* Educational qualification* and * academic rank Cross tabulation				
		Frequ ncy	Percent	Cumulative Percent
Age in years	20-25	1	2.9	2.9
	25-30	13	37.1	40.0
	30-35	8	22.9	62.9
	35-40	7	20.0	82.9
	40 and above	6	17.1	100.0
Year/s of teaching in University	0-1 years	1	2.9	2.9
	1-2 years	6	17.1	20.0
	2-3 years	4	11.4	31.4
	3-4 years	9	25.7	57.1
	4 and above	15	42.9	100.0
Experience in using CL	0-1 years	11	31.4	31.4
	1-2 years	10	28.6	60.0
	2-3 years	7	20.0	80.0
	3-4 years	5	14.3	94.3
	4-5 years	2	5.7	100.0
At which level do you teach?	Completely at undergraduate level	3	8.6	8.6
	Mostly at undergraduate level	32	91.4	100.0
Educational qualification	BA	2	5.7	5.7
	MA / MSc	26	74.3	80.0
	PhD	7	20.0	100.0
Academic rank	Lecturer	22	62.9	62.9
	associate Prof	4	11.4	74.3
	assistant Prof	9	25.7	100.0
	Total	35	100.0	

The table above shows instructors' demographic characteristics and hence the majority (62.9%) of them was under 35 years old. That means young instructors were dominating in number in the sample universities with smaller university teaching experience. Meanwhile, majority of the respondents (57.1%) had less than five years of teaching experience in university.

The instructors were also asked about their experience in using CL strategy in the teaching and learning process and hence majority of them (60%) had less than 3 years' experience in using

cooperative learning strategy. Furthermore, a high number of this group was engaged mostly in under graduate programs, having MA /MSc and working with the rank of lecturer.

To sum it up, most of the instructors from the three case universities lacks maturity and experience both teaching in universities as well as in using cooperative learning as a teaching and learning strategy which has a direct effect on quality of classroom learning in particular and education in general. This data can tell us how much these universities are in problem lacking/losing well experienced instructors and focusing on recruiting graduate assistances mainly not because they academically well but due to political motives which plays the major role in negatively affecting both quality of university education and quality of graduates and makes them in competitive front of their employees. Thus, EMOE and universities have to work together and find ways of that enables to improve merit and academic qualifications of instructors through formal education, short term trainings and experience sharing activities.

8.3. Analysis and Interpretation of the Main Data

The data collected through questionnaire were organized, analyzed and interpreted in line with the research questions and some research objectives of the study as described below:

1. How do higher education institutions implement cooperative teaching & learning strategy at curriculum level?
2. Which cooperative learning methods are mostly practiced in teaching and learning process?
3. How do instructors and students in the university context experience CL?
4. Does the implementation of CL strategy benefits students?
5. Do universities and Ministry of Education support implementation of cooperative learning by putting more resources and provisions of technical supports?
6. What are the opportunities and challenges that CL is facing? And how will cooperative learning implementation practices be improved for the future?

Furthermore, the investigator tried to focus on the following research objectives:

1. Comparing and contrasting the cases regarding the implementation practices of CL and enduring its consequences,

2. Distinguish the major determinant factors affecting the implementation practice of CL strategy and
3. Exploring the advantages of implementation of CL on curriculum implementation and improvement of quality of education.

Research Question 1: How do Higher education institutions implement cooperative teaching & learning strategy at curriculum level?

One-to-five group formation strategy is being implemented as an instrumental strategy used to improve students' academic achievement and for ensuring quality of education in universities. However, its practice along the objectives should be scrutinized as follows:

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Actual CL implementation practices

In relation to this, eleven questions for students and twelve questions for the instructors were forwarded to assess actual implementation practices of CL strategy in the three sample universities. Of those questions raised for both groups, eleven of them were asked similarly for both groups and hence the agreement and disagreement level these commonly raised questions for both groups were evaluated. Thus, the study summarized these commonly raised questions, and produced one item, which is called 'CL implementation practice'. Using this recoded variable, the investigator would be able to evaluate the overall practices of the case universities CL implementation practices at curriculum level. Furthermore, the study was comparing the CL implementation practice between groups, like between different universities, between the two groups of respondents and etc. for further analysis.

Many research papers have disclosed that how CL plays an important role in imparting long lasting knowledge for the students if it is implemented regularly according to its foundational science, principles and its elements. Effective implementation of the strategy requires studying the context on how to implement, provision of appropriate & enough amount of training and a planned and coordinated effort among all parties who take part in the implementation process. But in this research the majority of respondents from the two groups were unable to show either their

agreement or disagreement for five items as shown in the table (see appendix-k). Those items were including item 1 –whether evaluation principles were developed, item 4 -employing formal, informal types CL, item 5- CL group composition, item 7- each CL group members’ personal responsibility and also for item 8- university provisions for supporting cooperative learning strategy implementation practices.

Regarding, item 1 the majority of respondents (45.3% of students and 34.3% of instructs) have shown their disagreement or neutral position and unable to show their decision on issue that whether or not the implementation practices of CL was guided by the result of “study conducted and principles developed prior to the implementation”. On the other hand, almost fifty percent of respondents from both groups were not in the position to decide about the utilization of different types of CL, like: “formal, informal and base groups independently or in an integrated way” in the teaching and learning process” (item 4). This illuminates mismatch between said and observed practices; particularly the instructor respondents clearly indicate as there is lack of training because they didn’t know the CL type, they are using though it is said they are implementing the strategy. Hence, universities needs to discuss problems of CL implementation practices with instructors, students and bodies who take part in the implementation endeavor and find solution through trainings and awareness creation activities.

In relation to, the composition of the CL groups (item 5), the majority of the students (42 or 35.9%) and instructors (16 or 45.7%) respondents’ groups have shown neither their agreement nor their disagreement. This would indicate that CL groups were not intentionally organized based on academic achievement, ethnic background, language, geographical backgrounds or a combination. This condition may create a problem on groups’ effectiveness, duration and considering group dynamics while forming them would play an important role in facilitating the achievement of goals. According to Johnson and Ahlgren (1976) and Johnson et al. (2007), group dynamics play an important role in effective collaboration, and or cooperation is a key to group’s ability to accomplish a common goal. Hence, concerned bodies should pay a due attention when forming groups in order to maximize the benefits that students would possibly get from CL implementation.

In terms of CL group members personal responsibility for completing tasks half of the student respondents (47.9%) and a good proportion (34.3%) of instructors' respondents were also in the position of undecided. On the other hand, in relation to university provision of trainings, resources, established implementation system, clear responsibilities and hierarchical control to supervise the actions of the implementers the majority of these two groups (40.2% of students and 31.4% of instructors) were unable to decide on what is going on.

On the other hand, the two respondents groups have shown their disagreement for 3 items (i.e. item 2 "instructors use different CL approaches", item 6 "utilization of memorandum of understanding" and item 12 "CL implementation practice is only limited to class rooms"). As shown Appendix-k, more than 60% of respondents group for these three items were not sure to see different CL approach neither of instructors, nor on the using memorandum of understanding for CL implementation and also its implementation was limited to classrooms.

About the rest 3 items (item 3 "CL is designed requires relying students on each other to complete tasks", item 9 "existence of coordination among: the university management, departments, instructors and students" and item 11 "the success of CL implementation depends on how well groups are functioning and managed") the agreement level of the two group were quite different. Majority of students respondents ((47.9%, 35.9% and (47.9%)) have shown their agreement for three items respectively, while a small number of instructors 17.1%, 11.4% and 20% respectively have shown their agreement with the mode value of 4.

This implies that instructors denied on the design of CL group, existence of coordinated effort of CL and how well groups are functioning and managed. In general, the two respondents' groups have shown their disagreement for almost all items of CL implementation practices though their disagreement level varies.

Finally, majority of instructors (40.2%) have shown their agreement for item 10, which was asked specifically for instructors, that says "trainings on cooperative learning has not been practical enough for instructors to implement it successfully". This implies that CL has not been practical in the instructors training.

From the above discussions one can easily infer that the data collected from the research participants is matured enough to show the reality about CL implementation using their experience in CL implementation practices. Responses from these groups can capacitate to make generalizations about current level of implementation practices of the strategy in the Ethiopian public universities was not good enough.

The instructors simply put together by the name ‘CL groups’ to accomplish certain classroom tasks but clearly lacks knowledge about elements of CL, being sluggish and absence of timely technical support for instructors to take corrective measure. These all things could have their own contribution in hampering the effectiveness of implementation of the strategy. Besides, CL activities mainly limited to class rooms. Thus, to minimize these all problems parties that could take part in CL implementation process should better concerned just starting from planning stage to assessment and evaluation to narrowing observed gaps on CL implementation practices.

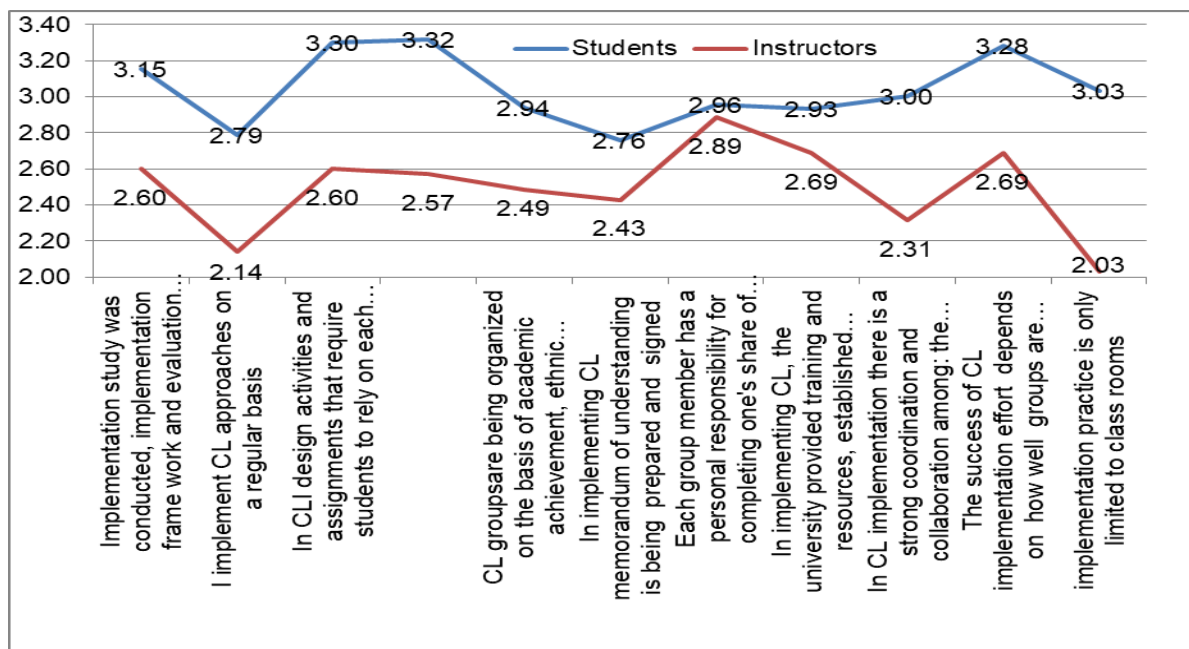


Figure-8: Average score of respondents for CL implementation practices

Figure 8 shows the average score for each variable in CL implementation practices for both respondents groups. The average score of the two groups scored from 2.03 to 3.30. As it can be seen in the above figure students group was more confident to each variable than the instructors group.

In general, the instructors showed either their disagreement or neutral position for all items while the students group showed their agreement for three items out of eleven and showed their undecided or disagreement for the rest 8 items. As shown in figure 8 the instructors were scored below 3.0 for all eleven items, while the students group scored above 3 only for five items. Both respondents' groups responded negatively for the following items:

- CL strategy is being implemented on a regular basis,
- CL groups are being organized on the basis of academic achievement, ethnic background, etc.,
- In implementing CL memorandum of understanding was prepared and signed by all group members
- Each group member has a personal responsibility for completing one's share in implementing CL,
- The university provided training and resources, established implementation system, clear responsibilities and hierarchical control.

This clearly indicates that both instructors and students have observed unsatisfactory and uncoordinated implementation practices of CL strategy in their respective universities. To generalize this issue (implementation practices of CL strategy at curriculum level), were at the initial stage without proper organizational and institutional setup. It seems the implementation was performed intuitively in the target universities.

Generally, the descriptive analysis revealed that relatively higher number of the respondents from both groups repeatedly showed either their disagreement or neutral position for majority of items raised in relation evaluation of implementation practices of cooperative learning strategy in the case universities. This shows that the research participants may be didn't know much about what is going on regarding CL implementation activities or they are purposely showing their hatred and negative attitude towards using one –two-five group formations as a CL strategy.

Thus, ministry of education, the universities management and other concerned bodies have to work collaboratively on key issues in implementing cooperative learning: trainings of instructors, grouping of students (- preparation of groups memorandum, group activity plan, group size, group duration, group selection, composition and how to functioning as a CL group), selecting appropriate CL methods and techniques, assessing CL group work, instructor's roles in CL

implementation, basic principles and elements of CL. Besides to all these, there should be provision of resources and facilities, working in coordination and implementing all types of CL both in and outside classrooms.

If all parties that have a share in CL implementation have a good knowledge and understanding on these key issues mentioned above may resulted in a successful use of CL in classrooms because successful CL practices substantively relies on how well the key issues in implementing CL are understood and addressed that much contribute to positive outcomes of cooperative learning. Further, the study was designed to examine the CL implementation practices among different universities and whether opinion difference is there between the two respondents' group regarding CL implementation practices. In this process, the study wants to show the existence of significant or insignificant mean difference in average score of implementation practices among the case universities and in between the participants groups.

Comparing sample universities in terms of average CL implementation practices

This sub-section, aimed at identifying the university that implement the CL strategy most frequently and at the same time to spot the university that has lowest average CL implementation practices. Actually, statisticians advise us to implement independent sample t-test and ANOVA for comparing mean score of one or more groups. As stated, the significance difference between the mean score of two samples judge through either z-test or the t-test. Here in this application the sample universities were three (more than 2) and hence the investigator employed one-way ANOVA to compare average score of one university with the others. In fact, the researcher aimed to compare the average score of CL implementation practice of among sample universities.

Table 16: Multiple Comparisons

Descriptive				ANOVA					
	N	Mean	Std. Deviation	CL Implementation practices					
				Sources of variation	Sum of Squares	df	Mean Square	F	Sig.
UoG	51	2.9533	.43159	Between Groups	.641	2	.321	1.005	.369
AASTU	49	2.9147	.65097	Within Groups	47.538	149	.319		
AU	52	2.8171	.59218	Total	48.179	151			
Total	152	2.9072	.56486	Dependent variable: CL Implementation Practices					

Df1 = 2 & Df2 = 149 and significance = 0.369

The average CL implementation practice in three sample universities, namely in UoG (University of Gonder), AASTU (Addis Ababa Science & Technology University) and AU (Ambo University) were 2.95, 2.91 and 2.82 respectively. The null hypothesis of One-way ANOVA is that the “average implementation practice of CL at UoG, AASTU and Ambo universities are all equal”, or no difference in average implementation practice of CL among sample universities. The main intention of the ANOVA model is to put decision for accepting or rejecting the null hypothesis of ANOVA model. As usual, the decision rule for accepting or rejecting the null hypothesis is determined by p value (sig.) or using F ratio. We can reject the null hypothesis when the significance value is less than alpha (0.05) and conclude the inequality of average score among the groups, otherwise accept the null hypothesis or mean score of multiple groups are not equal.

As shown in Table 16 the mean score of three sample universities had equal or nearly equal because of the observed big p value [$F(2,149) = 1.005$, $p = 0.369 > 0.05$]. Meaning the null hypothesis is justified. Hence, I accept the null hypothesis and concluded that the observed average difference of CL implementation practice among sample universities were not significant. This implies that the current status/level of CL implementation practices of the sample universities were almost equal. As our discussion above, the respondents have disclosed that the existence of poor implementation practice of CL in the sample universities and now we came up with statistical result that shows as there was no significant difference in CL implementation practices among the sample universities. To sum up, it is possible to safely conclude that all sample universities had equally poor implementation practices of CL strategy and I did not employ post hoc test because of insignificant ANOVA result.

Comparing two respondents' groups in terms of average CL implementation practices

This sub-section, aimed to examine the equality or in-equality of average CL implementation practices in the eyes of instructors and students. The researcher produced independent sample t-test to compare how the two groups view the CL implementation practices.

TABLE 17: groups' comparison

Group statistics						Independent sample t-test for equality of means			
Respondents' category		N	Mean	Std. Deviation	Total mean				
CL Implement ation Practices	Students	11	3.0411	.47482	2.907	t	df	Sig. (2-tailed)	Mean Difference
	Instructors	35	2.4594	.61625		5.916	150	.000	.5816

t-value = 5.916, df=150 and sig = 0.0

As it is displayed in Table 17, the overall average score of CL implementation practices is 2.9 (58%); while, the average score is 3.04 (60%) for the students and 2.459 (49%) for the instructors respectively. This indicates that the status of implementation practices of CL has not gone far from 60%. From this one can conclude that the CL implementation practices was less likely or poorly practiced in the sample universities because the average score of both groups 2.459 and 3.04 indicate that a little bit higher than disagreement. Meaning it cannot indicate agreement on the status average implementation practices. This could be happened when the implementation clearly not visualized by audiences or differentiated from other learning strategy.

Further, the CL implementation practices were assessed in comparison to average score of students and instructors' groups. For this comparison, independent sample t-test was employed because the two groups were independent from each other. Independent sample t-test enable us to examine the differences between two groups with a certain quantitative measurement so as to have statistical justification about the difference between the group means is statistically meaningful or not. This independent sample t-test is guided by the null hypothesis, which says "equality of mean implementation practices scores in between two respondents' group" or there is no significant difference in average score in both groups.

As seen in Table 17, the independent sample t-test revealed that the existing mean difference (0.5816) was statistically differ from zero or it is large enough to reject the null hypothesis of equal means ($t(150) = 5.916$ and $p\text{-value (sig)} = 0.000$) which is less than 0.05 (alpha), because of small p value which is less than alpha is the evidences to reject the null hypothesis. The average CL implementation viewed by students (3.04) was significantly different from instructors' score

(2.459). In general, the respondents' group observed poor CL implementation practices, especially the instructors viewed more worsen than the students' group.

This implies that the implementation practices of CL on the eyes of instructors in the case universities were not satisfactory and this may be due to several reasons. Briefly, though each university has its own set of experiences with cooperative learning, they all have some aspects in common with one another. They all have staff members who are less knowledgeable about CL teaching methods, less amount of training, and no implementation plan for helping those faculties who are interested in using the strategy. Besides colleges and departments may not overcome the implementation challenges that included lack of supplies of materials and poor technical support and monitoring. Thus, the university management, colleges and EMOE have to work together in minimizing all mentioned challenges for the betterment of CL implementation practices across all universities.

Research question two: Which cooperative learning methods are mostly practiced in teaching and learning process?

Here in this section, the researcher wants to examine about instructors' exposure to different training method and identify CL teaching and learning methods which are mostly practiced. For this question, the respondents were asked to give multiple responses. That is why the researcher was employed multiple response analysis. In this method it could be seen response above the number of total sample because respondents expected to respond more than one time for a single item.

Table 18: Multiple response analysis

		Responses	
		N	Percent
Multiple response Training method you are trained	Learning Together (Johnsons)	12	21.1%
	Structural Approach (Kagan)	7	12.3%
	STAD and TGT (Slavin)	10	17.5%
	Do not remember name of method	19	33.3%
	No training	9	15.8%
Total		57	100.0%
a. Dichotomy group tabulated at value 1.			

As shown in Table 18 multi-response table, of total responses, 15.8% of the respondents had no exposure for any type of CL training. This shows that there were instructors who are engage in implementing CL strategy without prior training and it is obvious that for those who haven't get any training on CL strategy it is difficult to be effective on utilization of fruits of CL though he/she be good at specific subject matter. Surprisingly, majority of the instructors (33.3%) were unable to remember the name of training or could not differentiate the training method that they were trained on. In general, 49.1% of the total respondents were unable to identify neither the training method they were trained on nor accessible to any CL training. Hence, this is an indication that CL implementation lack proper foundation in the sample universities and closely associated with the observed poor implementation practices.

Even if 50% of the respondents trained in one of the CL methods, and the proportion of exposure of instructors were 21.1% in Learning Together (Johnsons), 12.3% in Structural Approach (Kagan) and 17.5% in STAD and TGT (Slavin). These figures are shown that almost the university had no best recommended CL teaching method/most practiced for university students, because the instructors' exposure on three CL method seems almost equal. This implies that it seems hard to implement regular and consistent CL implementation procedure in the sample universities because of differences in instructors' trainings exposure on CL methods.

Further, only instructors were asked about the class size, amount of training on CL, type of follow up and support and major roles of instructors in implementation practices of cooperative learning strategy and these issues were summarized as follows:

Table 19: Instructors related issues

items		Frequency	Percent
Typical class size	Less than 25 students	1	2.9
	25 to 35 students	2	5.7
	35 to 45 students	10	28.6
	45 to 55 students	15	42.9
	More than 55 students	7	20.0
Amount of training in cooperative learning that you have received	More than 6 days	1	2.9
	Between 3 and 6 days	7	20.0
	Between 1 and 2 days	13	37.1
	Less than a full day	7	20.0
	None	7	20.0
Type of follow-up & support in cooperative learning that you have received	Provision of training	8	22.9
	Provision of facilities	3	8.6
	Technical assistance	2	5.7
	Continuous follows up & feed back	7	20.0
	None	15	42.9
Your major role while implementing CL?	Make pre instructional decisions, intervene within the groups to provide task assistance assess students' performance	16	45.7
	Presenting what to teach	4	11.4
	Guiding	11	31.4
	None	4	11.4
	Total	35	100.0

As clearly indicated above in Table 19, the majority of respondents in instructors' group were disclosed that:

- typical class size were 45 to 55 students,
- Amount of CL training the instructor received was for two days or less than a full day,
- (42.9%) of instructors have received almost no follow-up and support on CL implementation, the major (22.9%) of instructors got training support on CL methodology,
- The major role of instructors while implementing CL: pre-instructional decision and providing task related assistance and assessing students' performance.

Distinguish the major determinant factors of CL implementation practice

Here multiple regressions analysis has been used to examine the determinant factors of CL implementation practices (dependent variable) from six independent variables. The result of a regression analysis is an equation that represents the best prediction of a dependent variable from several other independent variables. I employed multiple linear regressions because the data has one continuous dependent variable (which is CL implementation practice) and six categorical and

continuous independent variables. In this test the investigator examined the determination capacity of each predictor using regression coefficient (B) and p value. Sig column (p value) which tells whether each predictor contributes significantly or not and the coefficients able to estimate the increase in the value of the dependent variable for each unit increase in the predictor (independent) variable.

The result of the study gives technique to estimate average implementation practice of CL the dependent variable as a function of Knowledge and perception (KNW), Physical setup and classroom conditions (CLS), staff training (TRN), equipment /facilities (EQP), political conditions (PLT) and leadership commitment (LDC). Based on the above variables the study employed a multiple regression analysis model given by: $PRC_i = \beta_0 + \beta_1KNW_i + \beta_2CLS_i + \beta_3TRN_i + \beta_4EQP_i + \beta_5PLT_i + e_i$

Where:

$\beta_0, \beta_1, \beta_2, \beta_3, \dots, \beta_7$ are parameters to be estimated with a priori expectation.

PRC = CL implementation practice

KNW = Knowledge and perception

CLS = Physical setup and classroom conditions

TRN = Staff training

EQP = Equipment /facilities

PLT = Political conditions

LDC = Leadership commitment

β_0 = Constant

e = Error term.

As usual hypothesis testing, I started the hypothesis testing procedure by stating the null hypotheses:

Ho1: Knowledge and perception has no impact on CL implementation practice in the sample universities.

Ho2: Physical setup and classroom conditions have no impact on CL implementation practice in the sample universities.

Ho3: Staff training has no impact on CL implementation practice in the sample universities.

Ho4: Provision of equipment /facilities have no impact on CL implementation practice in the sample universities.

Ho5: Political conditions have no impact on CL implementation practice in the sample universities.

Ho6: Leadership commitment has no impact on CL implementation practice in the sample universities.

Before running multiple linear regressions, the researcher should check the dependability of the result by running assumption testing. Multiple linear regression has different assumptions of residuals (error), like normality of error, homoscedasticity of error terms and independence of error, besides multi-collinearity and validity tests, like continuous dependent variable, multivariate outliers and others.

Assumption testing

Multi-collinearity could check overlap of any two independent variables and causes inflated result. So it could be checked using Tolerance & VIF (variance inflation factor). As stated by different writers, statistics of tolerance were in acceptable range if $VIF < 10$. Regarding independence of error for testing of collinearity error, the researcher run Durbin Watson test of independence. As suggested by different statisticians, the acceptable range of the result of test of serial correlation when (Durbin Watson statistics in between 1.5 to 2.5). As shown in the graph below test of homoscedasticity (the distribution of variance of error constant above & below the horizontal line) and normality of residual (the shape of the histogram in the graph approximately follow the shape of the normal curve), both were acknowledged the respective test. The overall assumption of multiple linear regressions gave way to continue the hypothesis testing practices.

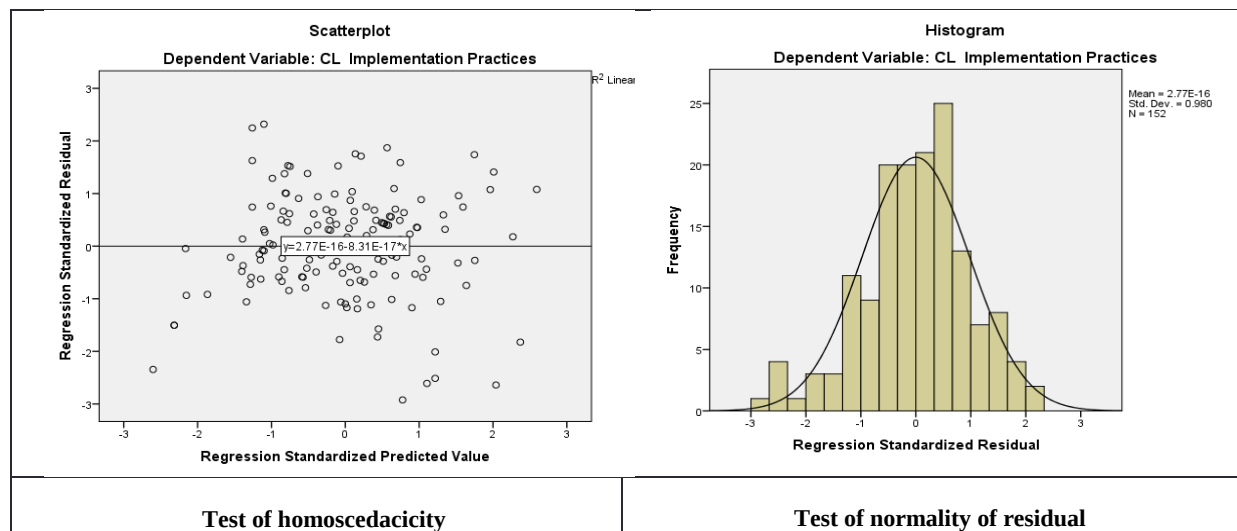


Figure- 9: Assumption testing

Assumption testing procedure of multicollinearity and serial correlation has tested using Table 19. As the result no multicollinearity in between any two independent variables, because of low VIF ($VIF < 10$) or high tolerance; and regarding serial correlation Durbin Watson statistics was estimated=1.535, which is found in acceptable range. The graph and the result of assumption testing give way to continue to run hypothesis testing procedure, which is called multiple linear

regressions. As shown in Table 20 below, multiple linear regression was employed to predict cooperative learning strategy implementation practice in relation with Knowledge and perception, Physical setup and classroom conditions, staff training, equipment /facilities, political conditions and leadership commitment.

Table 20: Multiple Linear Regression analysis on CL implementation practice (PRC)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.849	.177		10.424	.000		
Knowledge and Perception of CL	.052	.048	.085	1.085	.280	.841	1.189
Physical environment & CR conditions	.143	.053	.267	2.701	.008	.529	1.890
Staff training	-.013	.075	-.020	-.171	.865	.361	2.768
Equipment / facility	.024	.040	.053	.592	.555	.643	1.556
Political condition	.178	.053	.299	3.337	.001	.643	1.556
Leadership commitment	-.026	.056	-.057	-.470	.639	.347	2.882

- Dependent Variable: Cooperative Learning Implementation Practices
- R square = 0.252; Adjusted R square = 0.221 (22.1%); F (6,145) = 8.159 and sig =0.000
- Durbin Watson = 1.535

The result of multiple linear regressions includes the overall effect of the factor and individual factor contribution.

Overall factors contribution

A significant model was found ($F(6,145) = 8.159$ and $\text{sig} = 0.000$ ($p \text{ value} < 0.05$)) with R square 0.252. This indicated that the overall significance of the model. Since F- computed is large (i.e., greater than tabulated F) or probability of F- test is very low ($0.000 < 0.05$). And R square shows that the overall contribution of the predictors. It was 0.252, which indicate that 25.2% of the variation with the dependent variable (CL implementation practice) accounted to the factors (predictors). This reviled that the existence of unidentified contributors for the major share (74.8%) in the CL implementation practice. Thus, it implies that the independent variables in the model were able to explain one fourth of variations in the dependent variable.

Contribution individual factors

The next issue is examining the contribution of each factor for the CL implementation practices. As seen in Table 22 below, out of six predictors, only physical setup & classroom conditions ($\beta = 0.143$ & $\text{sig} = 0.008 < 0.05$) and political conditions ($\beta = 0.178$ & $\text{sig} = 0.001 < 0.05$) because of small p value, which is 0.05(alpha). This indicates that physical setup and political conditions of the sample universities were suitable when compared to other identified factors. And the other four factors: such as knowledge and perception ($\beta = 0.052$ & $\text{sig} = 0.280 > 0.05$), staff training ($\beta = -0.013$ & $\text{sig} = 0.865 > 0.05$), equipment /facility ($\beta = 0.024$ & $\text{sig} = 0.555 > 0.05$) and leadership commitment ($\beta = -0.026$ & $\text{sig} = 0.636 > 0.05$) were insignificantly contributing because these four predictors had p –value greater than 0.05 (alpha) for the change in dependent variable. Here at this point, the result have shown in contrary to the literature in which knowledge and perception of instructors and students, level of staff training, the existing facilities /equipment and leadership commitment play significant role for teaching and learning environment. This may indicate that the CL implementation practices in the sample universities may not base on proper plan, follow up and may not use appropriate resources because the result were not as expected.

Furthermore, of the two significant contributing factors, political conditions had highest standardized beta and this may indicate that the political conditions played the highest contribution for the CL implementation practice in sample universities. This seems that the CL implementation practice would be failed if the current political situation will change. Hence as the investigator knowledge and understanding goes, it is better to lead based on the demand of the profession rather than the political condition to stay for a longer period of time in the implementation and get the expected academic, social, psychological and other benefits from the implementation of this pedagogical innovation. This statistical result is highly correlated with the result obtained from qualitative data analysis which says the government introduced one-to-five group formation to universities as a CL strategy to use it as a political tool in academic environment.

Under research question 1, the researcher has been tested the impact of the determinant factors on the dependent variable – CL implementation practices. Now let us extend and examine the consequences of CL implementation on academic achievement, socialization and tolerance &

respecting by taking CL implementation practice as independent variable. This process helps to check if CL strategy has contribution on enhancement of students' cognitive development (academic achievement) and social development such as knowledge building, meta-cognition, self-esteem and positive peer relationship.

Relationship between CL implementation practices with academic achievement, socialization and tolerance

Further, the investigator wants to check the relationship between CL implementation practices with academic achievement, socialization and respecting and tolerance of others views. To test how CL implementation practices are related with these three variables, I employed Bivariate Pearson's c correlation.

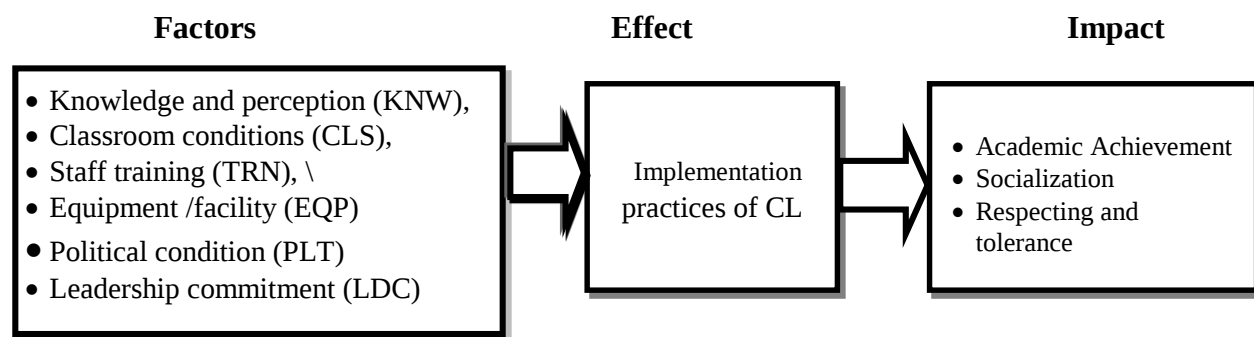


Figure -10: Relationship between CL and dependent variables

The investigator wants to examine the dependence of CL implementation practice, academic achievement, socialization, tolerance and respect by applying simple law of transfer. Thus, the researcher used CL implementation practice as independent variable and the three variables as dependent variables and applied two-tailed Pearson correlation for analysis. The result of the analysis provides correlation coefficients to indicate the strength and direction of the relationship between variables in the model. Correlation analysis as a hypothesis testing procedure starts by writing hypothesis. The null hypothesis is:

H0: “there is no significant relationship between pairs of variables in the model”

According to Huck (2012), a positive correlation coefficient (r) indicates a positive and direct relationship and a negative correlation coefficient (r) indicates a negative and an indirect

relationship. As to Somwkh and Lewin (2005) if correlation coefficient (r) is below 0.33 it is considered to be a weak relationship; if correlation coefficient (r) is between 0.34 and 0.66 it indicates a medium strength relationship; and if correlation coefficient (r) is greater than 0.66 it indicates a strong relationship.

Table -21: Table of correlations

		CL Implementatio n Practices	Academic achievement	Socialization	Tolerance and respect
CL Implementation Practices	Pearson Correlation	1	-.028	.495**	.635**
	Sig. (2-tailed)		.761	.000	.000
	N	152	117	152	152
Academic achievement	Pearson Correlation	-.028	1	.282**	.153
	Sig. (2-tailed)	.761		.002	.101
	N	117	117	117	117
Socialization	Pearson Correlation	.495**	.282**	1	.498**
	Sig. (2-tailed)	.000	.002		.000
	N	152	117	152	152
Tolerance and respect	Pearson Correlation	.635**	.153	.498**	1
	Sig. (2-tailed)	.000	.101	.000	
	N	152	117	152	152

****Correlation is significant at the 0.01 level (2-tailed).**

For this specific sub-section Pearson product moment correlation was applied and the result is shown in table 21 above. It was found that there was no-significant relationship between CL implementation (using CL as a teaching and learning strategy) and academic achievement ($r = -0.028$, $p = 0.761 > 0.01$). As the result, the investigator is forced to accept the null hypothesis, against the theory, which says “implementation practice of CI is independent with academic achievement”. This may happen because of lack of proper inputs for the implementation in expected standard or lack of proper implementation planning and follow up.

Furthermore, this would indicate that the universities were not implementing cooperative learning in its real sense according to its foundational science, principles and considering its elements but the researcher would say they were implementing one-to-five group formation as a CL approach which mainly create a conducive environment for dependency of students and development of culture of corruption though the university management claim as one-to-five group formation helps the students for the improvement of their academic performance. Besides, this would make clear that there was no continuous and enough amount of training for instructors, poor

commitment of university management which is manifested by lack of technical support and follow up. The results qualitative data also reveals exactly the same thing.

However, it was also found that there was significant moderate and positive relationship between CL implementation practice and socialization ($r=0.495$, $p = 0.000 < .05$), Tolerance & respect and CL implementation practice ($r= 0.635$, $p = 0.000 < 0.05$) and Tolerance & respect and socialization ($r= 0.498$, $p = 0.000 < .05$), because all mentioned correlation coefficient, r was positive (greater than 0) and they all in between 0.33 and 0.67. In fact, the relationship between academic achievement and socialization have shown significant weak and positive relationship ($r =0.344$, $p = 0.001 < .01$).

From the above discussion, though the primary aim of CL implementation is to bring academic success, according to the above discussion improvement of students' academic achievement was not resulted from CL implementation may be due to improper implementation of the strategy, lack true engagement from instructors and students and poor commitment from university management. This could be left for further research in detail. Furthermore, it is reviled that the impact of identified factors on the dependent variable (CL implementation practices) also transferred their impact to socialization and tolerance & respect.

CL implementation status

As shown in the above discussion, the study estimate CL implementation practice was concluded poor and in its intuitive form. To verify this, both respondents' group were asked three common questions and evaluated as follows.

Table 22: CL implementation status

Respondents category 1. Students 2. Instructors			Strongly disagree		Disagree		Undecided		Agree		Strongly agree		Chi-square test of independence	
			N	%	N	%	N	%	N	%	N	%	Value	Sig
1	CL is not the dominant teaching & learning strategy in our university/college or department	1	22	18.8%	31	26.5%	27	23.1%	32	27.4%	5	4.3%	1.89	0.75
		2	7	20.0%	6	17.1%	10	28.6%	11	31.4%	1	2.9%		
		Tot	29	19.1%	37	24.3%	38	25.0%	42	27.6%	6	3.9%		
2	The status of CL implementation practice varies from department to department	1	13	11.1%	40	34.2%	35	29.9%	25	21.4%	4	3.4%	2.37	0.66
		2	6	17.1%	8	22.9%	13	37.1%	7	20.0%	1	2.9%		
		Tot	19	12.5%	48	31.6%	48	31.6%	32	21.1%	5	3.3%		
3	The overall status of CL implementation practices in the university/my college or my department is unsatisfactory	1	19	16.2%	38	32.5%	29	24.8%	28	23.9%	3	2.6%	12.4	0.014
		2	3	8.6%	3	8.6%	17	48.6%	11	31.4%	1	2.9%		
		Tot	22	14.5%	41	27.0%	46	30.3%	39	25.7%	4	2.6%		

Table 22 has shown both descriptive and chi-square test of independence. Chi-square test of independence was used to check the existence of opinion difference between the two respondent groups. Chi-square tests whether two nominal variables are independent or have no opinion difference. The sig. column indicates the presence or absence of significant opinion difference. As it is displayed in the above table regarding the first two items “the dominant teaching & learning strategy in the sample universities” and “the status of CL implementation practice”, there were no opinion difference in between the groups, because of big of significance ($\text{sig} > 0.05$) while the third item “unsatisfactory overall implementation status” vary in between the two groups. This implies that the two respondents’ groups were agreed with non-dominant teaching learning strategy of CL in the sample universities.

Concerning the first item “the dominant teaching & learning strategy in the case universities” the majority (27.6%) of respondent gave their confirmation that CL was not the dominant teaching strategy, with the mode value 4 and also (25%) of the respondent were unable to decide whether CL dominantly implemented or not.

On item two the data clearly show the majority (37.1%) of the instructors had shown neither their agreement nor their disagreement for variation practice among the departments and collages; while majority (34.2%) of the students disregarded the implementation practices variation among the

departments and collages. This possibly indicates that CL implementation practices level in the sample universities was not vary from department to department in poor format, because CL was practiced not only unsatisfactory but also it was not the dominant learning strategy. Thus, from this one can say that before any change is put into practice, practitioners must be aware of the why and how aspects of a change. Accordingly, to make implementers ready for using the pedagogical innovation they must have clear understanding why they use it as an active learning strategy. Because, having a clear understanding of the strategy make implementers part of the change process.

Regarding unsatisfactory overall status of CL implementation practices in the sample universities, departments and collages majority (32.5%) of students showed their disagreement on the unsatisfactory implementation status of CL; while 48.6% of instructors were unable to decide on this. In general, the majority of respondents were unable to conclude that the CL implementation status was inadequate in the sample universities or it seems that it lacks its basic elements.

This shows that there is a perception difference between the two groups about what is going on in their respective universities in relation to the overall endeavor of CL implementation practices. Particularly it is surprising that though instructors are the main actors in using CL as a tool to create active learning environment in class rooms they were unable to clearly show their position and these manifests that instructors were not fully aware of the overall activities of CL and didn't engage whole heartedly in implementing the strategy.

On the other hand, the two respondents' groups had shown difference in their opinion about "unsatisfactory CL implementation practices in the university/ college", because of significant chi-square (sig or p-value < 0.05). In this respect, variation of score in the agreement/ disagreement level between the two groups, meaning the majority of students group have shown their disagreement while the majority of instructors group keep neutral position. Therefore, regarding the implementation practice and status the respondents' group have disclosed the existence of gap between predetermined expectations and current practices in the case universities. This implies that even though implementation of the strategy has many advantages, the identified unsatisfactory implementation practice hampers the target groups and the society in general to be benefited from social, academic and other paybacks.

Research Question three: How do instructors and students in the university context experience CL?

Cooperative learning is one of the most popular and important educational innovations in recent years. Regardless of how good research shows an innovation to be, it can improve education only to the extent that it is implemented in classrooms. Level of understanding and the way of perception of implementers particularly instructors and students and the way they implement according their specific situation matters more for the effectiveness of the strategy. Understanding what happens during the implementation of cooperative learning methods could assist instructors and students to identify problems specific to their universities, give solutions for problems and implement cooperative learning in better way.

Thus, knowing how instructors and students conceptualize cooperative learning and particularly what happens to instructors as they implement CL and how they adapt models to their classroom can help the university management, colleges, departments, and instructors themselves make implementation of cooperative learning more effective both within and outside the classroom. On the other hand, besides to university and instructors wide effort to implement, students should have an understanding of the strategy and work with instructors for their success and these all things would help to implement the CL in a better way which resulted in maximizing the benefits students get from CL implementation. The question is whether instructors and students in the university perform to the expected level and the targeted benefits obtained or not. To get an answer for this dealing with the following questions is important.

- Does the implementation of CL strategy benefit students?
- Do universities and ministry of education support implementation of cooperative learning by putting more resources and provisions of technical supports?

To assess instructors' and students' understanding and perception of the strategy, the study raised ten common questions for both groups and summarized as follows. For each CL perception items, the respondents were expected to respond their level of agreement or disagreement. As shown in Table (see appendix-L), the chi-square examined the opinion difference between the two groups of respondents and the result of the analysis indicates as there is opinion difference in between the two independent groups (students and instructors). Significant chi-square (when sig. <0.05)

indicates that there is an opinion difference in the agreement/disagreement level between the two groups on a specific item. Otherwise the two groups have shown no opinion difference.

The sig. column indicates that the presence or absence of significant opinion difference. Fortunately, the data in table shows no opinion differences between instructors and students in those 10 items, because of observed big p value (sig > 0.05) in the last column of the table. This indicates that the students and instructors have shown equally their agreements/ disagreement for each item presented by the investigator for revealing how CL strategy is being perceived. For instance, item number 1 (S2_A2) H0: “no opinion difference between instructors and students on CL basic premise that students construct knowledge through interaction with one another.” The result has disclosed that “no opinion difference” and accept H0 because the calculated statistical value of χ^2 (8.040) is less than the table value of χ^2 (9.488) at 0.05 level, and df= 4. This shows that there was no opinion difference in the agreement level between the two groups of respondents with respect to the CL basic premise.

Similarly, both instructors and students were equally shown their agreement for (s2_B.1) “The primary purpose of CL implementation is improving students’ academic achievement” because sig > 0.05). In this sense, the two respondents’ group agreed on the purpose of CL. This means that the majorities (48.7% and 48%) of total respondents have shown their agreement for constructing knowledge through students’ interaction and the aim of CL implementation is improving students’ academic achievement respectively. This shows that the research participants have an understanding of the basic premise of CL and purpose of the strategy. On the other hand, significant number of instructors and students were equally failed to show neither their agreements nor disagreement for the following items:

- S2_A.4: “I perceive CL as a strategy in which a small group of students is responsible for its own learning and the learning of all group members” ($\chi^2 = 4.699$; sig = 0.320 > 0.05 and 64.5% of respondents either their disagreement or undecided)
- S2_B.3: “The purpose of CL strategy is to minimize learning gaps among students” ($\chi^2 = 6.954$; sig = 0.138 > 0.05 and 65.8% of respondents shown their level of disagreement or undecided)
- S2_C.1: “Learning success is one opportunity that is created and that separates CL groups from other group tasks & competitive approaches” ($\chi^2 = 3.956$; sig = 0.412 > 0.05 and 75.7% respondents shown their disagreement or undecided)

- S2_C.2: “CL is a pedagogical practice tends to promote more positive attitudes toward learning” ($\chi^2 = 6.920$; $\text{sig} = 0.140 > 0.05$ and 65.8% of respondents shown their level of disagreement or undecided)
- S2_C.4: “CL make students active & increase their engagement” ($\chi^2 = 6.360$; $\text{sig} = 0.174 > 0.05$ and 65.1% of respondents shown their level of disagreement or undecided)
- S2_C.5: “CL strategies creates conducive environment for students’ cognitive and social development” ($\chi^2 = 4.304$; $\text{sig} = 0.366 > 0.05$ and 63.8% of respondents shown their level of disagreement or undecided)
- S2_C.7: “CL makes students better understand issues & concepts” ($\chi^2 = 0.873$; $\text{sig} = 0.928 < 0.05$ and 71.7% of respondents shown their level of disagreement or undecided)

Like other items of the table (Appendix-L) opinion difference was examined between the instructors and students on “CL serves as a political tool of government in the academic environment”. The result has shown insignificant chi-square ($\chi^2 = 4.324$; $\text{sig} = 0.364 > 0.05$). Meaning there was no opinion difference between instructors and students concerning to this issue. Though the chi-square result shows insignificant, the crosstab result disclosed that only 37.6% of the students and 20% of instructors have shown their agreements for this item. In general majority of the respondents have perceived negatively for eight items out of ten items and this implies that the perception of the respondents was not as expected, because of high political influence on the implementation, lack of enough amount and continuous training and may be due to hatred of one-two-five formation implementation in academic institutions as government imposition.

Research question four: Does the implementation of CL strategy benefits students?

Cooperative learning has been sufficiently studied to be accepted as an effective method of education. Student response to cooperative learning, and therefore the degree of its success in a given situation, will depend on the mode of delivery and before starting CL, I think it is needed to teach students skills of cooperation. Because, the greater the members' teamwork skills, the higher will be the quality and quantity of their learning. CL develops students' social interaction skills, also results in higher student achievement. In general, as stated by different scholars, effective teaching method benefit students of diverse ability and differing rates of learning with improvement of their academic performance, social skills and so on. In this sub-section of this study the researcher examined different benefits students get due to implementation of CL strategy. For analyzing this scenario, the researcher collected the overall academic result of the sample

students' and asked five question for evaluating the social and tolerance skill of the students and summarized as follows.

Table 23: Analysis of benefits of CL implementation

	Descriptive						One-way ANOVA			
			N	Mean	Grand mean		F	Sig.		
Socialization	Academic achievement	UoG	39	2.9190		2.5636	12.980	.000	Note: df = 2 & 114	
		AASTU	38	2.5087						
		AU	40	2.2693						
	CL develops students positive peer relationship	UoG	39	3.51	3.28	2.853	1.813	.168		
		AASTU	38	3.21						
		AU	40	3.13						
	Builds culture of collaboration and working with others	UoG	39	2.33	2.31			.144		.866
		AASTU	38	2.26						
		AU	40	2.33						
	Improves students’ social skills	UoG	39	2.85	2.84			1.666		.194
		AASTU	38	2.61						
		AU	40	3.05						
	enable students of different back ground to live together, learn from each other	UoG	39	2.82	2.86			.723		.488
		AASTU	38	2.76						
		AU	40	3.00						
	Make students to more engage in social responsibilities	UoG	39	3.21	2.97			2.058		.132
		AASTU	38	2.76						
		AU	40	2.95						
Tolerance	CL help students to tolerate differences in opinions	UoG	39	2.87	2.77		2.8496	.507	.604	
		AASTU	38	2.74						
		AU	40	2.70						
	CL improves respecting others views	UoG	39	3.05	2.90			2.632	.076	
		AASTU	38	2.97						
		AU	40	2.68						
	CL create conducive environment for students to appreciate differences	UoG	39	2.92	2.71			3.440	.035	
		AASTU	38	2.82						
		AU	40	2.40						
	Using CL strategy increase skills of acknowledging& respecting differences	UoG	39	2.95	2.74			1.092	.339	
		AASTU	38	2.68						
		AU	40	2.60						
	CL strategy helps minimize conflicts and create peaceful learning environment	UoG	39	3.28	3.13			.654	.522	
		AASTU	38	3.11						
		AU	40	3.00						

As it is observed in Table 23, the cumulative average of the sample students was 2.56 in the sample universities. As stated in different literature, academic achievement would be highly influenced because of the teaching learning strategy, Actually, as shown in the above table, the ANOVA result has shown that there is significant difference in academic achievement between the three universities ($F(2,114) = 12.980$ and $\text{sig} = 0$, which is less than $0.05(\alpha)$). Further, Tukey HSD was employed to check where the difference was seen. As the result of Tukey HSD, UoG students had statistically higher (2.919) average than the others. UoG students were much benefiting than the other two sample universities. This result highly supports the qualitative data result of phase

one. According to the qualitative data University of Gonder level of CL implementation practices was good in relation to the other case universities and due to its performance, the university won a prize from ministry education.

This finding- improvement of students' academic achievement aligns with constructivist principles of building knowledge through active learning. Constructivist-based instructional activities such as cooperative discourse is regarded to be an effective method of supporting students as they expand, alter, clarify, elaborate and manipulate content to create new meanings. By questioning and restating experiences and ideas, the knowledge spiral develops and students learn as new knowledge is constructed. Cooperative learning also results in higher student achievement. According to Bredehoft (1991) at least 63 studies indicate that cooperative learning promotes greater achievement in the classroom than traditional competitive methods.

On the other hand, the socialization score ranges from 2.31 to 3.28 and its grand average was 2.853. Whereas the tolerance score ranges from 2.71 to 3.13 and its grand average was 2.8496. The average score on socialization and tolerance was below 3. Meaning, the scores of socialization and tolerance was found to be on the border line of disagreement and undecided, which implies that students were poorly benefited regarding socialization and tolerance scale. Furthermore, the ANOVA table also discovered that tolerance and socialization score was almost the same (no significant) throughout three sample universities, because of big ($p\text{-value} > 0.05$). Hence, CL implementation would not contribute too much on socialization and tolerance scale in three the sample universities. This can be evident by clashes happened now and then in universities.

This is indicated that the life of CL implementation practices and students interaction was mainly limited to classrooms. Thus, it would be ideal if the universality management, EMoE and other concerned bodies who take part in the implementation of cooperative learning show their support and appreciation for the instructors and students' extra effort and time spent on CL lessons in both inside and outside classrooms. This can be expressed by some particular means like: presenting certificates of recognition, allowing them the privilege of attending academic conferences, participating in professional training programs and getting access to professional promotion for instructors. Undoubtedly, the fulfillment of these all things must be assisted with universities and EMoE's all sorts of institutional and organizational support.

Implementation of CL and quality of education

Five common questions were asked both groups and additional three questions specifically forwarded for instructors and two questions for students were asked to investigate the contribution of implementing CL as a teaching and learning strategy in the sampled universities and its statistical analysis presented in the following table.

Table 24: Contributions of CL implementation for quality of education

Respondents' category 1. Students 2. Instructors		Strongly disagree		Disagree		Undecided		Agree		Strongly agree		Chi-Square Tests	
		N	%	N	%	N	%	N	%	N	%	Value	Sig
Academic learning success for all members of the group is one opportunity that is created	1	9	7.7%	24	20.5%	52	44.4%	30	25.6%	2	1.7%	3.956 ^a	.412
	2	4	11.4%	11	31.4%	15	42.9%	5	14.3%	0	0.0%		
	T	13	8.6%	35	23.0%	67	44.1%	35	23.0%	2	1.3%		
CL is a pedagogical practice ends to promote more positive attitudes toward learning	1	9	7.7%	17	14.5%	47	40.2%	40	34.2%	4	3.4%	3.934 ^a	.415
	2	3	8.6%	7	20.0%	17	48.6%	6	17.1%	2	5.7%		
	T	12	7.9%	24	15.8%	64	42.1%	46	30.3%	6	3.9%		
CL make students active &increase their engagement	1	9	7.7%	20	17.1%	51	43.6%	34	29.1%	3	2.6%	6.871 ^a	.143
	2	2	5.7%	3	8.6%	13	37.1%	13	37.1%	4	11.4%		
	T	11	7.2%	23	15.1%	64	42.1%	47	30.9%	7	4.6%		
CL strategies creates conducive environment for students' cognitive & social development	1	7	6.0%	14	12.0%	52	44.4%	40	34.2%	4	3.4%	4.304 ^a	.366
	2	3	8.6%	7	20.0%	14	40.0%	8	22.9%	3	8.6%		
	T	10	6.6%	21	13.8%	66	43.4%	48	31.6%	7	4.6%		
CL makes students better understand issues& concepts	1	16	13.7%	23	19.7%	45	38.5%	29	24.8%	4	3.4%	.669 ^a	.955
	2	5	14.3%	9	25.7%	12	34.3%	8	22.9%	1	2.9%		
	T	21	13.8%	32	21.1%	57	37.5%	37	24.3%	5	3.3%		
Instructors													
CL offers many ways of promoting equal participation													
	3	8.6%	12	34.3%	14	40.0%	6	17.1%	0	0%			
CL helps to improve the quality of classroom learning													
	3	8.6%	7	20.0%	16	45.7%	7	20.0%	2	5.7%			
CL helps students to be competent graduates													
	3	8.6%	9	25.7%	14	40.0%	8	22.9%	1	2.9%			
Students													
In CL students work together to fill individual gaps that instructors may not recognize	9	7.7%	12	10.3%	57	48.7%	34	29.1%	5	4.3%			
CL enhances the learning of slow learner& medium learner students	17		27	23.1	34	29.1%	34	29.1	5	4.3			

Data in Table 24 is related contributions of implementing CL strategy in the public universities. Literature makes clear that cooperative learning as a learning strategy is linking the student's groups to assist each other to make sure that the assignments/projects are done and the purpose of

the group is achieved. As the result of this, students' academic performance and achievement in all type of learners will be improved. Specially, slow and moderate learners are benefiting a lot; that in turn contribute to the improvement of quality of education in the case universities and the entire higher education institutions as well. Hence, it is believed by the scholars that CL implementation has many contributions for the improvement of quality of classroom learning.

Here the aim of chi-square test of independence was used to test if there is opinion difference between the instructors and students with listed items regarding to benefits of CL. As usual this test of independence is hypothesis testing start with assumption "No opinion difference between the two groups". A chi-square test of independence is used to test the independence of the issue for the respondent in both the first and the second groups. Based on the result of chi-square test, it is possible to determine the probability of occurrence of effects of membership in those respondents' groups.

The sig. column indicates that the presence or absence of significant opinion difference and if sig. is less than 0.05 there is significance opinion difference otherwise there is no opinion differences. As shown in Table 23, all significance values for commonly asked question were greater than 0.05, which implies there is no significance opinion difference between the instructors and the students. Meaning these two groups has shown equally their agreement or disagreement on those listed items.

Unfortunately, majority of the respondent from both groups were unable to show their agreement for those five commonly asked items. For instance, only 24.34% for "CL create opportunity for academic learning success for all type of learners"; 34.21% for "CL promote more positive attitudes toward learning"; 35.3% for "CL makes students active & increases their engagement"; 36.18% for "CL creates conducive environment for students' cognitive & social development" and only 27.63% for "CL makes students better understand issues & concepts" showed their agreements. This would indicate that the majority of respondents stood against the manifestations of the benefits of CL. This implies that though the literature mentioned different benefits of implementing CL as a teaching and learning strategy, practically, in this research it was not observed. Similar responses were given by the respondents' group for specific question that were asked. For instance, only 17.1 % of the instructors group shown their agreement for the issue "CL

offers many ways of promoting more equal participation among group members” and on the other hand, 33.4% of the students have shown their agreement for the item which said “CL enhances the learning of slow learner& medium learner students”.

This implies that the majority of the respondents didn’t have enough amount of knowledge and understandings of CL strategy and tried to maximize the benefits that students, instructors and the university would possibly get from its implementation and through maximizing quality of students learning. In spite of the fact that CL has multiple advantages for students, both groups involved in the research have rarely seen the practical benefits of CL implementation. This could be happened because either CL was poorly implemented or it was not frequently used learning strategy in the respective universities.

Research question five: Do universities and EMoE support CL implementation of by putting more resources and technical supports?

In this sub-section, to respond for this leading research question, the study contained two common items for both respondents group and the responses were summarized as follows.

Table 25: Provision of facilities

1. Students 2. instructors			Poor provision of facilities/resources					Chi-Square Tests		
			SDA	DA	UD	AG	SA	Value	df	Significance (2-sided)
Poor provision of facilities/resources	1	N	19	27	25	34	12	3.319 ^a	4	.506
		%	16.2%	23.1%	21.4%	29.1%	10.3%			
	2	N	7	7	11	9	1			
		%	20.0%	20.0%	31.4%	25.7%	2.9%			
In implementing CL, the university provided training, established implementation system, clear responsibilities and supervise the implementation	1	N	10	25	47	33	2	8.982 ^a	4	.062
		%	8.5%	21.4%	40.2%	28.2%	1.7%			
	2	N	6	10	11	5	3			
		%	17.1%	28.6%	31.4%	14.3%	8.6%			

Table 25 focuses on analyzing two items presented for both groups. Regarding the first item, majority of students (30.4%) has agreed that “poor provision of facilities / resources, whereas the majority (31.4%) of instructors were unable to decide about provision of resources. On one hand, the chi-square shown no opinion difference in between the two respondents’ group ($\chi^2(4) = 3.319$ & sig (p-value) = 0.506, which is greater than 0.05). This indicates that scarcity of resource in the respective universities for the implementation of CL. This exactly matches with the data analysis

result the qualitative part which shows no adequate resource provision of resources and facilities that could better facilitate CL implementation practices. Hence, EMOE and the university management have to collaboratively work on it which otherwise highly influence implementation practices of the strategy.

A response to the second item, “in implementing CL, the university provided training, established implementation system, clear responsibilities and technical support” the chi-square test has shown insignificant chi-square result and this implies that there were no opinion difference in between the two respondents group, because of big p value (sig >0.05). Above all, the majority of respondents 40.2% and 31.4% from students and instructors respectively were neither shown their agreement nor disagreement.

Research Question six: What are the opportunities and challenges that CL is facing? And how will cooperative learning implementation practices be improved for the future?

In this section, the researcher concentrated on identification of the major challenges that is associated with cooperative learning strategy implementation practices, to pin point the major determinant factors that affect the CL implementation.

Attitude towards implementation of CL

To be successful in CL implementation practices it demands positive attitudes and perceptions of all implementers particularly those of the instructors and the students. In several studies, attitudes and perceptions of students have been utilized as an effective measure of success for an instructional method (Peterson & Miller, 2004; Armstrong, Chang, & Brickman, 2007). In this research to examine the attitude of instructors and student towards cooperative learning different items were presented for both groups and hence discussed separately.

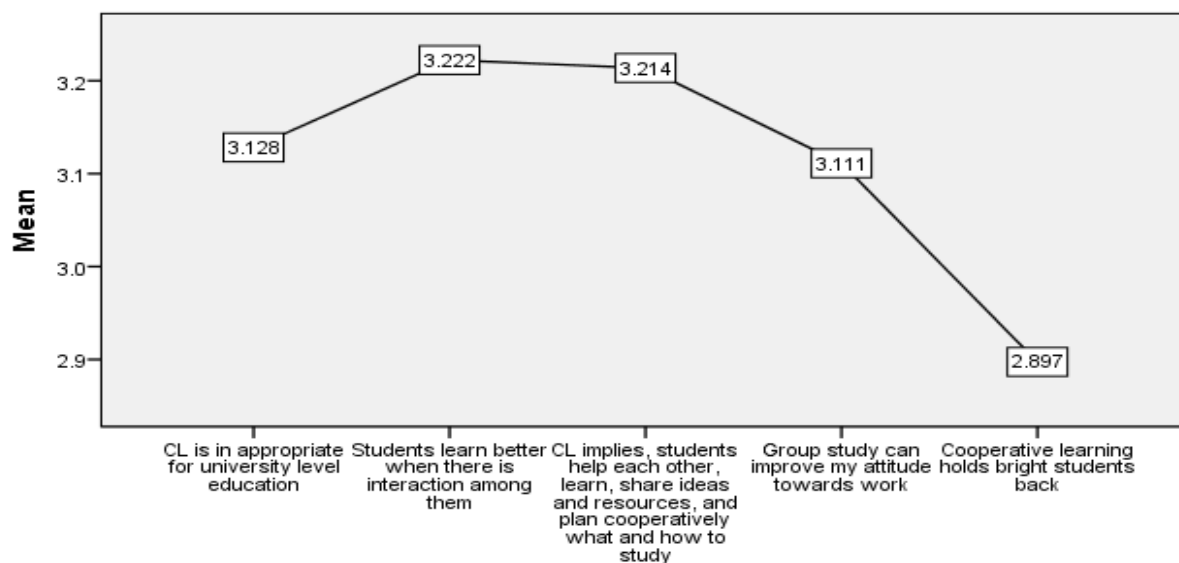


Figure 11: Attitude of students

Students were shown their least agreement for the issue which says “cooperative learning holds bright students back” rather has confirmed that students learn better when there is interaction. And this shows that students help each other, learn, share ideas and resources, and plan cooperatively what and how to study to learn better. This implies that majority of student have positive attitude towards CL and opportunities created by cooperative learning.

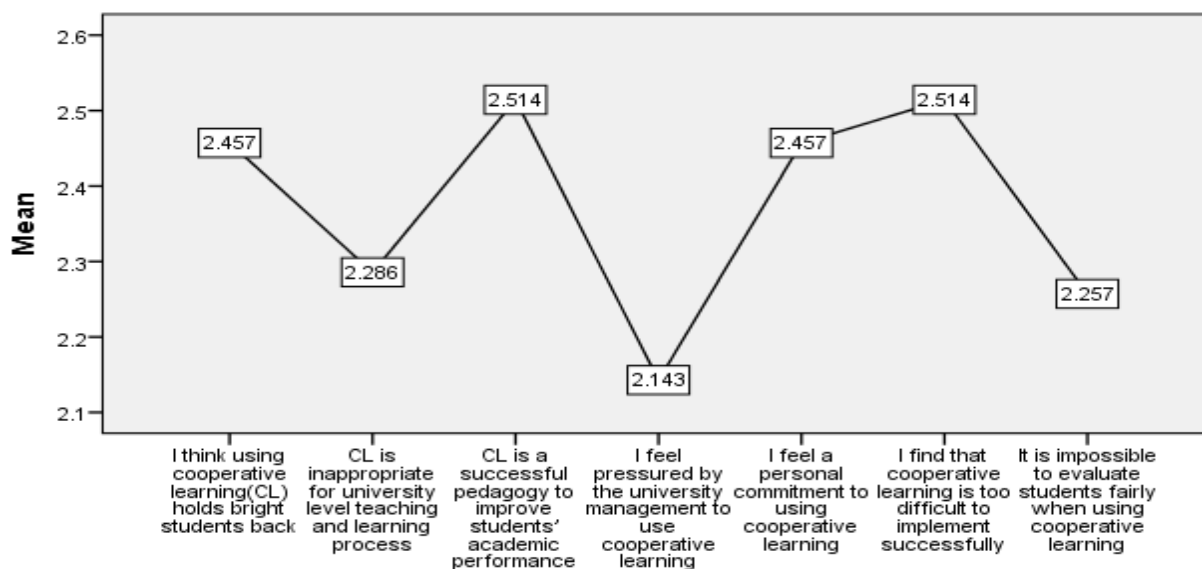


Figure 12: Attitude of instructors

As one can see in figure 12, instructors were shown their disagreement for all seven items. Especially, instructors have shown clearly their disagreement on issues like:

- CL is inappropriate for university level teaching and learning process

- Feel pressured by the university management to use CL
- Impossible to evaluate students fairly when using CL

From this one can say the result of quantitative data analysis matches with the result of the qualitative part of this research. Both the instructors and students were not stand against cooperative learning strategy, but they oppose implementing one-to-five group formation as cooperative learning strategy.

Challenges of CL implementation

As discussed under research question 1, the implementation of CL has been practiced not to the expected level. Hence at this scenario, it is natural to identify the major challenges and problems that hold back the implementation process. The investigator obtained the calculated average of each items in the list using SPSS. The higher the average score that indicate the higher the probability of occurrence of the challenge and vise verse. As you can see in the figure below, the average score of the hindrance factors ranged from 2.49 to 3.23 out of 5.

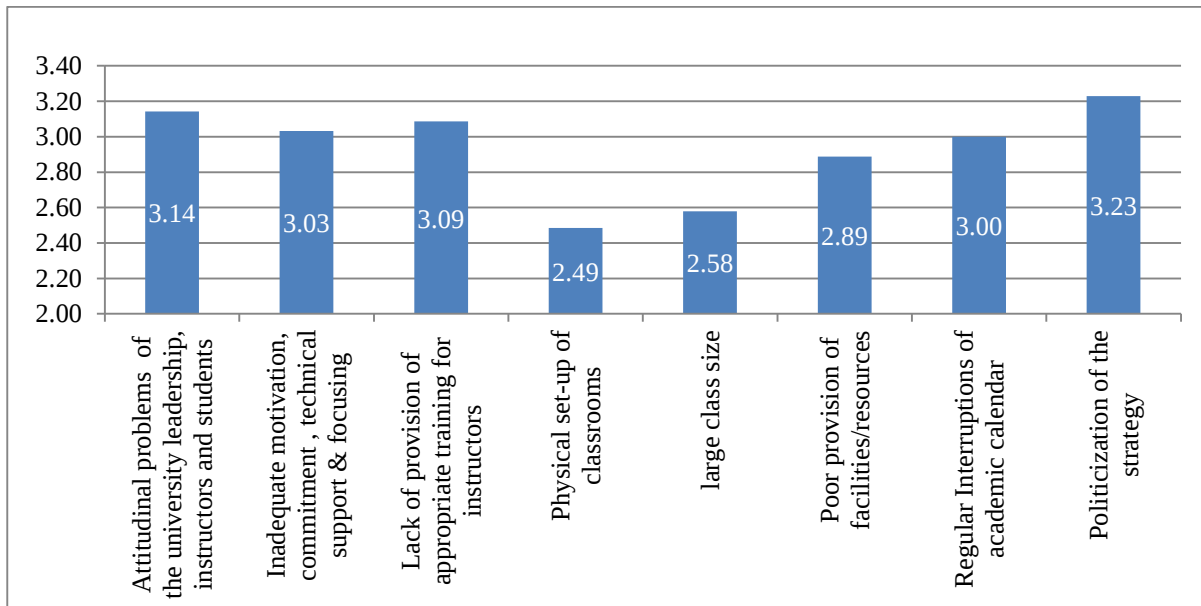


FIGURE 13: Average score of challenges

Based on the obtained average score, the investigator shown the most and least problematic areas in the implementation CL practice. In this respect, item number 8 “politicization of the strategy” stood at first. This indicates that the respondents were not viewed implementation of one-to-five group formation (students networking) as CL or a pedagogical teaching method, because the CL

groups were played primarily political role than supporting the teaching and learning scenario. Furthermore, as observed in the above figure, next to item number 8 the top three challenges as viewed by the respondents were:

Q1- Attitudinal problems of the university management, instructors and students,

Q3- Lack of provision of appropriate training for instructors and other concerned stakeholders,

Q2- Inadequate motivation, commitment, technical support & focusing only on paper reports from university management

This indicates that students’ and instructors’ negative attitude towards CL practice and lack of exposure of appropriate and enough amount of training played most decisive role in influencing the effectiveness of CL implementation in the sample universities. Hence, as the investigator’s suggestion the management bodies of the universities in collaboration with EMoE and other concerned bodies have to work on provision of proper training for instructors, and students to alleviate attitudinal problems of the implementers and straighten the problems observed in relation to CL the implementation as a teaching and learning strategy. In contrary, the negative influence of Q4- “physical set-up of class rooms” and Q5- “large class size” had least impact on the implementation of CL practices relative to other factors. This would indicate that physical setup in the universities played relatively lower impact than the others.

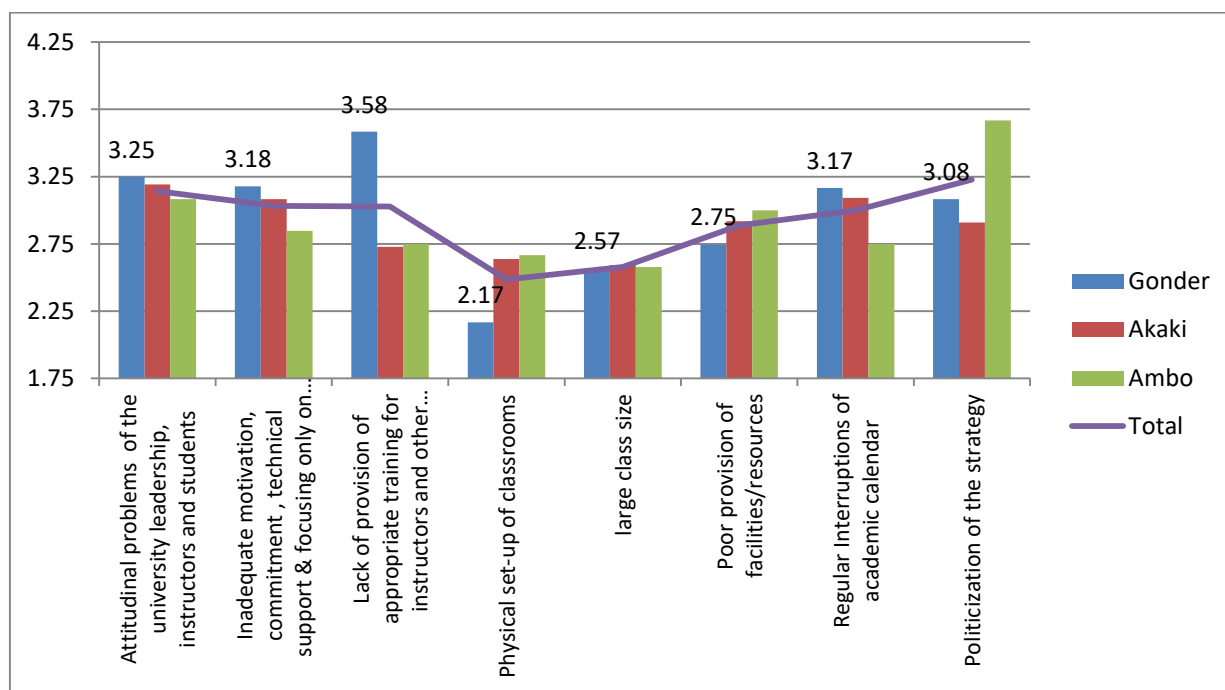


Figure 14: Perception of challenges among sample universities

The ANOVA table has shown insignificant variation of score among the universities regarding issues of challenges. This implies that all universities equally concluded all challenge issues in similar manner. As shown the impact of “politicization” considerably high in Ambo university, where as the first three issue (lack of provision of appropriate training for instructors and other concerned stakeholders, attitudinal problems of the university leadership, instructors and students and Inadequate motivation, commitment, technical support) noticeably high challenge in university of Gonder.

Table 26: Challenges of CL implementation

ANOVA						
Sources of variation		Sum of Squares	df	Mean Square	F	Sig.
Attitudinal problems of the university leadership, instructors and students	Between Groups	.210	2	.105	.056	.946
	Within Groups	60.076	32	1.877		
	Total	60.286	34			
Inadequate motivation, commitment, technical support & focusing only on paper reports from university leadership	Between Groups	2.981	2	1.491	1.001	.370
	Within Groups	221.854	149	1.489		
	Total	224.836	151			
Lack of provision of appropriate training for instructors and other concerned stakeholders	Between Groups	5.623	2	2.811	1.752	.190
	Within Groups	51.348	32	1.605		
	Total	56.971	34			
Physical set-up of classrooms	Between Groups	1.864	2	.932	.524	.597
	Within Groups	56.879	32	1.777		
	Total	58.743	34			
large class size	Between Groups	.014	2	.007	.005	.995
	Within Groups	189.039	149	1.269		
	Total	189.053	151			
Poor provision of facilities/resources	Between Groups	1.739	2	.869	.565	.570
	Within Groups	229.360	149	1.539		
	Total	231.099	151			
Regular Interruptions of academic calendar	Between Groups	1.174	2	.587	.401	.673
	Within Groups	46.826	32	1.463		
	Total	48.000	34			
Politicization of the strategy	Between Groups	3.679	2	1.840	1.214	.310
	Within Groups	48.492	32	1.515		
	Total	52.171	34			

How will cooperative learning implementation practices be improved for the future?

As observed in the Figure 10 (p.221) above of eight factors that are associated with CL implementation practices four of them were scored above 3. These are:

- Politicization of the strategy,

- Attitudinal problems of the university leadership, instructors and students ,students,
- Lack of provision of appropriate training for instructors and other concerned stakeholders and
- Inadequate motivation, commitment, technical support & focusing only on paper reports from university leadership.

The first top two factor identified by the respondent groups is politicization of the strategy and attitude of instructors and students. Hence, improving cooperative learning strategy implementation practices need to work in a coordinated way on these two issues. Also, the other two issues that one cannot skip are training provision for instructors, enhancing motivation, commitment and technical support for stakeholders.

CHAPTER NINE

DISCUSSION

9.1. Brief Description of the Study

This report was written based on a research which was conducted at three case universities Ambo University, Addis Ababa Science & Technology University and University of Gonder), Ethiopia, during the 2018 and 2019/2020 academic years. The purpose of this study was to explore higher education institutions practices of implementing cooperative learning strategy and to examine what factors influence the efficacy of the implementation practices in the universities.

A mixed research approach was employed in this study to answer the research questions. The research design used was a sequential exploratory design, whereby first a qualitative study conducted followed by a quantitative study. The qualitative study was conducted mainly to investigate and understand cooperative learning implementation practices in specific context and to search for multiple realities and meaning in communities of practice. Qualitative research is the best method to collect real data and doing real analysis of a phenomenon in specific contexts. Further, it can also represent lived experience as it is conducted in a natural setting to investigate the lived experiences of real people in real setting. It seeks to understand the world from the perspective of those living it. According to Hatch (2002), qualitative research helps to understand the special contexts of schools and schooling.

A total of 20 (6 college/institute deans, 6 department heads, 3 vice presidents for academic affairs, 3 reform directors and an expert from EMoE reform directorate and expert from education strategic center) were participated in the qualitative part of this study. Direct observation, semi-structured interview and document analysis were the data collection methods used in the study.

Following the qualitative study, a quantitative study was conducted to check the generalizability of the findings of the qualitative study and also to fill gaps that was unfilled by the first phase study. Statistical tools like: Percentages, means, grand means and standard deviation was employed for descriptive statistics. Correlation, multiple regressions, chi-square, independent t-

test, one-way ANOVA and bivariate Pearson's correlation were used to test the relation between independent and dependent variables and to identify the impact of independent variables on dependent variables. Totally 152 respondents were participated in the quantitative study phase. Survey questionnaire was used as data collection instrument.

The main body of this chapter begins by summarizing the major findings of the study followed by explaining the findings in relation to the above research questions, and previous studies and theories.

9.2. Summary of the Major Findings

In this study opposite ideas were repeatedly raised by the research participants on various issues in relation to practices of implementing cooperative learning strategy. Generally, seven categories/themes of HEIs CL implementation practices emerged from the qualitative phase of the study. The major themes again have various sub-themes under it. The major themes are: knowledge and perception of cooperative learning, purposes of cooperative learning, blessings & opportunities of cooperative learning, attitude towards CL, cooperative learning implementation practices, cooperative learning implementation practices status and challenges /curses/ in CL implementation practices.

The conceptualization and perception of CL of the research participants ranges from perceiving the strategy as a pedagogical approach to active learning to government's political tool in the academic environment. It was also found that though the theoretical knowledge of the research participants about the benefits of CL is good, they lack commitment and positive attitude and stick themselves on producing and collecting paper reports.

To assess the actual CL implementation practices of the sample universities eleven questions for students and twelve questions for the instructors were forwarded. Of those questions raised for both groups, eleven of them were common and the agreement and disagreement level of the groups was evaluated. Thus, the study summarized these commonly raised questions, and produced one item, which is called 'CL implementation practice'. Using this recoded variable, the investigator tried to evaluate the overall practices of HEIs CL implementation at curriculum level.

Furthermore, the study was comparing the CL implementation practice between groups, like among the case universities and between the two groups of respondents for further analysis. Hence, responses from these groups indicated that the current level of implementation practices of the strategy in the Ethiopian public universities was not good enough.

9.3. Discussion of the Findings

9.3.1. Implementation Practices of CL in the case universities

The qualitative data revealed that necessary preparations that could better facilitate the implementation practices of CL were not carried out by the universities and there was no prior planning by the university as well as colleges/institutes on how to: implement CL strategy, give technical support, coordinate different bodies, provide facilities and get feedback.

As indicated by both Cole (2008) and Wells & Langenfeld (n.d.) traditional teaching methods will not properly and adequately prepare students for the labor force and the technological world. EMoE and the public universities jointly have to carry out all necessary preparations including researches on how to implement and pre-planning for every activities to be carried out during the implementation process. Because, today's educators are facing a more diverse student body than ever before (Cole, 2008; Cummings, 2000). Furthermore, with the additional demands surfacing due to the wide span of diversity, instructors consistently want to utilize and become familiar with improved and research-based strategies in order to prepare each and every student for the future.

The current research also showed that there was no planned, continuous and enough amounts of pedagogical trainings specifically focused on CL strategy given to instructors and students both by the universities and EMoE rather than a very short brief by departments. The induction training was given for 7-10 days annually for newly coming instructors taking active learning as one thematic area. However, majority of the respondents from two case universities (AU & UoG) reported that there was a yearlong HDP program which is focused on active learning though given for limited number of instructors. The qualitative data also revealed that there was no HDP as well as any other form trainings related to CL in AASTU. Result of the multiple response analysis also showed that there were instructors (15.8%) who are engage in implementing the strategy without

prior training on CL. Majority (33.3%) of the instructors were unable to remember the name of training or could not differentiate the training method that they were trained on. In general, 49.1% of the total respondents were unable to identify neither the training method they were trained on nor accessible to any form of CL training.

According to the U.S. congress, office of technology assessment (1995), the lack of teacher training is one of the greatest roadblocks to integrating technology into a school's curriculum. Shelton and Jones (1996) suggest that instructors need considerable training and development. Therefore, continuous and planned training should be provided for instructors so that they become more effective in the teaching and learning process.

The qualitative strand of this study showed that a good number of interviewees from AASTU believe that the implementation of one-to-five group formation as a CL strategy in Ethiopian public universities is inappropriate. The qualitative part of the study also confirmed that no CL strategy implemented in the university. Colleges and departments established what they call 'research teams' and in AASTU there is a tradition of considering and reporting these research teams as a cooperative learning groups. On the other hand, at AU and UoG as the qualitative data showed CL groups were formed based on students' academic performance, geography and other as criteria. These two universities were using base group cooperative learning type. On contrary to this, many researches on CL suggest the importance of CL to University students' good academic performance and other diversified benefits (Slavin, 1995; Johnson & Johnson, 1999).

Findings of the quantitative data analysis showed that most of the instructors from the three case universities lacks maturity and experience both teaching in universities as well as in using cooperative learning as a teaching and learning strategy. This data can tell us how much these universities are in problem lacking/losing well experienced instructors and focusing on recruiting graduate assistances mainly not because they were academically good but due to their political motives. The quantitative data also reported that the majority (55.6%) of students have refused to respond for the question asked their experience in using CL. This refusal indicates that either they were not exposed formally to use CL as a teaching and learning strategy or they did not know exactly what CL means.

It was learned from the quantitative strand of this study that most of the respondents from both groups repeatedly showed either their disagreement, neutral or undecided position for majority of items raised in relation to evaluation of implementation practices of cooperative learning strategy in the case universities. This shows that the research participants may be didn't know much about what is going on regarding CL implementation activities or they are showing purposely their hatred and negative attitude towards to one –two-five group formations (see appendix-k).

The current research showed that the level of CL implementation practices of CL strategy in the sample universities were almost equal and the respondents have also disclosed the existence of poor implementation practice in the sample universities and the researcher came up with statistical result that shows as there was no significant difference in the status of CL implementation practices among the sample universities (please see table 16 and table 17).

In the Ethiopian higher education system, most teaching is characterized by a high degree of instructor control and student passivity (Fisher & Swindles, 1998; Tadesse, Manathunga & Gillies, 2012; Zerihun, Beishuizen & Van Os, 2012). This condition makes the teaching and learning process instructor-centered in which many students either remain passive and unthinking, fall asleep, distracted by their immediate environment, or engaged in irrelevant conversations with neighbors, thus distracting the class and deriving little benefit from their presence. In order to provide a more meaningful, more academic, and more enjoyable learning environment for students, implementing instructional strategies whereby students actively engage in the educational experience transforming the lecture-based class into one in which active involvement including group work, collaborative, cooperative, and team-based learning in which students must participate is very important. In general, many studies have described aspects of teaching practice which are related to effective classroom learning and student outcomes (Brophy and Good, 1986; Haertel and Walberg, 1993).

Results of multiple linear regression indicates that physical setup and political condition of the sample universities were suitable when compared to other identified factors: such as Knowledge and perception ($\beta = 0.052$ & $\text{sig} = 0.280 > 0.05$), staff training ($\beta = -0.013$ & $\text{sig} = 0.865 > 0.05$),

equipment /facility ($\beta = 0.024$ & $\text{sig} = 0.555 > 0.05$) and leadership commitment ($\beta = -0.026$ & $\text{sig} = 0.636 > 0.05$) were insignificantly contributing because these four predictors had p –value greater than 0.05 (alpha) for the change on dependent variable. This statistical result highly correlated with the result obtained from qualitative data analysis which says the government introduced one-to-five group formation to universities as a CL strategy is to use it as a political tool in academic environment. And this correspondence of the results of the two data sets may strengthen the idea which says government was using one-two-five group formation as a political instrument and makes the political environment conducive for the implementation of one-to-five group formation as a CL strategy.

As is known from research on the effectiveness of schools (Scheerens & Bosker, 1997; Hopkins, 2005; Lee & Williams, 2006; Harris & Chrispeels, 2006), the quality of the learning environment is the factor affecting student learning and outcomes that is most readily modified, given that background variables such as cognitive and motivational capacities, socio-economic background, social and cultural capital are mostly beyond the control of instructors and schools.

Results of Pearson product moment correlation showed that no-significant relationship between CL implementation (using CL as a teaching and learning strategy) and academic achievement ($r = -0.028$, $p = 0.761 > 0.01$) against the theories of CL, which says “implementation practice of CI is independent with academic achievement”. This may happen because of lack of proper inputs for the implementation in expected standard or lack of proper planning and follow up at the time of implementation. Furthermore, this would indicate that the universities were not implementing cooperative learning in real sense based on its foundational science, principles and considering its elements but I would say they were implementing one-to-five group formation as a CL approach which mainly facilitates conditions for dependency of students and makes the of culture of corruption more severe though the universities management officially reported using one-to-five group formation as a CL strategy helps the students to improve of their academic performance.

Though the result of statistical analysis of this study showed the as there is no significant relationship between using CL as teaching and learning strategy and academic achievement of students findings of numerous research studies on CL show improvement in academic

achievement, behavior and attendance, motivation, and school satisfaction (Wilson-Jones, & Caston, 2004). Also, 87% of the studies that used the CL strategy observed positive effects on learning achievement (AL-Rifae, 2006). Furthermore, many studies have shown that students' academic achievement was better for students who were involved in a cooperative learning environment, and the effects of cooperative learning on student achievement can be impressive. For example, the cooperative learning students in Whicker et al. (1997) had increasingly higher test scores than the students in the comparison group and significantly outscored the comparison group on the third chapter test.

More specifically, cooperatively taught students tend to exhibit higher academic achievement, greater persistence through graduation, better high-level reasoning and critical thinking skills, deeper understanding of learned material, greater time on task, greater psychological adjustment, have responsibility for their own learning, develop more positive and supportive relationships with peers, more positive attitudes toward subject areas, and higher self-esteem (Felder & Brent, 2007; Megahed & Mohammad, 2014; Zuheer, 2008; Mariana, 1997). Furthermore, it was demonstrated that CL method does influence students' academic achievement positively and there is a positive relationship between academic achievement and interpersonal skills of students (Tajudin, Tajuddin, Mamat, & Abd Hadi, 2014).

The result of the analysis also showed that there was significant/moderate and positive relationship between CL implementation practice and socialization ($r=0.495$, $p = 0.000 < .05$), tolerance & respecting of others idea or views and CL implementation practice ($r= 0.635$, $p = 0.000 < 0.05$) and tolerance & respecting and socialization ($r= 0.498$, $p = 0.000 < .05$), because all mentioned correlation coefficient, r was positive (greater than 0) and they all in between 0.33 and 0.67.

Research on CL conducted at all educational levels indicated that benefits are universal, regardless of the age of the student. Achievement of academic, affective and social-interpersonal development were evident at all educational levels and in all types of cultural ethnic environments. (Slavin, 1995; Johnson and Johnson 1999). These all things show that if cooperative learning strategy properly implemented it will benefit, students, instructors and the entire education system as well.

The analysis of the data obtained through questionnaire showed that the overall status of CL implementation practices in the sample universities was unsatisfactory and there was also implementation status variation among departments and collages.

Findings of both the qualitative and the quantitative phases of this study showed that no adequate provision of resources and facilities provisions that could better facilitate the implementation practices either from the university or EMoE. In general, in the three case universities strong attention was not given for prior implementation plan and trainings of instructors and the target was mainly on collecting reports which greatly hamper the effectiveness of the implementation of the strategy and decrease the motivation and commitment of the instructors.

9.3.2. Participants' knowledge and conception of CL

The current study revealed that the research participants viewed cooperative learning strategy in different ways and lacks consistency in their conceptions. Majority of them conceptualize CL as an accepted and often the preferred instructional procedure to all levels of education system in any country at all levels of schooling, in every subject area, and with every age student as a pedagogical practice focused on team-based learning across the globe and ended with achieving common educational purposes and satisfied all group members.

On the other hand, some of interviewees have expressed CL as an instructional model of active learning in which students carry out their assignments/projects together as a team toward common goals. Some participants also reported that cooperative learning is an approach by which students' study together and share information to help each other being two or more and find solutions for not only academic related issues but also for social challenges in their campus or university. Other participants also perceive the strategy as a teaching and learning approach which is focused on maximizing students' academic performance. Ethiopia also planned to improve students' results implementing the strategy in public universities through improving students' way of learning.

Contrary to what mentioned above a good number of participants in the qualitative strand conceptualize CL strategy as a research teams disgusting by the name one-to-five group formation and challenging the imposition from government and university management they established the research teams based on sub-specializations under the main departments. The research teams were formed as per the interest of instructors and students just against the ministry's one-to-five formation and implementation guideline. It was obtained from the study that in AASTU there were many teams formed by different instructors in one department and there was no common group that serves all across different courses.

It was obtained from the study that other participants perceive/conceptualize CL strategy as a pedagogical approach to student-centered learning resulted in the interaction of students targeted at improving students' academic learning. The findings of the study also indicated that the participants perceived CL as a student-centered learning approach by which students work their projects, assignments and LAB activities being in a group in which colleges and departments support them while students engaged in group activities. The current study also revealed that the research participants perceive CL as a very good strategy which makes students the center of the teaching and learning process that resulted in active learning approach and helps students to get good academic results.

It was reported by overwhelming majority of the interviewees of this study perceive CL as a political tool of government in the public universities. They noted that one-to-five group formation was highly and purposely politicized by the government and this forced instructors and students to consider it as a political instrument of government in the education environment with the hidden agenda of controlling situations in the institutions. Furthermore, the interviewees didn't believe as it is one of the active learning approaches which have great contributions for students, instructors and it is a strategy that plays a role of improving the quality of education but, with the primary target of controlling political situations in higher education institutions. That is why the implementation of one-to-five group formation as a CL strategy faces high resistance from the university management, instructors and good achiever students.

The study also revealed that the government forced all public universities across the country to implement the one-to-five group formation as cooperative learning strategy with similar context of other sectors like health, agriculture without considering special characteristics of the education sector and it was a top down decision which resulted in implementers' resistance.

The finding of the qualitative data indicated that though the interviewees perceived the CL approach differently and gave it different names all of them perceive the strategy as it could make student to be more participant in the teaching and learning process and help them to construct their own knowledge minimizing the role of the instructor.

It was reported by some of the interviewees of this study that participants knowledge and understanding of why the CL strategy was being used is also slightly varies. Some participants believed that the overall purpose of using CL as a teaching and learning strategy was to improve students' academic achievement, self-esteem, improving classroom learning and communication skills. On the other hand, most of the participants agreed that the planned target was to maximize students' academic performance and improving the quality of education, in general and help students develop their social skills that could make them better fit to their society and be a good citizen.

The quantitative analysis of this study showed that there were knowledge and perception problems on the side of instructors and students in relation to cooperative learning strategy. Out of ten items presented commonly for both (instructors and students) groups significant number of instructors and students were equally failed to show neither their agreements nor disagreement for the items (see appendix-L). They were unable to decide their position on eight items out of ten items presented for both groups.

On the other hand, opinion difference was examined in between the instructors and students on "CL serves as a political tool of government in the academic environment". The result has shown insignificant chi-square ($\chi^2 = 4.324$; $\text{sig} = 0.364 > 0.05$) result. Meaning there was no opinion difference between instructors and students participants concerning the issue. Though the chi-square result show insignificant, the crosstab results disclosed that only 37.6% of the students and

20% of instructors have shown their agreements for this item. But research participants of the qualitative phase indicated that the hatred created in relation to implementation of one-two-five group formation as CL strategy was due to instructors and other implementers belief that CL is serving as a political tool of government in the academic environment; but as the result of statistical analysis above clearly showed majority of the instructors and students respondents didn't belief CL was serving as political instrument of government in universities.

This implies that in general the respondents' perceptions were not as expected and there was negative attitude and hatred considering one-two-five group formation implementation in academic institutions as government's imposition or political influence. This shows that the result of both phases of the study slightly support each other and in both case the result shows the implementers lack enough amount and continuous trainings and awareness creations in relation to CL strategy.

The views of interviewees involved in this research were examined to determine their understanding and perception about the benefits and opportunities of CL as a methodology, and how and to what extent they had achieved success in its practices of implementation in classrooms. The findings revealed that these interviewees have understood the advantages of cooperative learning and the positive effects of CL implementation in comparison with traditional teaching practice.

Moreover, the interviewees strongly affirm that CL as a strategy has various benefits to students, students learning and improvement of quality of education even though the implementation practices were not to the expected level.

The qualitative strand of this study showed that most interviewees welcomed implementation of CL as a blessing and opportunity for the teaching and learning processes in their university. The interviewees also advocated the benefits of CL strongly. The findings of the qualitative data showed that using CL as a teaching and learning strategy has many positive effects on students as well on students learning. Thus, most interviewees welcomed implementation of CL as a blessing and opportunity for the teaching and learning processes in the universities and hence, the interviewees advocated the benefits of CL strongly.

It was reported by some of the interviewees of this study that CL has tremendous positive effects on student academic achievement and help students to have more self-esteem with a very important consideration of female students, psychological health and social skills. The research participants have also added that CL could bring an opportunity to teach a lesson effectively which would have been impossible otherwise.

In relation to the benefits and opportunities of implementing CL strategy most of the participants agreed that it may have blessings like: developing critical thinking, problem solving abilities and thinking differently. These interviewees also added that helps to improve quality of education, socialization, tolerance and respecting others view and diversities, decrease attrition rate of students' particularly female students, increase students learning motivation, make them engaged in their learning, helps students to speak their minds, minimizing conflicts among students and serves as a tool of producing competent graduates for the labor market. To harvest all these benefits the status of implementation practices of the strategy must be improved and in their universities these benefits were not still achieved because CL was not practiced to the expected level. These all things show that the research participants have good theoretical knowledge of CL strategy though not yet changed to practice.

Various research results also directly correlate with the views of the participants of the three case universities raised regarding the positive effects that cooperative learning strategy has on students and students' learning in both study phases. For instance, Johnson, Johnson, and Smith, (2007) noted that as CL continues to be a valuable tool for learning in academic institutions. It provides benefits for both students and instructors (Shimazoe & Aldrich, 2010). Slavin (1996) described cooperative learning as teaching methods in which students work together in small groups to help one another learn academic content. Slavin and Cooper (1999) also suggested that, the intent of cooperative work is to enhance the academic achievement of students by providing them with increased opportunity for discussion, for learning from each other, and for encouraging each other to excel. According to Slavin, Leavey and Madden (1986) CL results in student feeling greater mutual concern for each other and an overall greater liking of school. Learners in CL tend to become tolerant of diverse viewpoints, to consider others' thoughts and feelings in depth, and seek more support and clarification of others' positions (Stahl, 1994).

What the above finding possibly suggests is that cooperative learning strategy, when used appropriately, can enable students to move beyond the text, memorization of basic facts, and learning lower level skills. The investigator believes that using CL as a teaching and learning strategy results in cognitive restructuring leads to an increase in understanding of all students in a cooperative group.

The research reports also indicate that cooperative learning facilitates the process of learning. For instance, the findings from numerous research studies on cooperative learning show improvement in behavior and attendance, motivation, and school and classmates satisfaction (Wilson-Jones, & Caston, 2004). Also, 87% of the studies that used the CL strategy observed positive effects on learning achievement (AL-Rifae, 2006). CL inculcates the skills of cooperation, for the jobs in the companies which have emphasis on the social skills (Naseem & Bano 2011).

To sum up, the knowledge and perception implementers have can generally determine whether a particular instructional strategy is successful in the classroom and it is these same attitudes and beliefs that Parr & Townsend (2002) conclude are affected by peer context. Thus if cooperative learning strategies are perceived by instructors and students in the classroom as ineffective, wasteful, or inefficient, these same attitudes may influence others to poison the classroom atmosphere to this instructional technique. It is thus imperative that EMOE and the university management understand the prevailing instructors and students level of knowledge, perceptions and attitude within the classroom in order to better structure and implement cooperative learning strategies and this understanding of implementers level knowledge and perception may enable universities' management persevere with this pedagogical approach if at first unsuccessful.

9.3.3. Participants' attitude toward CL and its implementation practices

The qualitative strand of this study showed that not all implementers welcome implementing one-two-five group formation as a CL strategy. The study also showed that majority of the interviewees didn't have good feelings and positive attitude to the strategy because they feel that the introduction of CL to universities was purposely politicized by the government and as it was government's imposition on them. The research result also showed that instructors, the university management and students consider resisting implementing CL strategy as a means to oppose government's political influence and interference on universities autonomy and instructors'

academic freedom. They also added that the universities management and most of the instructors were reluctant and seasonal in implementing cooperative learning.

The current study revealed that majority of the research participants' always challenge and they were not comfortable with implementing one-to-five group formation as a CL strategy. They feel as it emanates from government's political interest of controlling the academic environment. Students were also not as such interested to participate in the formed groups. It was also reported by some interviewees of this study that the negative feelings and attitudes of the university management and instructors against using one-to-five group formation as CL strategy came out from the terminology 'one-to-five', considering as that government misusing and abusing the pedagogical innovation and hatred of government.

The investigator believes that the negative feelings and perception against the strategy was first they thought as it was purposely politicized by the government for controlling the academic environment. And second the government tried to implement the formation without considering the special characteristics of the education sector particularly that of higher education institutions. The structure of the one-two-five group formation was just like the formations in villages and other sectors. Otherwise most of them have no problem with CL strategy.

The quantitative data also revealed that, instructors and students' perceptions, attitudes, and behaviors can generally determine whether a particular instructional strategy is successful in classroom and hence, if CL strategy is perceived as an imposition, political tool or ineffective, these attitudes may influence others to poison classroom atmosphere in relation to this instructional technique. It is thus imperative that ministry of education and the university management have to understand the prevailing instructors and student attitudes and perceptions within the classroom in order to better structure and implement CL strategies and this understanding of implementers attitudes may enable them to persevere with this pedagogical approach if at first unsuccessful.

In several studies, attitudes and perceptions of students have been utilized as an effective measure of success for an instructional method (Peterson & Miller, 2004; Gupta, 2004; Armstrong, Chang, & Brickman, 2007; Hanze & Berger, 2007). Some factors affecting student perceptions can create a barrier for some university or college instructors interested in implementing CL into their class instruction. They may insist that they do not like it because it was more work than they thought it

was going to be or should be. These attitudes and perceptions could have a negative impact on the instructor's evaluation and reputation with the students. Instructors without tenure are especially vulnerable to poor evaluations and may, therefore, be resistant to utilize cooperative learning despite its documented success for educating (Phipps, Phipps, Kask, & Higgins, 2001). These are some important issues that need attention if the experience is to be successful for both the teacher and the student. "Implementing effective cooperative learning that results in improved teaching evaluations is a very complex, dynamic process requiring a constant "temperature reading" of the students' perceptions" (Phipps, Phipps, Kask, & Higgins, 2001).

9.3.4. Challenges of CL implementation practices of the sample universities

The result of qualitative phase of this study indicated the most common causes for CL implementation practices can fail. They are: inadequate training of instructors and poor preparation of universities with regards to planning, provision of facilities, technical support and so on. The data also revealed that CL implementation practices can fail if students lack necessary communication skills, social skills and conflict management skills.

It was reported during the qualitative study that absence of commitment & coordination of stake holders, absence of planning, inadequate provision of facilities and technical assistance, human related feelings (negative feelings & attitude and low commitment) and dependency, a top down approach of implementing were among the challenges faced the implementation practices of CL strategy in the case universities.

In the same way, a good number of research participants reported that attitudinal problems and mis-conceptions of instructors, students and the management were the major obstacles that limited the scope of success of implementation practices of the strategy.

The qualitative data also showed that all interviewees from the three case universities agreed that dependency of slow learners and some average learner students on top students were among the great challenges that CL implementation endeavor faced. On top of the above curses, the external political environment in which the universities were operating was one major problem that influenced the implementation process through regular interruption of the academic calendar. The investigator's observation data of classrooms in the three case universities revealed that there were

many potential barriers to group effectiveness which include: lack of group maturity, teamwork skills and taking group responsibility, dependency and inappropriate group size were among others.

It was learned from the qualitative strand of this study that politicization of the strategy, students' and instructors' negative attitude towards CL practice and lack exposure of appropriate and enough amount of training were among serious problems played most decisive role in influencing the effectiveness of CL implementation in the sample universities. The quantitative strand showed that improving the CL implementation practices needs to work on avoiding the politicization of the strategy, providing continuous and enough amount of training to: lesson attitudinal problems, build commitment and seeking reports only. The data also revealed the importance of providing timely and regular technical support.

Local Studies conducted on challenges of CL implementation practices showed that there are several challenges that hamper the effectiveness of the practices. For example, According to Muhammed (2012) a study on CL practices in college of education at Haramaya University, lack of awareness, motivation, clear guidelines and resistance are some of the major challenges hampered CL practices. Aschalew (2012) also identified instructors' tendency toward the traditional method, lack of students' interest and large class size. Were among the major factors affecting the effective implementation of active learning. Moreover, Parr & Townsend (2002) conclude that students' perceptions, attitudes, and behaviors can generally determine whether a particular instructional strategy is successful in the classroom.

CHAPTER TEN

CONCLUSIONS AND IMPLICATIONS

10.1. Conclusions

This study explored higher education institutions practices in implementing cooperative learning strategy as educational innovation and was conducted in three higher education institutions of Ethiopia. The study revealed that there were poor implementation practices of cooperative learning strategy. It also identified factors that hinder the efficacy of the implementation process. In this study I have tried to examine extent of using student-centered approaches by exploring the state of implementation practices of CL in the public universities. The three public universities were selected because they represent three generations (1st -3rd) and would able to give the picture of CL implementation process and contribution of the pedagogical innovation for student, students' learning.

In general, my concern in this study was based on the argument that implementing cooperative learning in higher education institutions strategy as an active learning approach is very critical to maintain quality of education and have competent graduates that could play a major role in solving social, economic, technological and political problems from which the country is suffering from. The following conclusions were drawn based on the findings of the current study:

One of the conclusions drawn from this study is that absence of necessary preparations including implementation planning, trainings for instructors, provision of resources and facilities, provision of technical support and unsatisfactory coordinated work among all parties. The findings also showed that 15% instructors engaged in implementing cooperative learning without prior planning. Thus, instructors who played an irreplaceable role in the implementation process lacks maturity and experience in both teaching in universities and in using CL strategy and most of them had less than three years of experience in using CL as a teaching and learning strategy. This condition could play the major role in influencing the implementation practices cooperative learning strategy in the sample universities. As a further matter, since the teaching and learning is not interactive it would reduce students endeavor of finding out knowledge through the spirit of experimentation and doing which ultimately resulted in affecting the quality of classroom learning. Besides, collaboration that expected among students would be limited.

Majority (45.3% of students and 34.3% of instructs) who participated in the second phase of study were un able to show their position for items presented and repeatedly showed either their disagreement, neutral or undecided position for most items raised in relation to the evaluation of CL implementation practices in the case universities which seems to show their hatred to the implementation of one-to-five group formation as CL strategy or they might not know what cooperative learning strategy mean. There was also a question of appropriateness of CL implementation in public universities. The findings also showed that base group type of CL was used in the universities (AU & UoG) though they were not successful as expected suffering from problems like: lack maturity CL groups, heterogeneity, and absence of team work skills and problem of dependency among others.

This study confirmed that there was no adequate provision of resources and facilities which better facilitates the implementation practices of the pedagogical innovation in the case universities.

The respondents conceptualize CL as an accepted and preferred strategy compering to individual or competitive approach. On the other hand, there were research participants who perceive CL as an instrument of maximizing students' academic performance while others understand the strategy as student-centered approach targeted at improving students learning. Contrary to all these, a good number of respondents perceive the strategy as government's political tool in the academic institutions. In general majority of respondents' have perceived negatively may be due to lack enough amount and continuous training and due to hatred of implementing one–two-five formation as a CL strategy and government interference in academic institutions through one-to-five formation which impose academic institutions autonomy (the possession or right of self-government) and instructors academic freedom.

The research participants have various conceptions about the purposes, blessings and opportunities of cooperative learning implementation in in the case universities. According to them, the purpose of implementing CL as an active learning approach is improvement of: students' academic achievement, This means (48.7% and 48%) of total respondents have shown their agreement for constructing knowledge through students' interaction and the aim of CL implementation is improving students' academic achievement respectively. This shows that the research participants have an understanding of the basic premise of CL and purpose of the strategy. Moreover, according to the quantitative phase study results implementation of CL helps students to improve

relationships with peers and acknowledging differences are among others. It has also benefited for students and students learning and improving quality of education in the institutions. The research participants also indicated that it helps to decrease attrition of students' particularly of female students.

The study identified the major challenges and problems that hold back the implementation process. Particularly the quantitative study result indicated the most and least problematic areas in the implementation practice of CL which the average score of the hindrance factors ranged from 2.49 to 3.23 out of 5. Thus, politicization of the strategy stood at first which shows the research participants were not viewing CL as a pedagogical teaching method. Furthermore, next to politicization of the strategy the top three challenges as indicated by the respondents were: attitudinal problems of the university management, instructors and students; lack of provision of appropriate training for instructors and other concerned stakeholders; inadequate motivation, commitment, technical support & focusing only on paper reports both by university management and EMOE.

The study showed that much has to be done by EMOE and the universities on improving instructors and students' attitude toward CL strategy and alleviating challenges related to CL implementation in a coordinated way. Therefore, it can be concluded that lack of prior preparations from both ministry of education and universities with respect to conducting implementation study, development of implementation plan, provision of appropriate and enough amount of training for instructors and other concerned bodies on top of poor provision of resources and facilities, poor commitment of university management that plays a major role for poor implementation practices of cooperative learning strategy in the universities.

10.2. Implications

To the case universities

Although the research is quite clear as to the various benefits of cooperative learning strategies implemented in education, this instructional technique still remains much of an enigma within higher education. This is especially true in the sciences where lecture-based instruction is the norm. Thus, instructors need to familiarize themselves with cooperative learning strategy having a positive attitude and commitment which would help them to become facilitators of learning and

making the teaching learning process more interactive than curriculum deliverers. Besides trainings would also help them what makes cooperative learning truly cooperative (Lou et al, 2000, Gillies, 2003, Johnson and Johnson, 1996), together with a commitment to implement it (Abrami, et al, 2004). Secondly, a program of teaching of the necessary skills to students (Gillies and Ashman, 1996, Blatchford et al, 2003, Stevahn et al, 2000) and applying these skills to appropriate tasks (Cohen, 1994a, Gillies and Ashman, 1998).

In addition, the case universities need to investigate their CL implementation process to come up with better implementation plan and strategy and work on instructors training, provision of resources and facilities and technical support so that better practices of CL implementation would be possible and hence respond to the demands of competent graduates of the country through avoiding the highly political stake placed on the strategy.

For Curriculum Development

The mission of many institutions of higher learning is to prepare students for the work force. College classrooms, however, tend to promote an atmosphere of competition for grades. Course design may have also been a factor contributing to such conditions because in the curriculum and courses activities that have not been properly planned and designed can lead to such negative experiences for students. These problems are endemic to many institutions of education, regardless of level. Because little or no attention is paid to the learning process. These all things accentuate the need for active learning and the implementation of cooperative learning in the college classrooms reduces the competitive nature among students and promotes cooperation.

Thus, ministry of science and higher education (MoSHE) and universities have to join together and seriously deal to rebuild university courses which will be designed making cooperative learning strategy center of activities rather duplicating the same and out outdated courses across all universities in the country. Therefore, universities need to develop strategy that will improve teamwork, effective communication, cooperation, mutual support, participation and social interaction of students. Cooperative learning is as an instructional strategy that can better help to achieve the objectives of learning and is an excellent way to increase students' participation.

For further research

One of the common contributions of research findings is inspiring new questions that lead to further research endeavors. It is difficult to assert that the findings of this study are generalizable to other contexts. I suggest that replicating the same research in different settings invigorates our understanding of factors that affect the implementation practices of cooperative learning strategy. The investigator also suggests that conducting further research in the area to identify major problems with implementing CL in university settings.

Also, when assuming that the cause (cooperative learning) leads to the effect (social skills, academic achievement and respecting& tolerance of others idea) it is important to keep in mind that there may be other confounding factors not explored in the studies (teaching and learning styles, psychological health, self-esteem and motivation and etc.).

Finally, another area of research that the investigator suggest is on how to include training in cooperative learning/team work during initial teacher training (education) at undergraduate, graduate level or on PGDT programs which could help to narrow the training gap of instructors in relation to practices of implementing cooperative learning strategy.

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APPENDICES

APPENDIX-A

Consent form: for Academic VP, universities reform directors, College Deans and Department Heads,

Dear vice president of the university, reform directorate, college deans and department heads you have been asked to participate in an interview entitled Higher Education Practices in Implementing Educational Innovations: The Case of Cooperative Learning. I am a doctoral student at Addis Ababa University in the department of curriculum and instruction. I would like you to participate in the interview regarding CL (cooperative learning) method implementation practices in your university. The title of my project is “Higher education practices in implementing educational innovations: the case of CL” is a mixed method research. Thus, I would like your permission to study about the usage of different CL strategies in teaching and learning process.

This research study will involve conducting a 30- 35-minute interview that will be tape recorded in which questions relating to current knowledge and understanding of cooperative learning implementation practices of universities will be asked. Interviews will be conducted at a time and place that is most convenient to you. The contents of this interview will be used solely for this research study in which a final paper and presentation will be completed. Your name and institution will not be used in the final paper or presentation. It is important to note that all information provided will be confidential and if you so choose to omit certain aspect of the interview, you will be accommodated.

If you agree to participate, please sign the form below. I greatly appreciate your participation in this research study.

Sincerely,

Ketema Haile

CONSENT FORM

I _____ acknowledge that the content of this research study has been thoroughly explained to me and any questions have been answered. I understand that I can withdraw from this study at any time or request to omit certain aspects of the interview. I have read the letter provided by Ketema Haile and have agreed to participate in the interview process for the research study described.

Thank you very much for considering this request. Your participation is very valuable and could help improve implementation practices of CL in Higher education institutions.

Name (Printed): _____

Signature and date: _____

Email address _____

APPENDIX-B

Interview: For Vice President for Academic Affairs, Universities Reform Directors, College Deans and Department Heads

A. FOR VICE PRESIDENT FOR ACADEMIC AFFAIRS AND REFORM DIRECTORS

1. What do you think about the importance of using cooperative learning (CL) strategy in your University?
2. Is there any training given in relation to implementation of CL for both instructors and students?
3. Who is responsible for the overall training, provision of resources, supervision and giving feedback, solving problems, and evaluation of the implementation practice of CL in universities?
4. What feeling have you observed from instructors and students when they engage in cooperative learning?
5. Do you think cooperative learning could improve students' academic achievement, socialization, life skills, respect and tolerate diversity, motivation, Socialization, Psychological health (self-esteem), reasoning ability, active learning, class room equity, problem-solving ability, learn social skills and civic values, and learn to tolerate& respect differences and increasing their engagement?
6. Do you think that CL implementation based on its five basic elements: students' interdependence, individual accountability, occurrence of group processing, face-to-face promotive interaction and social skills?
7. Do you have any feedback system from colleges, departments and even instructors and students? If yes how to you elicit the feedback?
8. Is there a coordinated activity among all parties within the university during implementing CL? And what is their specific role?
9. What kind of factors both internal & external that influences the implementation of cooperative learning in the university? And do you have points that you would like to add?
10. Exemplary activities in the implementation of CL as T-L strategy in your organization that could serve as a lesson for other institutions?
11. What are problems special to your university while implementing CL?
12. What is your overall comment on the implementation practice of CL in you university?

B. College Deans and Department Heads

1. What do you think about the importance of using cooperative learning in your college or department?
2. What is your department's role in implementation of CL?
3. What the implementation practices of CL look like in your college/department?
4. Do you think cooperative learning strategy could improve students' academic achievement, socialization, life skill, respect and tolerate diversity, motivation, socialization, psychological health(self-esteem), reasoning ability, active learning, class room equity, Problem-solving ability, to learn social skills and civic values, and learn to tolerate& respect differences , increasing their engagement and help to improve instructors and students relationship?
5. Do you think that success in using cooperative learning requires support from the university administration?
6. Do you think that CL implementation practices consider the five basic elements: interdependence, individual accountability, occurrence of group processing, face-to-face promotive interaction and social skills?
7. Do you think it is possible to implement cooperative learning approach in all subjects successfully?
8. What major problems and challenges have you encountered in implementation practices, complete assimilation and reutilization of CL?
9. Is their best practice or problem in your college or department in implementation of CL?
10. Do you have any feedback system from instructors and students about implementation practices of CL in your respective colleges and departments? If yes how to you elicit the feedback?
11. What is your overall comment on the implementation practice of CL in you university/college or department?

APPENDIX-C

Interview consent form for Ethiopian Ministry of Education (EMoE) Reform Director and Education Strategic Center (ESC) Reform Expert

Dear EMoE Reform Director & Education Strategic Center Expert,

You have been asked to participate in an interview entitled Higher Education Practices in Implementing Educational Innovations: The Case of Cooperative Learning. I am a doctoral student at Addis Ababa University in the department of curriculum and instruction. I would like you to participate in the interview regarding CL (cooperative learning) learning method implementation practices in your university. The title of my project is “Higher education practices in implementing educational innovations: the case of CL” is a mixed method research .Thus I would like your permission to study about the usage of different CL strategies in teaching and learning process.

This research study will involve conducting a 30- 35-minute interview that will be tape recorded in which questions relating to current knowledge and understanding of cooperative learning implementation practices of universities will be asked. Interviews will be conducted at a time and place that is most convenient to you. The contents of this interview will be used solely for this research study in which a final paper and presentation will be completed. Your name and institution will not be used in the final paper or presentation. It is important to note that all information provided will be confidential and if you so choose to omit certain aspect of the interview, you will be accommodated.

If you agree to participate, please sign the form below. I greatly appreciate your participation in this research study.

Sincerely,

Ketema Haile

CONSENT FORM

I _____ acknowledge that the content of this research study has been thoroughly explained to me and any questions have been answered. I understand that I can withdraw from this study at any time or request to omit certain aspects of the interview. I have read the letter provided by Ketema Haile and have agreed to participate in the interview process for the research study described.

Thank you very much for considering this request. Your participation is very valuable and could help improve implementation practices of CL in Higher Education Institutions.

Name (Printed): _____

Signature and date: _____

Email address _____

APPENDIX-D

Interview Protocol for EMoE (Ethiopian Ministry of education) Reform Directorate and Education Strategic Center (ESC) expert

1. What is the importance of cooperative learning in universities your own view?
2. Do you think cooperative learning approach is appropriate for university level teaching and learning process?
3. Is there any training sponsored by the EMoE and ESC in relation to implementation of CL for universities?
4. What kind of problems do you have in terms of provision of necessary recourses in relation to the implementation of CL?
5. Do you think that success in using cooperative learning strategy requires support from EMoE, ESC and other concerned bodies? If yes how the EMoE and ESC support the university in relation to the implementation CL strategy?
6. Who is responsible for the overall training, provision of resources, supervision and giving feedback, solving problems, and evaluation of the implementation practice of CL in universities?
7. Do you have any feedback system from universities? If yes how to you elicit the feedback?
8. What are the difficulties of implementing cooperative learning in universities in general as per one to five change army implementation strategies?
9. What EMoE's and ESC's overall evaluation of universities implementation practices of CL shows? What are the strengths and weaknesses? Which universities are performing well and which are not across their generation? What are the reasons for the differences?

Appendix-E

Cover letter for the questionnaire

Dear Instructor:

I am a PhD student at Addis Ababa University in the department of Curriculum and Instruction. This survey is part of the doctoral research work that I am conducting. I am inviting you to participate in this research project by completing the attached survey. This research project is entitled: “Higher Education Institutions Practices in Implementing Educational Innovations: The Case of Cooperative Learning.” The project has been approved by the department of Curriculum and Instruction. The aim of this questionnaire is to collect relevant information for the study on higher education institutions practices in implementing cooperative learning as a teaching and learning strategy.

Participating in this research does not have any personal risks. The information gathered will be confidential and will not be used for any other purpose than the study. It is the cooperation of all the respondents to answer the questions carefully and honestly that makes the study effective and meaningful. Therefore, you are kindly requested to provide the necessary information that is very helpful for the quality of the study. Please, return the completed questionnaires promptly either to me or to your department.

Participation is strictly voluntary and you are free to withdraw from this study at any time without obligation. If you require additional information or have questions, please contact me at the number: 0911966190.

Thank you for your time

The researcher

Appendix -F

Questionnaire

PART 1:-BACKGROUND INFORMATION

Instruction I: Please indicate your response to the following questions by filling the dashes with right answers and putting tick mark (✓) in the appropriate boxes for the others

- 1.1 University _____
- 1.2 Faculty/College _____
- 1.3 Department _____
- 1.4 Area of specialization _____
- 1.5 Sex _____
- 1.4 Age in years A.[20-25) ☐ B. [25-30) ☐ C.[30-35) ☐ D.[35-40) ☐ E. 40 and above ☐
- 1.5 Year/s of teaching in University A. [0-1) year ☐ B.[1-2) years ☐ C. [2-3) years ☐ D. [3-4) ☐
yea
- E. 4 and above ☐
- 1.6 Experience in using CL A. [0-1) year ☐ B. [1-2) years ☐ C. [2-3) years ☐ D. [3-4) years ☐
E. [4-5)years F. 5 years and above ☐
- 1.7 At which level do you teach? A. completely at undergraduate level ☐ B. mostly at undergraduate level ☐
- 1.8 Educational qualification A.BA ☐ B. MA /MSc ☐ C. PhD ☐
- 1.9 Academic rank A. Lecturer ☐ B. associate Prof ☐ C. assistant Prof ☐ D. Professor ☐

PART 2:- MAIN DATA

Instruction: -Items related to Higher Education institutions Practices in Implementing Cooperative Learning strategy are listed below with scale ranging from 1 to 5, where, 1= strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree. Please, read each of the items carefully and indicate by marking (✓) the rating that you think correspond to *Cooperative learning implementation practices* of your department /college/university.

Items no.	Items	5	4	3	2	1
	A. Items Related to Knowledge and Perception of Cooperative Learning					
1	To use cooperative learning (CL) effectively, one must know what is and is not a cooperative group					
2	I think CL basic premise is that students construct knowledge through interaction with other student					
3	I understand CL as a commonly used form of active pedagogy, structured, systematic instructional technique & educational situation					
4	I perceive CL as a student-centered, instructor-facilitated instructional strategy in which a small group of students is responsible for its own learning and the learning of all group members					
5	Cooperative learning (CL) is instruction that involves students working in teams to accomplish a common goal, under conditions that include: Positive interdependence, individual accountability, Face-to-face interaction, appropriate use of collaborative skills and processing as a group as basic elements					
6	I think any learning task in any course area may be structured cooperatively					

Items no.	B. Items Related to Purposes of Cooperative Learning					
1	The primary purpose of CL implementation is improving students' academic achievement					
2	Cooperative learning is being implemented with the purpose of serving as an instrumental strategy to improve quality of education in universities					
3	The purpose of CL strategy is to minimize learning gap among students & making all students productive in their education					
4	CL grouping (one-to-five group formations) has the purpose of serving as a political tool of government in the academic environment					
Item no.	C. Items Related to Blessings & Opportunities of Cooperative Learning					
1	Academic learning success for all members of the group is one opportunity that is created and that separates cooperative learning (CL) from competitive approaches					
2	CL is a pedagogical practice tends to promote more positive attitudes toward learning					
3	CL offers many ways of promoting more equal participation among group members					
4	CL make students active & increase their engagement					
5	CL strategies creates conducive environment for students' cognitive & social development					
6	CL helps to improve the quality of classroom learning					
7	CL makes students better understand issues & concepts					
8	CL helps students to be competent graduates?					
9	CL develops students positive peer relationship					
10	Builds culture of collaboration and working with others					
11	Improves students' social skills					
12	enable students of different back ground to live together, learn from each other, study together and share experiences					
13	Make students to more engage in social responsibilities					
14	CL help students to tolerate differences in opinions					
15	CL improves respecting others views					
16	CL create conducive environment for students to appreciate differences					
17	Using CL strategy increase skills of acknowledging & respecting differences					
18	CL strategy helps minimize conflicts and create peaceful learning environment					
item no.	D. Items Related to Attitude Towards Cooperative Learning					
1	I think using cooperative learning (CL) holds bright students back					
2	CL is inappropriate for university level teaching and learning process					
3	CL is a successful pedagogy to improve students' academic performance					
4	I feel pressured by the university management to use cooperative learning					
5	I feel a personal commitment to using cooperative learning					
6	I find that cooperative learning is too difficult to implement successfully					
7	It is impossible to evaluate students fairly when using cooperative learning					
Item no.	E. Items Related to Cooperative Learning Implementation Practices					
1	I think to guide the implementation practices of CL(cooperative learning) in the university, implementation study was conducted, implementation frame work and evaluation principles were developed					
2	I implement CL approaches on a regular basis					
3	In CL I design activities and assignments that require students to rely on each other to complete the task					
4	In the teaching and learning process I use all types (formal , informal , and base groups) of CL independently or in an integrated way					

5	CL groups are being organized on the basis of academic achievement, ethnic background, language, geographical backgrounds or a combination of these criteria					
6	In implementing CL memorandum of understanding is being prepared in written form with each group member signing it to indicate acceptance of a group expectations and each group member intended compliance					
7	I think in implementing CL each group member has a personal responsibility for completing one's share of the work and facilitating the work of other group member					
8	In implementing CL, the university provided training and resources, established implementation system, clear responsibilities and supervise the actions of the implementers					
9	In CL implementation there is a strong coordination and collaboration among: the university management, colleges, departments, instructors and students within the system					
10	My training on cooperative learning has not been practical enough for me to implement it successfully					
11	I think the success of CL implementation effort depends on how well groups are functioning & managed					
12	I think CL implementation practice is only limited to class rooms					
Item no	F. Items Related to Cooperative Learning Implementation Practices Status					
1	CL is not the dominant teaching & learning strategy in our university/college or department					
2	I think the status of CL implementation practice varies from department to department and from college to college					
3	The overall status of CL implementation practices in the university/my college or my department is unsatisfactory					
Item no	G. Items Related to Challenges /Curses/ in CL Implementation					
1	Attitudinal problems of the university leadership, instructors and students					
2	Inadequate motivation, commitment, technical support & focusing only on paper reports from university leadership					
3	Lack of provision of appropriate training for instructors and other concerned stakeholders					
4	Physical set-up of classrooms					
5	large class size					
6	Poor provision of facilities/resources					
7	Regular Interruptions of academic calendar					
8	Politicization of the strategy					

PART-III

INSTRUCTION-III: - circle what correctly describes you. Make sure to respond to every statement.

1. Typical class size (*Choose only one alternative that best describes*)

- A. Less than 25 students
- B. 25 to 35 students
- C. 35 to 45 students
- D. 45 to 55 students
- E. More than 55 students

2. Amount of training in cooperative learning that you have received (*Choose only one alternative that best describes the period of training*)

- A. More than 6 days
- B. Between 3 and 6 days
- C. Between 1 and 2 days
- D. Less than a full day
- E. None

3. Method (s) in which you have been trained (*mark all that apply*)

- A. Learning Together (Johnsons)
- B. Structural Approach (Kagan)
- C. STAD and TGT (Slavin)
- D. Name of method was not given/Do not remember name of method
- E. None

4. Type of follow-up & support in cooperative learning that you have received (*mark all that applies*)

- A. Provision of training
- B. Provision of facilities
- C. Technical assistance
- D. Continuous follows up & feed back
- E. None

5. What is your major role while implementing CL? (*Choose only one alternative that best describes you*)

- A. Make pre instructional decisions, explain the task and the positive interdependence, selecting CL methods and techniques, monitor students' learning and intervene within the groups to provide task assistance or to increase students' interpersonal and group skills, assess students' learning and helping students process how well their groups functioned and, as a facilitator while the students doing tasks and engaged in different learning activities
- B. presenting what to teach
- C. guiding (give direction about what and how to do learning tasks)
- D. preparing memorandum of understanding
- E. none

Appendix-G

Cover letter for the questionnaire

Dear student:

I am a PhD student at Addis Ababa University in the department of Curriculum and Instruction. This survey is part of the doctoral research work that I am conducting. I am kindly asking for your cooperation to participate in this research by completing the questionnaire. This research project is entitled: “Higher Education Institutions Practices in Implementing Educational Innovations: The Case of Cooperative Learning.” The project has been approved by the department of Curriculum and Instruction. The aim of this questionnaire is to collect relevant information for the study on higher education institutions practices in implementing cooperative learning as a teaching and learning strategy.

Participating in this research does not have any personal risks. The information gathered will be confidential and will not be used for any other purpose than the study. You do not also need to write your name. It is the cooperation of all research participants to answer the questions carefully and honestly that makes the study effective and meaningful. Therefore, you are kindly requested to provide the necessary information that is very helpful for the quality of the study. Please, return the completed questionnaires promptly either to me or to your department.

Participation is voluntary and you are free to withdraw from this study at any time without obligation. If you require additional information or have questions, please contact me at the number: 0911966190.

Thank you for your time

The researcher

Appendix-H Questionnaire

PART 1:- BACKGROUND INFORMATION

Instruction I: Please indicate your response to the following questions by filling the dashes with appropriate answers.

- 1.1 University_____
- 1.2 Faculty/College_____
- 1.3 Department_____
- 1.4 Sex_____
- 1.5 Year level_____
- 1.6 Experience in using cooperative learning_____

PART 2:- MAIN DATA

Instruction: - Items related to Higher Education institutions Practices in Implementing Cooperative Learning strategy are listed below with scale ranging from 1 to 5, where, 1= strongly disagree, 2= disagree, 3 = undecided, 4 = agree, and 5 = strongly agree. Please, read each of the items carefully and indicate by marking (√) the rating that you think correspond to cooperative learning implementation practices of your department /college/ university.

Items no.	Items	5	4	3	2	1
	A. Items Related to Knowledge and Perception of Cooperative Learning					
1	CL basic premise is that students construct knowledge through interaction with other student					
2	I perceive CL as a strategy in which a small group of students is responsible for its own learning and the learning of all group members					
3	In CL learning success is one opportunity that is created and that separates CL groups from other group tasks & competitive approaches					
4	.I perceive CL as a pedagogical practice tends to promote more positive attitudes toward learning, the subject area, and the university					
5	Using CL strategy helps to make students active & engaged					
6	CL creates conducive environment for students' cognitive and social development such as knowledge building, meta-cognition, self-esteem					
7	I understand CL as an approach that help students better understand issues & concepts					
	B. Items Related to Purposes of Cooperative Learning					
1	The primary purpose of cooperative learning implementation is improving students' academic achievement					
2	The purpose of CL strategy is to minimize learning gap among students & making all students productive in their education					
3	CL grouping (one-to-five group formations) has the purpose of serving as a political tool of government in the academic environment					
	C. Items Related to Blessings & Opportunities of Cooperative Learning					
1	Academic learning success for all members of a group					
2	CL tends to promote more positive attitudes toward learning					
3	CL make students active & increase their engagement					
4	CL strategies creates conducive environment for students' cognitive & social development					
5	CL makes students better understand issues& concepts					

6	In CL students work together to fill individual gaps that instructors may not recognize					
7	Cooperative learning (CL) enhances the learning of slow learner & medium learner students					
8	CL develops students positive peer relationship					
9	Builds culture of collaboration and working with others					
10	Improves students' social skills					
11	enable students of different back ground live together, learn from each other, study together and share experiences					
12	Make students to more engage in social responsibilities					
13	CL help students to tolerate differences in opinions					
14	CL improves respecting others views					
15	CL create conducive environment for students to appreciate differences					
16	Using CL strategy increase ability of acknowledging & respecting differences					
17	CL strategy helps minimize conflicts and create peaceful learning environment					
Items no.	D. Items Related to Attitude Toward Cooperative Learning					
1	CL is in appropriate for university level education					
2	Students learn better when there is interaction among them					
3	CL implies, students help each other, learn, share ideas and resources, and plan cooperatively what and how to study					
4	Group study can improve my attitude towards work					
5	Cooperative learning holds bright students back					
Items no	D. Items Related Cooperative Learning Implementation Practices					
1	Implementation study was conducted, implementation frame work and evaluation principles were developed for CL implementation in the university					
2	Instructors use different CL approaches on a regular basis					
3	In CL design activities & assignments that require students to rely on each other to complete the task					
4	Instructors use all types (formal, informal, and base groups) of CL independently or in an integrated way in classrooms					
5	CL groups are being organized on the basis of academic achievement, ethnic and geographical backgrounds or a combination					
6	In implementing CL memorandum of understanding is being prepared and signed					
7	In CL implementation each group member has a personal responsibility for completing one share of the work & facilitating the work of other member					
8	The university provided training and resources, established implementation system, clear responsibilities and supervise implementation					
9	In CL implementation there is a strong coordination and collaboration among: the university management, colleges, departments, instructors and students					
10	The success of CL implementation effort depends on how well groups are functioning& managed					
11	implementation practice is only limited to class rooms					

Items no	E. Items Related to Cooperative Learning Implementation Status					
1	CL is not the dominant teaching & learning strategy in our university/college or department					
2	The status of CL implementation practice varies from department to department					
3	I think, the overall status of CL implementation practices in the university/my college or my department is unsatisfactory					
Items no	F. Items Related to Challenges in Cooperative Learning Implementation					
1	Attitudinal problems of the university leadership, instructors and students					
2	Inadequate motivation, commitment, technical support					
3	Lack of provision of appropriate training for instructors and other concerned stakeholders					
4	Physical set-up of classrooms					
5	Large class size					
6	Poor provision of facilities					
7	Regular Interruptions of academic calendar					
8	Politicization of the strategy					

APPENDIX-I

OBSERVATION PROTOCOL

1. What facilities are there in the university in general and in classrooms in particular that better facilitates CL implementation practices?
2. Do students and instructors actively engage themselves in implementing CL and play roles expected of them?
3. Type of CL used (formal, informal and cooperative base group) in class rooms
4. What CL strategies mostly used by the instructors?
5. What internal and external factors hinder the CL implementation practices of the universities?
6. Do students engage in different CL activities out of classrooms such as in libraries, around dormitories and in any comfortable places like field?

APPENDIX-J

Benefits of cooperative learning method

Benefits of cooperative learning method	
For students	For instructors
- Promotes deep learning of course materials through a diversity of perspectives fostered by interactions between peers (McKinney & Graham-Buxton 1993; Carlsmith and Cooper, 2002; Davidson, N., & Major, C. H., 2014). - Achieve better grades in CL than in competitive or individual learning (Felder 1995; Weitz ,1995; Stearns, 1996; Pray Muir & Tracy ,1999; Davidson, N., & Major, C. H.,2014; Gokhale, 1995; Johnson, Johnson, and Holubec 1993; Slavin 1991; Stahl and VanSickle 1992). - Students learn social skills and civic values that are valuable in their later life (Abrami & Chambers 1994; Johnson, Johnson & Smith 2007; Slavin, 1989, 1985; Johnson and Johnson, 1989; Johnson et al., 2007; Totten, Sills, Digby, and Russ, 1991). They also learn higher-order, critical thinking skills (Windschitl 1999). Psychological well-being (Nilson, 1998). --students achieve personal growth that helps them maintain psychological health and a positive attitude toward their college experience & toward autonomous learning (Johnson, Johnson & Smith 2007). -Students' participation can increase: In CL students are active learner who needs to construct knowledge by activating their own schemata (Brown, 2001). -Interaction with peers offers students the chance to learn from one another's scholarship, skills, and experiences (Cooper, Robinson, and McKinney, 1993; Slavin, 1983). - In CL students exhibit signs of higher understanding when they were responsible for teaching concepts to their classmates and when their classmates taught concepts to them (Webb ,1985). - Cooperative teams achieve greater levels of thought and retain information longer than students who work on an individual basis (Johnson and Johnson, 1986). -CL offers a proven, practical means of creating exciting social and engaging classroom environment to help students to master traditional skills and knowledge as well as develop the creative and interactive skills needed in today's society and economy (Li, M. P. & Lam, B. H., 2013). -Students learn to respect others' ideas, tolerate differences and discuss with others. In short, they learn how to live in a democratic society and it assists the development of self-esteem and self-efficacy of the members and also it provides educational opportunities in a variety of issues, diversity in learning and it helps unearth and develop leadership potentials (Ahmet Saban, 2013; Büyükkaragöz, 1997; Aydın, 2000; Senemoğlu, 1997; Özden, 2000). -The cost of CL is low (Büyükkaragöz, 1997; Aydın, 2000; Senemoğlu, 1997; Özden, 2000). -It allows for simultaneous teaching approaches for multiple audiences and student levels (Antil et al., 1998).	- CL gives instructors more time to reflect on what is happening in the classroom. Rather than constantly being “on stage,” instructors can step back and gain a larger perspective on how well students are learning the material (Junko Shimazoe and Howard Aldrich, 2010). - Second, CL can decrease an instructor's grading load by reducing the number of assignments to be graded. For example, if students' complete assignments in groups of four, rather than individually, an instructor needs to read only one-fourth as many assignments (Junko Shimazoe and Howard Aldrich, 2010).

APPENDIX-K

Current CL implementation practices

			Strongly disagree		Disagree		Undecided		Agree		Strongly agree	
		1.Students 2.Instructors	N	%	N	%	N	%	N	%	N	%
1	Implementation study was conducted, implementation framework and evaluation principles were developed for CL implementation in the university	1	6	5.1%	15	12.8%	53	45.3%	41	35.0%	2	1.7%
		2	6	17.1%	10	28.6%	12	34.3%	6	17.1%	1	2.9%
2	Instructors use different CL approaches on a regular basis	1	14	12.0%	29	24.8%	45	38.5%	26	22.2%	3	2.6%
		2	11	31.4%	11	31.4%	10	28.6%	3	8.6%	0	0.0%
3	In CL design activities & assignments that require students to rely on each other to complete the task	1	10	8.5%	11	9.4%	35	29.9%	56	47.9%	5	4.3%
		2	4	11.4%	12	34.3%	13	37.1%	6	17.1%	0	0.0%
4	Formal , informal and base groups of types of CL independently or in an integrated way is used In the teaching and learning process	1	5	4.3%	18	15.4%	55	47.0%	34	29.1%	5	4.3%
		2	7	20.0%	6	17.1%	17	48.6%	5	14.3%	0	0.0%
5	CL groups are being organized on the basis of academic achievement, ethnic and geographical backgrounds or a combination	1	15	12.8%	19	16.2%	42	35.9%	40	34.2%	1	.9%
		2	7	20.0%	8	22.9%	16	45.7%	4	11.4%	0	0.0%
6	In implementing CL memorandum of understanding is being prepared and signed	1	16	13.7%	25	21.4%	49	41.9%	25	21.4%	2	1.7%
		2	7	20.0%	15	42.9%	6	17.1%	5	14.3%	2	5.7%
7	In CL implementation each group member has a personal responsibility for completing one share of the work & facilitating the work of other member	1	7	6.0%	23	19.7%	56	47.9%	30	25.6%	1	.9%
		2	3	8.6%	9	25.7%	12	34.3%	11	31.4%	0	0.0%
8	The university provided training and resources, established implementation system, clear responsibilities and hierarchical control	1	10	8.5%	25	21.4%	47	40.2%	33	28.2%	2	1.7%
		2	6	17.1%	10	28.6%	11	31.4%	5	14.3%	3	8.6%
9	In CL implementation there is a strong coordination and collaboration among: the university management, colleges, departments, instructors and students	1	18	15.4%	14	12.0%	39	33.3%	42	35.9%	4	3.4%
		2	9	25.7%	10	28.6%	12	34.3%	4	11.4%	0	0.0%
10	My training on CL has not been practical enough for me to implement it successfully	1										
		2	0	0.0%	10	28.6%	11	31.4%	12	34.3%	2	5.7%
11	The success of CL implementation effort depends on how well groups are functioning& managed	1	9	7.7%	11	9.4%	38	32.5%	56	47.9%	3	2.6%
		2	6	17.1%	8	22.9%	13	37.1%	7	20.0%	1	2.9%
12	implementation practice is only limited to class rooms	1	7	6.0%	26	22.2%	42	35.9%	40	34.2%	2	1.7%
		2	13	37.1%	11	31.4%	8	22.9%	3	8.6%	0	0.0%

APPENDIX-L

Instructors and students' knowledge and perception of CL

Items			Agreement level					Chi-Square Tests	
1. Students 2. Instructors			SDA	DA	UD	AG	SA	Value	Significance (2-sided)
S2_A2: I think CL basic premise is that students construct knowledge through interaction with other student	1	N	10	11	35	56	5	8.040 ^a	0.09
		%	8.50%	9.40%	29.90%	47.90%	4.30%		
	2	N	6	8	8	11	2		
		%	17.10%	22.90%	22.90%	31.40%	5.70%		
Tot		%	10.50%	12.50%	28.30%	44.10%	4.60%		
S2_A4: I perceive CL as a strategy in which a small group of students is responsible for its own learning and the learning of all group members	1	N	6	15	53	41	2	4.699 ^a	0.32
		%	5.10%	12.80%	45.30%	35.00%	1.70%		
	2	N	4	8	12	11	1		
		%	11.40%	22.90%	34.30%	28.60%	2.90%		
Tot		%	6.60%	15.10%	42.80%	33.60%	2.00%		
S2_B1: The primary purpose of CL implementation is improving students' academic achievement	1	N	9	11	38	56	3	8.339 ^a	0.08
		%	7.70%	9.40%	32.50%	47.90%	2.60%		
	2	N	5	7	9	11	3		
		%	14.30%	20.00%	25.70%	31.40%	8.60%		
Tot		%	9.20%	11.80%	30.90%	44.10%	3.90%		
S2_B3:The purpose of CL strategy is to minimize learning gap among students & making all students productive in their education	1	N	7	26	42	40	2	6.954 ^a	0.138
		%	6.00%	22.20%	35.90%	34.20%	1.70%		
	2	N	7	6	12	10	0		
		%	20.00%	17.10%	34.30%	28.60%	0.00%		
Tot		%	9.20%	21.10%	35.50%	32.90%	1.30%		
S2_B4:CL grouping (one-to-five group formations) has the purpose of serving as a political tool of government in the academic environment	1	N	16	19	38	40	4	4.324 ^a	0.364
		%	13.70%	16.20%	32.50%	34.20%	3.40%		
	2	N	6	9	13	6	1		
		%	17.10%	25.70%	37.10%	17.10%	2.90%		
Tot		%	14.50%	18.40%	33.60%	30.30%	3.30%		
S2_C1: Learning success is one opportunity that is created and that separates CL groups from other group tasks & competitive approaches	1	N	9	24	52	30	2	3.956 ^a	0.412
		%	7.70%	20.50%	44.40%	25.60%	1.70%		
	2	N	4	11	15	5	0		
		%	11.40%	31.40%	42.90%	14.30%	0.00%		
Tot		%	8.60%	23.00%	44.10%	23.00%	1.30%		
S2_C2: CL is a pedagogical practice tends to promote more positive attitudes toward learning, the subject area, and the university	1	N	9	17	47	40	4	6.920 ^a	0.14
		%	7.70%	14.50%	40.20%	34.20%	3.40%		
	2	N	3	7	6	17	2		
		%	8.60%	20.00%	48.60%	17.10%	5.70%		
Tot		%	7.90%	15.80%	42.10%	30.30%	3.90%		
S2_C4: CL make students active &increase their engagement	1	N	9	20	51	34	3	6.360 ^a	0.174
		%	7.70%	17.10%	43.60%	29.10%	2.60%		
	2	N	2	3	14	12	4		
		%	5.70%	8.60%	40.00%	34.30%	11.40%		
Tot		%	7.20%	15.10%	42.80%	30.30%	4.60%		
S2_C5: CL strategies creates conducive environment for students' cognitive and social development such as knowledge building, meta-cognition, self-esteem	1	N	7	14	52	40	4	4.304 ^a	0.366
		%	6.00%	12.00%	44.40%	34.20%	3.40%		
	2	N	3	7	14	8	3		
		%	8.60%	20.00%	40.00%	22.90%	8.60%		
Tot		%	6.60%	13.80%	43.40%	31.60%	4.60%		
S2_C7:CL makes students better understand issues& concepts	1	N	16	23	45	29	4	0.873 ^a	0.928
		%	13.70%	19.70%	38.50%	24.80%	3.40%		
	2	N	5	9	11	9	1		
		%	14.30%	25.70%	31.40%	25.60%	2.90%		
Tot		%	13.80%	21.10%	36.80%	25.00%	3.30%	Note: df = 4	

APPENDIX-M

Factor Loading

Items	Extraction
To use cooperative learning(CL) effectively, one must know what is and is not a cooperative group	.732
I think CL basic premise is that students construct knowledge through interaction with other student	.913
I understand CL as a commonly used form of active pedagogy, structured, systematic instructional technique& educational situation	.910
I perceive CL as a student-centered, instructor-facilitated instructional strategy in which a small group of students is responsible for its own learning and the learning of all group members	.845
CL is instruction that involves students working in teams to accomplish a common goal, under conditions that include: Positive interdependence, individual accountability, Face-to-face interaction, etc.	.870
I think any learning task in any course area may be structured cooperatively	.789
The primary purpose of CL implementation is improving students' achievement	.922
Cooperative learning is being implemented with the purpose of serving as an instrumental strategy to improve quality of education in universities	.884
The purpose of CL strategy is to minimize learning gap among students & making all students productive in their education	.846
CL grouping (one-to-five group formations) has the purpose of serving as a political tool of government in the academic environment	.835
Academic learning success for all members of the group is one opportunity that is created and that separates cooperative learning (CL)groups from other group tasks & competitive approaches	.775
CL is a pedagogical practice tends to promote more positive attitudes toward learning, the subject area, and the university	.877
CL offers many ways of promoting more equal participation among group members	.856
CL make students active &increase their engagement	.839
CL strategies creates conducive environment for students' cognitive development and social development such as knowledge building, meta-cognition, self-esteem	.844
CL helps to improve the quality of classroom learning	.897
CL makes students better understand issues& concepts	.870
CL helps students to be competent graduates	.880
I think using cooperative learning(CL) holds bright students back	.778
CL is inappropriate for university level teaching and learning process	.784
CL is a successful pedagogy to improve students' academic performance	.844
I feel pressured by the university management to use cooperative learning	.888
I feel a personal commitment to using cooperative learning	.833
I find that cooperative learning is too difficult to implement successfully	.852
It is impossible to evaluate students fairly when using cooperative learning	.889
I think to guide the implementation of CL (cooperative learning) in the university, implementation study was conducted, and implementation frame work and evaluation principles were developed	.882
I implement different CL approaches on a regular basis	.757
In CLI design activities and assignments that require students to rely on each other to complete the task	.888

In the teaching and learning process I use all types (formal , informal , and base groups) of CL independently or in an integrated way	.869
CL groups are being organized on the basis of academic achievement, ethnic background, language, geographical backgrounds or a combination of these criteria	.772
In implementing CL memorandum of understanding is being prepared in written form with each group member signing it to indicate acceptance of a group expectations	.901
I think in implementing CL each group member has a personal responsibility for completing one's share of the work and facilitating the work of other group member	.885
In implementing CL, the university provided training and resources, established implementation system, clear responsibilities and hierarchical control to supervise the actions of the implementers	.876
In CL implementation there is a strong coordination and collaboration among: the university management, colleges, departments, instructors and students within the system	.850
My training on cooperative learning has not been practical enough for me to implement it successfully	.740
I think the success of CL implementation effort depends on how well groups are functioning& managed	.918
I think CL implementation practice is only limited to class rooms	.857
CL is not the dominant teaching & learning strategy in our university/college or department	.862
I think the status of CL implementation practice varies from department to department and from college to college	.921
The overall status of CL implementation practices in the university/my college or my department is unsatisfactory	.891
Attitudinal problems of the university leadership, instructors and students	.903
Inadequate motivation, commitment, technical support & focusing only on paper reports from university leadership	.827
Lack of provision of appropriate training for instructors and other concerned stakeholders	.896
Physical set-up of classrooms	.873
Large class size	.591
Poor provision of facilities/resources	.927
Regular interruptions of academic calendar	.906
Politicization of the strategy	.938
Extraction Method: Principal Component Analysis	

APPENDIX-N



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የትምህርት ሚኒስቴር
The Federal Democratic Republic of Ethiopia
Ministry of Education

☎ 0111 55 31 33

☎ 1367

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No.

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Date

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ADDIS ABABA

7/01-259/813/08
13/3/08

ለአዲስ አበባ ዩኒቨርሲቲ
ለሀገራዊ የዲፕሎማሲ ትምህርት
ለሀገራዊ የዲፕሎማሲ ትምህርት
ለመቀሌ ዩኒቨርሲቲ
ለመደራ ዩኒቨርሲቲ
ለሚዳን ቴሮ ዩኒቨርሲቲ
ለአርባ ምንጭ ዩኒቨርሲቲ
ለሰሜን ዩኒቨርሲቲ
ለአዲስ አበባ ዩኒቨርሲቲ
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ለወለጋ ዩኒቨርሲቲ
ለወሎ ዩኒቨርሲቲ
ለደብረ-በርሃን ዩኒቨርሲቲ
ለደብረ-በርሃን ዩኒቨርሲቲ
ለደብረ-በርሃን ዩኒቨርሲቲ
ለሀገራዊ የዲፕሎማሲ ትምህርት
ለሀገራዊ የዲፕሎማሲ ትምህርት
ለሀገራዊ የዲፕሎማሲ ትምህርት
ለሀገራዊ የዲፕሎማሲ ትምህርት
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ለሀገራዊ የዲፕሎማሲ ትምህርት

ለአዲስ አበባ ዩኒቨርሲቲ
ለአዲስ አበባ ዩኒቨርሲቲ
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ለአዲስ አበባ ዩኒቨርሲቲ

ጉዳዩ፡ የክፍተኛ ትምህርት የትምህርት ልማት ሠራዊት ግንባታ አደረጃጀት ማንጥል ትግበራን ይመለከታል፤

የክፍተኛ ትምህርት የትምህርት ልማት ሠራዊት ግንባታ አደረጃጀት ረቂቅ ማንጥል ተዘጋጅቶ ለሁሉም ዩኒቨርሲቲዎች መላክ፤ እንዲሁም ድሬደዋ ዩኒቨርሲቲ በተካሄደው የንመብት የትምህርት ጉዳይ ላይ ተርቦ የተሰጠው ግብአቶች ታስተውሎ ማንጥል ለትግበራ ተርቧል።

ስለሆነም ማንጥልን በዚህ ደብዳቤ ሸኝነት በአባሪነት አያይዘን እየላክን እንደየዩኒቨርሲቲው አወቃቀርና ተጨባጭ ሁኔታ እንዲተገበር እናሳስባለን።



ከሠላምታ ጋር
/Signature/
ዳክ አርገላ ዲግላ (ዶ/ር)
የዲፕሎማሲ ደ/ሪ

ግልባጭ፡

- ለክቡር ሚኒስትር
- ለክቡር ሚኒስትር ዴኤታ ጽ/ቤት (ክፍተኛ ትምህርት)
- ለክፍ/ትም/አስ/ጉ/ ጀኔራል ዳይሬክቶሬት
- ለክፍ/ትም/የም/አካ/ጉ/ ጀኔራል ዳይሬክቶሬት
- ትምህርት ሚኒስቴር

መልስ ለጽ/ቤት በቤት አድራሻዎ ይገኛል።
e-mail: moe.education@ignat.com

Declaration

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others.

Name of the investigator: Ketema Haile Geleta

Signature: _____

Date: _____

This doctoral dissertation has been submitted for examination by my approval as the candidate's university advisor.

Name of the advisor: Amare Asgedom (Prof.)

Signature: _____

Date of Submission: _____