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POST GRADUATE SCHOOL FOR THE SOCIAL AND EDUCATIONAL SCIENCES \*\*\*\*\*\*\*\*

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# EVALUATION OF THE QUALITY OF COOPERATIVE LEARNING AND ITS IMPACT ON CLASSROOM ASSESSMENT: THE CASE OF SELECTED TEACHER TRAINING COLLEGES IN CAMEROON

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# **FEBRUARY 2024**

# CERTIFICATION

This is to certify that this thesis entitled "Evaluation of the quality of cooperative learning and its impact on classroom assessment: The case of selected Teacher Training Colleges in Cameroon" was carried out by Yvette NYAKE MAKOGE with registration number 14T3319 in the Department of Curriculum and Evaluation, Faculty of Education of the University of Yaounde 1, under my supervision and guidance

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# APPROVAL

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# DEDICATION

То

My family members of blessed memories

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#### ABSTRACT

This study, titled "Evaluation of the Quality of Cooperative Learning and its Impact on Classroom Assessment," focuses on investigating the extent to which the quality of cooperative learning variables influences classroom assessment in six (6) government bilingual teacher training colleges in Cameroon. Four (4) research hypotheses were formulated to guide the researcher in the study: the academic, pedagogical, classroom management, and didactic qualities of cooperative learning significantly influence classroom assessment. Four hundred and eleven (411) student teachers comprised the sample. Quantitative and qualitative data were collected through the questionnaire and interview guide, respectively. The questionnaires were administered by the researcher and her research assistants. The data were analysed with the help of the mean, standard deviation, and Pearson correlation. For qualitative data, six (6) student teachers that constituted part of the sample were chosen from the selected teacher training colleges. They were directly and indirectly interviewed by the researcher through WhatsApp (voice mails, SMS, video, and audio calls), and the data were descriptively analyzed. Findings revealed that the quality of cooperative learning influences classroom assessment. This is because the four (4) alternative hypotheses were retained; the above results were equally supported by the findings of the structured interview. Thus, the academic quality of cooperative learning significantly influences classroom assessment (P = 0.13, significance level of 0.01), and the pedagogical quality of cooperative learning significantly influences classroom assessment (P = 0.14). 0.1 significance level; the classroom management quality of cooperative learning significantly influences classroom assessment (P = 0.4) with a significance level of 0.01; and finally, the didactic quality of cooperative learning significantly influences classroom assessment (P = 0.51) with a significance level of 0.01. Based on the above results, some recommendations were made to teachers, school administrators, policymakers, and the state to encourage, provide in-service training, provide the necessary materials and equipment, and finance the implementation of cooperative learning qualities in schools. A model for evaluating cooperative learning qualities is also proposed based on the findings.

Key words: evaluation, cooperative learning, quality, and classroom assessment.

#### RESUME

Cette recherche intitulée « L'évaluation de la qualité de l'apprentissage coopératif et son impact sur l'évaluation » Cette étude analyse dans quelle mesure les variables liées à la qualité de l'apprentissage coopératif : la qualité académique, pédagogique, de la gestion de classe et didactique de l'apprentissage influencent l'évaluation dans six (06) Ecoles Normales Bilingue d'Instituteurs de l'Enseignement Normal publiques (ENBIEG) au Cameroun. Quatre (4) hypothèses ont été formulées pour guider l'étude. La qualité académique, la qualité pédagogique, la qualité de la gestion de la classe et la qualité didactique de l'apprentissage coopératif influence considérablement l'évaluation. L'échantillon utilisé est constitué de quatre cent onze (411) élèves-maîtres. Les données quantitatives et les données qualitatives ont été respectivement collectées par le biais des questionnaires et des entretiens. Les données quantitatives ont été analysées à l'aide de la moyenne de l'écart type et de la corrélation de Pearson. Pour ce qui est de l'analyse qualitative, six (06) élèves-maîtres appartenant au même échantillon ont été sélectionnés dans les six (06) ENIEG bilingues sus-évoquées, Ils ont été interrogés par le chercheur directement ou indirectement via WhatsApp (messages vocaux, SMS, vidéos et appels audio) et les données ont été analysées de manière descriptive. Les résultats obtenus ont montré que la qualité de l'apprentissage coopératif influence significativement l'évaluation puisque les quatre (4) hypothèses de recherche ont été retenues ; et cela correspond à celui de l'entretien. La qualité académique de l'apprentissage coopératif influencent de façon significative l'évaluation (P=0.13) à un niveau significatif de 0,01, la qualité pédagogique de l'apprentissage coopératif influencent de façon significative l'évaluation (P=0.14) à un niveau significatif de 0,01, la qualité de la gestion de la classe en apprentissage coopératif influencent de façon significative l'évaluation (P=0.4) à un niveau significatif de 0,01 et la qualité didactique de l'apprentissage coopératif influencent de façon significative l'évaluation (P=0.51) à un niveau significatif de 0,01. Au regard de ce résultats, des recommandations ont été faites aux élèves-maîtres, aux enseignants, aux administrateurs, aux parents, aux décideurs politiques et à l'État d'encourager la formation continue et de financer l'implémentation qualitative de l'apprentissage coopératif dans l'école afin d'améliorer l'évaluation et la qualité de l'éducation en général. Sur la base des résultats de ce travail, un modèle a été proposé.

Mots clés : Évaluation, qualité, apprentissage coopératif, évaluation.

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# LIST OF ABBREVIATIONS

%:	Percentage
A'Level:	Advanced levels
CBA:	Competence Based approach
<b>COFEMEN:</b>	Conference des ministres de l'education des etats et government de la francophonie
e:	Margin of error
ENBIEG :	Ecoles Normales Bilingue d'Instituteurs de l'Enseignement Normal publiques
ETUCE:	European trade union committee for education
<b>GBTTC:</b>	Government bilingual teacher training college
Ha:	Alternative hypothesis
Ho:	Null hypothesis
N:	Population size
NAEY:	National association for education of young children
NPA:	New pedagogic approach
O'Level:	Ordinary levels
PASEC:	Programme d'analyse des systemes educatifs de la confemen
RH:	Research hypothesis
SDG:	Sustainable development goals
Sig:	Significance
Std:	Standard deviation
<b>UNESCO:</b>	United Nations educational scientific and cultural organisation
SMS	Short message service
Z	Z- Score

## **GENERAL INTRODUCTION**

The 1995 Educational Forum on Education held in Yaounde, the capital and political capital of Cameroon, under the chairmanship of Mbella Mbappe, had as one of its demands: democracy, decentralisation, effective management, accountability, pedagogic reforms, and relevance in education. This educational forum was held due to the problems facing the educational system, such as poor teaching quality and irrelevant curriculum content that did not take into consideration the geo- and socio-historical circumstances of life at all levels (Fokeng, 2010). The educational forum called for a pedagogy that fosters reproduction rather than production and equally gave birth to Law No. 98/004 of April 14, 1998, which laid down guidelines for Cameroon's education. This law consists of five parts with 42 sections with respect to education in the primary, nursery, secondary, grammar, and technical grades, as well as teacher education. Section 4 of the said law stipulates that the general purpose of education shall be to train children for intellectual, civic, and moral development and their smooth integration into society, bearing in mind prevailing economic, socio-cultural, political, and moral factors.

Moreover, goal number 4 of the Sustainable Development Goals (SDG), which dwells on education, emphasises ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. In a nutshell, for learning to be lifelong, it should be quality. Quality education is that which inculcates in learners the ability to master and integrate knowledge, skills, and abilities. Quality education has the ability to enhance lifelong learning, which is seen as the "development of human potentials through a continuously supportive process that stimulates and empowers individuals to acquire all the knowledge, skills, and understanding required throughout their lives and apply them with confidence, creativity, and enjoyment in all roles, circumstances, and environments" (Longworth and Davies, p. 22).

According to Hanna and Dettmer (2004), assessment simply refers to the process of gathering information or gathering data by the instructor on his teaching as well as on the learner's learning. Information can be collected through varied activities such as examinations, observations, and, why not, tests and pre-tests? Thus, the data collected by the instructor enhances auto-evaluation as well as the learners' performances. Assessment exists in three types, even though all are referred to as assessment, but there is a slight difference amongst them.

The purpose of assessment is to enhance communication between the learners and their instruction. The learners are able to communicate their learning to the teacher; learners need to know where they are in their learning as well as where they are heading. The instructor, on his part, generally has clear goals for himself and his teaching. Thus, in every content, unit, activity, or lesson that he carries out, he has something in mind to achieve at the end, which may be referred to as learning goals (Stiggins et al., 2006). Thus, learners' goals serve as the basis for effective communication in students' learning. Giving a zero to a learner for missed work or deducting marks from learners because they submitted their work late does not have any meaning here because there is no communication. According to O'Connor (2009), the performance of learners has to be measured in relation to a single goal and not in relation to assessment instruments.

UNESCO (1996) holds that quality education enhances the development of all attributes and skills of people so they can achieve their potential as human beings and members of society. This means education is the basis of both personal and community development. Quality education empowers citizens and helps them contribute their maximum to the social and economic development of their communities. Hence, quality education should be able to lay the foundation for change and maintain its quality at the moment. A democratic and cooperative setting is essential for real life because it enables learners to acquire knowledge and social skills that are necessary for interaction both in the classroom and in their environment outside of the classroom setting.

Teacher Training Colleges (TTCs) activities are regulated nationally by MINEDUB. TTC trains teachers at the nursery and elementary levels. Their curriculum is divided into two main parts: the theoretical section, which gives learners the possibility of being impacted by specific content or knowledge of different subjects relevant to the curriculum. Secondly, practical training is carried out in a practicing school where student teachers observe and carry out teaching in the classroom under the guidance and supervision of cooperating teachers and teacher trainers (Eleonora et al., 2021). Despite the fact that 1990 saw the reforms of TTC curriculum in Cameroon, the educational system is still plagued with some challenges. (Djeumeni, 2015) says education in Cameroon remains theoretically focused and experiential learning is still lacking. To solve the above, there should be the promotion of an innovative teaching method that stimulates pedagogic practices, enhances professionalisation in teachers, and improves their learning. Hence, the need to place emphasis on ICT and classroom practices is of utmost importance. The current teacher education system lacks effective training and sustainable student-teacher follow-up because TTCs face the same threats as schools, in particular, underqualified staff and a constant shortage of materials threats as schools, in particular underqualified staff and a constant shortage of materials (Endeley, 2014).

Cooperative learning, which commonly takes the form of group work in our Cameroonian classrooms, is a successful teaching strategy employed in TTC classrooms, where learners of different abilities are put in small groups to work on assigned tasks in order to foster understanding of the subject (Stephen, 1992). More Slavin (1994) regards "cooperative learning as an instructional programme in which students work in small groups to help one another master academic content". Hence, cooperative learning is all about the learners working together in groups to accomplish group tasks and Improve understanding Cooperative learning as an instructional method enhances mastery and understanding; the question of integration and transferability can only take place if knowledge, skills, and abilities are well grasped. Every technique or instructional method used is in the light of enhancing classroom assessment and, why not, the academic performance of learners? Though it seems so good as a teaching method, the question one is left with is how efficiently it is used in our respective classrooms; hence, its quality is questioned because it has the power to positively or negatively affect classroom assessment as well as the academic performances of the learners.

This explains why the pedagogical quality, academic quality, classroom management quality, and didactic quality of cooperative learning are of utmost importance. The World Bank, in its report on Priorities and Strategies for Education (1995) in Ulf Fredriksson (2004), says that even though it is difficult to define quality in education, any proper definition should consist of students' outcomes. Thus, academic quality tries to examine how well learners have performed and the end results after knowledge impartation. It looks at learners' successes and failures. Quality in academics or education seeks to examine how well learners perform or the academic performance of learners. Moreover, other definitions of quality seek to examine how well learners to learning the right thing and learning it well. Comprehension and mastery are enhanced when learners construct their own knowledge. Group processing shapes the learners ideas about building concrete and reliable knowledge, thus influencing classroom assessment. The indicators employed in measuring academic quality comprise knowledge construction, validity, reliability, and group processing.

Pedagogical quality can also enhance classroom assessment and bring about better academic performance. Pedagogical quality is measured through group competition, motivation, imitation, and individual accountability. According to Barber and Mourshed (2007) and Chris and Pearce (2012), performance in education is greatly influenced by the quality of teaching. Implying that the high or bad performance of learners is based on the quality of teaching. In the same light, Barber and Mourshed (2007, p.13) state that "the quality of an education system cannot exceed the quality of its teachers." Based on their conclusion, schools with the best teachers are those that have good school systems. Pedagogy centres on teaching; the various techniques used in transmitting knowledge in classrooms influence learners' performances.

Classroom management of cooperative learning equally enhances classroom assessment and learners' performances. According to Ogunu (2000), classroom management consists of planning, supervising, controlling, and coordinating learners' activities during lessons. Classroom management has two purposes. According to Evertson and Weinstein (2006), the term classroom management is not only concerned with maintaining order in the classroom so as to make learners fully engaged in teaching and learning activities; it also has a second purpose, which is fostering the social and moral growth of the learners. Indicators of classroom management quality comprise management to accommodate group work, group expectations, the size of the group, and monitoring activities in group work.

Last but not least, the didactic quality of cooperative learners can enhance classroom assessment as well as their performances through learning content, learning activities, and learning materials. According to Feldman (1999), didactics has moved from being just a normal discipline that focused on the description and prescription of the art of teaching to becoming a discipline that is concerned with context and subject-specific knowledge. Hence, cognition can only be seen in possible interactions and not just reside in individuals' minds. Thus, didactics as a science in education is concerned with teaching and learning; teaching and learning are seen by some as two different processes, while others see it as a two-way process on the same side.

#### **CHAPTER ONE**

# **BACKGROUND TO THE STUDY**

### **1.0. INTRODUCTION**

This research work focused on the "*evaluation of cooperative learning and its impact on classroom assessment*". In this section of the work, the trend of the problem under study is examined from three main dimensions: the historical background, the conceptual background, and the contextual background of the problem. This section equally presents the statement of the problem, the objectives of the study, research questions and hypotheses, the scope of the study, the significance of the study to various stakeholders, and the definition of key concepts.

## **1.1.0. Historical Background**

This work begins with a presentation of the historical evolution of evaluation, cooperative learning, and assessment.

### 1.1.1. Historical Background of the Evaluation

It is difficult to trace the historical background as well as the evolution of evaluation because of the informal utilisation of evaluation. This explains why Scriven (1996) says evaluation is a very old practice and has gained maturity for the past 20 years, even though it springs forth now like a new discipline. According to Corner, Altman, and Jackson (1984), evaluation is presently at its late adolescent age and moving towards adulthood, judging from the fact that it is established as a discipline. In order to better understand the evolution of evaluation, Madaus et al. (2000) have brought out seven developmental phases or periods of the evolution of evaluation.

The first period is **the Age of Reform** and runs from 1900–1972, the second developmental period of evaluation is known as **the Age of Efficiency and Testing ''(1900–1930)** and the **Tylerian Age (1930–1945)** was the third developmental period of evaluation. The fourth developmental period of evaluation was called **the Age of Innocence (1946-1957)**, while the fifth developmental period of evaluation was known as **the Age of Development ''(1958–1972)**. The sixth developmental period was referred to as **the Age of** 

**Professionalisation''** (1973–1983) and last but not the least is the seventh developmental period called the Age of Expansion and Integration (1983–present day).

History equally holds that the term evaluation dates as far back as 40,000 years in China, where this concept was being used to assess public programs. Nevertheless, as a professional practice, evaluation only came up during the post-war period. In the United States of America, mention was first made of evaluation when it was being used in three social topics: educational innovation, resource allocation, and anti-poverty programs. Thereafter, the term was linked to social science. During the 1960s, countries like the United States, Canada, Germany, and the United Kingdom started monitoring the progress of programmes, which led to the first waves of evaluation. The above countries were interested in measuring the effectiveness of operations as well as the performance of government activities. In this light, the use of scientific methods in the evaluation of programmes has brought about a form of traditional evaluation. Thus, the 1960s saw "a new order of rationality in government, rationality undermined by social scientists" (Patton, 1997, p.7). This traditional evaluation needed evaluators to be objective because it laid emphasis on the reliability and validity of data collection, which were seen as scientific methods (Fines, Thayer et al., 2008; Torres et al., 2001).

By the 1970s, evaluation had spread to other countries in Europe and taken on different traditions and emphasis. In the United States of America, evaluation was seen as a significant part of social science research and was equally supported under the banner of the "War on Poverty" by Presidents Kennedy and Johnson. In Canada, evaluation is an essential part of social sciences just like in the United States of America, but it differs in the fact that evaluation provides the users with relevant and timely information that could help in decision-making, the allocation of resources, and the improvement of programs. In Scandinavia, that is, Sweden in particular, evaluation was seen to produce useful information for the users, judging from the fact that it opened the process of inquiry. In France, evaluation was seen as a formal, structured approach at the central government level and a dynamic practice at the local and regional levels.

#### **1.1.2.** Historical Background of Cooperative Learning

The concept of cooperation has long existed through human history, as expressed through African proverbs like "one hand cannot tie a bundle" and "two heads are better than one". This only implies that cooperation has long existed. The idea that a single hand cannot tie a bundle or that two heads are better than one gives us the impression that results or outputs are best when handled by more than one person, for individuals do well in their various contributions to better the situation at hand. Moreover, cooperation characterises the life style of Africans, for whom communal life has always been their way of life.

Right from time immemorial, our great-grandparents and grandparents, who were farmers, always practiced what we commonly referred to in our local parlance as "Njangi," where a group of individuals would accompany an individual to his or her farm and work there for the whole day. The individual who is benefiting from that "Njangi", that is, the one who has invited people to come and work on his farm, will also prepare food and drinks for those who have come to help him. With such a method of working, it was easier to cultivate a large portion of land in less than no time, which increased yields. Thus reiterating the fact that two heads are better than one and one hand cannot tie a bundle.

Cooperative learning can be traced as far back as the 18<sup>th</sup> century, when it was being used by Joseph Lancaster and Andrew Bell as an instructional method for English. Equally, Johnson and Holubec (1994) and Johnson et al. (1998) say that cooperative learning was introduced in the United States through the opening of a Lancastrian in New York in 1806. In the early 19th century, the use of cooperative learning in classrooms was seen as promoting educational goals, which consisted of the Americanization of the different student boys as well as effectively teaching a mixed-grade class. Later in the 19th century, proponents of cooperative learning and democratic education and equally advocated that cooperative learning be used in public schools. American education was greatly influenced by his method of structuring cooperative groups. In the 20<sup>th</sup> century, Dewey developed Parker's link between cooperative learning and democracy and made cooperative learning available for implementation and use in schools through his project method of instruction (1924). To Dewey, a democratic and cooperative setting was essential for real life.

According to Jacobs et al., (2000), cooperative learning dates as far back as 100 years, even though little or no research was carried out on it until 1960. Since then, much importance has been accorded to it based on the many studies carried out on it. Moreover, philosophers and psychologists in the 1930s and 1940s like John Dewey, Kurt Lewin, and Morton Deuts equally played a great role in influencing the use of cooperative learning in today's society. To this end, Dewey believed that it was very important for the learners to acquire knowledge and social skills that they could use outside of the classroom as well as in their environment. Thus,

the learners are active recipients of knowledge based on the fact that they are either involved in classroom discussion or answering questions and are not passive recipients of knowledge or information.

#### 1.1.3. Historical Background of the Assessment

History holds that the concept of assessment has existed for centuries. But assessment as a concept linked to educational practice is a more recent concept. In 1989, the Assessment Reform Group was created by assessment researchers led by the British Educational Research Association. This association has ensured the active promotion of assessment practices for learning. Equally, this group was able to bring out a clear distinction between assessment of learning and assessment for learning thanks to the brilliant ideas of Caroline (1994), one of the members of this group. To her, assessment of learning is more about evaluating what has been learned, while assessment of learning simply refers to the use of evaluation in ameliorating and improving the learning process. In a nutshell, assessment of learning can be referred to as summative assessment, while assessment of learning can be referred to as formative assessment.

It is difficult to trace the history as well as the usage of the concept of assessment for learning because other concepts similar to it exist, like formative assessment. Winter (2003, p. 767) says "changing prepositions of assessment—of, for, and as learning" but the concept was introduced by Carless and colleagues as "learning-oriented assessment". It was also used as Assessment that Supports Learning" by Gibbs et al., (2004). All these different terms accorded to assessment bring out subtle differences as well as similarities in the usage of the concept by different people in different contexts.

The history of formative assessment can be attributed to Scriven (1967). Who says formative assessment is a kind of assessment that should enable learners to understand goals 87] steps to close the gap? Implying that learners are to become expatriates in order to judge their own actions and learning. They have to develop evaluation skills that will enable them to determine the size of the gap and how to close it, evaluate their learning position, and monitor learning. To Sadle, these skills can only be developed in students through "authentic *experiences.*" Assessment practices do not have a fixed definition, according to Black and William (1998). To them, formative assessment is all that is being done by the teacher or by learners that can lead to information that can be used as feedback to ameliorate the ongoing

teaching and learning process. More to that, formative assessment is able to work out or evaluate what someone has already learned or is able to learn.

## **1.2.0. CONCEPTUAL BACKGROUND**

The conceptual background of this study examines the following concepts: evaluation, cooperative learning, assessment, academic quality, pedagogical quality, classroom management quality, and didactic quality.

#### **1.2.1.** Conceptual Background of the Evaluation

Ioannou-Georgious (2003) sees evaluation as a long-term process of assessing information. It gathers information in order to give feedback to both the learners and the teachers. To him, evaluation consists of gathering information to determine how a programme has achieved its goals or objectives. According to Cameron (2001), evaluation does not differ from assessment because evaluation is a broader assessment, implying that evaluation also consists of measuring children's learning and performance through a test so as to provide meaningful feedback. Gitlin et al., (1989) say the concept evaluation has taken many numerical turns, which makes it difficult to arrive at a unique definition. To them, evaluation deals with the measurement of things, and in the process of doing so, it can easily slip and become an end rather than a means.

More specifically, the concept of evaluation possesses difficulties in defining it because it cuts across a number of actors, such as policymakers, citizens, managers and administrators, professionals, and specialists, whose interests compete with each other when defining their priorities. Thus, each of the above groups of people has a defined evaluation based on the help evaluation offers them. Evaluation is a tool that ensures accountability and justification for policy decisions, according to policymakers. On the other hand, managers and administration are interested in the delivery of policies and programs. Citizens see evaluation as a tool for democratic accountability and the opportunity to shape public intervention to meet their needs; and finally, professionals see evaluation as an opportunity to improve the quality so as to make professional groups autonomous.

More there is programme evaluation; Vedung (1997) in Federica (2006, p. 19) defines programme evaluation as "a careful retrospective assessment of the merit, worth, and value of

administration, output, and outcome of government intervention, which is intended to play a role in future practical situations. This means that when we talk of programme evaluation, we are measuring the end product in order to come up with decisions that will ameliorate situations in the future." From Vedung's definition, evaluation is seen as measuring the worth, merits, and values of an end product. It measures the worth of the overall programme and makes decisions for the future.

Scriven (1991) in Federica (2006, p. 19) "Evaluation is the process of determining the merit or worth of things, and evaluations are the products of that process. Evaluation is not the mere accumulation and summarising of data that are clearly relevant for decision-making. The gathering and analysis of data needed for decision-making comprise only one of the two key components of evaluation; as a second element, it leads to conclusions about the merit or net benefits of evaluative premises or standards. Evaluation has two arms: one is engaged in data gathering; the other collects, clarifies, and verifies relevant values and standards." From the above definition, programme evaluation deals with the summary at the end of a process because it is only at the end of a process that we can determine the value and worth of a product. This implies that programme evaluation judges the worth and merits of a product so as to ameliorate situations in the future. Programme evaluation comes at the end of the process because it measures the value and merit of something. So when talking about programme evaluation, we are looking at the output, the product; the output is otherwise called the end product. Judging the worth or value of the product gives room for future decision-making in order to ameliorate conditions.

The COBUILD English Language Dictionary-Collins in Federica (2006, p. 19) says "Evaluation is a decision about the significance, value, or quality of something based on careful study of its good and bad features". According to this definition, programme evaluation consists of taking decisions to ameliorate conditions in the future based on how good or bad the quality of something is. It's only at the end that a product or outcome can be measured, and when measured, decision-making can then follow.

## 1.2.2. Conceptual Background of Cooperative Learning

Johnson et al., (2000) have the conviction that, without the cooperation of its members, society cannot survive, and the society of man has survived because the cooperativeness of its members made survival possible. It was not an advantageous individual here and there who did

so, but the group. In human societies, the individuals who are most likely to survive are those who are best enabled to do so by their group. Johnson et al., (1989) say cooperation means people coming together to work to accomplish a shared goal. That is, individuals work for outcomes that are profitable not only to themselves but equally to the whole group. That is to say, cooperative learning is the instructional use of small groups to enable learners to work together to maximise their own as well as each other's learning.

According to Slavin (1994), cooperative learning is an instructional programme in which students work in small groups to help one another master academic content He equally suggests that cooperative learning has the potential to capitalise on "the developmental characteristics of adolescents in order to harness their peer orientation, enthusiasm, activity, and craving for independence within a safe structure. According to Gilles (2003), the basic elements of cooperative learning do not only entail that learners sit side by side or on the same desk and do their own tasks; it also does not mean that learners are put in the same room and told that they are a cooperative group, hence advising them to cooperate (Johnson et al., 1998). According to Ballantine et al. (2007), cooperative learning occurs when group members can coordinate activities so that other group members' learning can be facilitated. In order to engage students in cooperative learning, Johnson et al. (2008) say the following five elements must be present:

- positive interdependence
- Face-to-face interaction
- Individual accountability
- Interpersonal and social skills
- Group processing.

According to Thomas (1957), positive interdependence needs to be constructed in cooperative learning groups so as to help students work and learn together. According to Skinner (1968), positive interdependence can be seen through the assignment of complementary tasks and group contingencies. Positive interdependence entails dividing information into separate pieces according to Aronson et al. (1979) or the division of labour according to Johnson et al. (2008). Research has shown that there is a positive effect of positive interdependence on productivity and achievement.

According to Hoing et al. (1998) and Johnson et al. (2005), positive interdependence produces higher achievement and productivity. This is due to the fact that group members'

performances affect the success of other group members and tend to create "responsibility of force," which indicates an increase in each member's effort to achieve (Mesch et al., 1998). According to Kerr et al. (1983), group members will come to the realisation that their personal efforts are very much needed for the success of the group; hence, it will not be possible for them to get" a free ride," as each has a unique contribution to make to the group's effort.

**Face-to-Face Interaction:** According to Johnson et al. (2008), face-to-face interaction comes into play in cooperative learning when group members encourage and facilitate each other's efforts to accomplish group goals. Learners interact verbally with one another on a learning task, which is one of the conditions for successful cooperative learning. Johnson et al. (2008) equally hold that the quality of interaction depends on the size of the group and the frequency of students' cooperation on their learning tasks. That is to say, groups have to be small when students begin learning together in order to facilitate the development of cooperative learning skills.

**Individual accountability:** Johnson et al. (2009) see students' individual responsibility as they ask for assistance, do their best work, present their ideas, learn as much as possible, take tasks seriously, help the group operate well, and take care of one another. Slavin (1996) sees individual accountability in terms of the extent to which a group's achievement depends on the individual learning of each group member, hence motivating group members to ensure everyone has a good mastery of the material being studied. According to Kagan (1985), it is necessary for other group members in the group to provide assistance to group members unable to finish assigned tasks.

According to Johnson et al. (1994), individual accountability can be maintained by the size of the group because the smaller the group, the greater the individual accountability. Gerard, Wilhelmy et al. (1965) and Messick et al. (1983), say the smaller the size of the group, the better the communication amongst group members, for they will tend to communicate more frequently, thus increasing the amount of information that will be used in arriving at a decision.

**Interpersonal and social skills**: it is the conviction of Johnson et al. (2006) that they cannot produce any effective work if socially unskilled learners are arranged in one group. Sharan (1990) says basic skills in cooperative interaction must be taught to group members in order for them to work effectively to finish their tasks. According to Slavin (1996), group members

should know how to manage groups, make decisions, and solve conflicts that arise amongst them; if such skills are not taught, then cooperative learning activities will hardly succeed.

**Group processing:** cooperative learning involves group processing. Johnson et al. (1994, p. 33) define group processing as reflecting on group sessions to help students (1) determine what member actions were helpful and unhelpful and (2) make decisions about what action to continue or change. Through their reflection on the learning process, group members contribute to the shared effort to achieve their goals. Group processing can be seen at two levels: the small group and the whole class." Yamark (2007) says the purpose of group processing is to clarify and improve the effectiveness of members in contributing to the joint effort to achieve group goals.

According to Johnson et al. (1994, p. 33) when dealing with small group processing, (1) "the teacher should allocate some time at the end of the class for cooperative groups to process how effectively members work together; when the group is processed, it enables the maintenance of relationships among cooperative members; (2) facilitates the cooperative skills of group members; (3) examines the group's task and gives students' feedback on their participation; (4) examines students' knowledge on their own learning parts; and (5) celebrates the success of the small group and reinforces group members' positive behavior." When dealing with whole-class processing, teachers should observe groups, give feedback to each group, and share the results of their observations in class through a whole-class processing session at the end of the class period.

Stephen (1992) sees cooperative learning as a successful teaching strategy that groups learners with different levels of abilities into small teams. The learners in the team use a variety of learning activities to improve their understanding of the subject. That is to say, learners or team members are not only responsible for learning what is taught but also equally help other team members learn, thus creating an atmosphere of achievement. According to Johnson et al. (2000) society cannot survive when there is no cooperation. For this reason, members have to come together to work towards shared goals. According to Slavin (1994) when members work together to accomplish shared goals, there is the possibility for individual learners to develop other skills that will enable them to perform better as well as fit in their respective societies. Implying that as the learners work in groups, they learn how to interact and manage their individual groups as they work towards attaining group goals.

Moreover, the quality of group interaction depends on the academic level of all members of the group. The learning abilities of all group members should be identified in order to help them give feedback and support one another in their learning. Also, the quality of group interaction depends on the learning environment. Slavin (2011) says that when there is a positive learning environment, students in cooperative group work learn together effectively. According to Hooper et al. (1989) examining cooperative learning on students learning, they noticed that cooperation resulted in higher achievement when individual accountability was structured than when it was not. They equally argued that a lack of individual accountability may reduce the feeling of personal responsibility.

#### 1.2.3. Conceptual Background of the Assessment

Ioannou-Georgiou et al. (2003) see the term assessment generally as all the methods put in place to collect information in relation to learners understanding, ability, knowledge, attitude, and motivation. He sees assessment as a complex concept that has different meanings in different contexts. Even though it is complex, assessment for him is linked to values, beliefs, and attitude. It is in the same light that Cameron (2001) defines assessment in relation to learners learning and performance, which goes a long way in providing information concerning the learners that can be used in evaluation. According to both authors, assessment is not only limited to knowledge and performance but equally includes motivation and attitude. To both authors, testing is a form of assessment. According to Kratochvilova (2011) the concept assessment has the following functions: informative, corrective, motivational, and developmental.

The informative function of assessment is to inform learners or make them see their progress and achievements, as well as compare their performances with those of other learners. This explains why Kratochvilova (2011) insists that information concerning assessment should be concrete and given on time for the assessed activity without leaving out the results that were obtained at the end of the day. Corrective assessment is a tool that enables the learners, be it individually or with the help of other learners, to improve on their results as well as determine the right path to follow in order to improve on their results. This implies that, through the corrective function of assessment, learners can determine where they missed and improve on their results.

Assessment equally has a prognostic function; the prognostic function of assessment consists of identifying the learner's possible performance in the long-term assessment. The prognostic function of assessment gives room for the prediction of what learners are to study and their perspectives. Assessment gives learners room to choose the right occupation, the right talent to explore, and the right secondary school to attend. More importantly, there is the developmental function of assessment; according to Kratochvilova (2011) this function looks at the overall development of learners. It enabled the learners to understand themselves and the reasons behind the way they were assessed. Finally, there is the motivation function of assessment, in which teachers look for means of motivating learners. Learners should be motivated to work on their learning so as to constantly improve; hence, assessment should not be seen by learners as something they cannot control.

Looking at Bordon et al. (2001); Palomba et al. (1999), the concept of assessment differs from evaluation in that, in assessment, there is the idea of improvement that comes in, whereas with evaluation, we are judging the quality of something or a program. Assessment focuses on the different means that can be put in place to improve the quality, outcome, or output of something. Evaluation, on its part, does not deal with improvement of quality or outcome; it is based on judging the outcome or end product of something so as to make future decisions. Evaluation is only concerned with the actual quality of something and not why a particular level or quality was attained, because if it thinks in terms of why the level was not attained, it may want to ameliorate or improve on it, hence acting as an assessment. Assessment gives feedback on the quality and level of something so as to ameliorate and improve the situation. Thus, in assessment, the locus of control rests with the performer, whereas in evaluation, it rests with the observer.

During assessment, the performer is given information on how and why his performance was good or bad and what could be done in the future to ameliorate it. Thus, there is no mention of the quality of performance; it is preoccupied with what is necessary to make the next performance better and stronger. Words like terrible, excellent, horrible, and terrific are not used to determine the level of quality. Evaluation judges or measures the actual quality of something. Evaluation reports give information on and use grades like good, excellent, or or "aver The evaluation report tells us about the actual level of the quality of performance and not possible suggestions on how to improve the quality of performance.

With regards to the purpose of assessment, Moon (2000) has classified it into two categories: formative and summative. As a formative purpose, Moon sees it as a kind of assessment that is used daily and can take the form of feedback given to learners during lessons so as to show them whether they are right or wrong. In a nutshell, this purpose of assessment tries to examine how successful learning has been and the way forward to ameliorate and improve future learning. This purpose of assessment also enables the teacher to know what to place emphasis on and not only give feedback. Thus, formative assessment centres on both the learners and the teacher. The summative purpose of evaluation, according to Moon (2000) is the type that sums up learners performance at the end of the school year, semester, course, or a given period. The feedback given here is final because the learners are not given the chance to ameliorate or improve their learning and results.

According to Black et al. (1998); William (2007) the purpose of assessment is to assist the learners. Moreover, when assessment is used to assist learners, it is referred to as formative assessment. They see it as a kind of assessment that is used to give students feedback on their progress and to motivate them. This type of assessment is carried out day to day and month to month, as it is used to guide the next step of instruction. This assessment can take the form of a teacher-made quiz, homework, classroom observation, written work, or conversation between teachers and students so as to monitor the learner's progress. Based on the conversation, the teacher is able to get additional information concerning the learners and the school context. The above authors still hold that assessment provides specific information about the learners, such as their strengths and weaknesses as well as difficulties faced in learning.

With such information, teachers can easily adapt their teaching methods to meet the learners' needs and be able to detect their misunderstandings. Assessment enables students to know the skills and knowledge they need to obtain, as well as the kind of adjustment and thinking they need. Assessment of an individual's achievement is another purpose of assessment, where assessment enhances the decision made about individual learners. It verifies the different levels of learners' competence that should be attained by learners upon completion of the assigned task or the educational phase, which could be a two-week curricular unit, a semester course, or, why not, 12 years of schooling? This kind of assessment is often seen as summative, which is why it is used by teachers at the end of the course or unit.

### 1.2.4. Academic Quality

According to Coombs (1985) in Ulf Fredriksson (2004), academic quality or quality in education simply refers to how well the knowledge imparted to learners fits their present and future needs. Coombs (1985) is trying to look at the relevance of what is taught and learned when academic quality is mentioned. So when talking of academic quality, we are looking at how well learners have mastered what they have learned, and we are looking at the relevance of that which is learned to the learner's day-to-day life, be it in the present or in the future. Knowledge and skills should not just be imparted to the learners; they should also have a good mastery of what was taught. Likewise, what is taught should be relevant to learners to enhance transferability. To the Teacher Union, quality and standard are somehow related because the concept of quality is not static; quality in academics or education refers to the relevance of the subject matter taught as well as the objective of education.

Quality education is the type of education that meets changing times. Implying that what was considered quality yesterday might not meet the standard of what will be called quality today or even tomorrow with regards to the changing world. Quality education has to do with the acquisition of basic skills such as reading, writing, and arithmetic before progressing to more complex ones. Quality education should be an interaction between teachers and learners and not just a process of consumption; it should give individuals the opportunity for personal development and the ability to adapt to new situations and make changes where necessary. Quality in education is defined by examining its relationship to different national educational sectors, different cultures, and different stakeholders in education, like policymakers, teachers, students, unions, and even business communities. The Teacher's Union sees education as a tool for training students in one way or another for the future, and this can only be achieved through quality education (ETUCE, 2002).

The World Bank, in its report on Priorities and Strategies for Education (1995) in Ulf Fredriksson (2004) says that even though it is difficult to define quality in education, any proper definition should consist of students' outcomes. Thus, academic quality tries to examine how well learners have performed and the end results after knowledge impartation to learners. It also looks at learners' successes and failures. Quality in academics or education seeks to examine how well learners perform or the academic performance of learners. Moreover, other definitions of quality seek to examine how well learners learn what is taught to them. Hence, quality in education refers to learning the right thing and learning it well. Comprehension and mastery are enhanced when learners construct their own knowledge. Group processing shapes the learners' ideas about building concrete and reliable knowledge, thus influencing classroom assessment.

Thus, learners are supposed to have mastery over what they have learned, for it is not good to learn the right things only half well. Quality in education or academics is equally defined by the Teachers Union in their ETUCE publication. Quality in Education (2002: equipping learners with all that it takes to carry out the different tasks they may be confronted with in the future) Education needs to prepare learners to participate in the political, economic, and cultural life of their respective societies and, individually, in their private lives of tomorrow. Education should provide them with the possibility of acquiring the necessary skills and knowledge that will permit them to integrate and contribute to the future development of their respective societies. Quality education should be able to lay the foundation for change and equally maintain its quality at the same time. Implying that every generation should ameliorate and develop its society through quality education, which is a factor that influences development, In a nutshell, academic quality is more like a mirror of society in some way. In this study, academic quality will be examined through knowledge construction, validity, reliability, and group processing.

## **Knowledge Construction**

Knowledge construction is one of the factors that can enhance academic quality. The National Research Council (2000) looks at knowledge construction as a process where new knowledge is connected to existing knowledge in order to construct new meaning. Huang (2006) refers to the construction of knowledge as constructivism. Constructivist learning is concerned with the learners constructing knowledge and not receiving it; constructivism is concerned with the ability of learners to understand and apply knowledge rather than recalling and memorising knowledge. Knowledge construction is equally seen by Ambrose et al. (2010) as the building of a strong conceptual framework by the learners through the teacher's help, who clarifies and assesses prior knowledge and enhances a social environment favourable for active learning activities that enable learners to build new knowledge.

For knowledge to be constructed, the environment has to be suitable, for it plays a lot in enabling individuals to build new knowledge. This explains why the National Research Council (2000) talks of an active social classroom. If the environment is not active and there are no interactions, then knowledge construction will certainly be difficult. It takes interaction between learners in the right environment to construct the right knowledge; although an active social classroom is required, care must be taken to ensure that learners are constructing the right knowledge because bad company corrupts good ones.

The idea of an active social classroom takes us back to the concept of cooperative learning, which reiterates that better learning takes place when learners work together in groups and exchange as well as build up ideas; thus, cooperative learning has the base to enable learners to construct long-lasting knowledge. The concept of knowledge construction ties in with Piaget, Bruner, and Vygotsky's constructivism, wherein they believe that the purpose of learning is to enable individuals to build or construct their own meaning. Learners learn by blending their past and present situations to come up with new knowledge.

Knowledge construction by Jean Piaget. According to Piaget, learners construct knowledge with the help of past knowledge. Through learners' interactions with the environment, they conflict with ideas that do not tie into their past knowledge (Piaget, 1929, in Qais Faryadi 2009). In such a situation, learners try to reconcile their previous experiences with their new ones. In trying to reconcile both the past and the present, the original beliefs of the learner might change or the new information might be discarded. Implying that in the course of reconciling or processing new knowledge, learners can either integrate it if it is consistent, or, on the other hand, if it is not consistent, then they will accommodate it. Knowledge is thus constructed through the posing of questions, exploring, and addressing what they know.

Knowledge construction by Jerome Bruner according to him, knowledge is constructed when the learners critically solve problems collectively. In order to construct knowledge, learners have to be active, goal-oriented, investigative, and thoughtful. Learners construct knowledge through their own investigation. Learners learn by taking initiative and constantly checking to verify if the initiatives are good enough to meet educational goals or objectives. Learning is discovered, and this makes it meaningful. According to Yun et al. (2000) in Qais (2009), knowledge is not transmitted from one person to the next, but individuals discover knowledge. When learners retrieve information, they make a discovery, and this discovery is very effective in acquiring knowledge (Bruner, 1996) in Qais (2009).

According to Bruner, learners should be able to construct knowledge through discovery and investigation as they explore their environment. Learners need to take initiative; they have to be active so as to carry out investigations. Learners do not only end with investigating; they must also check if their initiatives were correct or not. The environment has much to play in giving learners the opportunity to discover or investigate. Teachers must create these opportunities for learners to construct their own knowledge. According to Bruner (1996) in Qais (2009), discovery knowledge is very meaningful, and meaningful knowledge cannot be easily forgotten by the learners, thus influencing classroom assessment and evaluation.

Knowledge construction by Lev Vygotsky to him social interaction plays a prominent role in knowledge construction. To construct knowledge, there must be a zone of proximal expansion among the learners (Schutz et al., 2004; Qais, 2009). At the beginning, learners are unable to handle things by themselves; thus, to bridge the gap and bring about better understanding, scaffolding could be used, which is a "loan of consciousness" by the learners that helps each other achieve meaningful results. Hence, learners develop thinking through social interaction because there is a relationship between the environment and the learners. Nilson (2005), in Qais (2009). Learners do learn a lot from interaction with their environment as well as from adults, as can be seen in the case of language acquisition. Thus, without a society, there will be no chance for minds to be developed. Implying that, knowledge construction is first of all done by the learner as he interacts with the environment before constructing it alone.

## Validity

Another factor that can influence academic quality is validity. Amin (2005) sees validity as a concept that examines the ability to produce results that are in accordance with or in agreement with what one is supposed to measure. An instrument in research can only be said to be valid if it measures what it seeks to measure. This explains why Amin (2005) sees the ruler, measures of weight, and thermometers as true demonstrations of validity. To him, validity simply refers to the appropriateness of an instrument, which is why a test instrument cannot be said to be valid per se except for particular purposes and a particular group of people. Meaning that it's not the questions or instruments that are valid, but they make it valid if it measures "what and for whom". Implying that a test of intelligence cannot be a valid test of personality or achievement in biology. Due to the fact that validity can only be judged based on its purpose, tests are constructed for different purposes, so validity is of different types. Amin (2005) talks about two main types of validity: logical validity and criterionrelated validity, which is determined in a more objective manner than logical validity. According to him, the logical validity will consist of face, content, and construct validity, while the criterion-related validity also involves concurrent and predictive validity. Checking the validity of an instrument can either be empirical or theoretical. With empirical validation, the validity of a measurement is checked against empirical evidence, and with theoretical validation, the validity of a measurement is checked against theoretical and conceptual constructs.

Kelly (1927) is seen as the author who formulated the concept of validity. To her, validity is when a test or instrument measures what it claims to measure. In this regard, a test of intelligence should be constructed so that it measures just intelligence and nothing else. "Validity refers to the appropriateness of the inferences drawn from the results of an assessment. Inferences are conclusions that derive from empirical evidence bearing on scores (Messick, 1989, p. 6). Secondly, validity is a matter of degree and not a specific value. Thirdly, validity is applied to a specific purpose or use and therefore is not valid for all purposes. Fourthly, validity. Finally, validity is concerned with an evaluative judgement about an assessment (Gregory, 2000, p. 75). Of all the different types of validity that exist, construct validity forms the basis for any other type of validity and, from a scientific point of view, is seen as whole validity (Mislevy, 2007)".

### Reliability

Moreover, for us to talk about academic quality, the knowledge acquired should be reliable. Reliability, according to Cacioppo et al. (1982), is the consistency of measurement. Measurement deals with assigning scores to individuals. Thus, the assignment of scores enables the researcher to either confirm or not confirm the construct under study. According to them, psychologists have examined three types of reliability: test-retest reliability, internal consistency, and inter-rater reliability. Looking at test-retest reliability, it emphasises the fact that a person who is intelligent this week will still be intelligent next week, for a good measurement of intelligence will produce almost the same results or the same score for the individual next week as it did today.

Test-retest reliability requires assessing a group of individuals today and using the same test in a week on the same individual under the same conditions and having scores or results that are roughly the same. Knowledge, skills, abilities, and aptitude acquired through cooperative learning have a higher capacity for reliability because learners acquire knowledge that is built by themselves. Coombs (1985), in explaining the concept of academic quality, or quality in education, says it is how well one has mastered what they have learned. If learners have a better mastery of what they have learned, then certainly the question of reliability will come into play. If they have good mastery today, it will still be the same good mastery tomorrow and even next week if they are assessed.

#### **Group Processing**

Group processing is another aspect that can enhance academic quality. It is an aspect of human cooperation whereby the behaviours of individuals come into play based on the fact that they jointly take decisions and solve problems. Castellan, 2013; Hackman et al., 2010; Homans, 1950; Stangor, 2016; Turner, 2014). According to Johnson et al. (1994, p. 33), group processing is reflecting on group sessions to help students know: "(1) *what member actions were helpful and unhelpful, and (2) make decisions about what action to continue or change. Through their reflection on the learning process, group members contribute to the shared effort to achieve their goals. Group processing can be seen at two levels: the small group and the whole class."* In group processing, individuals contribute to achieving group goals. Based on their contributions, one can tell whose members' actions were profitable to the group and those whose actions need to be looked into. With this, the weaker learners can easily ameliorate their actions.

Group processing gives room for individual learners to be led by intelligent members and also contribute meaningfully to group goals. Individuals are likely to copy or imitate those whose work is usually appreciated, and with this, they will study well and have a good mastery of what they are studying. This will go a long way towards enhancing their academic quality. Through group processing, individual learners are pushed to contribute their best to group goals so that their actions will be appreciated. If the actions of group members are screened, it will push learners to put more effort into subsequent tasks. Hence, there will be a great improvement in the work done, fostering academic quality, since every individual will be happy to hear that their actions greatly contributed to the group goal. The fact that the members' actions are recorded puts them on the right track for the next task, which will enhance the quality of work that will be subsequently done, thus improving the academic quality.

To Niemi et al. (2012) in Chris et al. (2012), effective pedagogy is that which gives room for learners' voices to be heard. Meaning that it's important for learners to be consulted for educational decision-making and for learners' experiences and backgrounds to be taken into consideration to enhance effective pedagogy and thus pedagogical quality. Talking of the consultation of learners here simply refers to aspects like talking with the learners about teaching and learning, seeking the learners' advice on new initiatives, and allowing them to comment on how to solve problems. Learners should comment on new school policies, practices, and developments. According to Sellman (2009) in Chris et al. (2012) when learners are consulted on educational decision-making, it will lead to improvements in academic communication as well as motivation and engagement in matters concerning the school, thus giving teachers insight into improving their practice as well as their relationship with the learners. It also leads to feedback, which can greatly improve the teaching and learning process.

Bloom's taxonomy of educational objectives (1956) serves as a basis for arguing that good questioning follows a hierarchical order. That is knowledge, comprehension, application, analysis, synthesis, and evaluation. Effective pedagogies embed assessment into learning. Black et al. (2009) in Chris et al. (2012) see formative assessment as a powerful tool for the improvement of learners' outcomes. Finally, effective pedagogies are inclusive and take the diverse needs of a range of learners, as well as matters of student equity, into account. DfE (2011) in Chris (2012) is concerned with the possibility of creating an inclusive learning environment without relying on ability or attainment as organising principles for teaching. Hart et al. (2004) in Chris et al. (2012) talk about transformability, which implies that all children have the capacity to learn, and these capacities to learn can be changed for the better based on what happens as well as what people do in the present.

# **1.2.5 Pedagogical Quality**

In this study, pedagogical quality is examined through group competition, motivation, imitation, and individual accountability. According to Barber et al. (2007) in Chris et al. (2012), performance in education is greatly influenced by the quality of teaching. Implying that the high or bad performance of learners is based on the quality of teaching. In the same light, Barber et al. (2007, p, 13) state that "the quality of an education system cannot exceed the

quality of its teachers'' because, based on their conclusion, schools with the best teachers are those that have good school systems. Pedagogy centres on teaching; the various techniques used in the classroom to transmit knowledge influence learners' performance. The use of group competition, motivational imitation, and individual accountability influences classroom assessment because they have a way of pushing and motivating learners to work hard and put in their best.

Effective pedagogy equally depends on behaviour (what teachers do), knowledge and understanding (what teachers know), and beliefs (why teachers act as they do). Simon (1981) in Chris et al. (2012), sees pedagogy as a science of teaching. "Pedagogy *expresses the contingent relationship between teaching and learning... and does not treat teaching as something that can be considered separately from an understanding of how learners learn"* (James et al., 2011, p. 280) in Chris et al. (2012). "Effective pedagogy involves clear thinking about long-term learning outcomes as well as short-term goals". According to James et al. (2011) learning outcomes and goals should lead to personal fulfilment; they should contribute to social justice as well as the economic prosperity of the nation. Moreover, quality in pedagogy involves clear thinking about long-term learning outcomes as well as short-term goals. James et al. (2011) in Chris et al. (2012) say that although educators are more interested in securing good performances or examination results, which is important, they should equally see to it that learners have personal fulfilment from what they learn so as to contribute to the development of society.

Quality in pedagogy also places emphasis on building knowledge based on learners' prior learning and experiences. Vygotsky in (Alexander, 2000) in Chris et al. (2012) According to Vygotsky, having an idea or assumption about how individuals learn and think is very important in the teaching and learning process. To this end, he examined the work of Piaget, wherein he explained how children interact with objects and experiences. Effective pedagogies involve scaffolding pupils learning of Kim et al. (2011) in Chris et al. (2012) scaffolds are transitional in two senses: firstly, they support developmental changes in individual learners, and secondly, they change as the level of learners understanding increases; thus, new scaffolds are put in place when earlier scaffolds are no longer necessary so as to move individual learners above a newly acquired stage of understanding.

Quality in pedagogy involves a range of techniques, such as whole-class and structured group work, guided learning, and individual work. The effectiveness of the above techniques

is based on the teacher's ability to combine the different pedagogic strategies. This explains why Stronge et al. (2007) in Chis and Jo Pearce say using the different strategies should depend on the fitness for the purpose of the particular pedagogies. The teacher has to be able to plan, select, and use pedagogic strategies to a particular effect. Pedagogic quality focuses on developing higher-order thinking and meta-cognition and makes good use of dialogue and questioning.

### **Group competition**

Group competition is one of those aspects that can influence pedagogic quality. According to FreeDictionary.com (2012), competition deals with a test of skills and abilities. Competition is a conquest wherein learners perceive that they will be rewarded based on comparison with other learners or, better yet, past performances. Competition can take the following forms: individual completion, group competition, and classroom competition. Webster (2007) sees competition as some sort of contest involving two or more people wherein just one person wins. According to the above authors, one can only talk of competition when the desired outcome is limited so as to benefit just a group; hence, groups or individuals will position themselves towards the attainment of the desired outcome.

Group competition serves as some sort of motivation for individual competition or group competition, taking into consideration that the award goes just to a single group or person. Group members as well as individuals will put in their best so as to attain the scarce reward. Competition amongst group members will equally push the slow learners to wake up because they too will do their best like other group members. Thus, motivation is a driving force that will cause the different groups as well as group members to put in their best effort to achieve the limited reward, which will in turn influence classroom assessment. This is in line with Verhoeff (1997) who says if competition is well organised, it will challenge learners to put in their best, thus enhancing motivation for learning.

# **Motivation:**

Motivation can equally influence pedagogical quality. The term motivation seeks to establish a relationship between what we do and why we do it. It is the reason why individuals exhibit certain behaviors. Implying that motivation goes a long way to explaining an individual's action, needs, desire, or behavior. Motivation is that thing that causes one to repeat an action or that thing that directs one's behaviour (Elliot et al., 2001). Motivation could be intrinsic or extrinsic, for it comes from two sources: from oneself or from other people. This explains why Marr (2009) through the Incentive Theory promoted by psychologists like B.F. Skinner, illustrates that people's behaviours have social ramifications. Motivating an individual to do something could be a reward, which can either be tangible or intangible and come at the end of the action that has been taken.

Motivation determines whether the action can be repeated or not. Behaviours that are immediately rewarded have a high probability of happening again, and those that are delayed have a decreased probability of happening again. As Elliot et al. (2001) rightly put it, motivation is the reason behind certain behaviours individuals put up; it is a driving force behind behaviour as it establishes a link between what we do and why we do it. Looking at intrinsic motivation, it's that type of motivation that is self-desired. Here, the individual tries new things and faces new challenges to gain knowledge. It is the type of motivation that is driven by interest and enjoyment in the individual who carries it out. If it brings interest and enjoyment to the individuals. Intrinsic motivation is very important when talking about social, cognitive, and physical development. This explains why learners who are intrinsically motivated will undertake tasks to improve on their skills and capacities (Ryan et al., 2000).

### Imitation

Another factor that can enhance pedagogical quality is imitation. Bandura (1977) holds that much learning takes place through observing and imitating models. Social learning theories hold that much learning takes place through modelling and imitation, as learners can greatly improve their knowledge and retention by observing the desired behaviours, attitudes, and reactions of others. Cooperative learning, on its own, puts learners in groups and teams to work towards a common goal. Thus, through interaction in their little groups, members will have the opportunity to learn from others by observing, imitating, and modelling desired behaviours put up by other group members. Imitating and modelling the right behaviour and reactions will greatly influence learning and evaluation. This is in line with Schunk (2007) in Bandura (1997), who say much learning occurs when we observe, model, and imitate models. With this, learners can be able to retain knowledge by observing and modelling the desired behaviours, attitudes, and reactions of others.

Imitation is one of the most important ways to learn new information. It can also be referred to as copying another's behaviour. Imitation starts in infancy and continues throughout life. Imitation is a teaching method that focuses on breaking apart skills into components; that is, learners are provided with a model of the target behaviour that they are to imitate and are rewarded at the end of the day for modelling the said behaviour. Imitation has a way of benefiting learners of all ages. Imitation helps school-aged children learn classroom routines and helps adults learn routines, especially when they start a new job (Cardon et al., 2001; Ingersoil, 2008; Vismara et al., 2010).

Imitation is important in building the foundation for new skills. Here, teachers might start by building in the learner's simple imitation skills; these simple imitation skills can later on be combined to teach sophisticated and advanced skills. This explains why imitation makes learning quick and efficient. It is quick and efficient because it reduces lengthy explanations and lots of written instruction; imitation breaks the learners' learning apart into more efficient interactions. The teacher might demonstrate a specific skill, and if the learners are able to do the same, he provides positive consequences; if they are unable, he provides prompt help so as to bring out the desired skill (Cardon et al., 2001; Ingersoil, 2008; Vismara et al., 2010).

According to Meltzoff et al. (2003) imitation enhances the cognitive development of the learners, who, in the course of coping with the desired action, will also infer and reproduce the goals that the adult strived to achieve and the cognitive rules guiding such a behavior. Imitation increases learning opportunities because some learners are able to imitate even acts that they do not fully understand. Imitating these non-understood actions gives learners the opportunity to discover the deeper cognitive meaning and understanding of an act that was at first grasped in a superficial manner.

With imitation, learners learning is not only limited to specific observable behaviours but goes as far as inferring and reproducing the goals that others strive to achieve. Moreover, imitation is seen as an important instrument for the preservation and transmission of cultures between generations. Imitation provides a vast and rapid means of transmitting culture. A vast amount of information and skills that serve as a foundation on which various aspects of human culture can be built are transmitted through imitation. As children copy adults, they produce and use different cultures and will equally transmit these practices to the next generation (Hurley et al., 2005).

### **Individual Accountability**

Individual accountability influences pedagogical quality. According to Johnson et al. (1989; 2005) individual accountability occurs when individual group members contributions towards group goals are assessed and feedback is given to the individual and the group. Group members are held responsible by the group for contributing to the group's success or failure. According to Harkins et al. (1982) if individual members are not held responsible for the group's outcome, they may become redundant and seek a free ride. influences When group members' contributions are being assessed, it pushes learners to work since they will be held responsible for either letting the group down or being congratulated for a job well done.

Individual accountability simply means that individual group members have roles to play in the accomplishment of group goals. Harkins and Pretty say that if members are not individually held accountable, the lazy ones will want to profit by leaving the work to be done by others and receiving marks they did not work for. But if, at the end of the day, everyone has to put their work on the table, then they will be interested in working. Learners may not equally want to show how empty they are to classmates, so this will spur them to work so as not to be embarrassed by other group members when feedback is given.

With individual accountability, the learners have in mind that they are responsible for their own learning as well as performance. Implying that learners cannot talk of having a satisfactory result or rating themselves by riding on the coattails of other learners in the group. Johnson et al. (1984) say both individuals and the group as a whole have to be accountable. Hence, individual accountability is seen from two levels: firstly, from the group as a whole that has to be accountable for achieving its goal, and on the other hand, from individual members in the group who must be accountable for their own share of the work that has to contribute to the general goal of the group. We can only talk of individual accountability when the work of individuals in the group is assessed and the results are given back to the group as well as to the individuals; with this, they can be able to tell who needs more assistance and who needs more encouragement and support in learning.

Thus, there is no free ride or free lunch as far as individual accountability in group work is concerned. No one gains credit for the tasks performed by others, for all the group members are particularly involved in accomplishing their own individual tasks within the general goals of the group. Moreover, individual accountability makes room for the assessment of the performance of individual group members, and the results can be assessed and evaluated by others. Individual accountability ensures that all members of the group take responsibility for their learning and their own share of work.

Thus, it is not like in a traditional group, where the work of the group weighs on individuals and other members just get a free ride on the work of others. With individual accountability, group members are equally accountable for the work of other group members; they teach other group members rather than telling them the answers; group members are responsible for each other's share of work (Johnson et al., 1994). The question of individual accountability is to avoid group members having a free ride on work as well as preventing the acceptance of low-quality work by peers in the group (Johnson et al., 1991). Individual accountability is shared by all group members, although difficult to establish and maintain it. It requires time, practice, patience, and, why not, commitment, but once it is established amongst individual group members, the strength of the group indeed becomes the sum of the parts (Anderson, 2003).

#### 1.2.6 Classroom Management Quality

Emmer et al. (2001) believe that classroom management deals with the ability of the teacher to organise and manage learners' behaviours in order to enable them to achieve positive educational outcomes. Classroom management establishes a good environment that makes the teaching and learning process effective and possible. According to Ogunu (2000) classroom management consists of planning, supervising, controlling, and coordinating learners' activities during lessons. Classroom management has two purposes, according to Evertson et al. (2006) the term classroom management is not only concerned with maintaining order in the classroom so as to make learners fully engaged in teaching and learning activities; it also has a second purpose, which is that of fostering the social and moral growth of the learners.

For there to be classroom management, there must be simple rules and regulations to be observed by the learners so that they can work, interact, and cooperate peacefully in the classroom to enhance the smooth functioning of the teaching and learning process and the attainment of the lesson's objectives. Simple rules and regulations established by the teacher and sometimes with the help of the learners usually go a long way in working on the learner's character, enhancing their moral and social growth. For classroom management to be effective, it should go beyond the traditional behaviour management techniques of dealing with learners' disruptive behaviour to teachers' development of caring, supportive relationships with learners. It should consist of the teacher's ability to organise and implement teaching in a way that optimises learners' access to learning. Thus, they should use methods and techniques that foster learners' engagement in lessons as well as promote the development of social skills and self-regulation in the learners.

Classroom management in this work is examined through classroom management to accommodate group work, monitoring activities in group work, discipline, and rules and regulations. Favourable learning climates foster learning and comprehension, which explains why teachers in their classrooms should monitor learners as they construct knowledge in their small groups to ensure they are not doing something else than working on the assigned task, ensure that there is discipline to put the learners on track, and instill a favourable working atmosphere, influencing learners' performances, hence classroom assessment.

The environment, or climate, in the classroom has a lot to contribute to what learners will achieve as learning at the end of the day. In a classroom set up for cooperative learning where learners work in small groups, if care is not taken, instead of working on the assigned task, learners may end up discussing something else. To have a good classroom climate, a teacher has to control, supervise, plan, and coordinate the learners' activities (Ogunu, 2000). Keeping learners active is not enough; the teacher needs to supervise the work carried out in the different groups to render cooperative learning productive.

Kyriacou (2005) sees the classroom as a place where the entire educational plan of the school, which comprises teaching and learning, occurs. Thus, classrooms are meeting points for both the learners and the facilitators, where the school programme or curricular activities are put into practice. This only means that if educational objectives are to be fully achieved, the classroom environment has to be conducive. Moreover, there are interpersonal relationships in the classroom that are geared towards the attainment of educational goals. Interpersonal relationships here simply refer to the interaction, the exchange of reciprocal behaviour such as ideas, information, expressions, and, why not, mutual activities amongst the learners and the teachers.

The teacher in his classroom has many functions to carry out, among which are the teaching and learning process and control of the classroom. Thus, it is difficult to have an

efficient teaching and learning process in the absence of classroom management. No meaningful teaching can take place in a noisy and distracted classroom; effective teaching can only be seen through the teacher's ability to use varied techniques in controlling his class. A teacher's ability to control his classroom has a lot to do with a learner's academic performance. The teaching and learning process in a siren environment enhances understanding on the part of the learners, and vice versa.

# **Classroom Management to Accommodate Group Work**

Classroom management to accommodate group work can also influence classroom management quality. Although group work is an active and efficient method to motivate students to learn and think critically, if not well planned, it might bring about frustration on the part of the learners as well as the teacher. Understanding group dynamics is very challenging and important because it influences the work of the learners in their different groups. Cooperative learning, being group-based learning, can be greatly influenced by group dynamics, which can greatly influence learning. For effective group work in the classroom, the teacher should take into consideration the size of the group and the basis of group formation (homogenous or heterogeneous), which is according to age, ability, gender, and experiences. The teachers should take into consideration the composition of the group, the roles of the learners and the teacher, the task structures, group processing, and, equally, the learning environment. (Levine et al., 1998; Web et al., 1996).

For better management of groups in a cooperative classroom, the facilitator should determine who is to be placed together in a group, know how to organise materials that learners will use in working, and come up with strategies that will give him assurance that all group members are working (Tischanne-Moran et al., 2000; Colman, 1994; Holubec, 1992). Thus, the teacher should start by planning how learners will be regrouped physically so that they will be comfortable. That is the layout of the classroom, allowing them to come up with simple rules that will guide them in their work. The teacher should equally design the different activities that are to be undertaken by the group; instructors should start by identifying the instructional objectives so that learners will be clear on what is expected of them (Franchini, 2014). Instructors should make learners understand why they are using group work and set ground rules that will enhance interaction.

### **Monitoring Activities in Group Work**

Monitoring groups is another way of enhancing classroom management quality. The concern here is how instructors can follow up with the learners without making them uncomfortable, for most often, some learners do feel intimidated, shy, and uncomfortable when the teacher is monitoring their activities. For some learners, the teacher's monitoring might put them under a lot of pressure rather than facilitate their task. It is very important that during group work in the classroom, the teacher moves around the different groups, answering questions that are necessary, listening to the group discussion to ensure they are in line with the assigned task, and helping them with challenges they face (Michaelson, 2002). Moreover, for better monitoring of activities in groups, the teachers should define the instructional objectives to enable learners to know what is expected of them. In the different tasks given, the teacher should ensure there is interdependence as well as a fair division of labour (Johnson et al., and Smith 2014).

According to Jaques (2000) the teacher should not hover in the place of monitoring. Implying that the teacher should not interfere with how the group functions; he should allow the learners to work on their own. This explains why Jaques (2000) suggests that the teacher might even walk out of the classroom for a brief period of time so that learners can argue out their disagreements and uncertainties. For better follow-up of individual groups and members in groups, the teacher can make use of individual accountability, where each member in the group is accountable for the assigned task (Johnson, 1999). The teacher should use activities such as peer assessment so that learners will not be easily demoralized. Johnson (1999) also talks of group roles where learners must assume some responsibilities for their own learning. Learners' motivation, according to Slavin (1995), can be used to enhance individual accountability.

### **Classroom Discipline**

Classroom discipline equally enhances classroom management quality. Discipline is a multidimensional word used by many in varied ways. Some authors say discipline has to do with an individual's complete obedience—obeying and conforming to all the laid-down rules, orders, and norms (Glasser, 2001). To others, discipline simply refers to punishment and control (Darch and Kameenui, 2003). Discipline is equally a way of training a child in an orderly manner of life, meaning that every time the teacher tries to check, control, and regulate the activities of a learner, he is in some way carrying out discipline.

Hanna (2015) sees discipline as going above the power that the instructor exercises over the learners, above maintaining law and order in the classroom, above the appropriate manner of dealing with those who commit offences in school, above punishment and occasional rewards and praises, and above the quietness and stillness of the classroom. To scholars, discipline is applying all the influence that secures or tries to secure proper conduct in school; classroom discipline consists of training learners to be self-restraint, to be good, to possess good conduct, to be orderly, and to be able to cooperate; in a nutshell, the best habits in learners. Classroom discipline goes as far as intellectual and moral education and not just orders and instruction, making learners behave in a certain manner on certain occasions. Discipline is a continuous process of positive instruction and negative corrections where learners are taught how to behave within a specified value or rule.

Classroom discipline differs from classroom management. Classroom discipline deals with checking learners' behaviour and controlling learners' behaviour in the class; thus, it is the specific management of learners' behaviour, whereas classroom management deals with the procedures, routines, and structure of the class. Classroom management is more of the teacher's responsibility, while classroom discipline centres on students (Marshall, 2003). Discipline in itself is an action that is undertaken by the teacher to establish a favourable environment, end indiscipline, and restore order in the classroom during the teaching and learning processes. Classroom discipline refers to management actions that instructors undertake so as to ensure a smooth teaching and learning atmosphere. Classroom discipline requires that the instructor put in place a set of actions that comprise organisation and management processes with the objective of bringing and maintaining order in the classroom during lessons. These actions of organisation and management can be seen through the different norms, routines, and procedures laid down by the teacher (Doyle, 1985, 1986). Classroom discipline is complex; it is prone to multitudes of subjective interpretations, according to Espelage and Lopes (2013).

Classroom teaching revolves around two major factors: firstly, it consists of the teacher transmitting the subject matter to the learner, promoting cognitive changes through didactics, which is a part of pedagogy that enhances the transmission of content. On the other hand, it deals with classroom order; according to Doyle (2006), classroom management is the establishment of order so as to maintain a classroom environment. Since a classroom is a micro-organisation where we have multiple interactions during the teaching and learning process, it makes classrooms crowded places that will certainly need rules, procedures, and routines that

are clear enough to ensure a favourable atmosphere. Orders and procedures are established to help the teacher maximise the allocated time for instruction (Hochweber, Hosenfeld, and Klieme, 2014; Mirra, 2014). Teachers who are effective in their jobs most often have fewer problems related to disciplinary issues because they are good at establishing norms and procedures, which enables them to maximise instruction time.

According to Ritter and Hancock (2007), classroom environment and discipline are crucial factors as far as a teacher's work and satisfaction are concerned; discipline is one of the major challenges faced by the teacher in carrying out his duties. Classroom atmosphere has a lot to do with the learners' outcomes as well as the teacher's work satisfaction; hence, many studies have been carried out to identify the different types of effective classroom management styles. According to Lewis and others (2008), the first discipline management style is that of "assertive discipline" or "take-control"; this approach calls for teachers to lay down ground rules at the beginning of the school year. With this, learners will be aware of what is expected of them and the consequences of their misbehaviour upon failure to comply. Teachers should reward good behaviour and punish bad ones.

The second discipline management style is the "interventionist style." This discipline management style holds that learners will learn to behave better and more appropriately when good behaviours are rewarded and bad behaviours are punished. Thus, teachers should ensure strict control over the learners during activities in the classroom (Ritter and Hancock, 2007). The third discipline management control is "teacher effectiveness training," which stipulates students "self-control as the key to good behaviour in the classroom, which is obtained through interaction with the teacher. This style makes learners play an influential role in maintaining discipline during classroom activities. Hence, instructors do not need to make learners behave appropriately; students themselves will tend to behave appropriately on their own (Ritter and Hancock, 2007).

# 1.2.7. Didactic Quality

According to Gundem et al. (1998), didactics is derived from the Greek word "didaskein," which implies to teach or to educate; didactics consists of the teaching content, the learning environment, the classroom, and the main activities of the learners. In a nutshell, didactics deals with having the ability to teach. This explains why the didactic quality of this study will be examined through the learning content, learning activities, and learning materials (didactic materials). Nevertheless, over the years, the concept has changed, and it is now more of a teaching method (Gundem et al., 1998). Didactics can equally be defined as the science that generally deals with teaching and learning (Dolch, 1967).

This explains why Core et al. (2002) put forward the following questions in trying to understand the concept of didactics: "Who should learn, from whom, when, with whom, where, how, with what, and for which purpose? Didactics is a science in education that deals with the teaching and learning processes. It is a science of education that places emphasis on how instructors, learners, and knowledge interact to support each other. It is a key subject in the teacher education curriculum and serves as a hinge between the general education subjects and the specific ones. Learning content and activities that reflect learners' prior knowledge and experiences have a way of captivating their interest and enhancing learners 'understanding. Thus, interesting lessons instill in them the zeal to work better, hence influencing classroom assessment.

Didactics is a theory concerned with social practices that are geared towards the design, implementation, and evaluation of teaching and learning programs. It is equally concerned with designing teaching and learning situations and the orientation and support of students learning; it identifies and analyses problems coming from the teaching and learning processes so as to provide the best possible learning opportunity to all learners in educational institutions (Camilloni, 2007). According to Feldman (1999), didactics has moved from being just a normal discipline that focused on the description and prescription of the art of teaching to becoming a discipline that is concerned with context and subject-specific knowledge. Hence, cognition can only be seen in possible interactions and not just in individuals' minds. Thus, didactics as a science in education is concerned with teaching and learning; teaching and learning are seen by some others as two different processes, while others see it as a two-way process on the same side.

# Learning content

Didactic quality can be seen through learning content. Content in a curriculum defines and specifies the length, breadth, and depth of valued knowledge that learners are supposed to learn and acquire. Content is a driving force that serves as the basis for the educational outcome of any educational system. The learning content of any curriculum helps to frame the educational system because, through content, important and relevant teaching materials are brought out. This implies that the learning content signals the outcome that the public, policymakers, and educators consider valuable to the learners (McLaughlin et al., 1995). The learning content serves as a guide for how instruction and assessment will be carried out.

Thus providing a map of where the curriculum should go and also directing the teachers on how to carry out instruction in order to meet the diverse needs of learners. Content equally enhances the allocation of instructional resources by clarifying instructional goals so that teachers will be able to know how to use the resources to achieve their goals. Learning content does not only serve as a list of important knowledge and skills but also goes a long way in determining the vision of what the curriculum should include in terms of content priority and emphasis. The learning content should provide a coherent guide to the curriculum and instruction (McLaughlin et al., 1995).

The learning content of a curriculum consists of knowledge, skills, values, and attitudes. Learning content should be related to the learning outcomes; it should reflect a balance between topics, theory, and practice, depending on the level of the learners. Learning content in the different disciplines and courses may be taken from previous courses or already existing curricula, textbooks, national professional or discipline associations, etc. Once the outcome and broad content areas have been defined, the learning programme and timetable can be devised (Biggs, 1996). Learning content is the body of knowledge and information that instructors teach to learners because that is what they are supposed to know or learn in different content areas or disciplines like mathematics, English language, history, and geography, just to name a few. Thus, learning content refers generally to the theories, concepts, facts, and principles taught and learned in a specific subject area.

According to Tambo (2003) learning content, or the content of a curriculum, refers to the subject matter, topics, and objectives, learning activities, teaching activities, and methods and strategies of assessments. Hence, learning content is one of the many factors that can influence didactic quality. Looking at cooperative learning, it is an efficient and evidence-based method of teaching that enhances an inclusive classroom. As a teaching method, it focuses on a shift from the traditional method of learning facilitated by learners (Hinson, 2015). It deals with a shift from lecture in the traditional classroom to a brain-friendly classroom environment, which is of benefit to all the learners. In a nutshell, knowledge impartation is mostly done through an auto-didactic approach, thus a change from the teacher-centered education paradigm to student-centered education.

The cooperative learning method is a kind of teaching method that holds each learner accountable for their learning and increases the learning of others. Webb (2009) says cooperative learning gives learners room to explain materials learned to other peers and promotes learning for learners who explain, rehearse information, recognise and clarify materials, and recognise their own misconceptions. With this, they are able to fill in the gaps in their own understanding and strengthen the connection between new information and previous knowledge. Thus, it gives learners a better opportunity to have a good mastery of the content learned and equally enhances the didactic quality.

Discussion in small groups employed in the cooperative learning method equally enhances the didactic quality; this is due to the fact that discussion enables learners to have a good mastery of the content learned. In their small group discussions, they converse with peers, generate problem-solving strategies, and connect previous knowledge to new information as they are given the opportunity to build knowledge together (Buchs et al., 2017). The cooperative learning method makes use of the principle of constructivism, which implies individuals learn by building their own knowledge and connecting new ideas and experiences to existing knowledge and experiences to bring about better understanding (Bransford et al., 1999). Understanding and mastery are fostered as learners build knowledge and experience.

# Learning activities (teacher and learner activities)

Learning activities vary widely, from the delivery of knowledge to the development of student learning skills. Learning activities are effective when guides are produced for instructors, such as pre-planning, a presentation and facilitation plan, and an assessment of the learning plan. According to Bransford et al. (2000) learning activities refer to those activities in which students learning actually occurs. The design of learning activities should be based

on how learners make sense of new information, how they acquire skills, and how they develop a new way of being.

Characteristics of Effective Learning Activities are as follows:

**Focus on students' learning:** learning activities are designed to suit students learning. All the components of the learning activity should help learners acquire the stated objectives and goals. The teacher should not do anything for the students that they can do (Weimer, 2002).

**Have a compelling purpose:** This is when learners see the importance and values of and are pushed to work. It is implied that activities become successful when learners see them as important, and this will make them fully engaged in carrying out the task.

**Have clear objectives.** Objectives have to be specifically identified. Each activity has the potential to provide a combination of information, solution methodologies, and the opportunity to develop specific learning skills.

**Support the desired type of learning:** the learning objectives serve as a guide to the type of learning activities to be used. The same learning activities, tools, processes, context, ways of being, or rules will not be used in all concepts.

**Balance content and skill development:** learners learning something for the first time will be more focused. It is only later that learners try to focus on developing skills by applying the new content. Implying that learning objectives should specify the proper balance between content and skill development

# Support the needs of diverse learning styles.

Felder et al., (1988) say learners learn new materials through a variety of preferences. Constructing different activities should take into consideration the preferences of multiple learning styles. If possible, it is good to use a variety of learning activities in a single course to meet the different learners' needs.

# Include assessments of student learning.

Wiggins et al. (2005) say that if student learning is the goal of an activity, then assessment of student learning should be integrated into the activity itself. Implying that an activity can only

be successful if it produces targeted student learning. Thus, learning should be assessed based on predetermined performance criteria.

#### Include an assessment of the activity.

Every time the learners are done with an activity, the teacher should come up with possible ways of assessing that particular learning activity; this helps to strengthen future development and application of activities.

# Learning materials or instructional materials

Instructional materials also have a lot to play with when it comes to didactic quality. They are alternative materials that teachers use in their classroom to make lessons concrete. They are alternative means of communication that a classroom teacher employs in the classroom to enhance understanding of the concepts taught. Instructional materials give room for variations through which messages are sent across to ease communication (Tyler, 1987; Dike, 1989). Instructional materials or didactic materials sustain the learner's interest, they motivate the learners to learn, and they equally make the teaching and learning process concrete and enjoyable. Thus, different content in different disciplines will require different materials, apart from the most common ones like chalk, chalkboards, and the recommended text books.

### 1.3.1. Classroom Assessment

Angelo et al. (1993; p. 34) say classroom assessment "is an approach designed to help teachers find out what students are learning in the classroom and how well they are learning it". Classroom assessment has the following characteristics: First, it can be learner-centred, which implies classroom assessment is based on teachers and learners improving learning rather than teaching.

Hence, classroom assessment provides information to both students and teachers so as to adjust and make improvements in learning. Another characteristic of classroom assessment is that it is teacher-directed, meaning the teacher has autonomy, academic freedom, and professional judgement on what to assess, how to assess, and how to respond to the information gained from assessment. Formative assessment is another characteristic of classroom assessment that has the purpose of improving the quality of students learning. In addition to the above, classroom assessment is context-specific, implying that the characteristics of the teachers, students, and subject should be taken into consideration when assessing so that assessments will respond to their particular needs. This is because what works well in one class may not work in another.

Moreover, Angelo et al. (1993) equally define classroom assessment as a technique in which ungraded activities are carried out in a classroom setting. Such activities are carried out in order to give the teacher feedback on the learners' understanding of course materials and ameliorate where needed before moving on to the end of the programme, test, or course material. This light classroom assessment assures the learners of the teacher's interest in their learning process. Classroom assessment is important because it gives regular feedback on misconceptions and poor performances on tests, quizzes, and projects.

Classroom assessment gives the teacher insight into his day-to-day teaching and how learners learn, or the learning process; as such, modifications can be made where necessary. It makes learners modify their own learning styles and strategies to appropriate ones. This explains why classroom assessment should be carried out in relation to the teaching style and classroom time limit. The goal and purpose of assessment should be explained to the learners whenever it is carried out, the findings should be communicated to students, and the plan of feedback should be

### **Relevance of knowledge construction**

Am-brose et al. (2010) see the relevance of knowledge construction as a way of helping students develop and learn pathways to becoming expert learners whose conceptual frameworks are deeply interconnected, transferable, rooted in a solid memory and skills foundation, and easily retrieved. Instructors should help students assess and clarify prior knowledge by enhancing active learning activities that foster interconnected ideas, encourage students to reflect, co-build course road maps, and pursue other forms of meta cognition. Students learn by connecting new knowledge to existing knowledge and concepts to bring out a new meaning (NRC, 2000). An active social classroom provides learners the opportunity to connect knowledge effectively as they negotiate understanding through interaction and different approaches. Even as novices, students will most often possess incomplete conceptual framework work (Kober, 2015). This explains why Ambrose et al. (2010) say it takes time for the learners to know how to "chunk" knowledge into similar retrievable categories so as to grow larger conceptual ideas as well as interconnected ideas.

Nevertheless, connections with new knowledge may lead to misconceptions or erroneous ways of thinking that can awaken connections. To Doolittle et al. (2012) relevance of knowledge constructed is a constructive perspective of learning wherein learners, through social interaction with authentic situations that are prior to knowledge, construct meaningful learning to adapt to their respective contexts. This can be done by experiencing the world and building new knowledge on prior ones to enhance autonomous and self-directed functioning in learners. To construct meaningful and relevant knowledge, learners should be provided with participatory methods that will make them individually and socially engaged in learning. Knowledge construction should be fostered by an authentic and real-world environment, as well as real-world experiences and relevant problems.

### **Mastery of Content**

Concept mastery helps learners build a strong foundation to be able to identify and fill knowledge gaps. Mastery of knowledge equips the learners with the pre-requisite skills to solve more problems in the future. Mastery of concepts builds confidence in learners, which enhances a positive relationship with learning. This positive relationship motivates the learners to actively participate in their own learning; they ask questions, collaborate with the instructors, and apply feedback. Content mastery equally prepares learners for the future; hence, the main purpose of content mastery is to train learners to be self-motivated and independent—learners who are not afraid to take on new challenges and work with others to solve more complex problems. Internalised content will always help learners, be it in the near, immediate, or long run, to be successful (Schwartz et al., 2019).

#### Learners performances

This concept takes us back to academic performance, which is defined by Coballero et al. (2007) as meeting the stated goals, achievements, and objectives of the official programme or course that students attend. Hence, through assessments, grades are assigned, which can either be a pass or not for certain tests, subjects, or courses. Learners' performance, which is reflected in academic performance, is also the level of knowledge shown in a subject in relation to the norm and is generally measured using the grade point average. According to Torres et al. (2006) in Willcox (2011), the purpose of academic performance is to achieve an educational goal; hence, the several components of the complex unit called performance vary according to

organic and environmental conditions as well as circumstances that determine skills and experiences.

Marti (2003, p. 376): "Academic performance involves factors such as the intellectual level, personality, motivation, skills, interest, study habits, self-esteem, or the teacher-student relationship. When a gap between the academic performance and the student's expected performance occurs, it is referred to as a diverging performance. Unsatisfactory academic performance is the one that is below the expected performance; sometimes it can be related to teaching methods."

# Output

Schreyer (2009); Fraumeni et al. (2008) see output as an educational concept that defines the level of acquisition of knowledge, skills, and competence of the learners. Educational output tries to measure the effectiveness of a programme or activity to see if objectives were achieved. Output shows the performance of an educational system with respect to knowledge of the subject, progression and completion rates, competences, and also the satisfaction of employers. Output can be measured through the use of national and international examinations, international assessments, and surveys. Hence, output is all about measuring learning outcomes to see if educational quality and learning outcomes are improved as intended (Scheereen et al., 2011).

### Skills

Skills, according to the Education Unit (1982), are a wide concept that includes the ability for one to perform specific manipulative occupational tasks, such as reading, measuring, writing, speaking, listening, calculating, coordinating problem solving, coping with interpersonal relationships, computer literacy, and learning. Payne's (1999) skills encompass everything that has to do with reading, writing, reliability, problem solving, communication, reasoning, self-management, and continuous learning.

### Competence

According to Hartel et al. (2004), competence is a statement that describes the knowledge, skills, and behaviour that a student acquires after completing a course. It is the

applied skills and knowledge that enable people to successfully perform in educational, professional, and life contexts.

### **1.4.0. CONTEXTUAL BACKGROUND**

The contextual background of this study will examine the evolution of evaluation in Cameroon, the evolution of teacher training colleges in Cameroon and challenges faced in the implementation of assessments and cooperative learning in Cameroonian classrooms.

# 1.4.1. Evaluations and Assessments in Teacher Training Colleges in Cameroon

Evaluation and assessment in teacher training colleges should be constructed according to diagnostic, formative, criterion-referenced, and integrating assessment. Also with the use of a problem-situation technique, according to Decision N°. 495/B/MINESEC/CAB/30 August 2013 (MINESEC, 2013).

### **Diagnostic assessment:**

It is carried out by teachers to identify learners' prior or current level of knowledge in relation to a particular discipline, subject, or ability. It serves as clarification before the teaching and learning process begins to facilitate the acquisition of knowledge by the student teachers. This assessment type exposes the strengths and weaknesses of learners concerning the subject to be studied (Dettmer, 2004).

### **Formative assessment**

It is carried out on a weekly and daily basis in teacher training colleges, although the official syllabuses make mention of monthly formative assessment to verify the level of attainment of the teaching and learning objectives and to facilitate the verification of acquired knowledge, skills, and aptitude with respect to the stated objectives. It enables teachers to verify what the learners have actually learned and the extent to which objectives have been attained. On teachers' part, it enables them to re-strategize their teaching methods and techniques in order to enhance student teachers' acquisition of knowledge, skills, and abilities (Afitska, 2004).

### **Criterion-reference** assessment

It refers to student assessment; it examines the extent of individual achievement in relation to the expected learning objectives of a given discipline or program. Hence, the assessment of student teachers is based on predetermined criteria and standards of performance clearly defined in the instructional and learning sessions. The performance standard demonstrated by learner-based criteria, which is independent of other students' performances in the same cohort, determines their grades. Learning and Teaching Committee (2005) also reiterates that grades for assessment have no pre-set distribution, which is why it is possible for all student teachers to fail in a class or have distinctions in an assessment exercise.

### **Integrating assessment**

Talking about integrating assessment in relation to teacher training colleges in Cameroon, it consists of exploiting assessment for quality instruction and learning processes and outcomes. Integrating assessment might take place at these three (3) levels: first, directly relating what is to be taught to what is to be assessed. The use of different assessment techniques should be employed in assessing the different elements of the curriculum. Assessment directly relating to teaching implies that it is seen as an integral part of teaching. Secondly, assessment should be carried out to investigate the extent of the effectiveness of the curriculum, and finally, integrating assessment and teaching should consist of intertwining teaching and assessment for formative exploitation (Kesianye, 2015). Grouwsand et al. (1992); Kesianye (2015) research show that continuous assessment of student teachers knowledge, thinking, and problem-solving skills results in more efficient and effective practice.

# 1.4.2. The Evolution of Teacher Training Colleges in Cameroon

With regards to the advent of teacher training colleges in Cameroon, there were denominational and private teacher training colleges for the English-speaking Cameroon. In 1949, a teacher training college for girls was opened in Kumba by the St. Franciscan Missionaries, awarding Grade III and later Grade II certificates. More recently, another training college was opened in Mutengene for both men and women. Today, what remains of these efforts is the training college in Tatum, in the North West province. The Presbyterian Church has had three teacher training colleges open since 1966, and only the Presbyterian Teacher

Training College (PTTC) in Mbengwi, opened in 1981, for the training of Grade II teachers, now exists.

The Baptist Mission with the German Development Service (DED) opened a teacher training college for Grade I and II teacher certificates with boarding facilities in Ndop in 1985. Other than this, DED, through the financial support of the Protestant Association for Cooperation and Development (EZE), initiated in-service training programmes for academically qualified but pedagogically untrained teachers in the Presbyterian and Baptist secondary schools in the North West and South West provinces as of the 1994–1995 academic year. The programme was to improve skills in the teaching of mathematics, pure sciences, and food and nutrition. This initiative provides school-based in-service training opportunities for their teachers.

With regards to French-speaking Cameroon, they had only four private teacher training colleges in the whole territory by 1956, the first of which was opened at Nkongsamba. Between 1957 and 1958, the Lutheran Evangelical Church opened a college with the objective of training teachers. Other strategies for training were adopted by the mission, which led to the creation of a centre in Ngaoundere in 1975 for the retraining of teachers. Other prospective teachers of the Lutheran schools were trained as private teachers in the then-government teacher training colleges for all levels of the school system as far back as 1972. Some of the teachers were trained in Senegal and France. The importance of this was to improve the quality of teachers at the primary and secondary levels.

In 1988, the leaders of Protestant education in Francophone Africa created a group to reflect on pedagogic reforms for the purpose of ensuring more active participation of pupils in the learning process and relevant programmes that would facilitate the integration of pupils in their environment. This reflection facilitated the creation of a school of development network in 1989 (Reseaue Ecole et Development), known by the acronym RED. The pedagogic reform to improve teachers' skills focuses on the development of teaching methods that encourage independence and initiative. In addition to institutional offerings, the Catholic mission organised more school-based teacher training at the diocesan level with the support of pedagogic animators, and teachers needed to participate in a number of sessions to qualify as teachers.

Nevertheless, according to Tchombe (2006); Fonkoua (n.d.), there are some constraints to teacher developments, such as inadequate access to seminars and workshops and no followup for the capacity-building training programme; initial and in-service training needs to reflect the needs of the school system. At present, the programmes are inadequate for effective teachers' preparations as they concern the development of skills in ICT, human rights, and HIV/AIDS. There is no career growth profile within or between levels. The public service employs teachers based on prescribed categories and their qualifications. Teachers from rural areas never want to serve in these areas.

Teachers in most of our institutions are not trained, and those who are trained are not well trained. Whenever in-service provisions are made, they do not pay particular attention to teachers' immediate needs. The organisers of in-service training were supposed to have an operational rationale focusing primarily on identifying practicing teachers' needs. Teacher education should provide student teachers with research skills so that they can be critical of their own teaching and be self-evaluative. Due to the overcrowded programmes, with student-teachers being expected to attend lectures, be on the field for practicum or teaching practice, and at the same time do long essay dissertations as well as produce field reports, essential courses for professional training are treated in a very shallow manner. Thus, more emphasis is laid on certain disciplines than others. Out of the 32 to 36 hours a week for courses offered at all levels of teacher's education, only an average of 6 hours are devoted to education courses; hence, students feel they are not adequately prepared for the profession.

# 1.4.3. Challenges in carrying out assessment in Cameroonian classroom

Difficulties in implementing formative assessment in the classroom consist of overtesting. Also, time for teaching is taken over by assessment, which occupies a period set aside; hence, over-testing interrupts instructions and fragments learning into unrelated segments of information that hardly sum up to a coherent whole. Assessment makes learners shy away from education because of over testing. Factors that affect formative assessment apart from the conceptual misunderstanding include time and class size, which are practical barriers to formative assessment in Cameroon. In a study carried out by Monono and Foncha (2014), some teachers can have up to 600 learners across the different classes and levels.

Tornence et al. (2001) equally reiterate the aspect of limited time, which is cited in much research and has always caused changes in assessment practice. The assessment

strategies employed by teachers are influenced by the types of classroom learning conditions, that is, the availability of resources and class size. Some teachers have the conception that traditional forms of assessment are more time-efficient and have more value because they enhance summative requirements and accountability demands (Hargreaves et al., 2002; Maby et al., 2003).

Morgan et al. (2002) see formative assessment as demanding a lot of class time to carry out, which limits the amount of curriculum teachers can cover within their programme. This explains why teachers believe that formative assessment is good in theory but not practical to implement, especially in a context where the curriculum has to be covered because the large class size makes it practically impossible to provide descriptive feedback in Cameroonian classrooms.

According to Bailey et al. (2008), assessment usually requires skills to be properly implemented that novice or poorly trained teachers do not have. Teachers are supposed to have profound skills in content knowledge, knowledge of metacognition, pedagogic content knowledge, knowledge of students' previous learning, and finally assessment in literacy to better understand the composite task. But the disturbing issue is that the above aspects are evidently lacking in the majority of schools in Cameroon (Ndi et al., 2014).

Furthermore, the dominance of summative assessment in the minds of educational policymakers in Cameroon is so profound that it has thwarted all efforts at formative evaluation practices; hence, there is always a misalignment between the priorities of the system and those of classroom practices. The system has put more emphasis on certificate examinations, thus making teachers less enthusiastic about formative assessment practices in their classrooms because they feel constrained by the current emphasis and priority of the Cameroonian government on certificate examinations, particularly due to a lack of national assessment.

Hence, teachers focus on summative assessment because the results are used to communicate the learner's achievement. This results are equally part of learners' academic reports and measure the efficiency of teachers and the school. Whatever the case, this misalignment is paradoxical because engaging formative assessment in classroom teaching and learning likely serves to enhance student achievement on summative assessment (Gardner, 2006). Teachers are not allowed to test at the time they consider appropriate for continuous

assessments; timetables are imposed on them as they are obliged to forward students' scores within a given period (Monono et al., 2014).

Thus, from the above, learning and assessment are inseparably linked; hence, they should be concurrently planned and clearly rooted in specific learning goals. According to the constructivist learning principle, assessment should be an instrument to enhance both student learning and teachers knowledge of the level of learning of learners. Bloom's concept of 'mastery learning' is an instructional approach that espouses the use of assessment to gauge learners' progress towards mastery of learning goals. Bloom suggested that rather than waiting to assess learners at the end of the units or a particular period assigned for that, Teachers should use assessment as an integral part of the instructional process to identify individual learning difficulties and prescribe remediation procedures (Bloom et al. and Madus, 1971). Thus, formative assessment should be integrated into classroom activities and not scheduled, as teachers are expected to administer assessments in various ways over time with the use of multiple tasks to collect information on learners' levels of achievement.

### 1.3.4.1 Challenges of implementing cooperative learning in Cameroonian classrooms

Despite the enormous advantages that can be gained as a result of the use of cooperative learning, there are some challenges faced during implementation. According to Acho, Mboshi et al. (2023) instructors who constantly use it face resistance and, at times, open hostility from the students. Also, the brighter learners complained of being held back by slow teammates since all have to work towards the achievement of group goals. On the other hand, the slow learners in turn complain that their ideas do not count during group discussion and are equally ignored during working sessions. Another challenge is that learners might build resentments about team members who failed to do their own part in the general task.

With the above, instructors might find it difficult to deal with the above problems; hence, they become discouraged and revert to the traditional teacher-centred instruction paradigm. Some of the challenges are connected with the potential difficulty in carrying out cooperative learning in large classes, improper classroom organization, a lack of necessary teaching materials, and well-trained instructors (Najmonnisa, 2013).

### **1.5.0. FORMULATION OF THE PROBLEM OF THE STUDY**

The place of academic performance cannot be underestimated because it is an important achievement for learners during the educational process. The performance of learners affects their current and future lives (Kelly et al. 2013). The researcher noticed that a majority of student teachers score averages between 10 and 11 (Assiez bien) during grade 1 certificate examinations, and these are future teachers who have the destiny of young Cameroonians in their hands. With performances as such, one is likely to question the fate of future young Cameroonians for you can only give out what you have.

Cooperative learning, commonly used in the form of group work and teamwork, is a common method and technique employed in contemporary teacher's training colleges, especially with the learners of one-year courses (holders of GCE Advance level) because of the limited time in relation to the bulk of work to be covered as prescribed in the official syllabuses of TTC (24 subjects). Hence, the above is often used to gain time and cover the required workload. Tornbeg (2009) says because the experiences of life changes all the time, teachers should prepare to vary their teaching methodologies to make learners interested and fit in the changing society. This explains why educational actors such as the school administrators and teachers have been diverting effort through the evolution of different teaching methods to enhance learners' performances. How ever there exist a gap in the use of cooperative learning because one will tend to ask how efficient the above method and strategies are, judging from the fact that, usually after presentations, learners are unable to answer questions directed to them, and this is equally reflected in their performances du ring assessments.

Thus, if cooperative learning used in our respective classrooms is not checked, the lazy student teachers will always have a free ride, learning nothing but scoring the same as those who carry out the task without comprehension or mastery of the subject, which goes along way to affect classroom assessment. Tornbeg (2009) says that because the experiences of life change all the time, teachers should prepare to vary their teaching methodologies to make learners interested and fit in the changing society. Hence, it is for this reason that the research seeks to find out if the quality of cooperative learning can enhance quality education and better academic performances.

# 1.6.0. Objectives of the Study

Here we have the general objectives of the study and the specific objectives of the study.

# 1.6.1. General Objective

The main purpose of this study is to evaluate the quality of cooperative learning and its impact on classroom assessment.

# 1.6.1.1. Specific objectives

- To investigate if the academic quality of cooperative learning influences classroom assessment
- To find out if the pedagogical quality of cooperative learning has an impact on classroom assessment.
- To find out if classroom management quality of cooperative learning has an impact on classroom assessment.
- To investigate if the didactic quality of cooperative learning has an influence on classroom assessment

# **1.6.2. Research Questions**

Here we have the general research question and the specific research question.

# 1.6.2.1. General Research Question

To what extent does the quality of cooperative learning influence classroom assessment?

# 1.6.2.2. Specific research questions

- To what extent does the academic quality of cooperative learning influence classroom assessment?
- To what extent does the pedagogic quality of cooperative learning influence classroom assessment?
- To what extent does the quality of classroom management of cooperative learning influence classroom assessment?

• To what extent does the didactic quality of cooperative learning influence classroom assessment?

# **1.6.3. Research Hypotheses**

This research work was guided by research hypotheses: The research hypotheses were divided into general research hypotheses and specific research hypotheses.

# **1.6.3.1 General Hypothesis**

The quality of cooperative learning significantly influences classroom assessment.

# 1.6.3.2 Specific Hypotheses

- The academic quality of cooperative learning influences classroom assessment.
- The pedagogic quality of cooperative learning influences classroom assessment.
- Classroom management quality and cooperative learning influence classroom assessment.
- The didactic quality of cooperative learning influences classroom assessment.

# **1.7. SIGNIFICANCE OF THE STUDY**

The 1995 Educational Forum on Education held in Yaounde, the capital and political capital of Cameroon, under the chairmanship of Mbella Mbappe, had as one of its demands democracy, decentralisation, effective management, accountability, pedagogic reforms, and relevance in education. This educational forum was held because of the problems facing the education system, such as poor teaching quality and irrelevant curriculum content, which did not take into consideration the geo- and socio-historical circumstances of life at all levels (Fokeng, 2010). This educational forum called for a pedagogy that fosters reproduction rather than production. Hence, a study of this magnitude will enhance the implementation of cooperative learning qualities to contribute to classroom productivity. It will give insight to teachers and other educational stakeholders on useful practices to be implemented in classrooms to enhance learners performances, who occupy the central position of teaching and learning processes. The study will equally serve as a base for measuring and evaluating quality as far as education is concerned. This study will be of great help to the teachers, the

policymakers, the curriculum and evaluation processes, the school administrators, as well as the student teachers.

### **To Teachers**

A study like this one will enlighten them on different educational practices that can enhance school productivity. It will influence their choice of the different teaching methods, techniques, and processes that can enhance pedagogic practices in the classroom, and why not the performances of student teachers? Equally, it will enable them to assess and evaluate educational quality, given that the study provides them with some of the criteria that can be used in measuring and evaluating quality in education. Moreover, an understanding of some of these criteria will enable them to adapt their teachings, use the right method of knowledge transmission in their respective classrooms, and carry out assessments effectively.

# **Policy makers**

They should understand that cooperative learning brings about interaction, socialisation, and diversity amongst learners. Thus taking care of individual differences as the learners learn from their peers during group interaction. Cooperative learning gives room for deeper understanding, which enhances classroom assessment. Section 4 of the law that came as a result of the 1995 Forum on Education stipulates that the general purpose of education shall be to train children for intellectual, civic, and moral development and their smooth integration into society, bearing in mind prevailing economic, socio-cultural, political, and moral factors. Cooperative learning as an instructional method enhances mastery and understanding and enhances integration and transferability because knowledge, skills, and abilities are well grasped. Thus, a study as such will give policymakers reasons why pedagogical practices should be encouraged and implemented in schools.

# **The Curriculum and Evaluation Process**

It will enable those in charge of programme evaluation to try to judge the success and failure of programmes in order to take a step. With regard to the benefits that can be attained from the implementation and practice of the qualities of cooperative learning, they would be able to judge which curriculum or programme is best to be implemented with respect to the needs of society. This study equally provides the different practices, measures, and criteria that

can serve as the base of verification for those that are implemented as such, giving ideas on different elements that can serve as the base of assessment and evaluation when programme or curriculum evaluation is concerned.

# The school administrators

They are concerned with the general management of the school, and as such, they are concerned with the follow-up of the teachers. On their part, they can easily organise pedagogic days and in-service training to educate the classroom teacher and clarify them in situations where they do not have a clear understanding of what needs to be done. They are the ones to encourage their collaborators to make use of the different qualities that go with cooperative learning, coupled with the different techniques, teaching methods, processes, and principles, so as to enhance academic quality through classroom assessment.

# The students and teachers

They are at the centre of the curriculum and evaluation process, and the performance of learners affects their current and future lives (Kelly et al. 2013). They are the future leaders of tomorrow; hence, they should not be left out, as they deserve the best. An understanding of how cooperative learning works will enable them to work and carry out tasks efficiently, thus enhancing their performances. A study like this gives them an understanding of what is expected of them if they succeed as far as cooperative learning is concerned.

### **1.8.0. SCOPE OF THE STUDY**

The scope of this study presents the thematic delimitation, geographical delimitations, temporal delimitation, and spatial delimitation of the research work " evaluation of the quality of cooperative learning and its impact on classroom assessment".

# **Thematic delimitations**

The delimitation of this study involves the evaluation of the quality of cooperative learning from the perspective of its academic quality, pedagogic quality, classroom management quality, and didactic quality, as well as its impact on classroom assessment in terms of relevance of knowledge constructed, mastery of content, and learners' performances in terms of output, skills, and competence. It falls under the fields of curriculum evaluation and specialty quality evaluation.

#### **Geographical delimitations**

This research is carried out in six (06) regions of the Republic of Cameroon, that is, five regional headquarters where we have government bilingual teacher training colleges: Garoua, Ngaoundere, Bertoua, Yaounde, and Bamenda, and one subdivisional headquarters: Edea. GBTTC Garoua is situated in the Garoua 2 subdivision, some two hundred metres (200m) from the Roumde Adjia Stadium. GBTTC Ngaoundere is located in the Vina division of Ngaoundere 1 subdivision around the Champ de Prier neighbourhood, in a quarter known as Baladji 2.

Equally, GBTTC Bertoua is found in Bertoua 2 subdivision in the Lom and Djerem Division. It shares its neighbourhood with Bertoua Central Prison, the Presidential Lodge, and the governor's residence. GBTTC Yaounde is located in the northwest from the governor's, divisional, and sub-divisional officer's offices in the Nlongkak neighbourhood (camp SIC). GBTTC Edea is located in Sanaga Maritime Division, Edea 1 subdivision in Mbondadick quarter, around the road that goes to Kribi, commonly referred to as "Carrefour Kribbi". GBTTC Bamenda is located in the Bamenda 3 subdivision of Mezame Division of the North West Region and is located on the top of a hill where you can easily have a view of the town.

### **Temporal delimitation**

The study was carried out during the 2018–2019 and early 2019–2020 academic years.

# **Spatial delimitation**

A sample of 411 students from government bilingual teacher training colleges was used. That is 68 for GBTTC Garoua, 52 for GBTTC Ngaoundere, 64 for GBTTC Bertoua, 75 for GBTTC Yaounde, 80 for GBTTC Edea, and 80 for GBTTC Bamenda. The sample chosen was restricted to student teachers in the short-listed teacher training colleges and only to those who could express themselves in the two national languages of Cameroon—English and French.

# **1.9.0. DEFINITION OF KEY CONCEPTS**

# Evaluation

According to Scriven (1991), evaluation is defined as the process of determining the value, worth, and merit of things. Evaluation consists of the products of a process. Thus, evaluation is not only the accumulation and summarization of data that are relevant for decision-making but also the drawing of conclusions about the merits or benefits. Evaluation consists of two major components: collecting and analysing data for decision-making, and drawing conclusions about the merits or benefits of something.

### **Quality in Education**

Quality education is that which inculcates in learners the ability to master and integrate knowledge, skills, and abilities. Quality education has the ability to enhance lifelong learning, which is seen as the "development of human potentials through a continuously supportive process that stimulates and empowers individuals to acquire all the knowledge, skills, and understanding required throughout their lives and apply them with confidence, creativity, and enjoyment in all roles, circumstances, and environments" (Longworth et al., p. 22).

#### **Programme Evaluation**

According to Cook (2010); Durning et al. (2010), educational programme evaluation consists of making value judgements based on available information. This available information facilitates decision-making on the value or worth of the educational programme under study. Ellington et al. (1988) define programmeme evaluation as the collection, analysis, and interpretation of information about any aspect of a programmeme of education or training so as to judge its effectiveness, efficiency, and any other outcome it might have.

### **Cooperative learning:**

Johnson et al. (1999) explain cooperative learning as an instruction that involves students working in teams to accomplish a common goal. Elements of cooperative learning are:

1. **Positive interdependence:** group members rely on each other for the accomplishment of group goals. Everyone suffers the consequences if team members fail to do their part.

- 2. **Individual accountability**: members are held accountable for doing their own part of the work as well as mastering all the materials to be learned;
- 3. **Face-to-face interaction:** some work may be done individually, but some must be done interactively so that group members should provide feedback, challenge reasoning, and draw conclusions; teach and encourage one another;
- 4. **Appropriate use of collaborative skills**: group members are encouraged to help each other develop leadership, decision-making, communication, and conflict management skills;
- 5. **Group processing**: Team members set group goals, periodically assess what they are doing well as a team, and identify changes they will make to function more effectively in the future.

# Assessment

According to Hanna et al. (2004) assessment simply refers to the process of gathering information or gathering data by the instructor on his teaching as well as on learners learning. This information can be collected through varied activities such as examinations, observation tests, and pre-tests. Data collected by the instructor is used in evaluating his teaching as well as the learners' performances.

### **Diagnostic assessment**

According to Hanna et al. (2004), this assessment deals with the instructor identifying learners' current knowledge and previous knowledge, skills and abilities, strengths, and weaknesses on a given subject so as to better plan teaching.

### **Formative assessment**

Hanna et al. (2004) argue that formative assessment provides students' feedback while learning is occurring. It is important to note that this assessment does not only give feedback to students while learning is taking place, but it also measures the teacher's progress. The main aim of formative assessment is to identify areas of weakness so as to improve on them. Formative assessment is not graded; rather, it is used to determine the progress of teaching and learning so as to ameliorate where needed.

### **Summative Assessment**

Hanna et al. (2004) see summative assessment as the type that comes at the end when learning must have taken place. That is when learning is completed and feedback is summed up and ameliorated. To them, formal learning does not take place here, but learners can learn accidentally in the course of carrying out an assignment, such as project completion. This assessment comes at the end of a semester or course to assess what has been learned. Here, grades are allocated to either enable learners to go to the next class or show an acceptable level of knowledge gain. This assessment type is mostly product-oriented and assesses the final product of the teaching and learning process. This assessment type can take the following forms: final examinations, term papers, projects, portfolios, performances, and teacher selfevaluation.

### **Academic Quality**

According to Coombs (1985); Ulf (2004), academic quality or quality in education simply refers to how well the knowledge imparted to learners fits the present and future needs of the learners. Coombs looks at the relevance of that which is taught and learned as far as academic quality is mentioned. Thus, for a working definition, academic quality is looking at how well learners have mastered what they have learned and how relevant that is to their dayto-day lives. Knowledge and skills impacted to learners should foster comprehension and mastery so to enhance transferability and integration in their respective communities.

# **Pedagogical Quality**

According to Farquhar (2003), pedagogic quality (quality teaching) is defined as pedagogical practices that facilitate diverse children's access to knowledge, activities, and opportunities to advance their skills in ways that build on previous learning, assist in learning how to learn, and provide a strong foundation for further learning in relation to the goals of the early childhood curriculum.

### **Classroom management quality**

According to Emmer et al. (2001), classroom management deals with the ability of the teacher to organise and manage learners' behaviours, which will enable them to achieve positive educational outcomes. Classroom management establishes a good environment that

makes the teaching and learning process effective and possible. According to Ogu (2000), classroom management consists of planning, supervising, controlling, and coordinating learners' activities during lessons.

### **Didactics Quality**

According to Gundem et al. (1998), didactics is derived from the Greek word "didaskein," which implies to teach or to educate. Didactics consist of the teaching content, the learning environment, the classroom, and the main activities of the learners. Hence, didactics deals with the ability to teach.

### **Classroom Assessment**

Angelo et al. (1993) define classroom assessment as a technique in which ungraded activities are carried out in a classroom setting. Such activities are carried out in order to give the teacher feedback on the learners' understanding of course materials and ameliorate where needed before moving on to the end of the programme, test, or course material.

### The relevance of knowledge constructed

Ambrose et al. (2010) see the relevance of knowledge construction as a way of helping students develop and learn pathways to becoming expert learners whose conceptual frameworks are deeply interconnected, transferable, rooted in a solid memory and skills foundation, and easily retrieved.

### Learners' performances

Collabero et al. (2007) define academic performance as the achievement of the stated goals and objectives of the official programme or course by students. The reason why grades are assigned is that they can either be passed or failed through assessment.

### Output

Schreyer (2009); Fraumeni et al. (2008) see output as an educational concept that defines the level of acquisition of knowledge, skills, and competence of the learners. Educational output tries to measure the effectiveness of a programme or activity to see if objectives were achieved. Output shows the performance of an educational system with respect

to knowledge of the subject, progression and completion rates, competences, and also the satisfaction of employers.

## Skills

According to the Further and Education Unit (1982) it is a wide concept that includes the ability for one to perform specific manipulative occupational tasks that consist of reading, measuring, writing, speaking, listening, calculating, coordinating problem solving, coping with interpersonal relationships, computer literacy, and learning.

#### Competence

According to Hartel et al. (2004) a statement describes the knowledge, skills, and behaviour of students acquired after completing a course. It is the applied skills and knowledge that enable people to successfully perform in educational, professional, and life contexts.

# 1.10.0. CONCLUSION

This chapter has presented the historical, conceptual, and contextual backgrounds of the problem under investigation. In the historical background section, it presented the historical evolution of evaluation, cooperative learning, and assessment. On the other hand, the conceptual background section provided a brief insight into the concepts of the quality of cooperative learning, such as academic quality, pedagogical quality, classroom management quality, didactic quality, and assessment. The contextual background section has focused on the historical evolution of programme evaluation in Cameroon and the evolution of teacher training colleges in Cameroon.

This chapter has equally examined the problem of the study and the purpose of the study through general and specific objectives. The research questions were also presented in this chapter in the form of general research and specific research questions. The general hypothesis and research hypotheses were equally stated. This chapter has examined the significance of the study, the scope of the study, and the definition of key concepts of the study.

## **CHAPTER TWO**

# LITERATURE REVIEW

## **2.0. INTRODUCTION**

This chapter presents, examines, and discusses the writings and views of various authors and publications with respect to cooperative learning and classroom assessment. Evaluation is examined from the perspectives of programme evaluation, types, purposes, and approacj07k8kl8i8mjuiyuuyu7yhes; cooperative learning is examined from the perspectives of its influences and challenges in its implementation; and assessment is examined from the perspectives of the different types and purposes. These concepts are considered preliminary because they give an understanding of the concept and work to be discussed in the proceeding sections. Also, the quality of cooperative learning is examined from the perspectives of academic quality, pedagogic quality, didactic quality, and classroom assessment. Furthermore, empirical works are presented and discussed. Theories used in the work include the CIPP (context, input, process, and product) evaluation model, Kirkpatrick's four-level evaluation model, social constructivism by Vygotsky, social independence theory by Lewins, and social learning theory by Albert Bandura based on the variables of this work. This chapter is subdivided into a review of preliminary concepts, a conceptual review, empirical frame work, theoretical frame work, and variables of the study.

# 2.1.0. REVIEW OF PRELIMINARY CONCEPTS

This section presents, examines, and discusses the writings and views of diverse authors and publications with respect to cooperative learning and classroom assessment. Evaluation is examined from the perspectives of programme evaluation, types, purposes, and approaches, while cooperative learning is examined from the perspectives of its influences and challenges in its implementation. Finally, assessment is examined from the perspective of the different types and purposes. These concepts are considered preliminary because they give an understanding of the concept and work to be discussed in subsequent chapters.

## 2.1.1.0. EVALUATION

It is difficult to trace the historical background as well as the evolution of evaluation because of the informal utilisation of evaluation. This explains why Scriven (1996) says

evaluation is a very old practice and has gained maturity for the past 20 years, even though it springs forth now like a new discipline. According to Corner et al. (1984), evaluation is presently at its late adolescent age and moving towards adulthood, judging from the fact that it is established as a discipline. In order to better understand the evolution of evaluation, Madaus et al. (2000) have brought out seven developmental phases or periods of the evolution of evaluation.

The first period is **the Age of Reform** and runs from 1900–1972. This period marks the beginning of formal evaluation. In 1792, William Farish used quantitative marks to assess a learner's performance (Hoskin, 1968). The use of quantitative marks is of two great importance: firstly, it enables one to objectively rank learners based on their averages and aggregate scores because the marks are quantitatively allocated, and secondly, it has historical importance, which has favourable conditions for programme evaluation. This era also saw the reformation of British education through evaluation. This could be seen through the Powis Commission, which recommended that teachers' salaries should be based on learners' performance in certain disciplines like spelling, writing, and arithmetic since it was difficult to have an annual evaluation of learners' attainment, according to Madus and Kellaghan. It was only in 1815 that the earliest method of evaluation occurred in the United States. Formal evaluation started when the Army developed a policy on "uniformity of manufacturer's ordinance" (Smith, 1987, p. 42). Through this policy, they were able to set standards for production techniques, inspection, and product specifications for all suppliers of arms to the military.

Moreover, printed tests in different disciplines were used to assess Boston and Massachusetts learners in 1945, which marked the first time formal evaluation was used in the United States. This was of historical importance, for it sprang off the tradition of using learner scores as the main means of evaluating the effectiveness of a school or instructional programme (Stufflebeam et al., 2002). The years 1887–1898 saw the coming of an educational reformer, Joseph Rice, who carried out a comparative study across many schools in his district. To him, U.S. learners were not learning to spell; through his study, he was able to establish that there is no relationship between the time devoted to spelling and competence. His findings are found in an article titled "The Futility of the Spelling Grind" (Colwell, 1998). Rice's evaluation was seen as the first formal evaluation programme in America, according to Stufflebean et al. (2000).

The second developmental period of evaluation is known as **the Age of Efficiency and Testing ''(1900–1930).** The work of Fredrick W. Taylor was eminent during this period. According to Russell et al. (1998), Fredrick worked on scientific management, which was more concerned with observation, measurement, analysis, and efficiency, which was the most important of all. Departments were put in place to develop tests that could be used to improve efficiency, and objective tests were used to measure the quality of teaching. During this period, educators could not differentiate between measurement and evaluation; they saw evaluation as summarising students' performance in a test as well as assigning grades (Worthen et al., 1997).

The Tylerian Age (1930–1945) was the third developmental period of evaluation. This era saw great contributions from Ralph Tayer. From 1932–1940, Tyler was in charge of an eight-year study that had as its objective to assess fifteen progressive high schools and fifteen traditional high schools on the outcomes of their programs. As findings, objectives should be clearly stated in behavioural terms; objectives serve as the basis for effective evaluation of instruction. To him, objectives were sufficient to evaluate internal comparisons between the experimental and control groups, as postulated by Rice in his comparative study. The fourth developmental period of evaluation was called the Age of Innocence (1946-1957). This period came just as America came out of the First World War and was experiencing the Great Depression. During this period of the Great Depression, there was rapid growth in the upgrading and expansion of educational offerings. During this period, no accountability was given as to how educational funds were spent, which explains why this era was termed the Age of Innocence. Tyler's educational views were adopted during this period, as well as Blooms, Englehart, Furst, Hill, and Krathwal's taxonomies. These taxonomies reflect their educational objectives. We were equally made to understand that objectives could be stated depending on desired behaviour since these taxonomies were arranged in hierarchical order to show the relationship among different outcomes (Reiser, 2001).

The fifth developmental period of evaluation was known as **the Age of Development** "(1958–1972). This period came up during the period when Russia was going through a national crisis in 1957. Due to this crisis, legislation was passed to improve some domains that were considered important. The National Defence Education Act was enacted by Congress in 1958 (NDEA), and this led to about millions of dollars being allocated to the educational field for the development of a new curriculum; new programmes for mathematics, sciences, and

foreign languages emerged (Stufflebean, Madus, and Kellagan 2000). Evaluation was funded so as to assess and measure the outcome of the new curriculum.

The sixth developmental period was referred to as **the Age of Professionalisation''** (1973–1983). Evaluation was seen during this period as a profession, judging from the fact that it was seen in a number of journals, including Educational Evaluation and Policy Analysis and Evaluation and Programme Planning (Stufflebean et al., 2000). Moreover, universities could now offer programmes in evaluation methodology. Among such universities were Stanford University, Boston College, and Western Michigan University, just to name a few. The seventh developmental period was called **the Age of Expansion and Integration (1983–present day)**. There was a struggle in evaluation under the Reagan administration in the early 1980s because of the cutback in funding meant for education. New social initiatives equally experienced a cut in their funding, according to Weiss (1998). A professional association was developed along with evaluation standards. The criteria for standard education evaluation were developed by the Joint Committee.

History equally holds that measurement and evaluation played a very important role in human history. Although measurement and testing movements are lost in antiquity, for better understanding, the history of measurement and evaluation will be discussed in a chronological pattern. The first period was seen as the **testing procedure.** This period did not have concrete records due to the fact that it was an ancient one. The earliest records of using testing devices could be traced as far back as the Bible, in relation to biblical books like Judges. This first period also saw the advent of oral questions, which could be traced as far back as the beginning of human language. Socrates, 400 years before Christ, came up with an oral achievement test, which he primarily used as the basis to clarify and strengthen knowledge and understanding (Micheels and Kames, 1950). This period also saw the Chinese use tests in selecting civil servants (Stanley and Hopkins, 1978).

The second period was termed the testing **movement before the 20th century**. This period saw the advent of written examinations in America in 1845. The written exams consisted of many questions, and there was also the desirability of standardisation (Micheels and Kamen, 1950). The disadvantages of oral questions were brought out in relation to the cornerstones of modern theory, which are validity, reliability, and usability (Stanley and Hopkins, 1978). Boston School also started issuing written evaluations when Mann came up with his

suggestions. Also, Regents exams were equally carried out in New York State from 1865 to 1878 (Micheels and Karnes, 1950).

This period saw Rev. George Fisher, an enterprising schoolmaster from England, He proposed that an objective and standardised measurement of academic achievement be used. He came out with the book "Scale Book," where numbers were assigned to each proficiency grade of the different subjects of written exams (Stanley and Hopkin, 1978). Great contributions also came from Joseph Rice, a young American physician who, in his aim to make education scientific, secured test results on 15000 children under his control and 16000 through mail correspondence because he wanted quality education and was credited as the "real inventor of comparative tests" (Stanley and Hopkins, 1978).

The third period was known as the **Testing Movement during the Twentieth Century**. The approach to evaluation in relation to measurement was minimal before 1900. But it became a comprehensive programme during the twentieth century. This period is classified into five decades, where the trend of measurement and evaluation is traced (Wrightsone, Justman, and Robbin, 1964). The first decade under this third period runs from 1900 to 1910 and was termed the *Rise of Testing*. The period that runs from 1897 to 1906 was a period of incubation (Wrightsone, Justman, and Robbin, 1964). During this period, Rice was not only interested in measuring spelling but also in evaluating the strengths and weaknesses of educational practice. The first college course in education measurement was offered at Columbia University in 1902, and the instructor of this course was Dr. E. L. Thorndike (Micheels and Karnes, 1950).

The above period saw C.W. Stone, who was greatly inspired by Rice even though he was a student of Dr. E. L. Thorndike. He came up with two tests in mathematics where he showed the relationship between distinctive procedures in arithmetical work and their resulting abilities. These two tests relied, respectively, on fundamental operations on the one hand and reasoning in mathematics on the other. Although the test was not standardised, it made use of scientific methods during construction, such as the weight and level of difficulty of each question. His unique contributions were published in a 1908 thesis on "Arithmetical Abilities" and some factors determining them. A courtist series of arithmetical tests was also constructed during this period.

He worked with C. W. Stone in determining the test, and C. W. Stone found out that the test was not very useful because he was more interested in measuring, establishing norms, and measuring the learner's growth in arithmetic. S. A courtist test was standardised because it was carefully constructed, the instructions for administration were clear, norms were established, and scoring was objective. Binet-Simon scale 1905 and Binet-Simon scale 1908 also came up during this period. These scales were constructed to meet the needs of subnormal children. These scales have been of great importance and have contributed to the theory and practice of testing procedures, which is why Freeman (1968) and H.H. Goddard published a translation of Binet's 1905 Scale in 1908.

The second decade was that of the development *of testing* (1910–1920). Through the works of Thorndike and his student Monroe in 1945, we had the first publication of the standardised scale and achievement test, as well as objectivity in testing educational achievement. This period marked the "beginning of the wide spread use of objective tests in schools" (Stanley and Hopkins, 1978, p. 163). In 1910, the Thorndike scale for handwriting appeared. This scale presented samples of handwriting in order of merit on charts. Judged by experts, each sample on this scale was assigned a numerical value or score. According to Wrighstone, Jusman, and Robbins (1964), this sample was the first scientifically constructed test or measurement of educational achievement accepted by both the public and educators. The Ayres handwriting scale, which consisted of handwriting samples arranged in an increasingly legible order, also came up during this period, even though the scores for samples were not as rigorous as those of the Thorndike scale.

Ayres equally came up with the spelling test, which focused on determining educational objectives as a prerequisite to test construction. In 1912, the Hillegas composition scale was published. In 1913, a student of Thorndike, B.R. Buckengham, published a spelling scale that was of great historical significance. Buckengham was more concerned with the fact that the abilities of pupils should be measured in terms of the level of difficulty that could be reached on the scale. This level of difficulty was later used by Woody in constructing an arithmetic scale, and this arithmetic scale was used by Trabue in constructing language scales that were both published in 1916.

A translation of Binet's 1905 scale was published by H.H. Goddard in 1911. Yerkes also published, in 1915 and 1923, a revision of Binet's scale. It was in this decade that the idea of the "intelligence quotient" of William Sterm came up. This decade saw substantial development of printed, objectively scored, and standardised instruments for achievement

testing in many subject areas, even though the development was slow. Thorndike was awarded the title "Father of the Educational Testing Movement." According to Stanley and Hopkins (1978), he was called the father of the educational testing movement because of his unique and distinguished contributions.

The third decade was referred to as the *Extension of Standardised Testing* "(1920–1930). This era saw the rapid expansion of measurement in education. Measurement moved from adolescence to maturity. There was a tremendous increase in the number of tests developed, standardised, and published (Stanley and Hopkins, 1978). During the First World War, in order to examine the hundreds and thousands of men, an easy and convenient procedure was needed under the leadership of Dr. Arthur S. Otis, whose work was

responsible for the Army Alpha procedure and the Army Beta Test. A personal data sheet, which was a personal test devised by R.S. Woodworth, was developed (Noll, 1965).

Constructing a test for the armed forces of the First World War brought about tremendous development and the use of tests in schools. According to Wrighstone, Justman, and Robins (1964), more than one thousand standardised tests were constructed in all of the traditional subject areas like mathematics, language, and science, as well as in areas of commerce, engineering, aeronautics, and health (Stanley and Hopkins, 1978). This period was also marked by the G.M. Ruch survey test in 1920, which was very important for high schools. Even though many educational surveys were constructed, they had as points of interest school plans, administrative organisation, and staff qualifications. But all of these made use of intelligence and achievement in measuring the amount of retardation, the efficiency of curriculum methods, and comparative achievement.

The fourth decade was *The Rise of Evaluation* (1930- 1940). This decade saw a great increase in the use and precision of measurement instruments during the Second World War. There was great improvement in the understanding and use of measurement techniques thanks to the National Council on Measurement in Education in 1940. This council equally brought about the launch of many programmes of evaluation in elementary school and evaluation programmes for education. This era was also marked by an increase in the use of factor analysis statistical techniques based on intercorrelations between presumably related tests. The Spearman Theory of "a factor" of general intelligence and some "specific factors" tests equally marked this period, as did tests like the Chicago Test of Primary Mental Abilities by L.L.

Thurstone and T.G. Thurstone. Noll (1965) says the above brought about development and the use of factor analysis in mental health, and many people accepted the use of tests in schools during this decade.

The fifth decade was referred to as *Recent Trends in Evaluation*. During this period, much of the research was directed towards coming up with possibilities for refining and extending existing methods and applying statistical techniques to current instruments. There was an increase in the development and use of standardised tests, as could be seen in their use in education, business, industries, the civil service, and the armed forces. Equally, there was the development of Bloom's Taxonomy of Educational Objectives and that of Engelhart, Furst, Hill, and Krathwol in 1956. These taxonomies have had a great impact on the quality of educational measures. These taxonomies were introduced to teachers so as to enable them to effectively measure higher mental processes. This era saw the development of Spearman Two Factor Theory Intelligence in 1904 and the Chicago Test of Primary Mental Abilities in 1944, which gave room for factor analysis and brought refinement to existing tests as well as the development of new ones (Kerlinger 1995). Some of the methods of factor analysis consisted of image, principal factor, and diagonal maximum likelihood. Equally, there was the development of tests for gifted and retarded learners during this period (Pegnato and Birch 1959; Erickson 1958).

The last period was called the **Evaluation and Testing Scenario in India**. This period saw significant development in evaluation and testing in India during the second quarter of the Second World War. Research was focused more on the standardisation of achievement tests. Many innovations in educational evaluation also took place during this period. This period saw many research agencies, like the examination and evaluation unit of NCERT, state evaluation units, and the SSC examination board. Right up to the early 1960's, there were 52 intelligence tests according to Mitra (1961), Krishan (1961), Harper (1960), and Jalota (1965), even though it was difficult to give an account of the work done in India in educational and psychological measurement." *Menzel, E.W., wrote the first book on tests and measurements in India in 1956, and perhaps Rice was the first person to attempt a standardisation of the Binet-Simon tests in India (Adaval, ed., 1968). After Rice, Kamat adapted in the 1930s the 1917 Stanford revision of Binet's tests in Marathi and Kannada. Shukia, in the forties, translated Kamat's version into Gujarati. Mahalanobis and G.C. Chatterji had developed separate intelligence tests in* 

Bengali. Better group tests of intelligence were developed by Sohan Lai, Jalota, and Mohsin in Hindi and by Desai in Gujarati. Harper and Mitra had constructed an aptitude test".

There was keen interest in public exams during this period, which showed that interest was not only in the standardisation and development of tests in school subjects. In studies on the comparison of internal assessment scores and external examination marks by authors like Sidhu, I.K. (1961), and Cupta, K.C. (1962), they were equally concerned with reforming different types of evaluation questions in India. Essays on the comparison of essay type and objective test were equally not left out. All in all, most of the research work done in India on education during the post-Independence period was heavily focused on examinations and achievement testing, and there was an intensification of research work by new research agencies.

The concept of evaluation is not an easy concept to define due to its varying meanings to the different actors who are concerned with it. Amongst the different actors, we have policymakers, professionals, and specialists; we equally have managers and administrators, as well as the citizens who are affected by policies in evaluation. Hence, for the above actors, evaluation has been defined differently. Gitlin et al. (1989) say the concept of evaluation stems from a Latin word that means 'to strengthen.' To them, evaluation has taken a numerical form, which gives it the ability to measure. Implying that evaluation is the measurement of things, evaluation can turn out to be an end rather than a mean.

The different actors, who are concerned with evaluation, had the following preoccupations: policymakers see evaluation as a tool that can render accountability and thus justify the decision for a policy. To the citizens, evaluation is seen as a democratic instrument that gives room for accountability so as to shape public intervention according to their needs. For administrators and management, evaluation serves as a tool to measure the delivery of programmes as well as policies. Finally, for professionals, evaluation is a tool that helps improve work quality. With the diverse actors and diverse points of view towards the concept evaluation, various definitions have been put forward. According to Stufflebean (2000); Gitlin et al., (1989) evaluation is a study designed to assess the worth, merit, and value of something or an object.

Moreover, Vedung (1997); Gitlin et al. (1989) define evaluation as assessing the merits, worth, and values of administration. He equally sees evaluation as an outcome or output of

government intervention, which serves as a means of solving future practical situations. Scriven (1991), in Gitlin et al. (1989) says evaluation entails the process of examining the values, worth, and merits of something. When we talk of evaluation, we are talking about the product of a process. Evaluation does not end at summarising data for decision-making; it goes as far as getting a conclusion on the merits and benefits. To him, evaluation has two arms: the first deals with the gathering of information and data, and the second deals with the verification of the standard of values and their relevance. To Tyler (1950), evaluation is the process of determining the extent to which educational goals are actually attained.

From the above definitions, one can say the concept evaluation touches on three elements or components (Ramsden, 2009). The components are:

- Who is carrying out the evaluation?
- What is the purpose of evaluating? And
- For whom is evaluation done?

## Some purposes of evaluation

According to Patton (1987), one of the purposes of carrying out evaluation is to improve programme design and implementation. It is important to periodically assess and adapt activities so as to ensure they are effective. Through evaluation, one can be able to identify those areas that need improvement and ultimately enhance the effective achievement of goals. More importantly, evaluations purpose is to demonstrate the impact of the programme. That is, evaluation enables one to demonstrate a programme's success or progress. Information collected always has a way of enabling one to better communicate a programme's impact to others, which is necessary for public relations and attracting and retaining support from potential and, why not, current funders (Patton, 1987).

According to Oguniyi (1984), evaluation is carried out in education for the following purposes: To provide adequate information on teachers' effectiveness and school needs to educational administrators, to predict the general trend in the development of the teaching and learning process, to determine how effective their teaching materials and techniques are, learners who discover their progress or lack of progress in activities are motivated to learn more, feeds parents as well as guardians of the learner's progress and performances, it enables educational stakeholders to make reliable decisions about educational planning and

determining the relative effectiveness of a programme in relation to students' behavioural output; measurement and evaluation in education.

#### **Programme Evaluation**

Stufflebean (1968) has defined programme evaluation from two perspectives so as to give a wide base for the understanding of the word. Firstly, programme evaluation means providing information through formal means like criteria, measurement, and statistics, which serve as the basis for making decisions and passing judgements. In his definition, decision simply refers to choosing amongst alternatives, and in relation to judgement, he is talking about giving value to the chosen alternative. Looking at the criteria in his definition of programme evaluation, he is simply referring to the rules through which values are assigned to alternatives. These rules could be the specification of variables for measurement and standards used in judging that which is measured; to him, evaluation as a science provides data that are used for decision-making.

In his second perspective, programme evaluation is a systematic process of judging the effectiveness, adequacy, worth, and even desirability of something based on defined criteria and purpose. Judgement in the second definition deals with comparing the observation in relation to the criteria and standards. When talking about valid evaluation, one is looking at clearly stated purposes, specific standard criteria traits, precise definitions, accurate observations and measurements, as well as logical conclusions. From these two perspectives, it is clear that the essential idea of programme evaluation is that of purpose; that is, programme evaluation should have a purpose because evaluation is not carried out for its own sake. It is carried out to either contribute to the present or future programmes.

Thus, programme evaluation enhances decisions about the programme and what can be done in the future concerning the programme. Evaluation should be able to answer questions on the appropriateness of the methods, approaches, and content of a programme so as to improve it. Evaluation should serve as an input in the programme and not as an end to be obtained in that process. The second essential aspect of program evaluation, drawn from the two definitions, is that evaluation consists of three very important elements: criteria, evidence, and judgement. There should be a criteria that will serve as the basis on which the programme is judged; with regards to evidence, it examines the level or extent to which the programme meets the stated criteria, and judgement here deals with the extent to which the stated criteria were attained. me

Programme evaluation is the systematic application of scientific methods to assess, implement, and improve the outcome of a programme. Programme here may refer to organised actions like media campaigns, educational services, research projects, service provisions, and whpronotions and policies (Rossi et al., 1993; Short et al., 1996). According to Cook (2010); Durning et al. (2010), educational programme evaluation consists of making value judgements based on the available information. This available information gives room to make a decision on the value or worth of the educational programme under study.

In a nutshell, educational programme evaluation refers to the systematic collection of data or information and the analysis of the said data or information in relation to the design, implementation, and outcome of the programme in order to monitor and improve the effectiveness and quality of the This simply means programme evaluation consists of deliberately collecting systematic information on a programme so as to determine what contributed to its success and also to know what actions need to be taken to address the evaluation findings.

# 2.1.2. Cooperative Learning

History holds that prior to World War II, Allport et al. (1932) established cooperative learning when they discovered that learners output was more efficient and effective in terms of quantity and quality when they worked in groups as compared to the overall productivity of those who worked individually. It was not until 1937 that May and Doob found out that those who work together to achieve shared goals are more successful in the outcome than those who work individually or strive independently (May et al., 1937). Psychologists and sociologists such as Deutsch and Lewins equally made contributions towards cooperative learning. Deutsch's contribution to cooperative learning was that of positive social interdependence—the idea that the student is responsible for contributing to group knowledge (Deutsch, 1962).

Since then, David et al. (1975) have been actively contributing to cooperative learning theory. To them, cooperative learning promotes mutual skills, better communication, high acceptance and support, as well as an increase in a variety of thinking strategies amongst individuals in the group, while students who are competitive lack interaction and trust with

others. Lewin's contributions to cooperative learning were based on the idea of establishing good relationships between group members so as to successfully carry out the assigned task and achieve learning goals (Lewin, 1945).

Moreover, the strategy of cooperative learning, according to Coleman (1959) came in as a solution to reduce competition, which to him has a negative component on the educational system among schools in America. Coleman also developed what he termed a "climate of values" for "adolescent society" after studying nine Midwest high school students for two years. From his findings, he noticed that competition negatively affects the process of education; hence, he encouraged the introduction of more collaborative methods of teaching. Still based on Coleman's findings, Slavin (1994) examined a type of cooperative learning that he described as student-team learning. Cooperative learning is an instructional programme in which students work in small groups in order to help each other master academic content. In the same light, he suggested that cooperative learning has the potential to capitalise on "the developmental characteristics of adolescents in order to harness their peer orientation, enthusiasm, activity, and craving for independence within a safe structure". According to Slavin (1994), even though there are many methods of implementing cooperative learning techniques in different subject areas as well as at different grade levels, the fundamental aspect is that learners work together and are responsible for each other's learning.

In addition to the above, Montagu (1965) says that in the mid-1960s, cooperative learning was not widely known and was greatly ignored by educators. What was commonly used in elementary, secondary, and university settings was competitive and individualistic learning. Cultural resistance to cooperative learning was based on social Darwinism, with its premise that students must be taught to survive in a "dog-eat-dog" world, and the myth of "rugged individualism" underlying the use of individualistic learning. Thus, competition dominated education and was challenged by B.F. Skinner's work on individualist learning, programmed learning, and behaviour modification. But with the changes in educational thoughts and practices, cooperative learning is gaining acceptance and being preferred as an instructional procedure at all levels of education, in every subject area, and in every age group.

Cooperative learning is a teaching method that fosters learners' engagement in the teaching and learning process. Talking about engagement, Anyi (2019) says engagement is a term with inconsistent meaning based on the various definitions put forward by different authors. Notwithstanding, some definitions contrast the positive outcome of engagement with the negative results of disengagement, as seen in Ogbu (2009); Anyi (2019). To the above author, most of the definitions concerning student engagement have to do with the exhibition of positive conduct, efforts, and participation according to (Mark, 200; Williams, 2003) in Anyi (2019). Implying that cooperative learning is a kind of teaching method that enhances learners' engagement as the learners work to accomplish group goals, through interaction, positive conduct is encouraged, every learner participates in the success of the assigned task, and efforts are being made towards the successful accomplishment of the assigned task by all the learners. Hence, influencing the classroom assessment of learners

Gilles (2003) says the basic elements of cooperative learning do not end with learners sitting side by side on the same bench and carrying out their individual task; neither does it mean that learners are put in the same room and asked to sit side by side and told they are in a cooperative group, hence they need to cooperate (Johnson et al., 1998). It is only when group members can coordinate activities in a manner that other group members' learning is facilitated (Ballantine et al., 2007). For learners to be engaged in cooperative learning, the following five elements should be present: positive interdependence, face-to-face interaction, individual accountability, interpersonal and social skills and group processing. (Johnson and Johnson, 2008).

According to Yamark (2007) for cooperative activities to be effective, members must be assigned specific tasks, and all members must take individual accountability for their group members' achievements. Cooperative learning exists in three forms: Formal cooperative learning is the first form; according to Johnson et al. (2008), it consists of learners working in groups or together for a period of one class period to several weeks to achieve shared learning goals as well as complete jointly specific tasks and assignments. The teacher performs the following role in formal cooperative learning:

• Making pre-instructional decisions: he formulates the objectives, which could be either academic or social skills; he decides on the size of the group; he chooses a method for assigning learners to particular groups, which establishes role independence. He equally arranges the classroom or working environment as well as the didactic materials that learners need to accomplish tasks, thus establishing environmental and resource interdependence. As such, the teacher easily observes each group, leading to an increase in individual accountability and equally providing data for group processing.

- Explaining instructional tasks and cooperative structure: the teacher plays the role of explaining the academic assignment to learners; he explains the criteria for success; he structures positive interdependence; he structures individual accountability; he explains behaviours to be used by the learner; and he emphasises intergroup cooperation. Hence, by eliminating competition amongst the learners and giving room to positive goal interdependence for the class as a whole,
- Monitoring students' learning and intervening to provide assistance: to successfully complete the assigned task, the teacher monitors each learning group and intervenes when needed to improve task work and teamwork through monitoring individual accountability. Monitoring groups by the teacher makes the members feel accountable and constructive and provides the teacher with specific data on interaction.
- Assessing students' learning and helping students' process how well their group functioned could be done by the teacher bringing closure to the lesson, assessing and evaluating the quality and quantity of learners' achievement, and ensuring students discuss the effectiveness of their learning group or how they worked together. Have students make a plan for improvement and celebrate the hard work of group members. The feedback given during group processing is aimed at improving learners' use of social skills as well as bringing about individual accountability.

Equally, there is informal cooperative learning, which, according to Johnson et al., (2008), consists of making learners work together to achieve a joint learning goal in temporary ad-hoc groups that last from a few minutes to one class period. This instructional method is used during lessons like lectures, demonstrations, or films so as to capture learners' attention. The teacher has to set a conducive learning mood, set expectations for what will be covered in a class session, rehearse the material being taught, summarise all that was learned, and provide closure to the instructional session. To keep learners focused on informal cooperative learning, focused discussion before and after the lesson should be carried out. Two important aspects of using informal cooperative learning groups consist of making the task and instructions explicit and precise and producing a specific product (such as a written answer). To achieve these two important aspects, the teacher uses the following procedures:

1) **Introductory-focused discussion: the** teacher assigns students to pairs and explains to them what it takes to answer questions in a 4-5 minute time period and the positive goal interdependence of reaching consensus. Discussions here enable the learners to organise what

they already know in advance concerning the topic to be presented and establish expectations about what the lecture will cover.

2) **Intermittently focused discussions:** the teacher divides lecture segments into about 10–15 minutes; it is believed that in such a length of time, a motivated adult can concentrate on the information being presented. After every segment of 10–15 minutes, learners are asked to turn to the person next to them and work cooperatively to answer a question. The question should be specific enough to be answered in about 3 minutes.

3) **Closure-focused discussion:** learners are given an ending discussion task lasting for about 4 minutes by the teacher. The task learners carry out here is to summarise what they have learned from the lecture and integrate it into existing conceptual frameworks. Informal cooperative learning ensures that students are actively involved in understanding what is being presented. It provides time for teachers to move around the class, listening to what students are saying, so as to gain insight into their level of understanding.

Cooperative-based groups are the last type of cooperative learning; they are long-term, heterogeneous cooperative learning groups with stable membership. Learners in such groups have as their primary responsibilities to see that all members of the group are making academic progress (that is positive goal interdependence), hold each other accountable for striving to learn (individual accountability), and support, encourage, and assist each other in completing assignments (that is promotive interaction). In order to ensure the proper functioning of a cooperative-based group, teachers should educate group members on appropriate social skills and help them process how effectively they are functioning.

Such groups meet regularly, be it daily or biweekly, and last for the duration of the class, which could be a semester, a year, or, preferably, several years. The teacher forms heterogeneous groups of about 3–4 people and schedules their regular meeting time, which could equally be at the beginning and end of each class session or at the beginning and end of the week. The longer a cooperative group exists, the more caring their relationships tend to be, the greater their social support for each other, the more committed they will be to each other's success, and the more influence members have over each other. Permanent cooperative base groups provide a caring and communicative environment, committed relationships, and social support, hence improving the quality of school life.

## The Influence of Cooperative Learning on Student Outcomes

According to Catherine (1989) cooperative learning can take the form of formal, informal, cooperative base groups and cooperative structures.

# **Influence of Formal Cooperative Learning**

This type of cooperative learning deals with learners working together for a duration ranging from one class period to several weeks to achieve shared goals by ensuring that group members have successfully completed assigned tasks. Hence, the teacher carries out the following functions: specifies lesson objectives, make a number of pre-instructional decisions, explains the task to be carried out as well as positive interdependence, monitors learners' learning and intervenes within the groups so as to provide assistance or increase learners' interpersonal and group skills, evaluates learners' learning as well as helps them process how their groups functioned.

# **Influence of Informal Cooperative Learning**

Using cooperative learning does not stop the teacher from lecturing, making use of video tapes, film shows, and giving demonstrations; these teaching methods can be effectively used with informal cooperative learning, in which learners work together to achieve a joint learning goal in temporary ad-hoc groups, which last from a few minutes to one class period. Film projections as well as demonstrations could be used here to captivate learners' attention and also set a conducive learning mood, as well as set expectations as to what will be covered within a class session.

Informal cooperative learning helps teachers ensure that students do the intellectual work of organising, explaining, summarising, and integrating material into existing conceptual structures during direct teaching. Informal cooperative learning groups are often organised to enable students to engage in a three- to five-minute focused discussion before and after a lecture and two- to three-minute turn-to-your-partner discussions throughout a lecture.

# **Influence of Cooperative Base Groups**

Not all types of cooperative groups last for a short period of time. Cooperative base groups are long-term, heterogeneous groups with stable membership that can last even for a

year or until members graduate. Learners are provided with permanent, committed relationships that allow members to give needed support, encouragement, and assistance to consistently work hard in school as well as make academic progress. Johnson et al. (1992); Johnson et al. (1991) reiterate the fact that these long-term groups enable the learners to develop cognitively and socially. Base groups meet formally each day in elementary school and twice a week in secondary school (or whenever the class meets).

Informally, members interact every day within and between classes, discussing assignments and helping each other with homework. The use of base groups tends to improve attendance, personalise the required work and the school experience, and also improve the quality and quantity of learning. The larger the class or school, the more complex and difficult the subject matter, and the more important it is to have base groups. Base groups are also helpful in structuring the homeroom when a teacher comes up with a number of ideas.

# **Challenges in the Implementation of Cooperative Learning**

According to Khon (1992), teachers are reluctant to implement cooperative learning in the classroom because it poses some problems for them, such as the control channel of communication and the arrangement of the curriculum. In addition to this, Gillies (2008) say teachers may find difficulties in implementing cooperative learning in their classrooms due to a lack of understanding of how pedagogic practice works. To him, studies have shown that learners will perform better in classes where teachers have been trained on how to establish cooperative learning activities in their curricula and when students are given the opportunity to participate regularly in these activities, unlike those in schools where teachers have not been trained.

Moreover, Gilles (2008) says that one of the challenges of cooperative learning is its reliance on positive group dynamics to function at its highest efficiency. Conflicts amongst group members will always affect their ability to work together, especially if members are still young and have no conflict resolution skills. Equally mismatched personalities can also lead to unsatisfactory cooperative learning, even when there is no conflict. What is more, cooperative learning can bring uneven workloads and evaluations because, at times, more advanced learners do take up the project for the sake of trying to finish it in time rather than helping the slow learners. What is more, indolent students might deliberately abandon work for the advanced learners and other group members.

## Strengths and Weaknesses of Cooperative Learning

According to Barry et al.(2002), cooperative learning is generally positive, especially in cases where it is compared to traditional approaches such as whole-class teaching. These positive effects influence both cognitive and academic achievement as well as various affective and non-cognitive factors. Barry et al. (2002), reiterate the fact that, because cooperative learning is a learner-centred approach, it focuses on learners' development. Thus, apart from the subjects being taught by the teacher, through cooperative learning, learners develop many social and interpersonal skills, such as acceptance and respect for others, language proficiency, and working with others in a team. Skills that are becoming important in today's world of globalisation

According to Kagan (1999), over 500 research studies accept the fact that cooperative learning brings about gains across all content areas, all grade levels, and among all types of learners, such as those with special needs, gifted children, high-achieving, rural, urban, and all ethnic and racial groups. Kagan (1999), puts forward the following arguments as strengths of cooperative learning:

Cooperative learning benefits all types of learning and all abilities of learners, given that students' views and ideas are accepted by peers, it helps increase their self-esteem, interracial friendship in group work develops interracial and intercultural harmony, given that learners are working in groups, communicating among learners becomes easier and also helps in gaining communication skills, interpersonal skills are developed since learners interact with each other, through cooperative learning, learners learn discipline, like waiting for their turn to talk and talking one at a time, by listening to and accepting criticism from team members, students get to learn more about themselves and may even improve and fosters students' responsibility for learning.

It equally allows every learner to participate in class as compared to volunteering, where always the same learners raise their hands and participate. Topping (1988) sees defending the team's work as defending the views of other people. Cohen (1994) says cooperative learning helps the teacher keep the students engaged in classroom work.

## Weaknesses of Cooperative Learning

According to Kagan (1999), despite the non-exhaustive list of strengths, cooperative learning has some shortcomings that hinder its application in many situations. However, some of these weaknesses may be overcome with proper planning and preparation. Here are some of the weaknesses he developed:

Lack of proper instructions and guidance may lead to unsocial behaviours like all members talking at the same time, some members not participating, some members trying to dominate others as well as imposing their views, or some members being ignored, lack of supervision may lead to lots of noise-making and unnecessary discussion rather than the topic to be learned, which will only make cooperation a waste of time, learner who did his share of work honestly and would deserve a very good grade otherwise may be undergraded for work not done by others in the group.

Moreover, a bad experience working in a group may leave a bad impression about teamwork on students, and this may negatively affect their working life in the future, consistent use of cooperative learning may cause learners to be dependent on each other and negatively influence them when required to work individually, consensus becomes difficult, especially when it comes to matters that involve emotions and it is a time-consuming strategy, both for preparation and implementation. Therefore, the teacher may not have enough time to complete his syllabus

# 2.1.3. ASSESSMENT

Referring to the above concept, Angelo et al. (1993) see it as "classroom assessment," and they said it should be used at university levels since it was only seen as a good practice and used in schools. Formative assessment can be seen as "learner-centred, formative, context-specific, ongoing, and firmly rooted in good practice". Angelo et al. (1993) brought out seven principles of classroom assessment, which consist of "the *development of an active assessment research community, clear teaching goals and objectives, appropriate and focused feedback, faculty involvement in the design of assessments, and the development of'simple tools' to assist teachers in the classroom. The final concept relates to the sharing of assessment experience both with students and colleagues, resulting in what Angelo and Cross describe as'mutually positive benefits, which can aid and assist the development of an improved learning process".* 

Too many formative assessments have as their main idea "feedback". This explains why Black et al. (1998) and other authors see formative assessment as feedback in higher education.

To Gibbs et al. (2004), formative assessment cannot be equated to the effect of feedback, for it has not been adequately conceptualised; hence, they brought out ten conditions under which assessment learning can address complexity. From these ten conditions, "seven are directly linked to feedback, seven of which link explicitly to feedback, address levels of engagement with assessment tasks, time allocation, sufficient, timely feedback, the importance of student perception and understanding in relation to the assessment task, and the centrality of student action in relation to feedback".

Conditions that differed from Gibbs and Simpson's were equally offered by Nicol et al. (2006), Nicol et al. (2006) talked about assessment and feedback as a model that could help the learners regulate themselves. To them, self-regulation refers to the extent to which learners can monitor and evaluate areas of their learning behaviour so as to ameliorate their learning. With this, learners are able to carry out self-regulation, as they can judge from the first assigned assessment task and review their present knowledge.

According to the above authors, the outcomes produced here lead to internal feedback and give learners the room to re-evaluate goals and criteria that can be used to compare the present stage of learning. This model equally brought out seven principles of effective feedback, which consist of "clarity as to what constitutes 'good' performance, the promotion of self-assessment, the encouragement of peer and teacher dialogue, and the promotion of student self-esteem and confidence". The concept of formative assessment is equally seen by Carless (2007) as learning-oriented assessment, which broadly looks at developing learning elements to be used for assessment instead of measuring aspects. He talks about three principles that could be used to enhance understanding of the concept of learning-oriented assessment:

- Assessment tasks should be designed to stimulate sound learning practices among students.
- Assessment should involve students actively engaging with criteria, quality, and their own and/or peers performance.
- Feedback should be timely and forward-looking so as to support current and future student learning".

Boud et al. (2006) see assessment as a "forward-looking view of assessment", Assessment should be a model that could be extended to the university to support students learning as well as prepare them for "lifetime learning," be it in their jobs or social settings. Thus, the concept of "learning for long-term and sustainable assessment" was made known by Boud and

Falchikov. They argued that assessment for learning should not only be based on providing feedback and ameliorating learning in the university but should also prepare learners to become effective assessors of their own learning after university training and life thereafter.

According to Hanna et al. (2004) assessment simply refers to the process of gathering information or gathering data by the instructor on his teaching as well as on the learner's learning. Information can be collected through varied activities such as examinations, observations, and, why not, tests and pre-tests? Thus, the data collected by the instructor enhances auto-evaluation as well as the learners' performances. Assessment exists in three types, even though all are referred to as assessment, but there is a slight difference amongst them.

# 2.1.3.1 Types of Classroom Assessments

The first type of assessment is referred to as a diagnostic **assessment**. According to Hanna et al. (2004), it is the type of assessment that deals with the instructor identifying the learner's current knowledge as well as previous knowledge, their skills and abilities, strengths and weaknesses on a given subject so as to better plan teaching. The different types of diagnostic evaluation that can be used by the teacher to identify the learner's previous knowledge or current knowledge consist of:

Pre-test, which can be carried out on the content and abilities of learners, self-assessments, discussion and broad response (learners can talk about prompt questions given to them) and interview (learners can be briefly interviewed privately by instructors on the concerned subject).

**Formative assessment** is the second type of assessment, according to Hanna et al. (2004). This type of assessment gives students feedback while learning is occurring. It is important to note that this assessment does not only give feedback to students while learning is taking place but also measures the teacher's progress. The main aim of this assessment is to identify areas of weakness so as to improve on them. This implies that assessment is not graded but is used to determine the progress of teaching and learning so as to ameliorate where needed. According to Hanna et al. (2004; 2), formative assessment exists in the following forms:

'Observations during in-class activities; of students' non-verbal feedback during lectures, homework exercises as a review for exams and class discussions, reflection journals that are reviewed periodically during this semester, question and answer sessions (both formal and informal) and spontaneous, conferences between the instructor and student at various points in this semester, in-class activities where students informally present their results and student feedback is collected by periodically answering specific questions about the instruction and their self-evaluation of performance and progress."

**Summative assessment** is the last type of assessment, according to Hanna et al. (2004). It comes at the end when learning must have taken place, when learning is completed, and when feedback has been summed up and ameliorated. Formal learning does not take place here but can accidentally occur in the course of learners carrying out an assignment, such as project completion. Summative assessment comes at the end of a semester or course to assess how well what has been learned has been learned. Grades are allocated to either enable learners to go to the next class or show an acceptable level of knowledge gain. Summative assessment is mostly product-oriented, for it assesses the final product of the teaching and learning process. It can take the following form: final examinations, term papers, projects, portfolios, performances, and the teacher's self-evaluation.

With regards to the fact that it comes at the end after instruction must have taken place, it does not give room for diagnosing learners difficulties so as to make timely adjustments to instruction, and it does not provide teachers with valid information that they can use in remediating instruction (Garrison et al., 2007; Harlen et al., 1997). Despite the above shortcoming, summative assessment plays a very vital role in education because it brings out the weaknesses in a system. It provides information that shows the effectiveness of an instruction for a particular unit of study. It improves the overall instruction or programme through the giving of feedback on progression based on stipulated goals; it gives accountability for continuous improvement of the system, thus helping teachers to improve too (Hart et al., 2015).

### **Types of summative assessment:**

There is teacher-constructed summative assessment, which is equally referred to as informal assessment, and standardised assessment, commonly referred to as systematic, according to educators. Looking at teacher-constructed assessment, it is the most common form of assessment used in the classroom, although it provides information for measuring learners' performances but is most often very biased. This is the reason for standardising assessment in order to overcome the limitations above. Constructed summative assessment consists of tests constructed by the teacher, quizzes, portfolios, and grades, all of which depend on the teacher's professional judgment. Most often, these judgements are false due to a lack of reliability and validity, even though they help the teacher come to accurate conclusions about the performance of the learners (Barnett, 1988; Spencer et al., 2012). Thus, because teacher assessment does not make use of validity and reliability to an extent, their judgements are considered lacking. Validity measures how well what is to be measured is measured and exists in three forms: construct, content, and criterion. They argue that most often it is the content validity that is used in class by instructors, and to this end, learners are best served. Nevertheless, the problem that arises is that constructs and criteria for validity that require statistical calculation are hardly used or do not even have a place for classroom teachers (Allen et al., 2002).

The standardised test, on the other hand, ranks as the second main category of summative assessment that is used in schools. Over the last 20 years, they have increased in schools, both in influence and quality (NCLB, 2002). Due to frequent assessments, learners' performances have equally increased; it is for this reason that Wang, Haertel et al. (1990) say there should be a reduction in the use of standardised tests, no matter the position of educators. Standardised assessments should be reduced to the minimum that is necessary to obtain the required information for which they were constructed. A standardised test provides valuable information for the amelioration and improvement of instruction in the future because it is vetted before use. A standardised test does not deal with individual learners but examines how a population reacts to the intervention. Data collected from standardised tests serves as a base for reform and improvement to prevent potential future problems.

# **Purpose of Assessment**

Scriven (1967) says one of the purposes of formative assessment is to enhance the development and improvement of ongoing programmes, activities, persons, or products. While the purpose of summative evaluation is to measure if the object, product, person, or thing measured met the stated goals, Thus, summative evaluation has the purpose of testing the validity of a theory or the impact of an educational practice so as to improve on it and modify it in the future, while formative evaluation has the purpose of refining goals and working on strategies to attain the set goals. Be it formative or summative, all have the purpose of refining educational goals or products of education. Their activities give feedback in one way or another to curriculum developers and help them improve and ameliorate the programme.

The purpose of assessment is to enhance communication between the learners and their instruction. The learners are able to communicate their learning to the teacher; learners need to know where they are in their learning as well as where they are heading. The instructor, on his part, generally has clear goals for himself and his teaching. Thus, in every content, unit, activity, or lesson that he carries out, he has something in mind to achieve at the end, which may be referred to as learning goals (Stiggins et al., 2006). Thus, learners' goals serve as the basis for effective communication in students' learning. Giving a zero to a learner for missed work or deducting marks from learners because they submitted their work late does not have any meaning here because there is no communication. According to O'Connor (2009) the performance of learners has to be measured in relation to a single goal and not in relation to assessment instruments.

Moreover, another purpose of assessment is to value what instructors teach. Assessment as well as evaluation are two-edged swords because when we assess learners, we equally evaluate the instructor based on the work they present. The choice we make in what we assess shows what the instructor values because teachers like to assess what they think is important; if it is important, then it is valuable. However, this does imply that everything that is valuable should be tested or assigned marks. Assessment has the purpose of reporting; it is just impossible to ignore that one of the primary purposes of assessment is to gather information or data so as to report on the learner's progress to stakeholders other than the teachers or the students. To this end, students' performances are assigned grades, which show their performances. (BC Ministry of Education, 2009)

Finally, we have the purpose of not sorting or not ranking; assumptions show that assessments are used for sorting and ranking; this explains why, more often, there is an assignment of aggregated letter grades (sorting) or percentages (ranking) to represent all that learners have learned. Sorting and ranking give room for all learners to be assessed equally so as to be considered accurate. Sorting and ranking have internal and external problems; internally, it tries to show that all instruments used for assessments are objective and infallible to represent learners' results in relation to their attainment of goals in relation to the curriculum with a single percentage point.

This assumption ignores the inconsistency of teachers and students representing such performance and the fallibility of assessment instruments. Externally, when assessment takes such a position, the individuality of learners is not taken into consideration. If we accept that learners differ in the way they learn, they differ even in their progress, so why then should they be assessed using a common approach? Educators have accepted varying means of instruction to deal with different types of learners, so they equally have to accept the need for differentiated assessment. According to Bordon et al. (2001, p. 442); Palomba et al. (1999, p. 442) there is a difference between assessment and evaluation as illustrated on the table below:

	Assessment	Evaluation
What is the Purpose?	to improve the quality of future Performances	to determine the quality of the present performance
Who requests it?	Assesse	Client
Who performs?	Assesse	Evaluator
Who observes the performance?	Assessor	Evaluator
Who sets criteria?	assesse and assessor	client (with possible consultation with the evaluator)
Who uses the information?	Assesse (in future Performances	client (to make decisions)
When can feedback occur?	during or after a performance	during or after a performance
On what is feedback based?	observations; and strongest and weakest points	level of quality based on a set standard
What is included in the report?	what made the quality of the performance strong; and how might one improve future performances	the quality of the performance, often compared to set standards
Who receives the report?	Assesse	Client
How is the report used?	to improve performance	to make judgments

The difference between evaluation and assessment Taghi (2009)

#### The Difference between evaluation and Assessment Taghi (2009)

Carter et al. (2001) in Taghi (2009) try to bring out the differences that exist between both concepts, as they are often used interchangeably in our classrooms or during the teaching and learning process, even though they are technically different. To them, assessment refers to the use of tests in measuring an individual's progress or achievement; on the other hand, evaluation goes beyond measuring a learner's achievement and progress; it measures all aspects of the teaching and learning process in order to measure how educational decisions can be arrived at based on the results of formative assessment. Rea-Dickens et al. (1993); Genesee et al. (1996); O'Mally et al. (1996), in Tahgi (2009, p. 2) say the concept of evaluation consists of five components, which are:

- Articulating the purpose of the educational system.
- Identifying and collecting relevant information
- Having ideas that are valuable and useful to learners in their lives and professions
- analysing and interpreting information for learners.
- Classroom management or classroom decision-making

Thus, one can deduce that programme evaluation is mostly concerned with the measurement of the end product of a system. When the above authors talk of the purpose of the educational system, it is in light of whether the stated goals were obtained. The relevance of information in the lives of learners does come in the long run. Ideas valuable in life and profession only come at the end of the different courses or disciplines undertaken by learners. Thus, programme evaluation judges the overall outcome, the end product, of all that learners learn in school.

Programme evaluation judges the value or worth of all that learners were exposed to in school so as to make decisions that will be of help in the future. On the other hand, in classroom assessment, the teacher uses quizzes or tests in which he or she assesses his or her teaching based on the results gotten from the assessment. Assessment gives room for feedback on teaching and measures learners' progress. According to Biggs (1999) in Taghi (2009), assessment plays two major roles: firstly, it enables us to see if learning has been successful or not, and secondly, it enables the teacher to clarify his or her expectations from students. Assessment consists of four components, according to Tahgi (2009, p. 419) which are:

- measuring improvement over time.
- *Motivating students to study.*
- Evaluating the teaching methods.
- Ranking the students' capabilities in relation to the whole group evaluation

Hence, assessment is achieved in the short run, not like evaluation, which comes at the end to measure the outcome. Assessment measures what learners have acquired at the end of the class or instructional method and enables the teacher to give feedback on learners' performances and ameliorate the instructional method. Through assessment, the teacher ranks and motivates learners. Programme evaluation comes at the end of the programme and measures the worth and merits of the output or outcome. Assessment, on its part, occurs within the instructional process and is achieved through a test in class. The teacher is able to determine if learning has taken place and give feedback based on the results obtained from tests or quizzes.

This section has examined the writings, views of diverse authors, and publications of the preliminary concepts to enhance understanding of subsequent chapters such as evaluation, cooperative learning, and classroom assessment. Evaluation has been examined from the perspectives of programme evaluation, types, purposes, and approaches, while cooperative learning has been examined from the perspectives of its influences and challenges in its implementation. Finally, assessment has been examined from the perspectives of the different types and purposes.

# **2.2.0. CONCEPTUAL REVIEW**

This section presents and examines the writings, views, and publications of diverse authors with respect to the quality of cooperative learning; hence, academic quality, with its components of knowledge construction, validity, reliability, and group processing. Secondly, pedagogic quality and its components of group competition, motivation, imitation, and individual accountability Equally important is classroom management quality, consisting of management to accommodate group work, monitoring activities in group work, discipline, and rules as components. Finally, the didactic quality includes components of learning content, learning activities, and learning materials (didactic materials). Relevance of knowledge constructed, mastery of content, and learners' performances (output, skills, and competences) were the components examined for classroom assessment.

## **QUALITY IN EDUCATION**

Quality in education deals with learning which strengthens the capacities of children to act progressively on their own through acquisition of relevant knowledge, useful skills and appropriate attitude and help children create for themselves and others a place of safety, security, health and interaction (Bernard, 1999). It is equally the processes in which trained teachers used child centered teaching approaches in a well managed classroom and school and skillful assessment to facilitate and reduce desparities. It has to do with outcome that encompass knowledge, skills, attitudes linked to the nations goals concerning education and positive participation in society (Adams, 1993).

According to UNESCO quality in education should enhance learner's creative and emotional development in supporting security, peace and citizenship . it should allowed learners reach their fullest potential interms of cognitive, emotional and creative capacities. Quality education is that which provides all children and young people with a comprehensive education and qith an appropriate preparation for working life, life in the society and private life (Jacques Delors, 1996) underpinning UNESCO'S quality education framework is a fourfold principle of learning : learning to know which has as principle that quality should orovide opportunities for learners to build their own knowledge daily combining indigenous and external elements: Learning top do which looks at the opportunity for learners to apply that which they have learn; leaving together which consist of learners developing attitudes free from discrimination, where all have equal rights and learning to develop skills where emphasis is on the skills required for developing their full potentials

# 2.2.1.0. ACADEMIC QUALITY

Education needs to prepare students for tomorrow's private lives by helping them to develop individually; through education, they should acquire the necessary skills and knowledge that will permit them to integrate and contribute to their respective societies in the future. Quality in academics should lay the foundation for change and equally maintain quality at the moment. Implying that every generation should ameliorate and develop society. Although academic quality is a factor that influences development, it is also the mirror of society in some way. To this end, the Teacher Union sees quality and standard as somehow related, as the concept of quality is not static. Quality in academics or education refers to the relevance of the subject matter taught as well as the objective of education. Academic quality is the type of education that meets changing times. Implying that what was considered quality yesterday might not meet the standard of what will be called quality today or even tomorrow due to the changing world. Academic quality has to do with the acquisition of basic skills such as reading, writing, and arithmetic before progressing to complex ones. Academic quality fosters interaction between teachers and learners, not just a process of consumption, because quality education gives individuals the opportunities for personal development and the ability to adapt to new situations and changes where needed. (ETUCE, 2002).

## **Facets of Academic Quality**

The concept of quality, though largely used, is difficult to define. Nevertheless, to better understand the concept of quality, it is better to review it in light of the available international indicator system in order to measure what quality is, and even more quality in academics (Scheerens, 1989). Scheerens (1989) examines the following views in relation to academic quality in his works: First, the productivity view: the success of anything can be judged on the achievement of stipulated outcomes.

Here we can talk of the satisfactory number of school leavers that have obtained a specific level or diploma; we can equally look at the numbers of employment of school leavers with the said diploma; thus, talking about academic quality, we are looking at the outcome or output of learners if they came back with satisfactory results and certificates that will foster their absorption in society. The examination of the above gives us an idea of academic quality at the end of the day. More specifically, the instrumental effectiveness view stipulates that context, input, and process, which are all indicators of quality education, are not chosen haphazardly; they are selected based on clear perspectives. This implies that we can easily predict the outcome based on what we had as inputs. The worth of some levels and the values of inputs and processes are determined by instrumental potentials.

The adaptation perspective view transcends the instrumental perspective, which examines the question of how to do things right; it focuses on the question of how to do the right things, implying that it focuses on educational goals. It examines the conditions that can be put in place to contextualise education in relation to changing times, looking at the outcomes

of the labour market and "cultural capital," which are considered the end. More specifically, from the equity perspective, equity is the main primary factor that enables us to judge academic as well as educational quality. In this regard, inputs, processes, and outputs should be fairly distributed to all participants in education, taking into consideration their different characteristics.

There is also the efficiency perspective; efficiency looks at productivity and instrumental effectiveness. It examines the highest possible outcome and the lowest possible cost based on inputs, processes, and outcomes. Finally, the disjointed view stipulates that input, context, and output be examined independently of each other; they should be judged independently to know if they manifested in an acceptable manner or level. For example, the teacher's training gives him the capability to function as a teacher and manage the size of his classroom based on the idea of classroom management given through training.

# The Raison d'Etre of Academic Quality

Looking at the World Education Forum of 2000 held in Dakar, it stipulates the need for all to acquire education and, what is more, the need to improve the quality of education. As a recommendation of the above forum, it talks about "improve all aspects of the quality of education to achieve recognised and measurable outcomes for all, especially literacy, numeracy, and essential life skills" (Dakar Framework for Action, Article 7, World Education Forum, 2000). The issue of quality was equally raised by the UNESCO International Commission on Education for the Twenty-First Century (1996, p. 120), where it states that "*a greater focus on quality is desirable everywhere, even in countries where all children are enrolled in basic education*". Implying that the concept of quality, be it in academics or education, is an old concept that dates as far back as the 1980's

## How Teachers Can Improve Academic Qualities

Academic quality is a way of describing how well the learning opportunities available to students help them achieve their awards. Academic quality ensures that appropriate and effective teaching, support, assessment, and learning opportunities are given to the learners. To this end, the teacher can enhance academic quality through the following, according to UNESCO (1996):

## Quality awareness and self-evaluation

To be able to enhance academic quality, the teacher should be able to critically reflect on his teachings, critically examine the teaching methods used, and look for appropriate ways of teaching. Teachers should systematically assess their teachings and the results obtained from them. Different countries carry out evaluation in different forms; in some countries, it is the whole educational system that is evaluated; in others, it can be individual schools and learners. The problem of evaluation here focuses on measurable school achievements, leaving out the complexity of the said school in reality.

Academic quality can be equally enhanced through evaluating teachers' tools. There is a need to come up with tools that will help improve academic quality. There is also a need to come up with other alternatives that take into consideration the complexity of school environments. The teacher should come up with alternatives to teach the learners and make use of the best teaching methods related to the specific circumstances. In a nutshell, if the teachers must enhance academic quality, then they should be given the opportunity to try different methods in order to fine-tune the best in particular teaching circumstances.

# **Professional freedom.**

Professional freedom is very important for teachers to develop academic quality. Professional freedom does not mean instructors should do as they please. On the other hand, they are supposed to know the type of learners they have in front of them. They are better equipped to decide on the appropriate teaching method to be used to create an optimal learning condition, hence their trust in the creativity of the teacher. Teaching is carried out in the classroom; thus, issues concerning the classroom should not be prescribed by an outsider. Nevertheless, this does not imply that authorities cannot suggest a teaching method or alternative through in-service training, professional development, or any other means. Risks may occur when decisions concerning curriculum are taken by local authorities due to decentralization. Local authorities must respect the professional freedom of teachers so that the right text books, teaching materials, and courses can be chosen.

### **Professional Ethics**

In teaching, the teacher meets with learners from different backgrounds, which makes teaching more and more complex. In this light, the professional ethics of teachers can be attached to the rights of children. This convention should be made clear to teachers so that they can responsibly take into account the child's interests, such as protecting the child from drug abuse, maltreatment, and sexual exploitation. Teachers need to have awareness of corruption in order to stay away from such practices; they are supposed to look for measures to monitor this as well as make administration transparent.

#### **Government Support for Teachers to Enhance Academic Quality**

To improve academic quality, it is not the sole responsibility of teachers but equally the responsibility of the public and educational authorities. Demands at all levels should be met, such as the institution, school, and classrooms, as well as the educational system, which embodies the institution, school, and classroom. This implies that we cannot talk of good teaching when the educational system is functioning badly. Even when teachers try to do their best at classroom levels without the support of local and national authorities, such situations do not last long and often end with a lot of stress and burnout on the teacher's part. The government needs to help teachers improve their academic qualities by providing the following:

## Provide teachers' education and professional development.

Professional development of teachers in all stages of teacher education is one of the key aspects of enhancing academic quality. Educational authorities, the government, and intergovernmental organisations must see to it that, from the very first stage, teachers should receive a good education at the university level so as to better prepare them for the job of a teacher. The education given them must consist of pedagogy, methodology, practice, and curriculum areas, for these components enhance a balance between general theory and professional-oriented training and go a long way towards fostering professional development in the teacher. In a study carried out on the quality of education in primary schools, the results show that the quality of teachers is one factor that differentiates between a high-performing school and a low-performing school (Carron and Chau, 1996). Equally, one of the MLA project recommendations concerning education in Africa holds that "special *attention should be* 

accorded to teacher working conditions as well as in-service training needs and the support of teachers" (Chinapah et al., 2000, p. 9).

Thus, teachers have to be exposed to in-service training and professional development to keep in touch with recent findings in their different disciplines taught there by improving their teaching methods. Teaching is a lifelong process; as time passes, human beings are changing, facts are changing, and human knowledge is expanding; hence, teachers should not be tucked in their old ways and repeat the same instruction year after year. In this light, new methods, testing of new methods, and identifying new approaches in classrooms must be encouraged. In-service training should not be a mere routine of meetings and conferences but should be of high quality.

Research in education must be encouraged so as to enhance academic quality, and the results of the research must always be communicated to teachers during in-service training because of the importance of research in a classroom. The in-service training might take different forms; it could take the form of improvement in teaching methods and techniques as well as deeper knowledge in the disciplines taught. Thus, teachers should be given, as much as possible, a variety of options to freely choose the kind of training they want, for they know what is best for them. In-service training should be a fundamental right for teachers, not a privilege. (Chinapah et al., 2000).

## **Available Resources**

A study was carried out under the guidance of UNESCO and UNICEF, wherein the researcher examined some primary schools in certain less developed countries and came up with the finding that very few schools have the basic requirements. The said requirements consist of a chalkboard, cupboard, teacher's chair, and table, as well as desks for learners. The MLA project equally noticed that services that could enrich classroom teaching were absent; to this end, they recommended that "greater emphasis should be given to the improvement of access to teacher resources so as to empower teachers to positively influence the teaching-learning environment of children" (Chinapah et al., 2000, p. 44). It is difficult for teachers to do good work without the necessary resources.

This explains why Postlehwaite et al. (1992), with the support of the IEA, came out with findings on "reading literacy" and what is required in a classroom to develop and enhance

good reading ability. Hence, a school library with sufficient books is necessary to create a positive teaching and learning atmosphere for learners. If all learners get at least one text book, academic quality will improve, and this is possible if there is an increase in the number of libraries in our classrooms. Moreover, information and communication technology is equally powerful in developing critical thinking in learners. Information and communication tools should be used in the teaching and learning processes in all disciplines if possible. Information and communication technology should be seen as a complementary component of the teacher and the educational process. Thus, teachers should be given in-service training so as to enhance their efficient usage of it.

# Salaries

Often times, teachers are unable to manage salaries until the end of the month. When all basic costs are paid, they are usually left with little or nothing; hence, they are forced to pick up other jobs to increase their income. Having other jobs besides the teaching job affects their concentration, so little time is given to their teaching (Fredriksson et al., 1999).

## **Teacher's Status**

The joint ILO/UNESCO committee of experts on the application of the recommendations concerning teaching personnel concluded in their 8<sup>th</sup> meeting report that "there is limited evidence of any general improvement in the status of teachers and their overall conditions of service" (The joint ILO/UNESCO committee of experts on the application of the recommendations concerning teaching personnel, 2003, para 37). Due to the key position held by the instructors, considerations must be taken to reform and improve education. Advancement in education depends greatly on a teacher's ability and qualifications. Carron et al. (1996); OECD (1994) hold that to influence the working conditions of teachers, motivation is necessary. Teachers greatly influence student learning when they are motivated. Thus, there is a strong relationship between a teacher's motivation, performance, and education quality (VSO, 2002).

# **Knowledge Construction**

According to Mark (2000); William (2003) Cooperative learning enhances learner's engagement as they work to accomplish group goals through interaction, positive conduct and

participation to group's success by carrying out assigned task. Hence learner's turn to construct knowledge as they make efforts to successfully accomplished group's work.

Knowledge construction is the building of a strong conceptual framework by the learners with the teacher's help, who clarifies and assesses their prior knowledge. The teacher equally enhances a social environment favourable for active learning activities, which enable learners to build new knowledge (Ambrose et al., 2010). Even though an active social classroom is required for knowledge construction, care must be taken to ensure that learners are constructing just the right knowledge because bad company corrupts good. The idea of an active social classroom takes us back to cooperative learning, which reiterates that better learning takes place when learners work together in groups and exchange as well as build up ideas. The importance of learners constructing knowledge for enhanced academic quality is emphasised by Jean Piaget, Jerome Bruner, and Lev Vygotsky in their various explanations of knowledge construction.

## **Importance of Knowledge Construction**

Knowledge construction is an active means of learning; thus, it is a student-centred and not teacher-centred way of learning. When learners build knowledge, they end up with lifelong learning; knowledge construction makes use of construction rather than instruction. This implies that learners are not passive receivers of knowledge but are active participants in the teaching and learning process. The instructor is just a facilitator and guides learners to carry out activities that enhance the construction of knowledge and the management of their learning (Devey, 1916; Kasemvilas et al., 2009). To construct knowledge, learners have to be active by exploring possibilities, coming up with new possible solutions, trying out new hypotheses and ideas, collaborating with other learners, and presenting the best solutions they can derive (O'Longhlin, 1992; Cole, 2009).

#### Role of the teacher in facilitating knowledge construction

Teachers have to come up with approaches that will foster learners' development to enhance their knowledge construction because the teacher has the capacity to enable learners to assess and clarify previous knowledge and provide a suitable environment for active learning to take place by providing interconnected ideas and different approaches to knowledge. Hence, it takes active learners to construct knowledge. The following can be done to enhance knowledge construction in learners:

**Provide scaffolding;** here, the teacher might start the lesson with what learners already know or ask the learners to do a brief exercise like brainstorming; the new content will be gradually given by the instructor so that learners will be able to connect the previous knowledge to the new one and will be able to clarify new issues. This model can work on a whole class or whole course at the beginning and end of a class.

**Visibly organise course content**; the teacher should try as much as possible to arrange course content in a logical manner. He can provide roadmaps as well as an outline for each class. He can equally work with learners to come up with roadmaps that can serve as the basis of what they know about the said content and make explicit how the topics connect or relate to each other. The use of white boards or chalkboards can enable the listing of topics and connected ideas and help the learner build a tighter conceptual understanding.

Allow learners to make predictions and encounter phenomena; make learners discover information rather than explaining or telling it to them. If they are able to discover something, they will be able to make predictions and encounter phenomena. It is true that there will be a high possibility of learners not offering the right answer or providing inaccurate or missing responses; the teacher can help them here by providing circumstances that will enable them to think over answers and connection over rightness.

Show students how experts with more developed conceptual frameworks think through problems or topics. Learners always enjoy watching how their teachers think. Teachers can show learners how they think, either by solving problems on the chalkboard or by thinking aloud about social dilemmas. They can equally trace a way through the linking of words as well as the literary interpretation of imagines. Teachers should be bold enough to express doubts if they are not sure of questions posed by learners, because learners are still building their conceptual framework (Ambrose et al., 2010).

From the above, cooperative learning is a kind of teaching method that gives the learners the opportunity to construct their own knowledge as they strive to provide solutions to the different tasks assigned to them. As they work in their small groups, they try to reason out the problem given to them; they come up with possible solutions to the said problem, and by so doing, they end up building their own knowledge. Being able to construct their own knowledge provides them with the opportunity to have an understanding and mastery of that knowledge, thus enhancing quality in academics, which will equally influence classroom assessments.

#### 2.2.1.1. Validity

Cooperative learning brings about validity because when group processing is reflected in a group it is easier to say whose action was helpful, whose contribution was meaningful and makes decision about whether to continue or change action (Johnson et al., 1994). Validity simply refers to the appropriateness of an instrument. That is why a test instrument cannot be said to be valid per se except for particular purposes and a particular group of persons. Meaning that it is not the questions or instruments that are valid, but they make it valid if it measures "what and for whom". Implying that a test of intelligence cannot be a valid test of personality or achievement in biology, Amin (2005) Due to the fact that validity can only be judged based on its purpose, tests are constructed for different purposes, hence the different types of validity. Amin (2005) talks about two main types of validity: logical validity and criterion-related validity consists of face, content, and construct validity, while criterion-related validity involves concurrent and predictive validity.

Cooperative learning in itself gives the learners the opportunity to interact and construct knowledge by themselves. The enhancement of knowledge construction in cooperative learning is mostly fostered through individual accountability and group processing, which are all elements of cooperative learning. Working in their little groups creates a good environment for learners to master the knowledge, skills, and abilities of the task given to them; at the end of the task, they are able to present and answer questions posed to them based on their assigned task, making valid the knowledge acquired, for it is not the question or instruments that bring about validity but the measurement for what or for whom that makes it according to (Amin, 2005).

## **Types of validity**

#### **Content Validity**

As the name implies, this validity type examines if all the areas or domains were efficiently covered or exploited during the assessment. It examines how assessment is designed to check if there is enough working space, if the font size is good, if the language used is appropriate, and if the instructions are clear enough. Thus, content validity is based on examining the content of the assessment (Fraenkel et al., 2003). According to Amin (2005), content validity deals with the extent to which the content of an instrument corresponds to the concept of the theory it seeks to measure. Moreover, to establish content validity, the domains of the content as well as the indicators representing the domains and content must be taken into consideration. Content validity brings to light how well the instrument samples the universe of knowledge, skills, perceptions, and attitudes that respondents are expected to exhibit.

Due to the fact that content validity seeks to measure the extent to which a test or instrument measures the intended area, it will be necessary that the item and sample be well looked into. Thus, item validity and sampling validity are necessary here. With item validity, it looks at whether the items measure the intended content, and with sampling validity, we are looking at whether the instrument covers the concerned total content area. Content validity is important because, when the instrument is good, it can probably sample the appropriate area of concern since it is difficult to measure every aspect of a given content area. Content validity is important in testing different skills and proficiency. Amin (2005).

In light of content validity, Amin (2005) sees content validity as that which specifies the domain of content. Tasks assigned to learners during cooperative learning are based on the syllabuses as well as the materials to be studied under different units and chapters. This explains why, at the end of the presentation of the group's task, questions posed to members dwell only on the work that was assigned to them, hence measuring that which was supposed to be measured and making knowledge acquired valid. Tasks broken down and assigned to the different cooperative learning groups are based on the content learners have to study; questions that follow after group presentations are based on the content that was given as a task, thus validating the acquired knowledge.

#### **Construct Validity**

It examines whether a particular measure relates to other measures; it assesses the relationship among concepts. Cronbach (1946) in Amin (2005) holds that construct validation is when a researcher is sure his instrument reflects a particular construct, and this construct is attached to certain meanings. Construct validity is usually measured within a theoretical context. Amin (2005).

#### **Concurrent Validity**

This validity is obtained when the new instrument is constructed to correlate with the earlier instrument that was constructed and judged valid for a similar purpose. For example, test two is a new instrument that still needs to be validated, while test one has already been established as valid. Both tests seek to evaluate achievement in biology; they are administered to the same sample, and the measurements obtained from both tests are correlated (Amin, 2005). Assigning tasks to learners in cooperative learning is based on the syllabuses and schemes of work; thus, the different tasks are arranged so that they proceed with the next work to be done. This means previous tasks will always serve as a starting point for new tasks, which enhances the fact that the new instrument constructed will correlate with a previous instrument when assessing the work done in their different groups to foster validity and academic quality.

## **Predictive Validity**

It's a kind of validity that predicts the future performance of an individual. It shows how well an individual can perform in the future. They are important for tests that are used in classifying or selecting individuals. Most of the research that we carried out in education was to be able to predict success in the future in the different activities of education. Predictive validity of instruments of education will be concerned more with factors like the text books used, the curriculum, the subject matter, the teaching technique, and methods. Amin (2005). Thus, from the learners' presentation during cooperative learning on assigned tasks as well as the solution provided in response to the assigned task, it would be possible to predict what they can do in the future.

Thus, validity has a way of ensuring the quality of academics. Cooperative learning, on its part, equally enhances validity, such as criterion, predictive, content, and many other types of validity. Validity enhances classroom assessment because assessments are not carried out in space but on the content that is to be measured. Thus, learners are not taken aback by questions given during assessments since validity makes it possible for us to measure what was supposed to measure. Knowing that, which has to be measured as a result of validity, influences classroom assessment on the part of the learners.a

#### 2.2.1.2. Reliability

Slavin (1994), in cooperative learning group members help other group members to master academic content, hence when there is the master of academic content we are likely to have reliability.Reliability is the type of measurement that gives consistent results with equal values (Blumberg et al., 2005). It is a kind of measurement that deals with consistency, repeatability, precision, and trustworthiness. It shows the extent to which there is no bias (error-free). Thus, the results of research are said to be valid if the results obtained in different situations, though in different circumstances, are consistent (Charkrabartty, 2013). Reliability, according to Kimberlin et al. (2008), serves as a base to measure the stability of measurements that were administered at two separate periods to the same person and the equivalence obtained from the set of administered tests. Reliability, according to Cacioppo et al. (1982), is the consistency of measurement. Measurement deals with assigning scores to individuals.

Thus, the assignment of scores enables the researcher to either confirm or not confirm the construct under study. According to the above authors, psychologists have examined three types of reliability, which are: test-retest reliability, internal consistency, and inter-rater reliability. Looking at test-retest reliability, it emphasizes the fact that a person who is intelligent this week will still be intelligent next week; a good measurement of intelligence will produce almost the same results or the same score for the individual next week as it did today. Test-retest reliability requires assessing a group of individuals today and using the same test for a week on the same individual under the same conditions and having scores or results that are roughly the same. Knowledge, skills, abilities, and aptitude acquired through cooperative learning have a higher capacity to be reliable for learners who acquire knowledge that is constructed by them.

This explains why Coombs (1985), in explaining the concept of academic quality or quality in education, says it is how well you have mastered what you have learned. If learners have a better mastery of that which is learned, there will be reliability; having a good mastery today will still be the same good mastery the following week if they were to be evaluated. So it is easier to have consistent scores with the same measurement instruments and under the same working conditions. This is so because what learners have constructed with the help of cooperative learning cannot be easily forgotten since it requires understanding and mastery to come up with new knowledge.

In a nutshell, the notion of reliability explains how consistent results will be obtained from the same learners under the same conditions due to the fact that they have a good mastery of what they have learned or what they have been taught. Learners do learn a lot from interaction with their environment and adults, as can be seen through language acquisition. Vygotsky (1986) says that without a society, there will be no chance for minds to be developed. This implies that knowledge is first and foremost constructed by the learner as he interacts with the environment before he can construct it alone.

#### **Types of Reliability**

According to Allen et al. (1979), reliability is of two types: stability and internal consistency reliability. Talking about stability, it simply refers to the fact that a measurement remains the same after a given period of time despite the uncontrolled testing conditions. It implies the score obtained by an individual will not change from one administration to another because a perfectly stable measure will certain produce the same outcome. With stability, it can be tested using either test-retest reliability or parallel form reliability.

## **Test-retest reliability**

It refers to the extent to which scores on the same test by the same person are consistent over a period of time. The coefficient here is obtained through repetition of the same measure a second time. It establishes the fact that scores obtained during the first test are the same or close to those of the second test that was administered (Amin, 2005). The time period between the administrations of the two tests could range from a few weeks to a month. According to Bland et al. (1986), scores from the two tests can be correlated between the two separate measures so as to evaluate their stability over time.

If the result obtained after following these four steps, stability reliability, is significant and high, then the test has good test-retest reliability. According to Amin (2005), it is difficult to determine the time period that has to be between the administration of the first and second tests. Because if it is too soon, learners will be able to recall their responses in the second test, which will bring about a high reliability coefficient; and on the other hand, if the time period is too long, the responses of the individuals might change as a result of maturation or intervening learning, which might have an impact on the correlation as well as on the test-retest reliability. Cooperative learning gives learners the opportunity to have a good understanding of knowledge through interaction and the building of knowledge; hence, consistent results will be produced.

#### Parallel-form reliability and equivalent-form reliability

Here, two different versions of measures are administered to a group of individuals, which are two identical instruments in every form except for the actual questions or items included. It implies that we have two forms of measurement, and in these two forms, they measure the same concepts, have the same number of questions or items, the same structure, the same level of difficulty, and the same directions for administration and interpretation, except for the fact that they might differ in content and style (Amin, 2005).

If concepts are well mastered and comprehended, the two different versions of measurement instruments will still produce consistent results because learners have a good mastery of what they have learned due to knowledge construction. These different versions are administered to the same group of appropriate individuals, and the scores obtained from the two versions are correlated so as to evaluate the consistency across the alternative measures. If the correlated scores are high, then we say it has parallel-form reliability (DeVellis, 2006). If concepts are well mastered and comprehended, the two different versions of measurement instruments will produce consistent results because of the good mastery of what is learned.

If the result obtained from correlating the two scores is high, then the test has a good form of equivalence or parallel-form reliability. The difficulties faced in using this type of reliability stem from the fact that it is difficult to construct two sets of items or questions that are essentially equivalent, for a lack of equivalence in itself is a source of measurement error. In addition, another problem is that it is not always feasible to administer two different forms of the same test or even the same test twice. According to Allen et al. (1979), this parallel form of reliability can be represented in two forms: internal consistency and split-half reliability.

#### Inter-rater reliability.

This form of reliability examines the equivalence of ratings that can be obtained by different observers with the same instrument. When reliability is tested, no doubt can be raised. Thus, reliability here is rated based on the correlation of scores obtained from the independent observers or raters. It is a good form of reliability because, most often, observers will not

interpret results or answers in the same way. The most common measurement of internal consistency is Cronbach's alpha, which is the average of the inter correlations of items and the number of items in the scale (Cortina, 1993). Cooperative learning fosters consistent observations on tasks; this implies observations on the task performances will be consistent for both teachers and any other observer because what students have learned, they have learned well and equally have a good mastery and comprehension of it. Thus, similar results will be produced, no matter the observer.

In all, cooperative learning has a way of enhancing reliability. Knowledge acquired in cooperative learning is long-lasting because it is constructed by the learners themselves; hence, similar results and performances will be obtained. What learners know today, with the help of interactions and knowledge construction, will last in their memories, hence influencing academic quality and classroom assessment.

## 2.2.1.3. Group Processing

Slavin (1994), in cooperative learning group members help other group members to master academic content, hence when there is the master of academic content we are likely to have reliability. Group processing is another element that can enhance academic quality. Group processing is an aspect of human cooperation whereby the behaviours of individuals come into play based on the fact that they jointly take decisions, solve problems, and perform tasks in their working groups for the common good of their groups (Brown, 2000; Castellan, 2013; Hackman et al., 2010; Homans, 1950; Stangor, 2016; Turner, 2014). Screening the actions of group members pushes them to work better on subsequent tasks. It equally enhances great improvement in the work done, which will lead to academic quality. Group members will be motivated to put in their best once they realise their actions have greatly contributed to the group's goal. Screening members' actions put them on the right track for the next task and equally enhance the quality of subsequent tasks, thus improving academic quality. Group members have to discuss how well they can achieve goals and maintain a good working relationship amongst themselves. According to Johnson et al. (2006), group processing has the following purposes:

## **Purposes of Group Processing**

- It enables the group to continue improving their work over time. Group members always sit down at the end of their session to examine the contributions of members, equally to tell whose work was helpful and whose contributions did not have a place. Thus, members keep on putting in more effort to ameliorate their work overtime and put in their best to positively contribute to the task. With such an attitude, academic quality is enhanced, and classroom assessment is equally influenced.
- It focuses on members' contributions so as to enhance individual accountability. Members' works are examined at the end of each working session; thus, everyone has a contribution to make. No one folds the arm and expects other group members to go on with the work because there is individual accountability on the part of group members; everyone has a contribution to make to the attainment of the group's objectives. This explains why it is possible to tell whose work was helpful and not at the end of the day, hence fostering learners to work harder and enhancing academic quality and classroom assessments.
- It makes the learning process simpler through streamlining; learning becomes easier on the part of group members because everyone is engaged in achieving the objectives of the assigned task. Effective work is done because group members are held accountable for their own small portion of the general work. Learning is facilitated because it is not left in the hands of a few group members; all group members have something to contribute to obtaining the group's objectives. As such, knowledge will not be new to anyone, hence enhancing classroom assessments.
- It eliminates and reduces actions that are not helpful to the group. At the end of the task, members' contributions are assessed; members are told whose contributions were helpful and which were not. To this end, those whose contributions were irrelevant will work harder to correct their mistake as well as ameliorate their work in subsequent tasks. The fact that they try to improve in subsequent sessions enhances the reduction and elimination of actions that are not helpful to the group, thus influencing academic quality (Johnson et al., 2006).

## The Role of the Teacher in Enhancing Group Processing

• It enables the group to continue improving their work over time. Group members always sit down at the end of their session to examine the contributions of members,

equally to tell whose work was helpful and whose contributions did not have a place. Thus, members keep on putting in more effort to ameliorate their work overtime and do their best to positively contribute to the task. With such an attitude, academic quality is enhanced, and classroom assessment is equally influenced.

- It focuses on members' contributions so as to enhance individual accountability. Members' works are examined at the end of each working session; thus, everyone has a contribution to make. No one folds the arm and expects other group members to go on with the work because there is individual accountability on the part of group members; everyone has a contribution to make to the attainment of the group's objectives. This explains why it is possible to tell whose work was helpful and not at the end of the day, hence fostering learners to work harder and enhancing academic quality and classroom assessments.
- It makes the learning process simpler through streamlining; learning becomes easier on the part of group members because everyone is engaged in achieving the objectives of the assigned task. Effective work is done because group members are held accountable for their own small portion of the general work. Learning is facilitated because it is not left in the hands of a few group members; all group members have something to contribute to obtaining the group's objectives. As such, knowledge will not be new to anyone, hence enhancing classroom assessments.
- It eliminates and reduces actions that are not helpful to the group. At the end of the task, members' contributions are assessed; members are told whose contributions were helpful and which were not. To this end, those whose contributions were irrelevant will work harder to correct their mistake as well as ameliorate their work in subsequent tasks. The fact that they try to improve in subsequent sessions enhances the reduction and elimination of actions that are not helpful to the group, thus influencing academic quality (Johnson et al., 2006).

## The Role of the Teacher in Enhancing Group Processing

Johnson et al. (2006) say teachers and instructors can set group processing for learners in the following ways:

• The skills to be developed by the group are chosen by the teacher, which serves as part of the objective of the task given. In this light, the learners do not just learn or do work

given in a haphazard manner but carry out tasks in relation to the skills and objectives given by the teacher.

- The teacher explains to the learners what actions are expected of them throughout the work. Thus, learners are guided on how to go about working, the kinds of behaviours expected from members, and the nature of interactions required from members as they work. Learners have to know that this is not a one-man show, where the group leader does whatever he pleases; it is not a situation where members do not contribute and leave the entire work to be done by some individuals.
- Instructors have to equally monitor the different groups as they carry out their activities. Teachers have to go around the class, monitoring the different activities that group members are carrying out in relation to the task given. He should be able to resolve small arguments and conflicts in the different groups as they work; he should be able to see to it that learners are on track in their individual groups; and if not, direct and guide them on the right path. The instructor should monitor the groups to ensure students are actually working and not idling or conversing. They have to observe group members' actions and interventions so as to improve their learning.

## Elements necessary for group processing

- **Feedback:** group members should receive feedback based on the different contributions they make. If the feedback is positive, it spurs learners to work harder to improve their work. Thus, it is important that positive feedback be given.
- **Reflection:** group members do have to reflect on the feedback that was given them so as to improve on subsequent tasks. If the feedback given was not good, they should be aware of doubling their efforts; if it was good, then they know they have to keep it on and continue improving their work.
- **Improvement goals:** individual members as well as the group should set goals for improving their work both at the individual and group level. Individual group members can pick up specific social skills to work on; groups can also decide about working on collaborative skills in their subsequent tasks.
- **Celebration:** groups should celebrate hard-working and successful members in the group; it should equally celebrate the success of the whole group. These celebrations serve as a catalyst to boost the morale of group members to continue working well and improving on their work (Johnson et al., 2006).

Thus, from the above, Johnson et al. (1998) say group processing is a very important element as far as cooperative learning is concerned because students cannot learn from experiences that they do not reflect on. With group processing, group members have the opportunity to reflect on their contributions, which makes them want to improve their work either as individuals or as a group. From the above, quality in cooperative learning can be attained through elements like knowledge construction, validity, reliability, and group processing, which are all means of attaining academic quality. Academic quality, on the other hand, enhances learners' performances as well as classroom assessments.

## 2.2.2.0. PEDAGOGICAL QUALITY

Pedagogic quality is another aspect that can influence the quality of cooperative learning and classroom assessment. To Niemi, Heikkinen, and Kannas (2012), in Chris et al. (2012), effective pedagogy is that which gives room for learners' voices to be heard. It is important for learners to be consulted for educational decision-making; learners' experiences and backgrounds should be taken into consideration to bring about effective pedagogy, thus pedagogical quality. According to Sellman (2009); Chris and et al. (2012), when learners are consulted on educational decision-making, there is an improvement in academic communication as well as motivation and engagement in matters concerning the school. There is equally insight for teachers, which goes a long way in improving their practices as well as their relationship with the learners; it enhances feedback, which greatly improves the teaching and learning processes.

Quality in pedagogy also emphasises building knowledge in learners prior to learning and experience. Pedagogic quality focuses on developing higher-order thinking and metacognition and making good use of dialogue and questioning. Bloom's taxonomy of educational objectives (1956) serves as a basis for arguing that good questioning follows a hierarchical order: knowledge, comprehension, application, analysis, synthesis, and evaluation. In a nutshell, teaching quality can be fostered through the use of different teaching methods, techniques, and processes, with respect to the previous knowledge and experiences of the learner and the environment as well. With all this under the teacher's control, learners needs will be efficiently met through teaching and learning, hence influencing their performances and classroom assessments.

#### **Characteristics of Pedagogic Qualities**

According to NAEYC (1999), the teacher has a great role to play when it comes to pedagogic quality. Approaches used by the instructor, either in class or for the transmission of new knowledge, have an effect on the pedagogic quality. Quality in pedagogy tries to examine if the approaches used by the teacher enhance communication, interaction, and cooperation amongst the learners, implying the above elements have a way of bringing about quality in pedagogy, and it takes only a competent teacher to do so. Instructors should come up with teaching and learning opportunities that challenge learners to think, reflect, and solve problems, while on their own part, they should be able to listen, be sensitive, and get involved as they engage learners in the different learning activities through communications and interactions. Teachers should foster learning on learners' part by challenging them to learn through the different directions given to them (Pramling, 1994).

## Standards of effective pedagogy

NAEYC (1991) sees a teacher's action as having a great impact on pedagogic quality. The teacher is the one to create an enabling environment that encourages learners to create and learn through varied experiences under his control. This explains why teachers have to be competent enough to create a working environment that will engage and involve learners in the acquisition of their proper knowledge. When learners are able to create and develop their own point of view, they will embrace the fundamental values of a democratic society (Ministry of Education and Science in Sweden, 1998a). The quality of an educational system is never above the teacher's quality; there is a consensus that the quality of the teacher enhances high performance in education (Barber et al., 2007). Below are some of the things a good teacher will do in order to promote good learning, which are equally seen as characteristics of successful pedagogies that can enhance the quality of pedagogy.

 Quality pedagogy gives room for learners' voices to be heard; effective pedagogy can be generated by paying attention to what learners are saying, involving learners in decision-making in education, and listening to their own experiences. Listening to learners consists of talking with them about school, about teaching and learning, and about new initiatives and difficulties encountered in learning. Robinson and Taylor (2007) have cited a lot of literature in which instructors have changed their practices to foster learners' experiences and understanding. Learners' voices should be heard, not just from the superficial, questionable ethics of consulting them; there should be a serious engagement where learners can respond with insight and intelligence. Sellman (2009), citing the works of Fielding and Bragg, says students' voices play the following important roles:

- Firstly, it improves academics; this is because there is communication, which makes learners motivated as they are engaged in school affairs.
- Secondly, it gives instructors insight, which helps in improving their practices in the classroom and relationships with the learners.
- Thirdly, it brings about important feedback in the school, which leads to the improvement of the teaching and learning processes.

Whatever the case, Robinson et al. (2007) warn that consulting learners should be done properly or not at all. Everyone's voice cannot be heard to avoid uncountable alternatives; hence, learners' voices should constitute just one group and one voice. In addition to the above, behaviour can also influence pedagogic quality (what teachers do), knowledge and understanding (what they know), and beliefs (why they act the way they do). Grimmitt (2000) says it is better for the government to draw up a national curriculum based on theories of teaching and learning than to prescribe a framework of contents and outcomes free of curriculum theory and not address the characteristics of learners.

Alexander (2004, pp. 7-8) says pedagogy consists of two meanings: firstly, it is the act of teaching, and secondly, it consists of "*ideas, values, and evidence' about children, learning, teaching curriculum, and culture*". Pedagogy is not limited only to the teaching and learning techniques used; it goes beyond that and refers to theories, children, and learning that underpin practices. Thus, it is based on the teaching-learning relationship, which cannot be separated from understanding how learners learn (James et al., 2011). Effective practice can be acquired through interaction amongst the following elements: subject matter knowledge, knowledge of pedagogic methods, techniques, and practices, and knowledge about children and their development (Husbands, 2010).

Moreover, quality pedagogy takes into consideration long-term learning outcomes as well as short-term goals. Most often, many educators are focused on securing good results, but that should not occupy the central stage, even though it is satisfactory to have good results at the end of studies. With good results, one tends to ask if they are indications of understanding and capability in important learning domains or if they are a sign of personal fulfilment and economic and social justice. Much literature on what is expected of teachers focuses on the conduct of individual lessons and lesson planning. It is important to note that the quality of individual lessons does not mean effective pedagogy is built on the sequence of the individual lessons; it goes as far as relating the overall vision of what an educated person should be able to do, know, and understand at a given age. Individual lessons have to be related to the sequence planned for learning so as to focus on an overall intended learning outcome. Hence we have *"the lesson in the context of the scheme, the scheme in the context of the annual curriculum plan, and the annual curriculum plan in the context of intended learning outcomes"* (Pring, 2004).

In addition to the above, quality pedagogy builds on the learner's prior learning experience; it is difficult to come up with effective pedagogic practices and techniques without working on assumptions about how learners think and learn. Ideas on teaching and learning changed when Piaget, in the 20<sup>th</sup> century, carried out his research on children's learning and cognitive development. In his research, Piaget explains how children learn by exploring their environment, the developmental stages of the child in relation to making sense in the environment, and the role of adults in assessing children's readiness to learn. Piaget research was supplanted by constructivist learning theories, where Vygotsky, who was not concerned about how individual children learn like Piaget, said children learn through interaction with others and are able to acquire language and dialogue. To him, what a child is able to do in cooperation today will be able to be done alone tomorrow; thus, pedagogy is effective when it matches ahead of development (Vygotsky in Alexander, 2000).

Scaffolding learners' learning also fosters quality in pedagogy. Piaget's works focused on the child's exploitation of the environment and teachers ability to assess a child's readiness for learning. The constructivists, on their part, focused on dialogue, discussion, and the social context of learning. They laid emphasis on teachers' ability to scaffold learning beyond the present level of understanding. These scaffolds are transitional because, firstly, they support developmental change in learners, and secondly, they change themselves. That is to say, when the learners move to a higher level, the earlier scaffolds are no longer needed and are replaced by new ones to move the learners beyond. Kim et al. (2011) look at the importance of scaffolding, especially in the light of problem solving in a science classroom. Problem solving is a deliberate activity that makes learners go through: problem identification, exploitation, reconstruction, presentation, communication, reflection, and negotiations, which are important in the learning sciences. Problem solving makes the teaching and learning process more content-oriented. Puntambekar et al. (2000) found these five effective and essential features of scaffolding learning: common goals, ongoing diagnosis, dynamic and adaptive support, dialogues and interactions, and fading and transfer of responsibilities.

Furthermore, the use of a wide range of techniques, such as whole-class and structured group work, guided learning, and individual activity, enhances quality pedagogy. There should be a fitness to the purpose of particular pedagogies. The effectiveness of pedagogic techniques and approaches does not depend on the selected approach but on the combination of different pedagogic strategies to attain one's objective. Implying that it is not the teaching approaches that are effective in themselves but rather careful planning, good organisation, and implementation that influence the quality of pedagogy (Stronge et al., 2007). Thus, it is not all about a strategy that matters here; it is the manner in which the strategy is used or employed by the instructor that makes the difference (Hattie, 2003).

Finally, quality pedagogy embeds assessment for learning. The use of appropriate embedded learning has high potential for improving students' achievements (William, 2010). Formative assessment is the extent to which evidence of students learning is interpreted and elicited by teachers, students, and peers in order to make a decision on the next step to take that is considered better (Black et al., 2009). Feedback is a strong tool for influencing achievements. Good-quality feedback has a positive effect when instructors receive it concerning their teaching (Hattie et al., 2007). In a nutshell, pedagogic quality is an aspect that can greatly enhance the quality of cooperative learning and classroom assessment. To positively influence classroom assessments, learners' voices should be taken into consideration, and the use of varied teaching methods, techniques, and processes should be employed by instructors so as to meet learners' different points of need since learners come from diverse backgrounds with different experiences and previous knowledge.

#### **Purposes of Group Processing**

• It enables the group to continue improving their work over time. Group members always sit down at the end of their session to examine the contributions of members, equally to tell whose work was helpful and whose contributions did not have a place. Thus, members keep on putting in more effort to ameliorate their work overtime and

put in their best to positively contribute to the task. With such an attitude, academic quality is enhanced, and classroom assessment is equally influenced.

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- It makes the learning process simpler through streamlining; learning becomes easier on the part of group members because everyone is engaged in achieving the objectives of the assigned task. Effective work is done because group members are held accountable for their own small portion of the general work. Learning is facilitated because it is not left in the hands of a few group members; all group members have something to contribute to obtaining the group's objectives. As such, knowledge will not be new to anyone, hence enhancing classroom assessments.
- It eliminates and reduces actions that are not helpful to the group. At the end of the task, members' contributions are assessed; members are told whose contributions were helpful and which were not. To this end, those whose contributions were irrelevant will work harder to correct their mistake as well as ameliorate their work in subsequent tasks. The fact that they try to improve in subsequent sessions enhances the reduction and elimination of actions that are not helpful to the group, thus influencing academic quality (Johnson et al., 2006).

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- Instructors have to equally monitor the different groups as they carry out their activities. Teachers have to go around the class, monitoring the different activities that group members are carrying out in relation to the task given. He should be able to resolve small arguments and conflicts in the different groups as they work; he should be able to see to it that learners are on track in their individual groups; and if not, direct and guide them on the right path. The instructor should monitor the groups to ensure students are actually working and not idling or conversing. They have to observe group members' actions and interventions so as to improve their learning.

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## 2.2.3.0. PEDAGOGICAL QUALITY

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knowledge, has an effect on the pedagogic quality. Quality in pedagogy tries to examine if the approaches used by the teacher enhance communication, interaction, and cooperation amongst the learners, implying the above elements have a way of bringing about quality in pedagogy, and it takes only a competent teacher to do so. Instructors should come up with teaching and learning opportunities that challenge learners to think, reflect, and solve problems, while on their own part, they should be able to listen, be sensitive, and get involved as they engage learners in the different learning activities through communications and interactions. Teachers should foster learning on learners' part by challenging them to learn through the different directions given to them (Pramling, 1994).

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- Secondly, it gives instructors insight, which helps in improving their practices in the classroom and relationships with the learners.
- Thirdly, it brings about important feedback in the school, which leads to the improvement of the teaching and learning processes.

Whatever the case, Robinson et al. (2007) warn that consulting learners should be done properly or not at all. Everyone's voice cannot be heard to avoid uncountable alternatives; hence, learners' voices should constitute just one group and one voice. In addition to the above, behavior can also influence pedagogic quality (what teachers do), knowledge and understanding (what they know), and beliefs (why they act the way they do). Grimmitt (2000) says it is better for the government to draw up a national curriculum based on theories of teaching and learning than to prescribe a framework of contents and outcomes free of curriculum theory and not address the characteristics of learners.

Alexander (2004, pp. 7-8) says pedagogy consists of two meanings: firstly, it is the act of teaching, and secondly, it consists of "*ideas, values, and evidence' about children, learning, teaching curriculum, and culture*". Pedagogy is not limited only to the teaching and learning techniques used; it goes beyond that and refers to theories, children, and learning that underpin practices. Thus, it is based on the teaching-learning relationship, which cannot be separated from understanding how learners learn (James et al., 2011). Effective practice can be acquired through interaction amongst the following elements: subject matter knowledge, knowledge of pedagogic methods, techniques, and practices, and knowledge about children and their development (Husbands, 2010).

Moreover, quality pedagogy takes into consideration long-term learning outcomes as well as short-term goals. Most often, many educators are focused on securing good results, but that should not occupy the central stage, even though it is satisfactory to have good results at the end of studies. With good results, one tends to ask if they are indications of understanding and capability in important learning domains or if they are a sign of personal fulfillment and economic and social justice. Much literature on what is expected of teachers focuses on the conduct of individual lessons and lesson planning. It is important to note that the quality of individual lessons does not mean effective pedagogy is built on the sequence of the individual lessons; it goes as far as relating the overall vision of what an educated person should be able to do, know, and understand at a given age. Individual lessons have to be related to the sequence planned for learning so as to focus on an overall intended learning outcome. Hence we have "the lesson in the context of the scheme, the scheme in the context of the annual curriculum plan, and the annual curriculum plan in the context of intended learning outcomes" (Pring, 2004).

In addition to the above, quality pedagogy builds on the learner's prior learning experience; it is difficult to come up with effective pedagogic practices and techniques without working on assumptions about how learners think and learn. Ideas on teaching and learning changed when Piaget, in the 20<sup>th</sup> century, carried out his research on children's learning and cognitive development. In his research, Piaget explains how children learn by exploring their environment, the developmental stages of the child in relation to making sense in the environment, and the role of adults in assessing children's readiness to learn. Piaget research was supplanted by constructivist learning theories, where Vygotsky, who was not concerned about how individual children learn like Piaget, said children learn through interaction with others and are able to be done alone tomorrow; thus, pedagogy is effective when it matches ahead of development (Vygotsky in Alexander, 2000).

Scaffolding learners' learning also fosters quality in pedagogy. Piaget's works focused on the child's exploitation of the environment and teachers ability to assess a child's readiness for learning. The constructivists, on their part, focused on dialogue, discussion, and the social context of learning. They laid emphasis on teachers' ability to scaffold learning beyond the present level of understanding. These scaffolds are transitional because, firstly, they support developmental change in learners, and secondly, they change themselves. That is to say, when the learners move to a higher level, the earlier scaffolds are no longer needed and are replaced by new ones to move the learners beyond. Kim et al. (2011) look at the importance of scaffolding, especially in the light of problem solving in a science classroom. Problem solving is a deliberate activity that makes learners go through: problem identification, exploitation, reconstruction, presentation, communication, reflection, and negotiations, which are important in the learning sciences. Problem solving makes the teaching and learning process more than content-oriented. Puntambekar et al. (2005) found out these five effective and essential features of scaffolding learning: common goals, ongoing diagnosis, dynamic and adaptive support, dialogues and interactions, and fading and transfer of responsibilities. Furthermore, the use of a wide range of techniques, such as whole-class and structured group work, guided learning, and individual activity, enhances quality pedagogy. There should be a fitness to the purpose of particular pedagogies. The effectiveness of the pedagogic techniques and approaches does not depend on the selected approach but on the combination of different pedagogic strategies to attain one's objective. Implying that it is not the teaching approaches that are effective in themselves but rather careful planning, good organization, and implementation that influence the quality of pedagogy (Stronge et al., 2007). Thus, it is not all about a strategy that matters here; it is the manner in which the strategy is used or employed by the instructor that makes the difference (Hattie, 2003).

Finally, quality pedagogy embeds assessment for learning. The use of appropriate embedded learning has high potential for improving students' achievements (William, 2010). Formative assessment is the extent to which evidence of students learning is interpreted and elicited by teachers, students, and peers in order to make a decision on the next step to take that is considered better (Black et al., 2009). Feedback is a strong tool for influencing achievements. Good-quality feedback has a positive effect when instructors receive it concerning their teaching (Hattie et al., 2007). In a nutshell, pedagogic quality is an aspect that can greatly enhance the quality of cooperative learning and classroom assessment. To positively influence classroom assessments, learners' voices should be taken into consideration, and the use of varied teaching methods, techniques, and processes should be employed by instructors so as to meet learners' different points of need since learners come from diverse backgrounds with different experiences and previous knowledge.

#### **Group Competition**

Pedagogic quality can also be enhanced through group competition. According to Free.Dictionary.com (2012), competition deals with a test of skills and abilities. Competition is a conquest wherein learners perceive that they will be rewarded based on comparison with other learners or, better yet, past performances. Verhoeff (1997) says if competition is well organised, it challenges learners to put in their best. In other words, competition encourages motivation for learning. Human beings do not act in isolation; their actions are mostly influenced by others or the environment as they interact. This explains why classroom interaction is an important feature that enhances learners' motivation (Fortress Learning, 2011).

Goody et al. (2008) say that when every learner gets the chance to win in competition, it makes competition appropriate. They insist on a team approach to competition rather than individual competition. When team competition is used, it reduces the fact that the same individuals might always win and the same losers might always lose, reducing embarrassment for the losers. What is more, a team-based approach increases cooperation among members of a team and brings about unity amongst team members as they work together for a common goal, which is to be better than the other team they are competing with. Sharon (2009) is in favour of competitions being used in schools.

Nevertheless, cooperative activities or learning tend to make the learners overly dependent on each other, such that if care is not taken, they might be affected in the future as they may not be able to perform or carry out activities individually. Group competition can enhance pedagogic quality, judging from the fact that it motivates the learners to learn and put in their very best in trying to win the prize; it wakes even the very slow learners to sit up to contribute to the team's so that their team can win the sacred prize set for the competition.

#### How to Structure Healthy Competition

Vockell (2011) holds that, for completion to be healthy, it must offer opportunity to all the learners to have good chances of winning; this can be done through the use of many different activities. Ask different questions to different learners with different abilities, arrange students into teams, and introduce elements of chance into the competition. More specifically, Vockell (2011) says that for competition to be healthy, learners should compete against themselves rather than against other students. Evaluating learners on the basis of what they have personally acquired gives them the opportunity to succeed. With this, even the weak students, who are always disadvantaged, are opportune to improve on their knowledge and skills as they compete against themselves. Also, for competition to be healthy, it should be combined with a cooperative environment. Let learners work in teams and compete against other teams. When competition is appropriately balanced with cooperation, it enhances students learning and enables them to succeed in their academics, both in concert with other learners in the group and on an individual basis within the team (Vockell, 2011).

#### Managing Competition in a Learning Environment

Although many reasons have been advanced against the use of competition in school, such as competition having a negative effect on learning since learners tend to focus on the goals to be attained at the end rather than the process itself (Lam et al., 2001), Verhoeff (1997) says competition, if well organised, has a lot of advantages in the classroom because it pushes the learners to put in their best and thus serves as a motivating factor for students' learning. It is in the same light that Lawerence (2004) supports that competition brings about active learning and motivation on the part of the learners. Team competition is less harmful for learners and enhances their learning skills. Learners prefer anonymous competition to face-to-face competition. With group competition, learners can compete anonymously, whereas with individual competition, learners do compete face-to-face, which might not always be good because of the negative emotions as well as the stress that comes with it (Yu et al., 2002).

Moreover, for competition to be effective, the activities to which the team or group is subjected should be short, and learners should be focused on the learning process and not the outcome. This explains why prizes given to the team that won the competition should just be symbolic or less important in order to make learners more intrinsically motivated than driven by the outcome. If that which is won is important, learners will strive for the outcome or get the reward, and less attention will be paid to the quality of their effort. Thus, competition should not make the learners hold on to the outcome or reward but to the process (Shindler, 2007). In addition to the above, to make competition effective in the teaching and learning process, the goal or objective of the competition should be clearly stated in the process rather than the results of the different groups or teams. When goals are clear, winning or losing will be of less importance to the teams or members as compared to learning and improvement during competition. Symbolic prizes could serve as a prerequisite, so valuable prizes should not be set, which might easily cause the learners to focus on them (Shindler, 2007).

In all, group competition gives learners the opportunity to work collaboratively with other group members to win the prize. To this end, individual accountability sets in, for group members try to do their best in accomplishing their own portion of the general task, implying that everyone is at work and there is no free ride. Every group member puts in their best effort to complete the team's goal so as to win the trophy; thus, competition pushes the learners to work hard and bring out the best in accomplishing tasks in order to win the prize, hence influencing the acquisition of knowledge, skills, and abilities, which in turn will influence their performances and classroom assessment.

#### Motivation

According to Kerr et al. (1983), if group members are aware that their personal effort are very much needed for group success, they will be motivated to work harder and not go for a free ride. The use of motivation can equally enhance pedagogic quality. Motivation is the thing that causes one to repeat an action or that directs one's behavior. Elliot et al. (2001) Motivation could be intrinsic or extrinsic, as it comes from two sources: oneself or other people. Looking at intrinsic motivation, it is that type of motivation that is self-desire, and extrinsic motivation is when individuals are driven by external influences such as competition and a cheering coward. Marr (2009), through the Incentive Theory promoted by psychologists like B.F. Skinner, illustrates that a person's behaviour has social ramifications; the motive for an individual to do something could be a reward, which can either be tangible or intangible, that comes at the end of the action.

## **General Strategies to Motivate Learners**

Effective learning in the classroom is usually triggered by the teacher's ability to motivate the learners to learn. It is equally true that some learners are naturally enthusiastic to learn, and some too have to be inspired by their teachers to learn. Thus, no matter the level of motivation that learners had or brought to class, it can get better or worse based on what happens in the classroom, so the teacher has a responsibility to transform the level of motivation that was brought to class by learners (Ericksen, 1978). It is difficult to say what motivates learners because there are many factors that can affect their motivation, such as their general desire to achieve, their interest in the subject matter, their perception of how useful the materials are to be learned, their self-confidence and self-esteem, and not leaving out patience and persistence (Bligh, 1971; Sass, 1989).

Here are some of the teaching situations that teachers can employ to make learners selfmotivated, independent learners:providing regular and positive feedback that supports the learners belief that they can do better, give them opportunities to succeed by giving them tasks that are not too difficult, create a conducive environment by creating a positive and open atmosphere, make the learners find personal meaning and value in what they do and the instructors should equally make the learners feel valued in the learning community (Lowman, 1984; Lucas, 1990; Weinert et al., 1987; Bligh, 1971).

Ericksen (1978) equally stipulates that learners are motivated when the course or subjects are well organised and taught by an enthusiastic teacher who has a genuine interest in the learners and what they learn. Hence, instructors have a lot to play in classrooms to bring about motivation on the part of learners; good teaching practices can do more to reduce learners' apathy than a special effort to attack motivation directly. Thus, the following general strategies can be used to motivate learners:

- Capitalise on learners needs; when a learner's motive for learning a particular course or subject meets their needs, they learn best. Learners might come to the classroom with needs that, when acquired, will enable them to complete a particular activity or task. Learners need to perfect skills; they need to gain experiences to overcome challenges; they need to become competent; they need to succeed; they need to be involved and interact with others. Thus, the purpose of enrolling in a course or discipline is to fulfil one or more of these needs. When the instructor and his practices satisfy these different needs of the learners, it sustains learning on the learner's part and also makes learning efficient, hence encouraging them to do better (McMillian et al., 1991).
- Make learners active participants in learning. Lucas (1990) holds that students learn by carrying out activities such as writing, doing, creating, designing, and solving problems; thus, indulging them in such activities brings about motivation and curiosity on their part. The teacher should pose questions, encourage them to guess the results of experiments, suggest approaches to problems, and work in groups where they lead discussion. The instructor could equally make use of collaborative learning methods than lecturing to enhance active methods that bring about motivation and encourage students learning.
- Ask the learners to analyse what makes their class more or less motivating. Sass (1989): Choose two classes and ask the learners to bring out the factors that motivated them and those that did not motivate them. The learners made a list of the specific aspects of the two classes that influenced their high level of motivation. From those aspects reported by the learners, Sass came up with eight characteristics that enhance motivation: teachers enthusiasm, relevance of course materials, organisation of the course, appropriate difficulty level of the material, active involvement of

learners.variety, rapport between the instructor and the learners, and the use of concrete, appropriate, and explicit examples

#### How to Structure Content or Courses to Motivate Students Learning

To make the learner interested in studying a particular course, subject, or content, the instructor can do the following:

- Working from students' strengths and interests, the instructor should try to find out why the learner wants to study that particular discipline or content, what they feel concerning the subject matter, and what their expectations are. With this, the instructor will be guided by examples, case studies, and assignments that can relate the content of the course to the needs, interests, and expectations of the students. The instructor should always try to explain to learners the importance of what they are learning and whether it is going to help them achieve their educational, professional, or personal goals. Tell them so that they can be motivated to study it (Brock, 1976; Cashin, 1976; Lucas, 1990).
- More importantly, learners should have some say in their choice of what to study if possible; give learners the opportunity to choose between two locations concerning their field trip; and give them the opportunity to choose which topic they will like to explore deeper. Instructors can add optional units to courses if it is possible and give learners assignments or term papers where they can express themselves (Ames et al., 1990; Cashin, 1979; Forsyth et al., 1991; Lowman, 1984).
- In addition to the above, the instructor should increase the difficulty level of the material as the semester progresses. Learners should be given the opportunity to succeed at the beginning of the semester; having the feeling that they can succeed will motivate them to learn, and the teacher can gradually increase the difficulty level. Learners will only be able to experience success and difficulties when questions in the exams or assignments have easier and harder questions (Cashin, 1979).
- The instructor should vary his teaching methods. Variety draws learners' attention and keeps them awake and involved in the lesson. Teachers should avoid routine so as to make the learners re-awaken since they will be attentive to see what is new in the instructor's presentation. The instructor can use activities and methods such as role play, debate, brainstorming, demonstrations, small group work, guess speakers, case studies, and audio-visuals (Forsyth et al., 1991).

Hence, motivation plays an important role in enhancing learning as well as pedagogic quality. Learning becomes meaningful when learners are motivated, be it intrinsically or extrinsically. Motivation pushes learners to work harder and explore their environment. It gives learners zeal, making the teaching process easier on the part of teachers. Thus, motivation has an influence on classroom assessment as well as learners' performances.

## Imitation

Pedagogic quality can also be influenced through the use of imitation. Schunk (2007) says most learning takes place in a social environment in which the learners obtain skills, strategies, beliefs, and attitudes by observing others. Schunk (2007) equally says that the social learning theory places human behaviour within a framework of three reciprocal interactions: persons, behaviour, and environment, which influence one another. It is more of a triangle and needs the functioning of all three parts to keep the triangle in place. Due to the fact that cooperative learning heterogeneously groups learners, there is a possibility that, in the course of interacting in their different subgroups, learners will retain knowledge through observing and modelling desired behaviours, attitudes, and reactions, which can influence their learning.

According to Johnson et al. (2010), in social learning theory, learners learn more through observation and imitation of the desired behaviours of other members or learners. Thus, there is a strong connection between this theory and the practice of cooperative learning because the social behaviours and actions of active learners in the cooperative learning group are expected to be modelled and adopted by other learners through interaction, which can take place either depending on observed behaviours, cognitive factors, or the external environment. According to Rogers et al. (2006), imitation deals with one's ability to socially learn from others as well as incorporate behaviours seen in others into their behavioural repertoire. It deals with the connection between what participants observe and what they enact as behavior. Thus, when imitating, learners have to be able to absorb and repeat in order to be integrated into the behaviour they are imitating.

Although imitation is generally seen as a non-cognitive, low-level copying behaviour that does not foster creativity and critical thinking in learners (Bender, 1979; Deahl, 1899; Warnick, 2008), studies in neuroscientific and psychological development have proven that imitation requires a high level of cognitive capacity as well as critical ability unique to human beings (Meltzoff, 2005; Meltzoff et al., 2003). Imitation is developed in infancy and continues

up to adulthood, and it is associated with intelligence, communication, emotional, and cognitive abilities (Meltzoff et al., 2002; Nadel et al., 1999). This only implies that imitation has a role to play in learning, even though most studies show that it is important for children. But it goes beyond children's learning to adulthood's learning.

Imitation is an important aspect of learning and goes beyond learners copying the behaviour of the person they are observing; it requires participants to copy behaviour with an understanding of the goal of such a behaviour and, moreover, to understand that the same behaviour can be acquired by other behaviours. This aspect of the learners being able to imitate observers through understanding the goal of the said behaviour is what makes imitation different from other forms of social learning, according to Hurley et al. (2005); Zentall (2006). This is further illustrated through the example where participants were shown how to put on the lights with the observer pushing it with his head. Thus, participants will imitate putting on the light by pushing it with their heads based on whether the observer's hands are free or empty. Participants understood that the goal was to put on the lights, and certainly the demonstrator used his head because his hands were not free. Thus, the participants will imitate the demonstrator by putting on the lights with their heads and not their heads (Gergely et al., 2002).

Imitation as a means of learning requires high-level cognitive abilities because learners have to understand the goal behind the observed behaviour in order to come up with a different means appropriate to the attainment of the same goals, meaning that imitation is not a low-level and non-cognitive behaviour (Hurley et al., 2005; Williamson et al., 2010). Imitation has to do with complicated capacities, and it is important for human learning. Research has shown that both children and adults use imitation in social interaction, even though more studies emphasise that infants learn through imitation (Brass et al., 2000, 2001; Meltzoff, 2005, 2007; Rumiati et al., 2009).

In all, pedagogic quality can be enhanced through the use of imitation, taking into cognizance that to copy, the learners need to understand the reason behind the behaviour they are modelling; hence, a lot of reflection is needed on the learners' part, which enhances learning. Moreover, copying worthy behaviours, such as hard-working behaviours, from other classmates or group members influences classroom assessment.

#### **Individual Accountability**

Deutsch (1960) says cooperative learning brings about positive interdependence, hence individual accountability. Pedagogic quality can also be achieved through the use of individual accountability. The purpose of cooperative learning, making use of individual accountability, is to make the individual stronger; thus, learning together in small groups gives them the opportunity to gain greater individual competency. Learning to do things together gives them a better opportunity to do the same easily by themselves in situations where they are left alone. Thus, there is no free rider or free lunch when the question of individual accountability in group work is concerned. No one gains credit for the tasks performed by others, for all the group members are particularly involved in accomplishing their own little tasks within the general goals of the group (Johnson et al., 1984).

Individual accountability is something shared by all in the group, even though it is difficult to establish and maintain. It requires time, practice, patience, and commitment, but once it is established amongst individual group members, the strength of the group indeed becomes the sum of the parts (Anderson, 2003). More importantly, individual accountability fosters a situation where individual members' performances and results can be assessed and evaluated by others. Individual accountability can take the following forms in the classroom:

- **Random checking:** teachers can randomly call up any learners to present or give explanations after they have discussed in their groups.
- Individual contribution to team report: after a team has orally assembled the report of their group, the teacher might randomly pick up any member to present at least certain portions of their report. Thus, we can only talk of individual accountability, where individual members of that team can orally give their own report.
- **Individual skill demonstration:** the instructor might give room to individual group members to demonstrate the skills that were given to them as tasks in their group.
- **Individual explanation:** looking at many activities related to cooperative learning, individuals will have the opportunity to explain their approaches, their thinking, and their solutions (Mills et al., 1999).
- **Teach it to someone else**; individual group members should be given the opportunity to teach materials learned to their peers so as to foster individual accountability.
- In peer instruction, the teacher might prepare questions, which the learners will answer individually and later in their groups or teams. That is to say, after they have

individually answered questions, they will use their ideas of their answers in their different group discussions to describe their answers and equally listen to others to reach a conclusion about the best consensus answer (Mazur, 1997).

• In structured problem solving, groups are assigned roles or different tasks to carry out in a group. But at the end of the task, any individual from that group is randomly called upon to present their solutions (Mills et al., 1999).

According to Eric (1992) over 600 studies in the past 90 years have been dedicated to validating the assertion that students learn better when working together in small groups. This group can either be collaborative learning, cooperative learning, or group work. According to Davis (1993) research has proven that learners perform better, are able to retain knowledge longer, and even appear with course materials when they learn in groups. Establishing the appropriate conditions for learning in a group setting is a critical component of success. This is because one of the conditions requires the teacher to ensure that individual members of a group are actually working on the material given rather than taking credit for other group members.

According to Johnson (1999), one of the primary purposes of a collaborative learning group is to make members strong individuals. Exploring cooperative learning as a pedagogical approach implies that you must also explore the methods for enforcing individual accountability for learning. How do you ensure that each individual learns each course objective when the students work in teams? How do you prevent the "social loafer" who is content to let everyone else do the work while receiving the same grade? How do you prevent the overbearing member who dominates group discussions so that others stop attempting to contribute? To him, the above can be controlled through individual accountability.

#### Key Elements to Attain Accountability of Group Members

Cooperative learning occurs when students work together in small groups to accomplish a collective task. According to Slavin (1980) when cooperative learning is employed properly, it can result in improved conventional academic achievement, such as performance on standardised tests. A well-constructed cooperative learning environment contributes to the development of conceptual skills needed for problems requiring critical thought. It improves social and leadership skills gained through group members' interaction. According to Johnson (1991) these benefits are not automatically achieved, but rather teachers must place

considerable thought into how they implement the technique. The following key elements must be present for students to learn in a cooperative environment and attain the accountability of group members:

- 1. **Positive interdependence**. Students within a group must be forced to rely on one another to be successful on their project or homework. The scope of the work must be such that it is impossible for the team to do well (finish the work and receive a good grade) without considerable contributions from each group member.
- 2. **Individual Accountability.** Instructors, teachers, and group members must have a method of holding each person accountable for their contributions. Moreover, each student must learn all of the course objectives; learning only a subset is not sufficient.
- 3. **Face-to-face interaction**. Some work should be separated and completed in parallel, but members of the group must be forced to interact directly with one another. The nature of the task should give them the opportunity for a division of labour; there must be a degree of integration that can only be accomplished collectively.
- 4. **Appropriate use of collaborative skills**. Group members must learn how to interact with others and develop leadership, decision-making, communication, and conflict-resolution skills that will be required by learners upon graduation.
- 5. **Group processing**. The team has to approach the overall work from a group perspective. The members must establish mutual goals, a collective timeline, and group policies to keep the team focused. Additionally, they must periodically assess their collective performance and make adjustments as needed.

#### How to avoid an individual's accountability problem

The first step in promoting individual accountability in an environment suitable for cooperative learning is to build teams in a productive manner. Placing students in effective teams requires considerable forethought in order to account for each of the elements of a successful cooperative learning endeavor. According to Oakley (2004) teachers should form heterogeneous groups consisting of about 3–5 learners in a group. Teams should be selected by the classroom teacher because he knows the different students; if the learners are left to do the grouping, they might not keep individual learning as their primary goal. Stronger students may gravitate towards one another, leaving the weaker students to flounder, or students may overestimate the significance of friendships and social acquaintances.

Oakley (2004) says the actual size of the group has a critical impact on individual accountability. The right-sized team can maximise collaborative effort while minimising potential problems; a group of 3-5 is good for a team because if the group is too small, individuals can easily dominate group sessions, or there may be insufficient diversity of insight or skills to enhance learning. On the other hand, if the group is too large, some group members would easily avoid working, some quieter members may simply be ignored, or there may be insufficient work to keep all members occupied.

To sum it up, individual accountability influences classroom assessment. If learners are held responsible for their assigned tasks, they will be motivated or forced to learn as well as contribute to the attainment of group goals by accomplishing their individual tasks. Learning is most likely to occur in the course of accomplishing tasks. In accomplishing tasks, the opportunity to master the content of their work is given, and as such, their performances and classroom assessment will be influenced.

# 2.2.4.0. CLASSROOM MANAGEMENT QUALITY

The quality of classroom management is another factor that can influence the quality of cooperative learning and classroom assessment. Managing the class and learners as they work in groups influences their performances; thus, classroom management quality in cooperative learning can equally influence classroom assessment. Emmer and Stough (2001) believe that classroom management deals with the ability of teachers to organise and manage learners' behaviours, which in turn enables them to achieve positive educational outcomes. Hence, classroom management establishes a good environment that makes the teaching and learning process effective and possible. According to Ogunu (2000), classroom management consists of planning, supervising, controlling, and coordinating learners' activities during lessons. If these activities are properly coordinated, they will influence classroom assessment, and their impact will greatly affect learners' performances.

According to Kounin (1970), he believes that quality management can be attained when learners are actively participating in the lessons; thus, when learners are fully engaged in the lessons, they have little or no time to misbehave, so the question of disruptive behaviour does not really come into play. The instructors, on their part, should ensure lessons are precise and completed at a steady, continuous pace. If lessons are interesting, learners will pay attention; they will be focused on the task they are carrying out and will not have time to cause trouble. Instructors should efficiently plan their lessons, manage their time, and use non-verbal cues like body language and communication skills. To have quality in classroom management, instructors should plan and prepare for lessons before class; they should equally try to motivate the learners as much as possible, providing a conducive learning environment, building their self-esteem, and equally fostering their imagination and creativity in daily lessons. Thus, if cooperative learning is to be successful, the teacher has to plan and prepare his lesson very well to ensure a conducive learning environment.

#### Management to Accommodate Group Work

According to Ballantine et al. (2007), group members coordinate activities so that other group members learning can be facilitated thus there is the management to accommodate group work. Classroom management quality can also be enhanced through the management of group work and the different activities that pertain to it. Group work is an active teaching technique that fosters critical thinking and motivates learners to work, but if not well managed, it may lead to many difficulties. Better management of groups in a cooperative classroom requires the facilitator to determine who to place together in a group, know how to organise materials that learners will use in working, and come up with strategies that will give him the assurance that all group members are working (Tischanne-Moran et al., 2000; Colman, 1994; Holubec, 1992).

According to Hansen (2006), group work is widely used by many faculties. Learners working in groups may be assigned to prepare a report, collect and analyse data, create a presentation supported with visuals, and so forth, so as to produce quality work as compared to learners working alone. Thus, learners should learn to work productively with others. The following are suggestions for improving group work:

**Firstly, the importance of teamwork should be emphasized.** Hansen (2006) says that **before** groups are formed and tasks assigned, teachers should explain clearly why they say assignments should be done in groups. For example, the teacher's explanation may go as follows: Most of us are using groups because employers in many fields want employees who can work with others they do not know and thus may not like those who hold different views and possess different skills and capabilities.

Hansen (2006) says **teamwork skills should be taught; most** students come to group work not knowing how to function effectively. Whether in handouts, online resources, or

discussions in class, teachers need to educate learners on their different responsibilities towards the group (such as sacrifices individual learners must make in order to attain group goals) and about members' rights and expectations from groups. Students need strategies to deal with those who are not doing their fair share. They need ideas on how to constructively resolve disagreements and advice on time management.

Moreover, the teacher should use **team-building exercises to build cohesive groups.** Members need the chance to get to know each other and be encouraged to talk about how they like to work together. Hansen (2006) also notes that a discussion of worst-group experiences makes it clear to everyone that there are behaviours to avoid. This might be followed by a discussion of what individual members need from the group in order to do their best. Things like picking a group name and creating a logo also help create a sense of identity for the group and foster the commitment groups need to succeed.

The teacher should thoughtfully consider group formation. According to Hansen (2006), most learners prefer forming groups on their own. Studies have shown, on the one hand, that such groups are more productive, even though, on the other hand, they might not always get a lot done since they might spend most of their time discussing. In most professional contexts, people do not get to choose their group members if the goal is for learners to learn how to work with others whom they do not know, and then the teacher should form the groups. There are many ways groups can be formed and many criteria that can be used to assemble groups. Groups should be formed in a way that furthers the learning goals of the group activity. The tasks or work load assigned to the learners should be reasonable and clear. Whatever the task, the teacher's goals and objectives should be clear; hence, learners should not spend a lot of time trying to figure out what they are supposed to be doing. (Hansen, 2006),

Interim reports and group process feedback should be given, according to Hansen (2006). One of the group's first tasks should be to create a time line—that is, what they expect to do and by when. That time line should guide instructor requests for progress reports from the group. Students should report individually on how well the group is working together, including their contributions to the group. Ask learners what they need to make the group function even more effectively. Hansen (2006) Individual members have to keep track of their contributions; the work should include a report from every member identifying their

contribution to the project. If two members report contributing the same thing, the teacher defers to the student who has evidence that supports what the student claims to have done.

**Peer assessment should be involved in the evaluation process.** What learners claim to have contributed to the group and its final product can also be verified with a peer assessment in which members rate or rank (or both) the contributions of others. A formative peer assessment early in the process can help members redress what the group might identify as problems they are experiencing at this stage (Hansen, 2006). According to Gillies (2003), for group work to be successful, group members need to have the skills to communicate effectively through listening, explaining, and sharing ideas. Nevertheless, effective group work involves more than this; members have to learn to trust and respect each other (Galton, 1990; Kutnick, 1988), and they need skills on how to plan, organize, and evaluate their group work.

### **Group Expectations**

Group expectations are another factor that influences classroom management quality. Focus in a group enhances learners performance and, hence, classroom assessment. This focus may take the form of a goal or objective, which serves as a guide to the attainment of goals. This focus or guide enhances the management of accommodating group work. According to Patrick in his book *'The Five Dysfunctions of a Team,* a group where there is ambiguity about its priorities and direction fails. Thus, in managing a group, clear expectations should be stated in order to avoid members asking questions concerning what is expected of them as a group. Learners working together in a cooperative group should know what is expected of them and do just that so as to accomplish group goals and tasks. In order to meet group expectations, the group should be governed by the group's objectives.

# **Group Objectives**

According to Grant (2012), group objectives simply mean the group setting goals. Goal setting involves the development of an action plan designed to motivate and guide a person or group towards a goal. Studies have shown that more specific and ambitious goals lead to more performance improvement than easy or general goals. Studies by Locke et al. (2006) say that as long as the person accepts the goal, he or she has the ability to attain it, for there is a positive linear relationship between goal difficulty and task performance. Working in their small cooperative learning groups, they should identify their priorities based on the stated goals;

hence, do that which is required of them. Locke et al. (2002) say if goals (objectives) are clearly stated, they affect outcomes, which are classroom assessments in our context, in the following four ways:

- **Choice:** Goals narrow attention and direct efforts to goal-relevant activities and away from goal-irrelevant actions.
- Effort: Goals can lead to more effort; for example, if one typically produces 4 widgets an hour and has the goal of producing 6, one may work more intensely towards the goal than one would otherwise.
- **Persistence:** Someone becomes more likely to work through setbacks if they pursue a goal.
- Cognition: Goals can lead individuals to develop and change their behaviour.

This only means that groups with a fixed objective (goal) orient members' actions towards the attainment of group goals, thus influencing classroom assessment. If members activities are oriented, their attentions will be narrowed, relevant activities will be identified, and assigned tasks will be efficiently carried out, and this will go a long way towards influencing classroom assessment. Harrison et al. (1998) say that for a group to have a good orientation as well as work better, they must share a common goal, which is working towards the stated objectives of the group. Group members must have a high level of commitment towards attaining the objectives of the group by understanding that working together as a group is better than working individually. Hence, lazy students will not shy away from accomplishing the assigned task, leaving the work for a few hardworking students. Each and every learner will be concerned about accomplishing the assigned task.

According to Stogdill (1972), when group members have high commitment towards attaining group goals (objectives), they tend to perform better, thus positively influencing classroom assessment. Without a purpose or objective (goal), groups will eventually splinter into separate individuals working towards their own personal agenda or, better yet, members becoming less committed to the group's task, which will in turn influence classroom assessment. Thus, members, knowing what is expected of them and knowing they will be held accountable by other group members, will stay committed to the objectives of the group. Moreover, Locke et al. (2006) say the relationship between group goals and individual goals influences group performance, hence the learner's performance. When goals are compatible,

there is a positive effect, but when goals are incompatible, the effects can be detrimental to the group's performance.

In other words, all group members have to work towards the common good of the group in order to accomplish the objectives (goals) and render cooperative learning effective, thereby influencing classroom assessment. Locke et al. (2006) talk about the sharing factor. The sharing factor is a positive correlation that exists between sharing information within the group and group performance. In the case of group goals, feedback needs to be related to the group, not individuals, so as to improve the group's performance as well as the learner's performance. Locke (2002) says people perform better when they are committed to achieving certain goals. If goals are certain, it is because, from the onset, the group stated objectives and worked towards the attainment of these goals or objectives.

Classroom management quality can also be achieved through students' motivation. Motivating the learners is another strategy for accommodating them as they work in groups to bring out better performances and enhance classroom assessment. A final method that teachers can use to provide a cooperative learning environment that promotes individual accountability is to factor in student motivation. According to Slavin (1995) motivation should be derived from both internal and external factors. The importance of a student being truly interested in a particular topic cannot be overstated. Teachers can provide learners with the latitude to choose a project they will like to work on so that they will be motivated and implicated in the tasks. If learners are forced to work on a project they do not find interesting, it will require considerable self-discipline just to get the work done. If the learners have flexibility in selecting a problem they find intriguing, working towards the solution will be less of a chore, and there will be an increased potential for insightful discussion, deeper research, and true learning.

According to Slavin (1995), instructors can also provide external motivation by offering incentives for exercising effective teamwork. Individual accountability and group goals must be intertwined so that there is an incentive for individuals to put forth their best effort. For example, one individual may present a group's work and all members of the group receive the same grade, or the individual that presents the group's task receives a plus. Whatever the case, the learners must be motivated, be it intrinsically or extrinsically, to work towards the attainment of group goals and accomplishing assigned tasks. Motivating the learners makes them fully engaged in accomplishing assigned tasks and enhances learners' performances as well as classroom assessment.

### Size of the group

Group size is another factor that influences the quality of classroom management; the largeness and smallness of the group make it either easier or more difficult to accommodate the different activities in the group. Felder et al. (1994) proposed forming three- to four-person teams for most assignments. Attempting to observe the following two guidelines can be of help: Firstly, form teams whose members are diverse in ability levels and who have common blocks of time to meet outside class. Secondly, in the first two years of a curriculum, avoid isolating at-risk minority students on teams. There is no consensus in the literature on the optimal team size, but most authors agree that the minimum for most team assignments is three and the maximum is five. (There are obvious exceptions to these rules, such as laboratories with two-person work stations.) With only two people on a team, there may not be a sufficient variety of ideas, skills, and approaches to problem solving for the full benefits of group work to be realised.

According to Gillies (2003), for group work to be successful, group members need to have the skills to communicate effectively through listening, explaining, and sharing ideas. Notwithstanding, effective group work involves more than this; members have to learn to trust and respect each other, according to Galton (1990); Kutnick (1988), and they need skills on how to plan, organise, and evaluate their group work. Thus, for cooperative learning to be successful, learners need to be able to communicate; they need to trust and respect other group members so as to fogged ahead in accomplishing group tasks and not settle disputes based on misbehaviour.

### **Monitoring Activities in Group Work**

Classroom management quality can equally be obtained through the teacher's monitoring of the different activities carried out by the learners in their different cooperative learning groups. Monitoring groups here simply refer to the instructor being able to follow up with the learners as they work in their different groups without making them uncomfortable, for most often, some learners do feel intimidated, shy, and uncomfortable when the teacher is monitoring their activities. For some learners, the teacher's monitoring might put them under a lot of pressure rather than facilitate their task. It is very important that during group work in the classroom, the teacher moves around the different groups, answering questions that are necessary and listening to the group discussion to ensure they are in line with the assigned task

and equally help out with the challenges they are facing (Michaelson, 2002). Moreover, for better monitoring of activities in the different cooperative groups, the teacher should make sure he defines the instructional objectives to ensure learners know what is expected of them as a task.

In the different tasks assigned, teachers should ensure there is interdependence as well as a fair division of labour (Johnson et al., 2014). According to Jaques (2000), the teacher should not hover in the place of monitoring. Considering that, the teacher should not interfere with how the group functions; he should allow the learners to work on their own. This explains why Jaques (2000) suggests that the teacher might even walk out of the classroom for a brief period of time so that learners can argue out their disagreements and uncertainties and then fogged ahead together to make cooperative learning successful. For better follow-up of individual groups and members in a given group, the teacher can make use of individual accountability, where each member of the group should be held accountable for the assigned task (Johnson 1999). The teacher should use activities such as peer assessment so that nothing will demoralise learners quickly. Johnson (1999) equally talks of group roles where learners must assume some responsibilities for their own learning. Learners' motivation, according to Slavin (1995), can be used to enhance individual accountability.

# **Individuals'** Accountability

Classroom management quality can also be attained through individual accountability. Individual accountability can serve as a strategy for monitoring learners' activities in their different groups as they work. According to Eric (1992) over 600 studies in the past 90 years have been dedicated to validating the assertion that students learn better when working together in small groups. This group can either be collaborative learning, cooperative learning, or group work. According to Davis (1993) research has proven that learners perform better and are able to retain knowledge when they learn in groups; thus, establishing the appropriate conditions for learning in a group setting is a critical component for success. This is because

one of the conditions requires that the teacher make sure individual members in groups are actually working on assigned tasks and not taking credit for other group members.

According to Johnson (1999), the primary purposes of a collaborative learning group are to make members strong individuals. Exploring cooperative learning as a pedagogical approach implies that you must also explore the methods for enforcing individual accountability for learning. How do you make sure that each individual learns each course objective when the students work in teams? How do you prevent the "social loafer" who is content to let everyone else do the work while receiving the same grade? How do you prevent the overbearing member who dominates group discussions so much that others stop attempting to contribute? The above can only be monitored through individual accountability through the following:

### Using peer assessments

The use of peer assessment can enhance individual accountability. According to Kaufman (2000), when the learners have already been grouped, teachers must continually observe team progress as well as provide them with directions and guidance. In order for learners to embrace the cooperative learning environment, they must feel that there is a method of ensuring fairness in grading. Nothing will demoralise learners more quickly than for a non-contributing student to receive a high grade based solely on other group members' efforts. Research has shown that students derive a much greater sense of satisfaction and higher test scores from groups that have the ability to provide a peer assessment that is factored into grade calculation. Group members' assessments should reflect the degree of contribution each member made towards the collective effort, hence motivating learners to learn and influencing classroom assessment.

# **Giving Individual Exams**

Individual accountability can be checked through individual exams. According to Cooper (1990) peer evaluations will assist a teacher in determining if individual group members contributed to the group's effort, even though they can be misleading. Group members may find it socially difficult to provide an accurate assessment of their peers (even in an anonymous setting), resulting in peer evaluations that provide a false representation of the individual's effort. Also, while peer assessments help to ensure that everyone is contributing towards groups' goals, it does not necessarily mean that each student understands each objective for the course. Thus, the teacher may need an additional tool, which could be the administration of individual exams that cover all of the objectives, thereby avoiding a situation where only group products, demonstrations, and performances are evaluated. The results of the

exam will serve as a clear indicator of who understood the material and who did not, so as to provide assistance where needed and influence their performances.

#### **Using Group Roles**

The use of group roles equally enhances individual accountability. Johnson (1999) says that for learners to succeed while taking a comprehensive exam, teachers need to ensure individuals are learning each objective. Students must assume some responsibility for their own learning, but teachers must steer group interaction in a positive direction. Teachers should ensure proper distribution of work rather than isolating tasks to particular individuals. Keeping in mind that many students will naturally gravitate towards a "divide and conquer" approach, teachers should insist that in the different groups, members should assume particular roles that can be rotated periodically. This makes group members implicated in the breadth of the assigned task; thus, each and every group member is given the opportunity to learn what is required, hence influencing classroom assessment.

Johnson (1999) adds that each individual should assume the following roles during the course of the assignment: coordinator (organises tasks and assigns responsibilities), checker (monitors the team's solution for correctness, completeness, and accuracy), recorder (writes the solution), and sceptic (plays devil's advocate to ensure various perspectives are considered in determining the final solution). These administrative responsibilities are in addition to performing work towards the actual solution.

#### **Classroom Discipline**

According to Saettler (1990), cooperative learning enhances discipline. Basic skills of cooperative interaction must be taught to group members so that they can work effectively and finished up task, thus team members have to be disciplined by following rules of interaction to carry out assigned task. The use of classroom discipline enhances classroom management quality, which equally affects classroom assessment. Discipline is a difficult it is a multidimensional word that is used by many in varied ways. Some authors say discipline has to do with an individual's complete obedience—obeying and conforming to all the laid-down rules, orders, and norms (Glasser, 2001). To others, discipline simply refers to punishment and control (Darch et al., 2003). Discipline is equally a way of training a child in an orderly manner of life, meaning every time the teacher tries to check, control, and regulate the activities of a

learner, he is in some way carrying out discipline. If learners' activities are not regulated during cooperative learning, it might result in a lot of indiscipline, which will influence learners learning as well as classroom assessment.

Hanna (2015) says that discipline goes above the power that instructors exercise over the learners, above maintaining law and order in the classroom, above the appropriate manner of dealing with those who commit offences in school, above punishment and occasional rewards and praises, and above the quietness and stillness of the classroom. To scholars, discipline has to do with applying all the influences that secure or try to secure proper conduct in school. This is classroom discipline, which consists of training learners to be self-restraint, to be good, to possess good conduct, to be orderly, and to be able to cooperate; in a nutshell, to develop the best habits in learners. Classroom discipline goes as far as intellectual and moral education, not just giving orders and instructions and making learners behave in a certain manner on certain occasions. Discipline is a continuous process of positive instruction and negative corrections where learners are taught how to behave within a specified value and rule. Maintaining order as learners work in their different cooperative groups influences classroom assessment.

When talking about classroom discipline, it is important to note that it differs from classroom management. Classroom discipline deals with checking learners' behaviour and controlling learners' behaviour in the class; thus, it is the specific management of learners' behaviour, whereas classroom management deals with the procedures, routines, and structure of the class. Classroom management is more of the teacher's responsibility, while classroom discipline centres on students (Marshall, 2003). Discipline in itself is an action that is undertaken by the teacher to establish a favourable environment, to end indiscipline, and to restore order in the classroom during the teaching and learning processes. Classroom discipline refers to management actions that instructors undertake to ensure a smooth teaching and learning atmosphere. Classroom discipline requires the instructor to put in place a set of actions that comprise organisation and management processes with the objective of maintaining order in the classroom during lessons.

The actions of organisation and management are seen through the different norms, routines, and procedures put down by the teacher (Doyle, 1985, 1986). Classroom discipline is a complex concept; it is prone to multitudes of subjective interpretations, according to Espelage et al. (2013). Classroom teaching usually revolves around two major factors: firstly, the teacher

transmits the subject matter to the learner, which promotes cognitive changes with the help of didactics, which is a part of pedagogy that enhances the transmission of content. On the other hand, it deals with classroom order; according to Doyle (2006), classroom management has to do with the establishment of order so as to maintain the classroom environment.

Since the classroom is a micro-organisation where we have multiple interactions during the teaching and learning process, it makes classrooms crowded places that will certainly need rules, procedures, and routines that are clear enough so as to make interaction take place in a favourable atmosphere. Thus, orders and procedures established go a long way towards helping the teachers maximise the allocated time for instructions (Hochweber et al., 2014; Mirra, 2014). Teaching and learning, as well as interaction in cooperative learning groups, can be maximised for good when simple rules and regulations are put in place guiding learners' behaviours, thus influencing classroom assessment.

Teachers who are effective in their jobs most often have lesson problems related to disciplinary issues, not because they are good at restoring discipline but because they are good at establishing norms and procedures that enable them to maximise their time for instruction. Classroom environment and discipline, according to Ritter et al. (2007), are important and crucial factors as far as teachers' work and satisfaction are concerned; discipline is one of the major challenges faced by teachers in carrying out their duties. Due to the fact that classroom atmosphere has a lot to play on the learners outcomes as well as the teacher's work satisfaction, Many studies have been carried out so as to identify the different types of management styles that are effective in the classroom as well as in school during lessons.

According to Lewis et al. (2008) the first discipline management style is that of "assertive discipline" or "take-control" approach. This approach calls for teachers to lay down ground rules at the beginning of the school year. With this, learners will be aware of what is expected of them and the consequences of their misbehaviour and failure to comply. Teachers are called upon to reward good behaviour and punish bad ones. The second discipline management style is the "interventionist style." This discipline management style holds that learners will learn to behave better and more appropriately when good behaviours are rewarded and bad behaviours punished. This implies that teachers should ensure strict control over the learners during activities in the classroom (Ritter et al., 2007).

The third discipline management control is "teacher effectiveness training". It stipulates students 'self-control as the key to their good behaviour in the classroom, which is obtained by interacting with the teacher. There must be room for negotiation and conversation between the learners and their instructor. This style makes learners play an influential role in maintaining discipline during classroom activities. This only means that the instructor does not need to border on bringing learners to behave appropriately, for the students themselves will tend to behave appropriately on their own (Ritter et al., 2007). Here, the emphasis is on the fact that learners should participate in decision-making. In a nutshell, a disciplined classroom creates a favourable condition for the teaching and learning process; it fosters learners' understanding; and it creates opportunities for learners to cooperate and interact better in small groups. With the above, learners' performances will be influenced, hence classroom assessment.

# **Types of Discipline**

**Preventive discipline in the classroom:** Jones et al. (2001) say this type of discipline requires the instructor to put a stop to learners unacceptable and inappropriate behaviours manifested in the classroom. To prevent unacceptable or inappropriate behaviour is better because one can easily prevent its occurrence by providing stimulating curriculum that will make learners active participants in the teaching and learning process in order not to give time for misbehaviour or misconduct. Occupying learners with different tasks in cooperative learning leaves learners with little or no time to misbehave, thus influencing their performances as well as classroom assessment.

**Supportive discipline in the classroom** is a kind of discipline that enhances students discipline through maintaining good classroom conduct and self-control. It is discipline that is attached to learning. Learners can easily become subjective and restive to temptation sometimes when signs of incipient misconduct show up; in such moments, supportive discipline should be used to bring situations under control (Hanna, 2015).

**Corrective discipline in the classroom:** when preventive and supportive discipline have been used and situations cannot be helped, corrective discipline should be used. Corrective discipline is one that is used to correct behaviours in the classroom (Hanna, 2015).

### Ways of Maintaining Discipline in the Classroom

It is important to note that the school's objective is to provide learners with foundations in education that can foster their successful careers and independent lives, but when the question of misconduct comes up, it will stand as a stumbling block to the learners' academic achievement and classroom assessment. In other words, maintaining discipline in the classroom is very essential for the effective delivery of the curriculum. To maintain discipline in the classroom, it is important for the instructor to be aware of the causes of indiscipline so as to avoid certain actions and bring about discipline in the classroom. According to Fowers (2008), the following can bring about indiscipline in the class:

- **Instructors who are biassed in teaching and classroom management** might favour some learners, and when this happens, other learners will think everything can be accepted no matter the rules. Also, they might look at this favouritism as an offence against them and may rebel.
- The non-enforcement of laid-down rules: learners go unpunished for an offence, and with this, they will go on committing the same offence.
- Lack of communication: when the laid-down rules and norms to maintain discipline are not clearly communicated, learners will tend to violate them, which will lead to indiscipline.
- **Teachers-students relationship in the classroom;** there should be appropriate interaction between instructor and learner; when this relationship is broken, indiscipline immediately emerges. This means the teacher-student relationship is an important element of the learning process.
- Lack of leadership: when the teacher fails in his responsibility in taking up the task as the leader of the classroom, he will certainly become a student; students, on their own part, will be glad to take over this role, which will greatly bring about an indisciplined classroom.
- Lack of motivation: when the learners are motivated, they tend to work and become very active in the classroom; when they are not motivated, they will refuse to work idling, and doing nothing constructively fosters misbehaviour.
- **Bad habits.** Learners may acquire bad habits from previous teaching experiences; learners who have cultivated the bad habit of always being late to school will always be late. Often times, it is difficult to change.

Hence, to have a disciplined classroom that will enhance the positive school climate and promote a favourable teaching and learning environment, be it in the classroom in general or in different cooperative learning groups, the teacher should watch against the above factors that can hinder discipline and instead foster indiscipline. Indisciplined classrooms affect the teaching and learning processes and learners' performances. To avoid the above, the teacher can do the following, according to Hanna (2015):

- The instructor should be fair, consistent, and positive; to maintain discipline, the instructor should be friendly, courteous, firm, fair, enthusiastic, and confident.
- **Instructors should keep the classroom orderly;** for there to be discipline, teachers should try as much as possible to maintain a cheerful and attractive environment rather than disorder, which can easily influence inappropriate behaviours.
- **Teachers should know the names of individual learners;** with this, they can easily point out the learner who is misbehaving in the classroom, which will help the teacher maintain discipline.
- Schools should create and enforce a wide discipline plan; this will enable the learners to know the consequences of their actions in cases of misbehavior. Having it posted everywhere in school on notice boards is a good way to start bringing about discipline.
- Teachers should practice effective follow-through; this implies that instructors should thoroughly follow the discipline plan of the school. The discipline plan gives students ideas on acceptable and unacceptable behaviours, as well as the consequences of misbehaviour. If teachers do not follow this plan thoroughly, they might not administer the right measure to inappropriate behaviour, which might increase indiscipline.
- Teachers should avoid confrontations in front of the learners in class; this is because when there is confrontation in the classroom, there is a winner and a loser. Thus, it is better for the instructor to privately deal with indiscipline cases than cause a learner to "lose face" in front of the other classmates. It is equally not good or appropriate for the teacher to make examples out of disciplinary issues.

## Rules

Establishing simple rules and regulations in the school and classroom can enhance the quality of classroom management. According to Rosenberg (1986), rules are seen as the basis

for effective classroom management, and when learners know and follow them, it enhances appropriate behaviours in the classroom. Rules should be constructed taking into consideration the expectations of the entire school and then tailored to promote specific behaviours in the classroom. Rules should be constructed by taking into consideration the conducive behaviour of learners that can foster a positive learning environment. Rules established should be clear, communicate to learners the desirable expected behaviour, and identify replacement behaviours for existing problems. To effectively work in the different cooperative learning groups, simple rules and regulations should be put in place to moderate group members' actions and behaviors. For rules to be effective, they should possess the following characteristics:

They should be positively stated; for effective rules, identify just the acceptable behaviour so as to wipe out confusion or ambiguity in its meaning. To be effective, they should be observable and measurable; rules referring to behaviour make it clear to observe the behaviour as well as measure it in terms of academic behaviour. They should be simple and appropriate to the learner's developmental age. The vocabulary and words used should be simple and brief so as to be understood by all and finally, they should be kept to the minimum, such as addressing issues like walking around the class, talking, and completing work. (Rosenberg, 1986),

Making use of classroom rules is a very important tool for enhancing classroom management. Rules give an idea as well as establish the behavioural context of the classroom; that is, what should be accepted in the classroom and that which should not be accepted; what can be accepted in the different cooperative learning groups and that which cannot be accepted. Rules specify the expected behaviours of students; they show what student's behaviour is reinforced as well as the consequences for inappropriate behaviours. When the rules themselves are stated so that they describe the expected behaviour and not "what not to do," it is easier to manage and prevent problem behaviours (Colvin et al., 1993; Kerr et al., 2002). Educators have tried to identify some important guidance lines that should serve in constructing rules that will be efficient (Nelson et al., 2003). Thus, to construct classroom rules, the teacher should:

Ensure that the rules constructed are at their minimum so that all the learners will be able to remember them.Equally, when constructing rules, the language should be appropriate to the developmental level of the learners and the class so that it is well understood. More the teacher should make sure rules are positively stated rather than "do not," which is negative.Rules construction should take into consideration various contexts and situations as may be needed; that is, if it is physical education, this is what is needed; if it is a field trip, this is what we need; and if it is in class, this is what we need and the instructor should ensure that rules are consistent with school-wide behaviour.

From the above, the quality of classroom management technique affects the performances of the learners. Hence, for cooperative learning to be successful, teachers need to prepare lessons before going to class and motivate and encourage learners by making their lessons and tasks interesting to captivate learners' attention. Teachers need to occupy learners by making sure they are actively involved in carrying out assigned tasks in order to avoid noise and distractions. With these under control, classroom assessment will be influenced, and learners' performances will be enhanced. Thus, the quality of classroom management can be enhanced through classroom management to accommodate group work, monitoring of group activities, discipline, rules, and regulations, which all provide a favourable learning environment and give learners the opportunity to learn in a calm and siren atmosphere, hence influencing learners' performances and classroom assessment.

# 2.2.5.0. DIDACTIC QUALITY

Classroom assessment can be fostered through the quality of didactics. Didactics can be defined as the science that generally deals with teaching and learning (Dolch, 1967). This explains why Core et al. (2002) put forward the following questions in trying to understand the concept of didactics: "Who should learn, from whom, when, with whom, where, how, with what, and for which purpose? Didactics is a theory concerned with social practices geared towards the design, implementation, and evaluation of teaching and learning programmes.

It is concerned with designing teaching and learning situations, orientation, and support for student learning, judging from the fact that it identifies and analyses problems coming from the teaching and learning processes so as to provide the best possible learning opportunity to all learners in educational institutions (Camilloni, 2007). The teacher, through didactics, carries out teaching, taking into consideration the content, the activities to be carried out in the course of delivering the content, and putting in place the right instructional materials to enhance students understanding. Thus, the teacher has complex and diverse actions to carry out in order to enhance quality in didactics (Grossman, 1990). To achieve didactic quality, the teacher should possess knowledge on: Subject matter: Teachers should have an idea of the different paradigms within the field of study; they should know how particular fields of study are organised; and they should have questions that guide further inquiry. The teacher should know and understand the canons of evidence and proof of disciplines so as to enhance knowledge evaluation. Nevertheless, the teacher's lack of knowledge limits him to being an expert in that particular discipline, while the other aspects of didactics are left out. To bring about didactic quality, the teacher should possess pedagogical knowledge, which is knowledge about the learners and their learning; the teacher should have knowledge of the curriculum in order to know how to go about teaching; and he should have knowledge of classroom management. Even at this level, we cannot talk of didactic quality because having pedagogical knowledge without necessary content knowledge does not make one a good teacher but rather a good pedagogue or designer.

To have didactic quality, the teacher should possess knowledge of context. That is, teachers should know the background of their learners; they should have knowledge of educational institutions and the community within which it develops its social role; they should also have knowledge of the school-required system and the purpose of education in that society. But having knowledge of all this equally limits the teacher to a social worker rather than a teacher. Having examined the above elements, which are limited in themselves as they do not make a good teacher and do not enhance didactic quality, Grossman (1990) says the teacher needs to possess a fourth kind of knowledge known as pedagogical content knowledge.

This type of knowledge encompasses a teacher's knowledge and beliefs about the purpose of teaching a subject at different levels and grades. The teacher should possess knowledge of the difficulties as well as the misconceptions and conceptions of certain portions of topics, subject matters, curriculum, available instructional materials, and curriculum alignments, be they horizontal or vertical, of subjects and instructional strategies, so as to enhance learners' understanding. Thus, to influence the quality of didactics, the teacher in his classroom room should be versed, have an idea, and possess the above qualities.

#### Learning Content

Learning content is one of the many elements through which didactic quality can be seen. It is the body of knowledge and information that the teacher teaches to the learners; it is what learners are supposed to know or learn in different content areas or different disciplines like mathematics, English language, history, and geography, just to name a few. Thus, learning content refers generally to the theories, concepts, facts, and principles taught and learned in a specific subject area. According to Tambo (2003), when we talk of learning content or the content of a curriculum, it is concerned with the subject matter topics, the objectives, learning activities, teaching activities, methods, and strategies of assessments. To enhance didactic quality, content in different disciplines should enhance continuity and sequence.

Tambo (2003) sees sequence as the order in which the different topics and themes will occur or be learned. Implying that syllabuses should be drawn up in a chronology with regards to the different content (themes, topics, objectives, learning activities). The emphasis should be laid on successful learning experiences built on preceding ones. Sequence is concerned with the organisation of the syllabuses with respect to certain principles like simple to complex, concrete to abstract, part to whole or whole to part, and the developmental stage of the learners (Schubert, 1986; Ornstein et al., 1986); (Tambo 2003). Equally, Tambo (2003) says content in itself is not the objective of the lesson; rather, it is a means of achieving objectives; thus, syllabuses should not only be limited to the list of subjects and subject matters.

Thus, for teachers to be able to transmit content, they should have knowledge of the content of subjects and their organising structures. They should not only end up knowing the facts and concepts of the said discipline, for it actually goes beyond that. The teacher needs to have an understanding of why things are the way they are, the grounds on which certain things can be asserted, and the circumstances in which our beliefs are justified, weakened, or denied. For learning content to be effective, teachers must have an understanding of why particular topics are central to some subjects and why others may be peripheral (Shulman, 1978).

To have good content, there should be curricular knowledge. Implying that, there should be a full range of programme designs for teaching particular topics and topics at different levels; hence, different available instructional materials in relation to those programme. Shulman (1986) talks about lateral curriculum knowledge and vertical curriculum knowledge. Lateral knowledge relates knowledge of the curriculum being taught to the curriculum that students are learning in other classes (in other subject areas). Vertical knowledge includes "familiarity with the topics and issues that have been and will be taught in the same subject area during the preceding and later years in school, and the materials that embody them" (Shulman, 1986, p. 10). Thus, content as an element of quality didactics should consist of pedagogical content knowledge, which is powerful illustrations, analogies, explanations, and examples used in formulating subjects to make them comprehensive. It equally entails one to have an understanding of what makes learning in some disciplines difficult and others not, the conceptions and misconceptions that different learners have in learning due to their background and different ages of development (Shulman, 1986).

# Selection and organisation of learning content

The content selected should be in line with the goals and objectives of the curriculum. The organisation and arrangement of the learning content enhance teachers' choice of an appropriate learning experience for the classroom. According to Ornstein et al. (1998), the following serve as criteria for the selection of the learning content:

- Self-sufficiency: learning content should be built in a manner that gives learners the opportunity to experiment, observe, and carry out field work. With such a system, learners will be given the opportunity to work independently.
- Significance: Learning content is significant when it is selected and organised for the development of learning activities, skills, processes, and attitudes. When it is organised across cognitive, psychomotor, and affective skills and takes into consideration learners' cultural backgrounds. Learners are from different races and cultural backgrounds; thus, content or subject matter should be equally culture-sensitive. The selected content should be in line with the overall aim of the curriculum.
- Validity: validity in relation to the learning content simply refers to the authenticity of the content selected. Topics should not be obsolete. This implies the need for regular checks of curriculum content, and replacements were necessary.
- Interest: Learners learn best if the content is meaningful to them. Content is only meaningful to them if they are interested. Thus, it is advisable that the content of the curriculum be learner-centered. If it is the other way around, that is the teacher-centred curriculum; the teachers will have no choice but to finish their pacing schedule religiously and only teach what is in the text books. This explains why many students will fail in some disciplines.
- Utility: Another criterion for the choice of learning content is the usefulness of the content. When students think that some content is not important, they see it as useless. As a result, they do not study. They tend to pose questions like, Will I need this in my

job? Will it give meaning to my life? Will it develop my potential? Will it be part of the test? Implying that learners only value content that is useful to them at the end of the day.

- Learnability: the learning content must be within the schema of the learners. It should be within their mental age and experience. Meaning that teachers must make appropriate use of learning theories in psychology to know how subject matters are presented, sequenced, and organised to maximise the learning capacity of the learners.
- Feasibility: this has to do with the full implementation of the subject matter. The reality
  of the school should be taken into consideration by the government and society.
  Learners must learn within the allocated time and make use of the available resources.
  They should avoid giving learners topics that are impossible to finish based on the
  available time allocation. For example, do not offer a computer subject if there is no
  electricity, for it will make the subject unfeasible.

### **Principles of Content Organization**

Learning content should be properly arranged to enhance and facilitate learning. Scope, sequence, continuity, integration, articulation, and balance are the principles to be followed when organising learning content (Sowell, 2000; Ornstein et al., 1998).

#### 1. Scope

It looks at the breadth and depth of the learning content. It looks at the topics, learning experiences, and organisational threads found in the curriculum plan. Scope cuts across cognitive, affective, and psychomotor learning. Every time we refer to the scope, we are concerned with questions like: What is the level of mathematics required of learners before they graduate? The reason why Ornanstein et al. (1998) explain that elements like the usefulness of the selected content, amount of content, learners' abilities, and balance in the content selected between cognitive, psychomotor, and affective or spiritual outcomes should serve as guidelines in organising the learning content

# 2. Sequence

It examines how content organisation may enhance cumulative and continuous learning. Curriculum developers should know if learners have the appropriate opportunity to make connections. Sequencing of learning content should foster the cumulative development of intellectual and affective processes. The logic of the subject matter should be taken into consideration when sequencing. Sequencing should be based on psychological principles and an understanding of human development. (Ornstein et al., 1998; Taba, 1962; Bruner, 1960) put forward the following principles that serve as guidelines in sequencing content:

- Simple to complex, this depicts interrelationships among components. Optimal learning takes place when studies are presented with easy, concrete, and more difficult, abstract content.
- Spiral: concepts of the learning content may be introduced on a simple level in early grades and then revisited at a profound and complex level at a later stage in life.
- Prerequisites: it holds that bits of information or learning must be grasped before other bits of information can be understood.
- Whole-to-part content is best understood if the learners have an overview (whole) first presented to show the connection between the parts.
- Chronology, in subjects like history, political science, and world events, is very important and useful for sequencing.
- Vertical organisation: the learning contents and skills should be arranged in a manner that they build on one another. Sequencing should indicate what students have learned and what they will later learn.
- Horizontal organisation: skills and content learned during a given period should be related to one another.
- 1. **Integration** consists of putting together the skills, concepts, and values of the different disciplines to reinforce each other. Implying that information about the different disciplines is brought out in a unified manner so as to give the learners a better picture of the knowledge.

# Learning activities

The quality of didactics can also be seen through learning activities. Learning activities are the tasks or activities that learners undertake to obtain the lesson's intended outcome. These activities consist of debate, discussion forums, manipulating data on a spreadsheet, finding and summarising materials from the web, constructing reports, and synthesising important points from podcasts (Beetham et al., 2007). They referred to all activities that the teacher designs

and deploys to create a good learning environment. Implying that learning activities are driven by the following: what the teacher wants to achieve with the selected activity; how the teacher wants to achieve his aims; and the best knowledge process to be used to achieve the aims. According to Siemens et al. (2009), learning activities consist of a range of activities used in order to promote learning, such as discovery activities, demonstrative activities, and discussion activities.

According to Fredricks (2014), learning activities should be convenient enough to engage the students behaviorally, emotionally, and cognitively, thus positively influencing their learning and achievements. To fully get the students engaged in learning activities, make the activity meaningful. It is good for the learners to perceive the activity as meaningful; without that, they might not be engaged in a satisfactory way or may even be disengaged entirely in their responses. Making activities meaningful requires teachers to ensure activities are tied to the previous knowledge and experiences of learners. Equally, teachers should highlight the importance of activities to the learners and tell them when and how they are used in real life (Fredricks et al., 2004).

Learners can get engaged in learning activities through the fostering of a sense of competence. Competence here will take the form of a personal evaluation, whereby learners can challenge themselves to see whether they can do something or not. Researchers have found out that effectively performing an activity can positively impact subsequent engagement (Schunk et al., 2012). To strengthen students' sense of competence in learning activities, the assigned activities could:

• Show peer coping models, that is, students who struggle but eventually succeed at the activity, and peer mastery models, that is, students who try and succeed at the activity. Make students demonstrate understanding throughout the activity and be only slightly beyond students' current levels of proficiency.

Moreover, learners' engagement in learning activities is enhanced through providing autonomy support. Autonomy support is the nurturing of students' sense of control over their behaviours and goals. When teachers, without losing power, relinquish control to students rather than promoting compliance with directives and commands, learners' engagement levels are likely to increase as a result (Reeve et al., 2004). Autonomy support can be implemented by:

• Using informational, non-controlling language with students, welcoming students' opinions and ideas into the flow of the activity and giving students the time they need to understand and absorb an activity by themselves

Embracing collaborative learning is another way of getting the learners to engage in learning activities. When learners work together seriously, their engagement may be amplified, and their performances will be influenced due to experiencing a sense of connection to others during the activities (Deci et al., 2000). For collaborative or group work to be effective, the teacher should be the one modelling; he should avoid creating homogeneous groups and ensure students know how to communicate.

Moreover, students can become interested in the learning activities when there is a positive teacher-student relationship. The establishment of a positive teacher-student relationship influences students' engagement, especially in the case of difficult students and those from lower socioeconomic backgrounds (Fredricks, 2014). When students form close and caring relationships with their teachers, they fulfil their developmental needs, which come from connection with others and a sense of belonging in society (Scales, 1991).

Students' engagements can also be fostered through the promotion of mastery orientations. This implies that when students pursue an activity because they want to learn and understand (mastery orientation), it is different from just wanting to obtain good grades, looking smart, or pleasing parents (performance orientation). When they are in pursuit of knowledge, their engagement is more likely to be full and thorough (Anderman et al., 2012). To foster mastery orientation, the teacher should encourage individual progress by reducing social comparison, making grades private, and recognising students' improvement and effort.

In addition to the above, activities like the **Think Pair Share Jigsaw** can equally foster the quality of didactics. The jigsaw method was developed by Elliot Aronson in 1978. Here, students are assigned to multi-member teams to work on academic material or tasks that are normally divided into sections. Each member of the group is assigned a section of study on which he or she becomes an expert. Experts are then assigned to expert groups, in which the members of the group discuss the information and decide on the best way to present the material to members of their home teams. After the students have mastered the material, group members return to their home teams to teach the other members the material. Jigsaw teaching is an appropriate strategy for social studies because there is often not always one answer to a

question (Slavin, 1995). Rhetorical and open-minded questions are confronted more easily when students have exposure to a plethora of perspectives.

**Learning together** is a cooperative learning strategy created by David W. Johnson and Roger T. Johnson in 1989. Learning together was originally designed to help train teachers on how to use cooperative learning groups in the classroom at the University of Minnesota in 1966. In the learning together strategy, cooperative effort includes five basic elements: Faceto-face interaction, social skills, group processing, positive interdependence, and individual accountability Johnson et al. (1989) learners complete worksheets in groups of four or five, and emphasis is placed on team building and group self-reflection. The teacher determines each team grade.

**Team-games-tournament:** David Devries, Keith Edwards, and Robert Slavin are the authors of this cooperative learning strategy. This strategy is similar to that of the Student Teacher-Achievement Division, but for the fact that they do not take individual quizzes. Instead, learners participate in academic games with members of other teams and contribute points to their team scores.

**Student-teams-achievement division,** created by Robert Slavin in 1995, is a situation wherein learners are grouped in fours within their team in order to master a lesson presented by the teacher. The learners take individualised quizzes, which are compared to past performances, and then team scores are put together based on the extent to which the students in the group meet or surpass past performances (Slavin, 1995).

#### Learning materials or instructional materials

They refer to the alternative materials that teachers use in their classroom to make their lessons concrete. They are those alternative means of communication that a classroom teacher uses to enhance understanding of the concept under study. Instructional materials bring about variations through which messages can be sent across to ease the process of communication (Tyler, 1987; Dike, 1989). Instructional materials or didactic materials sustain learners' interest; they motivate the learners to learn and equally make the teaching and learning process concrete and enjoyable; thus, different content in different disciplines will require different materials apart from the most common ones like chalk, chalkboards, and the recommended text books.

### **Types of Instructional Materials**

Instructional materials are of various kinds; in their variations, they have their advantages and disadvantages, and they have their limitations and characteristics. NAPTEA (2003) talks about the following types of instructional materials: still projected pictures, audio-materials, motion pictures, graphic materials, three-dimensional materials, and still pictures.

Still projected pictures: they are a group of instructional materials with which learners might not be familiar. To enhance understanding, still-projected pictures can be projected with the help of a projector. This projector might consist of strong and powerful electronic bulbs that throw lights on the negative, which is projected on the screen or wall. Using these didactic materials means one is using a range of didactic materials whose images are negatively imprinted and have to be projected with the help of various types of projectors. Images are equally presented here, one frame at a time, and the images stay on the projected screen or wall as long as learners want them to.

Audio materials refer to tap recordings and discs. They provide sounds and vibrations through the action of a needle. The needles determine the clarity as well as the quality of the sound. Recording exists in most subjects in overseas countries. And it is equally important in music departments. Sounds like the cry of an owl at night, thunder, noise produced during work, or noise from a factory can be recorded and used in class to enhance the teaching and learning process. The instructor should specify his objective when using such types of instructional materials. Students can always listen as a group or as individuals to records.

**Motion pictures** are pictures projected at speed. The idea of motion is derived from the fact that images are projected at speed, which makes them appear to be in motion. They can be projected at 16 or 24 frames per second. They have pocket holes along both edges, which facilitate projection. They can be projected with sound or silence. Films with sounds either use a magnetic tape or optical sound track for sound recording.

**Graphic materials** are charts, cartoons, drawings on cardboard, comics, posters, diagrams, and pieces of cloth that are presented to learners to facilitate their understanding. Graphic materials fall under the category of two-dimensional materials. They are used to capture learners' interest and attention and help them recall what they have learned. When these graphic materials are appropriately produced, they can be used to attain all processes in the

information processing model of learning as well as serve as an avenue for applying principles from other learning theories.

**Three-dimensional materials** are different from two-dimensional materials because of their incorporation of a third element—the department. This feature makes three-dimensional materials a replica of the real thing; examples here will include specimens, kits, models, mock-ups, and dioramas, which are the creation of a scene in an event.

**Still pictures:** they are flat, opaque pictures taken during ceremonies. They are pictures we find in journals and magazines. They are still there because we can hold them in our hands and place them on surfaces; they are not viewed with the help of projectors. They equally belong to the group of two-dimensional materials.

### **Importance of Instructional Materials**

Instructional materials are not to serve as decorations in the classroom but as a tool for facilitating the teaching and learning processes, for they affect the attention of learners: instructional materials provide a concrete basis for thinking, reduce meaningless work, and thus make what is learned permanent. It has a high degree of interest for the learners, for it gives room for reality and gives them experience, which goes a long way in stimulating self-activity and they develop continuity of thought; this can be seen through motion pictures, and they provide experiences and contribute to efficiency.

Thus, the quality of didactics can be enhanced through the learning content, especially when the content seems meaningful and ties to the learners' experiences. This makes the teaching and learning process interesting when learners are fully engaged. Moreover, making use of learning activities that are learner-centred also enhances the quality of didactics because learners will construct their knowledge, which will foster mastery of what is learned. Making use of didactics or instructional materials makes the teaching and learning process colourful and interesting, captivating the attention and interest of the learners. As such, the performances of learners will be influenced, as will classroom assessment.

### 2.2.6.0. CLASSROOM ASSESSMENT

According to Angelo et al. (1993), a formative evaluation is carried out by instructors in their respective classrooms in order to determine how well students are learning. Hence, classroom assessment improves learning that takes place in the classroom based on the fact that it empowers both learners and instructors "through an approach that is learner-centred, teacherdirected, mutually beneficial, formative, context-specific, and firmly rooted in good practices (Angelo et al., 1993, p. 4). Classroom assessment serves as a means of evaluating individual learners' performances and equally gives room for one to compare performance within a population. In this light, classroom assessment has the function of gathering information relevant to learners' performances and progress so as to judge the learning process. From classroom assessment, teachers can judge learners' performances, which are their learning process and their instructional process, in order to customise instructional plans.

Moreover, classroom assessment has the purpose of reinforcing and bringing about efficiency in the instructional and learning processes through the daily feedback obtained about the learning and instructional processes. Hence, teaching is seen as a formative process that requires frequent feedback and input from learners as it evolves over time (Mathew et al., 2016). It is the responsibility of the instructor to carry out classroom assessment to foster learning and motivate students to learn; classroom assessment enables teachers to document students learning and progress for the sake of accountability (McMillian, 2015). Classroom assessment in this study is examined through the relevance of knowledge constructed, mastery of content, and learners' performances (output, skills, and competences).

# The relevance of knowledge constructed

Doolittle et al. (2012) say the relevance of knowledge constructed is when the learners construct knowledge that is meaningful and adaptive in the context where they find themselves. Thus, for them to construct meaningful and adaptive content, new knowledge has to be built on prior experiences and knowledge. In this regard, the relevance of knowledge constructed can only occur when students socially interact in authentic situations that relate to their prior goals and knowledge. To enhance the construction of relevant knowledge, learners should engage socially and not passively receive knowledge; through interaction and engagement, they will be able to construct meaning in whatever they are learning. Students should engage in active learning rather than listening, reading, and memorizing. Hence, instructors should create an environment where learners can dialogue, share meaning, and understand the topic under study in order to construct relevant knowledge.

Moreover, to foster the construction of relevant knowledge, authentic and real-world environments should be presented to learners; relevant problems and real-life experiences can be linked to the learning process. Implying that learning should also dwell on that which is happening outside the training context, the focus should be on that which is happening in students' social environment and cultural background. Learners can only construct relevant knowledge by building on prior knowledge and experiences; hence, learners build new knowledge based on what they already know. Teachers should include opportunities for learners to express, challenge, change, or add to existing beliefs and understandings; hence, a learner-centred approach where their interests and backgrounds have a place in their learning. More importantly, instructors should ensure that knowledge and skills are introduced to learners through diverse means and multiple forms because it will challenge them to see information from multiple and diverse perspectives. Equally, learners should be provided with relevant tools and context that will enable them to develop their ability to manage their own learning (Doolittle et al., 2012).

### Mastery of content

Mastery of content and learning is a shift from the teacher-centred approach to the learner-centred approach, wherein learners completely understand the lesson regardless of the available time and resources required before moving to the next level. To obtain mastery, instructors have to employ individual learning experiences and allow the learners additional time to understand lessons or develop particular skills (Chargois, 2012). For the learners to master content, they need to have an understanding of the assigned task and the procedure needed to accomplish it. Specific objectives should also be stated for the task to be learned. Moreover, the content of subjects should be broken down into teachable units that can be assessed at the end of each lesson; students should equally be given feedback at the end of the assessment by the instructor. Equally, learners should be accorded additional time to learn and master content where needed, and the teacher should provide alternative learning opportunities as the need arises and ensure learners work in groups to increase their efforts (McNeil, 1969; Chargois, 2013). Mastery of content can only be possible when students are provided with favourable learning conditions.

Concept mastery helps learners build a strong foundation to be able to identify and fill knowledge gaps. Mastery of knowledge equips the learners with the pre-requisite skills to solve more problems in the future. Mastery of concepts builds confidence in learners, which enhances

a positive relationship with learning. This positive relationship motivates the learners to actively participate in their own learning; they ask questions, collaborate with the instructors, and apply feedback. Content mastery equally prepares learners for the future; hence, the main purpose of content mastery is to train learners to be self-motivated and independent—learners who are not afraid to take on new challenges and work with others to solve more complex problems. Internalised content will always help learners, be it in the near, immediate, or long run, to be successful (Schwartz et al., 2019).

### Learner performance

Learners 'performance or academic performance is a complex concept explained by semantics, as it is used as synonyms conventionally to refer to school readiness, school performances, and academic achievement. Learner performances are the result obtained from learning; that is what learners can produce after teaching has been carried out. Hence, it is the grade, the product given by students, according to Martinez (2007) in Burn et al. (2002). Academic performance is a measure of the indicative and responsive abilities that express in an estimated way what one has learned from the process of training and teaching.

Learners' performance means achieving the stated goals and objectives of an educational programme or course. Caballero et al. (2007) in Burn et al. (2002) argue that academic performance consists of factors like personality, motivation, study habits, intellectual levels, and skills. Academic performance is a net result of cognitive and non-cognitive attributes (Lee et al., 2010; Lee et al., 2016; Burn et al., 2002). Learner's performance is a multidimensional construct composed of the skills, attitudes, and behaviour of learners that can lead to success in academics in school (Hijazi et al., 2006) Burn et al., 2002). There are varied ways of measuring academic performance, such as report cards, grade points, averages, standardised test scores, teacher rating, other cognitive test scores, grade, retention, and dropout rates (Burn et al., 2002).

Academic and learner performance is the primary business of education because it influences socialisation, students' learning, and vocational preparedness. Learners' performances can be influenced by their parents' education. Educated parents have a way of influencing their children's performances; the education of parents gives them the opportunity to act as guidance and second teachers to their children, counsel them, and provide them with necessary school materials (Taiwo, 1993; Burn et al., 2002). In the same light, Musgrave (2000)

argues that children will likely follow in the footsteps of educated parents and, hence, will work actively in their studies.

Moreover, learners' performances can be influenced by the learner's ambition. Setting goals and pursuing them is seen as students' academic ambition (Dembo, 1931) in (Burn et al., 2002). Pursing their ambitions may lead to success and not failure, for ambition is seen as persistent and generalised striving for success, attainment, and accomplishment (Pettigrowe, 2007). Setting academic ambitions influences students learning and preparation for life choices; thus, learners who set difficult goals tend to be task-oriented with a sense of purpose that pushes them to be hardworking (Quaglia et al., 1996) in (Burn et al., 2002). Hence, the ambitions of individual learners influence educational outcomes. Destorges and Abouchaar (2003), in Burn et al. (2002), state that learners with higher ambitions have greater motivation and higher educational attainment than their peers.

Also, learners' effort is another factor that influences learners' performances. Effort is the overall amount of energy put into studying by learners (Zimmerman et al., 1992; Burn et al., 2002). Effort consists of putting continuous energy into learning, even when problems are encountered. School efforts consist of the amount of time and energy that learners put in to meet the formal academic requirements set by instructors or schools (Carbonaro, 2005; Burn et al., 2002).

#### **Output, skills, and competences**

Output, skills, and competences acquired are means through which a learner's performance or classroom assessment can be measured. Schreyer (2009b); Fraumeni et al. (2008) see output as an educational concept that defines the level of acquisition of knowledge, skills, and competence of the learners. Educational output tries to measure the effectiveness of a programme or activity to see if objectives were achieved. Output shows the performance of an educational system with respect to knowledge of the subject, progression and completion rates, competences, and also the satisfaction of employers. On the other hand, skills, according to the Further and Education Unit (1982), are a wide concept that includes the ability for one to perform specific manipulative occupational tasks that consist of reading, measuring, writing, speaking, listening, calculating, coordinating problem solving, coping with interpersonal relationships, computer literacy, and learning. Competence, according to Hartel et al. (2004), is a statement that describes the knowledge, skills, and behaviour that students acquire after

completing a course. It is the applied skills and knowledge that enable people to successfully perform in educational, professional, and life contexts.

This section has presented and examined the writings, views, and publications of diverse authors with respect to the quality of cooperative learning and academic quality, with its components of knowledge construction, validity, reliability, and group processing. Pedagogic quality with its components of group competition, motivation imitation, and individual accountability; equally, classroom management quality with components of management to accommodate group work, monitoring activities in group work, discipline, and rules as components Finally, the didactic quality includes components of learning content, learning activities, and learning materials (didactic materials). Relevance of knowledge constructed, mastery of content, and learners' performances (output, skills, and competences) were the components examined for classroom assessment.

# 2.3.0. EMPIRICAL FRAMEWORK

This section presents, examines, and discusses the empirical works; evaluates the effect of cooperative learning strategies; compares flipped and cooperative learning; evaluates the use of cooperative learning; examines the benefits of cooperative learning; reviews research and practice; and discusses the advantages of cooperative learning.

The empirical framework presents research works, their nature, methodology, findings, and results. The empirical work of this study will present research works and findings in Cameroon and the world at large with respect to the evaluation of the quality of cooperative learning, taking into consideration the different variables of the study such as academic quality, pedagogical quality, classroom management quality, and didactic quality. So many studies have been carried out on cooperative learning because most researchers see it as the best way of enhancing active teaching techniques in the classroom and getting learners involved in the teaching and learning processes to enhance their performances.

With regards to the evaluation of cooperative learning, Oben (2018) evaluates the effects of cooperative learning strategies and attitudes on performance in secondary school mathematics in the South West Region of the Republic of Cameroon. In this work, the author sought to examine the extent to which cooperative learning strategies and attitudes affect the performances of students in secondary school mathematics, having observed the constant poor

performance of students at the General Certificate of Education for almost five years. Four research hypotheses were formulated for this study. A combined design of the quasi-experiment and survey research was used with a target population of 5671 from three students in the whole of the south-west region of Cameroon. A sample of 359 form three students was used for the survey study, and 65 students for the quasi-experimental, who were intact groups of 34 and 31.

The instruments for data collection consisted of questionnaires, pre- and post-tests, and instruments for focus group discussion. Hypotheses were tested with the help of inferential statistics comprising the t-test and Pearson correlation (r) coefficient product moment. Findings revealed that:

- The mean performance of students exposed to peer tutoring in the study of mathematics is significantly better than that of those who study individually.
- The mean performance of students exposed to positive interdependence in the study of mathematics is significantly better than that of those who study individually.
- There is a significant relationship between interest in secondary school mathematics and performance.
- There is a significant relationship between participation in mathematics lessons and performance in secondary school mathematics.

Thus, all four alternate research hypotheses were retained, and all four null hypotheses were rejected. To this end, recommendations were made to teachers to always make use of cooperative learning strategies so as to sustain learners' interest in mathematics and enhance their performances.

In addition to the above, Nkepah (2019) carried out a study that focused on comparing flipped and cooperative learning in mathematics in Cameroon, entitled Effectiveness of Flipped Learning and Cooperative Learning Strategies on Students' Achievements in Mathematics. The purpose of this study was to compare the effectiveness of flipped learning and cooperative learning strategies in enhancing students' achievement in mathematics. The target population consisted of 5348 form three students from Mezame Division, Cameroon, of which 61 males and females comprised the sample. Pretest-non-equivalent control group was chosen as used, and the sample was divided into two experimental groups and one control group. Data was collected with the help of an achievement test in mathematics. Hypotheses were tested using

ANCOVA at the 0.05 level of significance, and the mean was equally used to answer research questions. Findings showed that both cooperative learning and flipped learning strategies of teaching mathematics enhance learners' performances in mathematics compared to conventional learning strategies; thus, teachers should adopt these two strategies in the teaching of mathematics.

Lyonga (2018), in trying to evaluate the use of cooperative learning, carried out a study on peer learning amongst students of the Higher Technical Teacher's Training College (HTTTC) of the University of Buea in Kumba. In this study, the author determined the effectiveness of peer learning by students through study groups and peer tutoring on students' achievement. Quantitative quantitative description data was used. The descriptive survey design was used on a sample of 234 student teachers from both the first and second cycles of the 14 different departments of the HTTTC in Kumba, Cameroon. As a purpose, the study sought to find the effects of study groups and peer tutoring on students' achievement at HTTTC, Kumba. Data was collected with the help of a structured questionnaire, and frequencies and percentages computed with SPSS V.20 were used to descriptively analyse the data.

Findings indicated that studying in groups with classmates and receiving peer tutoring by other students is important for enhancing success in their end-of-semester and final-year examinations. Students were able to form cohesive groups where they freely expressed their ideas and helped others succeed. Thus, teachers were recommended to pair knowledgeable students with good mastery of the subject with other students in groups. More importantly, peer tutoring techniques should equally enable learners to work in small mixed-ability groups where both intelligent and slow learners can share ideas in the course of expressing themselves.

In an attempt to enhance the quality of cooperative learning through peer assessment, Lourdusamy et al. journal (2000) examined the benefits of cooperative learning to students who used it. Cooperative learning enhanced the acquisition of knowledge and cognitive and social skills. As the aim of this study, they sought to examine whether the introduction of peer assessment improves the quality of participation in cooperative learning as perceived by the students in one of their courses. The sample was made up of 69 postgraduate diploma students in education who enrolled in an elective module on "instructional strategies and learning effectiveness". Participants worked in groups of 5 on tutorial tasks related to the theoretical components in lectures. Participants presented tasks assigned to them in their various groups; two forms of tutorial assessment were used. Firstly, each group assessed the presentation of the others based on the evaluation criteria, even though the work was independently evaluated by the teacher later. Secondly, participants assessed the contributions of group members with the help of an assessment guide and a scoring rubric provided for this purpose. The data was qualitatively analysed so as to get students' impressions. Findings indicated that peer assessments helped to encourage and accentuate the benefits of cooperative group work for the students. Students saw the task of assessing the group presentations of their peers as interesting and accepted. In a nutshell, students' views were positive due to the fact that peer assessment motivated them to work better.

Tombak et al. (2016), equally carried out a study on The Effect of Cooperative Learning: A University Example. Motivation was seen as a major factor in enhancing school success. Motivation is a strong determiner of not only educational success but equally success in every field. Steven (2005), says the only way one can do great is to love what they do. Motivation is the force that makes one love what he or she does. To this end, the cooperative learning method was seen as a compatible 21st-century requirement for enhancing motivation. The study had the purpose of investigating the effect of cooperative learning on students' motivation and students' product at the university level. A mixed study design was used, implying a combination of qualitative and quantitative techniques were used in data collection. This design was powerful, consistent, and provided a more complete picture void of bias for data analysis (Denscombe, 2008). Purposive sampling was used in selecting participants, and from this, two university classes were chosen.

Quantitative data was collected with the help of questionnaires, which were analysed through SPSS (Statistical Product and Service Solution 17). The questionnaire consisted of six sub-scales: self-regulation, intrinsic value, task value, learning belief, self-efficacy, and exam anxiety. The qualitative data was collected through document analysis, in which students' products like posters and presentations were analysed. Findings revealed that cooperative learning at the university level has a positive outcome in terms of intrinsic values, learning beliefs, and self-efficacy, although the other three sub-scales of the motivational scale (self-regulation, task value, and exam anxiety) did not reveal an increase.

Altun (2015), carried out a study at the Yildiz Technical University of Turkey on The Effect of Cooperative Learning on Students' Achievement and Views on the Science and Technology Course. The main purpose of this study was to investigate the efficiency of learning plan implementation prepared with the cooperative learning method. Specifically, the

study was based on the effect of cooperative learning on students' achievement and their views regarding the "systems in our body" unit of the 6<sup>th</sup> grade science and technology lesson. Years passed; studying with someone else was seen as independence, but today it is considered one of the best strategies for learning (Chen, 2002). Cooperative learning is among the best strategies because producing information as well as theorising or developing models in the required field is more complicated. Therefore, common minds seem to be the better way out than single minds.

Thus, the idea of cooperative learning helps to keep up with the times and make a difference in all systems in society, such as health, economics, law, education, and the information industry, which all consider cooperative learning to be ideal. Cooperative learning cannot be carried out through verbal instruction but through the process of learners working together in groups. A lesson plan prepared in line with cooperative learning has enabled individual students to benefit from science and technology instruction by using scientific processes and principles for decision-making, participating in scientific decisions affecting society, and developing skills to produce ideas on a subject (Akcay et al., 2010). Cooperative learning provides more efficient skills, efficient thinking, problem-solving skills, and cooperative working habits. To investigate the purpose of the study, a mixed method was used. The sample consisted of 20 students of a private middle school in Istanbul, that is, 7 boys and 13 girls, and the study was carried out during the second term of the 2013–2014 school year in a study group.

Data was collected through a focus group interview for the qualitative instrument. For the quantitative data, the achievement scale was used. The t-test was used in analysing quantitative findings, and the content analysis technique was used for qualitative data. For this study, two research questions were formulated: Is there a significant difference between the pre-test and post-term scores of students who studied the system in our body unit of science and technology course based on the cooperative learning method? And the second was: how do students' views on the systems in our body unit of science and technology change through the cooperative learning method? The results of both research questions indicated that cooperative learning had a favourable outcome for learning. Cooperative-based learning: the teaching environment provided cooperation, supported permanent learning, provided opportunities to be successful, and contributed to the development of social and personal skills.

From an empirical perspective, Gilles (2016) in cooperative learning: review of research and practice I became interested in cooperative learning in the 1980s with the publication of the first meta-analysis involving 122 studies on the effect of cooperative, competitive, and individualistic goal structures on students' achievements and productivity, drawn from a sample of North American schools (Johnson et al., 1981). As findings show, cooperative learning is more efficient than individualistic and interpersonal competition. Results equally indicated that cooperative learning is efficient across many age groups and disciplines, like language, arts, reading, mathematics, sciences, social studies, and physical education. Cooperative learning also cuts across different teaching and learning tasks like problem solving, categorising, and reasoning.

More, Slavin's (1989) synthesis of 60 studies carried out in elementary and secondary schools with regards to comparing cooperative learning to a control group studying the same material showed that cooperative learning had an overall positive 72% of the comparison, while the control group had just 15%, with 13% showing that there are no significant differences. Thus, Slavin concluded that cooperative learning can be a strategy for increasing student achievement. Equally, in a follow-up meta-analysis of 117 studies on the Learning Together and Learning Alone Method (Johnson et al., 1994), a study was carried out on the effect of cooperative, individualistic, and competitive learning on a number of variables, such as achievements, social support, learning together, perspective-taking, interpersonal attraction, and controversy. Findings show that there is a strong effect size, which ranges from 0.58 for cooperative learning to 0.78 for competitive and individualistic learning.

Thus, the meta-analysis findings of Johnson et al. (1981); Johnson et al., (2002), and Slavin (1989) have highlighted the benefits that learners achieve when they work cooperatively rather than individually or competitively. Moreover, Slavin (2013), in a best evidence synthesis on primary and secondary mathematics, reading, and programmes for struggling readers, discovered that when the teaching method is well structured, like that of cooperative learning, it has a greater positive influence on learning than those evaluating other instructional practices, like the use of innovative curriculum text books. The above view was strongly supported by Slavin et al. (2014), who hold that instructional methods of teaching sciences emphasise enhancing teachers' classroom instruction throughout the year, and one such teaching method is cooperative learning. Slavin (2014), to crown it all, says there is a whole lot of overwhelming evidence to prove that cooperative learning is a pedagogical practice that greatly influences socialisation and students' learning.

In addition to the above, Ross et al. (1998), with respect to cooperative learning, carried out a study on student evaluation in cooperative learning: teacher cognition. Cooperative learning was seen to have brought some changes in relation to evaluation. Teachers who were used to the practice of evaluating learners learned new strategies for evaluating the learners working in groups. The pressure of changing students' ways of evaluating created tension for teachers, even though there were guidelines on students' feedback in cooperative manuals. Problems lay in the effectiveness of these strategies, which was not really known (Authors, 1991). Thus, the purpose of this study was to investigate how exemplary implementers of cooperative learning approaches handled these tensions. Their goal was to identify workable evaluation strategies that other teachers might try in their own domains.

The study was carried out with a school-university partnership and three academics who shared decision-making with a district committee of five experienced cooperative learning teachers: two principals who made cooperative learning their top school priority and the curriculum supervisor responsible for cooperative learning in-service. The sample was made up of 13 teachers, that is, 9 females and 4 males, selected by a district committee that also consulted other district officials, including school principals. Teachers who successfully used cooperative learning over an extended period The 13 teachers selected accepted to be interviewed. It is important to know that all of them had a full range of distinct in-service sessions, and some of the teachers had been involved in their delivery.

Data was collected qualitatively through interviews. Each teacher was interviewed twice in a month's period, over 60–90 minutes each, using a semi-structured interview guide. This interview was carried out by two important members of the district team (alternating between questioner and recorder) or by one of the academics. At the end of the research, findings showed that the experience of the teacher-researcher in using the knowledge they acquired by interviewing 13 exemplary users suggested that the knowledge base of teachers can be extended through collaborative action research, and equally, the development of teachers' capacities individually and collaboratively is a process of reflective inquiry that is best addressed in collaborative teams of teachers and academics (Authors, 1993). The above strategies can be more successful if they include the development of collaborative structures within the schools to enhance instructional decision-making and the induction of new teachers.

#### 2.3.1. ADVANTAGES OF COOPERATIVE LEARNING

Some advantages have been put forward in the use of cooperative learning, such as learning in groups. According to Harmer (2009), cooperative learning recognises the old maxim that "two heads are better than one," and in promoting cooperative cooperation, the classroom becomes relaxed and friendly, which enhances the learner's learning: group learning can help learners develop communication skills, leadership skills, and cooperation skills,working in groups gives students the opportunity to interact independently without a teacher's guide and goes a long way towards fostering the learners' independence and working in groups also helps in motivating bored students as well as improving students' achievement.

According to Geri et al. (2005), cooperative learning brings about independence amongst learners. The learners learn together, and learning is part and parcel of each learner. As they work in small groups, they plan to finish their product together, and this type of learning holds great value for all.

Moreover, the fact that each individual is accountable for sharing their own knowledge encourages them to work. Using collaborative skills to help each other learn and encourage other learners to participate in problem solving, cooperative learning thus strives to increase the overall achievement of groups and equally group members (Negangard et al., 1991).

Cooperative learning is equally advantageous; it gives equal opportunities for all group members to contribute to assigned tasks as well as strive for the collective success of the group, hence pushing the learners to work hard. Cooperative learning makes the students work together for a common goal and objective; all of them work to benefit one another by sharing their personal knowledge and skills (James, 2002).

This section has presented, examined, and discussed empirical works that evaluate the effect of cooperative learning strategies, compare flipped and cooperative learning, evaluate the use of cooperative learning, examine the benefits of cooperative learning, review research and practice, and discuss the advantages of cooperative learning.

## 2.4.0. THEORETICAL REVIEW

This section focuses on the theories used in the work. These theories include the CIPP (context, input, process, and product) evaluation model, social constructivism by Vygotsky,

and the social learning theory of Albert Bandura. According to Mbua (2003), a theory is a systematic and deductive manner of thinking about reality in order to better understand and describe such reality; it implies facts, models, laws, or principles about a phenomenon. To Luma (1983), a theory is "a related assumption or conception that fields in some way the real world of unknown properties or behaviors that can be subjected to experimentation and revision as well as a reserve to guide in the search for more truth hitherto unknown".

The following theories were used in this study:

- The cipp (context, input, process, and product model) by StuffleBeam
- Social constructivism by Vygotsky
- Social learning theory by Bandura.
- Social Interdependence Theory 1945 By Lewins

# 2.4.1. THE CIPP (CONTEXT/INPUT/PROCESS/PRODUCT MODEL) BY STUFFLEBEAM 2007

Created in 1960 by Daniel Stufflebean this model systematically collects information about a programme by collecting its strengths and weaknesses in order to improve its effectiveness in the future. It consists of four stages of evaluation (context, input, process, and product). The aim of this evaluation model is to enhance continuous improvement by concentrating on its four stages of evaluation. As society keeps evolving, educational actors keep looking for ways to improve education so that it fits into contemporary society. With the use of quality cooperative learning, teachers is able to measure learners' progress through the results of assigning tasks to group members. Teachers can collect information on learners' progress based on the responses given during their presentations. To make progress in learners learning after judgement, the teacher might decide to change group members from one team to another; he can decide to dissolve a particular group and recreate it again based on the information on learners progress because this model examines the strengths and weaknesses in an attempt to ameliorate them in the future. CIPP evaluates the effectiveness of a programme outcome, so too will the teacher be able to evaluate learners; achievement based on the results of assigned tasks and will be able to say if learning has taken place or not.

With regards to the context evaluation, which examines the needs of the community, Contemporary society needs more than knowledge recitation. It needs the development of social skills to be able to interact, collaborate, and work with others. The use of quality cooperative learning can enhance such skills as group members learn to interact so as to solve assigned tasks. In relation to input evaluations that examine materials, time, physical, and human resources for effective working in school, Cooperative learning is a less costly teaching method; it is not very demanding as far as didactic materials are concerned. More of it involves learners working in small groups to enhance understanding and influence classroom productivity. Input makes use of human and physical materials; cooperative learning consists of students working in groups to attain group objectives.

CIPP equally talks of process evaluation, which comprises all the teaching and learning processes. Cooperative learning fosters teaching and learning through interaction as learners carry out assigned tasks. Slow learners are taught or pulled up by the stronger ones, which enhances their understanding and mastery of the subject matter under study. Finally, we have a product that focuses on the quality of teaching and learning processes. Interaction during cooperative learning brings about quality in the teaching and learning process. When there is understanding and mastery, there is lifelong learning as knowledge and skills can be used anywhere and at any time. What learners learn during cooperative learning lasts a long time in their memories because they were at the centre of knowledge construction.

In a nutshell, the use of cooperative learning quality can bring about improvement and programme effectiveness because learners are actively involved in instructional processes, and the facilitators can easily collect information about the method from the learners' presentations after the assigned task. As such, the weaknesses and strengths can easily be identified to ameliorate for the future, either by changing the learners groups or resolving conflict in the different cooperative learning groups.

## 2.4.2. SOCIAL CONSTRUCTIVISM BY LEV VYGOTSKY, 1962

Social learning theories help us to understand how people learn in social contexts (learn from each other) and inform us on how we, as teachers, construct active learning communities through interactions and communications with others. Vygotsky (1962) examined how social environments influence the learning process. He suggested that learning takes place through the interactions students have with their peers, teachers, and other experts. Consequently, teachers can create a learning environment that maximizes the learners' ability to interact with each other through discussion, collaboration, and feedback. Vygotsky theories place emphasis on the role of social interaction in cognitive development (Vygotsky, 1978). The community plays a vital role in the process of making meaning' in this theory. Vygotsky (1978) considered the role played by culture and society; language and interaction are very important in enhancing understanding of how human beings learn.

Using his socio-cultural approach in the study of children, he asserted that language, thoughts, reasoning, and the development of an individual are the result of culture and social interaction with others (especially parents and teachers). Studying the growth of children in their environment, he notices that what happens in the social environment, such as dialogue, action, and activities, helps children learn, develop, and grow. This explains the fact that in cooperative learning, students interact with each other in the same group to acquire and practice the elements of a subject matter to solve problems, complete a task, or achieve a goal. One of the most important principles invoked in Vygotsky's (1978) work is the zone of proximal development.

Zone of Proximal Development refers to the difference between what the learners can achieve independently and that which can be achieved with the help of skilled partners. Thus, the cognitive development of learners greatly depends on social interaction, hence the place of cooperative learning. More specifically, in the example of Shaffers (1996) of the little girl who could not solve the jigsaw puzzle by herself and would have taken her a lot of time to do so, thanks to her father, she was able to do so and acquire skills at the end of the day on how to solve jigsaw puzzles. According to Vygotsky (1978), the Zone of Proximal Development should be the area where the most sensitive guidance or instruction should be given in order to allow the learners to develop skills they will use individually; through this, they will develop higher mental functions.

Peer interaction is an important way of developing skills and strategies. Teachers should use cooperative learning exercises to enable less competent children to develop with the help of skilled peers within the Zone of Proximal Development. Meaning that tasks that are difficult to master alone by the learners at the actual developmental level can be learned through guidance and assistance from adults, more skilled learners, or more knowledgeable learners at the Zone of Proximal Development, which captures children cognitive skills that are in the process of maturing and the skills can only be honed with the assistance of more skilled persons. Looking at Vygotsky's (1972) Zone of Proximal Development, attention is placed on the fact that when learners work in teams or small groups, the weaker students benefit from the more knowledgeable ones. Hence, through collaboration or interaction, learners' cognitive skills that are in the process of maturing can be honed.

This explains why Vygotsky (1972) further explains that the upper limit in the Zone of Proximal Development can only be fruitful through social and interactive support from peers and teachers. Vygotsky (1978), in his theory, states that cognitive development comes from social interaction, from guided learning within the zone of proximal development, as the learners and partners or group members construct knowledge. In this light, one can say that cooperative learning enhances cognitive development; thus, when there is collaboration, learners learn and cross over to their zone of proximal development through ideas and interactions from other intelligent group members through interaction and discussions.

Vygotsky (1978) states that cognition comes from guided learning. This is equally true, drawn from the fact that cooperative learning is guided by the teacher or facilitator in order to orient the work of learners in their small teams or groups. If the knowledge is not guided, learners may easily go out of topic or the desired work expected of them. Vygotsky (1978) illustrates that much important learning for a child occurs through social interaction with a skilled tutor; this implies the need for collaboration or cooperative dialogue in which the tutor or teacher provides verbal instruction to the learners and provides guidance in order to model the learner's behavior. Learners are able to model their own performance based on instructions given by parents or teachers. Shaffer (1996) equally supports this idea through his example of a young girl who is given her first jigsaw.

We notice here that on her first attempt, she behaved poorly to solve the puzzle, but after the teacher demonstrated to her some basic strategies like finding the edge piece as well as providing a couple of pieces for the child to put it together alone, the child became competent and worked independently. Thus, Vygotsky (1978) is simply reiterating the fact that collaboration or coo perative learning enhances better understanding, hence cognitive development under the guidance of teachers, parents, peers, and higher intelligent abilities. Hence, interaction with peers is an effective way of developing skills and strategies. Teachers should use cooperative learning exercises to give less competent children the opportunity to develop with help from more skilled peers within the zone of proximal development, thus influencing learners' performances and classroom assessment.

#### 2.4.3. SOCIAL LEARNING THEORY 1971 BY ALBERT BANDURA

Bandura's theory of social learning bridges the gap between behavioral and cognitive learning theories by taking into account how imitable behaviors are affected by cognitive constructs such as attention reduction and motivation (Bandura, 1977). Bandura (1977) further illustrates that much learning takes place through observing and imitating models. The major premise of social learning theory is that learners can improve their knowledge as well as retention through observing and modeling the desired behavior, attitudes, and reactions of others. Cooperative learning, on its own part, puts learners in groups and teams to work toward a common goal. Thus, through interaction in their little groups, members are given the opportunity to learn from others by observing, imitating, and modeling desired behaviors from other group members.

According to Schunk (2007), this theory highlights that much learning occurs when we observe, model, and imitate models; with this, learners can retain knowledge by observing and modeling the desired behavior, attitudes, and reactions of others. Learning together in small groups and teams permits group members to observe and model the desired behavior and reaction of group members as they interact, which enhances much learning. Moreover, according to Schunk (2007), most learning takes place in a social environment in which the learners obtain skills, strategies, beliefs, and attitudes by observing others. Schunk (2007) equally says that the social learning theory places human behavior within a framework of three reciprocal interactions: persons, behavior, and environment, which influence one another. It is a triangle that needs the functioning of all three parts to keep the triangle in place.

The fact that cooperative learning heterogeneously groups learners means that there is a possibility that, in the course of interacting in their different subgroups, learners will retain knowledge through observing and modeling desired behaviors, attitudes, and reactions, which will equally influence their learning. Bandura (1986: p. 6) equally reports that "*In a social cognitive theory, people are neither driven by inner forces nor automatically shaped and controlled by the motivation, behavior, and development within a network of reciprocally interacting influence. Persons are in terms of the number of basic capabilities*". That is to say, learners are not just motivated to work by an inner force, but most especially, they are able to learn through interaction in their different groups as they observe and imitate desired attitudes and behaviors. According to Johnson et al. (2010), in the social learning theory, learners learn more through observation and imitation of the desired behavior of other members or learners; thus, there is a strong connection between this theory and the practice of cooperative learning because the social behavior and actions of effective learners in the cooperative learning group are expected to be modeled and adopted by other learners through interaction between observed behavior, cognitive factors, and the external environment.

#### 2.4.4. SOCIAL INTERDEPENDENCE THEORY 1945 BY LEWINS

According to Johnson and Johnson (2005) is based on the fact that, individual's goals can be accomplished or achieved through action of others. Slavin (2011)says this perspective is based on the fact that the learners or group members help each other learn taking into consideration that they care about their group and its members and they derive self-identity benefit from group membership. In this light, Johnson and Johnson (2005) see this as a strong relationship between cooperative learning and social interdependence theory. According to Deutch (1949), Johnson (1970) and D.W Johnson and Johnson (1989) social independence can further be divided in to two parts, namely: positive cooperation and negative competition.

Positive interdependence according to Deutsch (1949) it is when individuals perceive they can only attain their goals if the individuals whom they are cooperatively linked also reach or attain their goals; that is to say the promote each other's effort to attained goals. Hence cooperative learning, taking in to consideration those individual goals can be accomplished through the action of others Johnson and Johnson (2005). This idea is further reinforced through Slavin (2011) who says group members derive self-identity benefit from group membership.

According to Johnson and Johnson (2008) positive interdependence brings about promotive interaction as group members encourage and facilitates each other's effort to complete task as well as accomplish groups' goals. Promotive interaction comprises of mutual help and assistance, exchange of needed resources, effective communication, mutual influence, trust and constructive management of conflict, hence cooperative learning enhancing learning as well as productivity. According to Deutsch (1948 and 1962) the psychological processes that comes to play when we talk of positive independence includes: Substitutability which is the degree to which the action of one person substitute for the action of another person. It equally includes Inducibility which is the openness to be influence and to influence others and

finally it consists of Positive cathexis which means the investment of positive psychological energy in object outside of oneself (Deutsch, 1994).

Social Interdependence Theory explains how self-interest is expanded to join interest and how new goals and motives are created in cooperative and competitive situation. Throwing light to the fact that when learners work in teams or groups their interest and focused is not on themselves but on other group members because they all work for the accomplishment of a common goal; thus interests are expanded to mutual interest through the actions of other group member's actions substituting for one's own. Cooperative learning is seen here through the emotional investment in achieving goals for one self is generalized to caring and committed relationships with those with whom learners are working with for the same purposes and goals. Deutsch (1949) says the weaker learners are helped by the stronger ones with respect to the fact learners are heterogeneously group.

Moreover, group members are open to be influence so that joint efforts become more effective. That is to say it is not individual's opinion that counts but what group members jointly comes out with, taking into consideration that they lay down the task to be accomplished in their different groups and discussed jointly on the possible solution so that ideas of one another influences others being open and flexible. The author rightly puts it when he talked of the transition from self-interest to mutual interest which is a very important aspect of the Social Interdependence Theory. Johnson and Johnson (2008) equally reiterates the fact that, when there is positive interdependence we will have variables such as mutual help and assistance, exchange of needed resources, effective communication, mutual influence, trust and a constructive management of conflict. That is to say when dealing with cooperative learning, group members as they work in collaboration ends up helping each other mutually as they exchange ideas together to accomplish a common task.

It is equally true that if there is not trust members cannot work together because nobody will look in to others opinions taking into consideration those members have to be open to be influenced by others. Thus if members have to work together to attain or accomplish the same goal they ought to be able to communicate effectively, there have to be influence mutual by each other, trust and constructively managed conflict amongst themselves. Johnson and Johnson (1989) found out that" greater performance is obtained by cooperation than competitive or individuals effort. This is because with cooperative situation, performance is constructed in terms of achievement and productivity, long term retention on- task behaviour,

use of higher-level reasoning strategies, generation of new ideas and solutions, transfer of what is learnt within one situation to another, intrinsic motivation, achievement motivation, continuing motivation to learn and positive attitudes towards learning and school.

## 2.5.0. VARIABLES OF THE STUDY

Luma et al. (1999) see a variable as a characteristic by which people or elements differ from one another.

#### **Independent variables**

According to Mbua (2003), the independent variables refer to factors that provoke or cause an event. In this respect, the independent variables of this study are the evaluation of cooperative learning with the following components:

- Academic quality
- Pedagogical quality
- Quality of classroom management
- Didactics quality

## **Dependent variable**

A dependent variable refers to the characteristic that is derived from the statement of hypothesis (Luma et al., 1999). The dependent variable in this study is classroom assessment, which will be measured in terms of:

- Relevance of knowledge constructed
- Mastery of content
- Learners' performances
- output, skills, and competence

SPECIFIC RESEARCH QUESTIONS	RESEARCH HYPOTHESIS	INDEPENDENT VARIABLES	INDICATORS	MODALITIES	DEPENDENT VARIABLE	INDICATORS	MODALITIES	MEASUR -ING SCALE	STATIS- TICAL TECHNIQUE
1. To what extend does academic quality of cooperative learning influences classroom assessment?	H1. The academic quality of cooperative learning influences classroom assessment	Academic quality	-Knowledge construction -Validity -Reliability Group processing	Agree Strongly Agree Disagree Strongly Disagree	Classroom Assessment	-Relevance of knowledge constructed -Mastery of content -learners' performance (output, skills and competence)	Agree Strongly Agree Disagree Strongly Disagree	Interval scale	<b>f</b> Corrsel ation) Pearson Product Moment r
2. To what extent does the pedagogical quality of cooperative learning influences classroom assessment?	H2. The pedagogical quality of cooperative learning influences classroom assessment	Pedagogical quality	<ul> <li>Group competition</li> <li>Motivation</li> <li>Imitation</li> <li>Individual</li> <li>accountability</li> </ul>	Agree Strongly Agree Disagree Strongly Disagree	Classroom Assessment	Relevance of knowledge constructed -Mastery of content -learners' performance -output, skills and competence	Agree Strongly Agree Disagree Strongly Disagree	Interval scale	<b>1</b> (Correl ation) Pearson Product Moment r
3. To what extent does the quality of classroom management of cooperative learning influences classroom assessment?	H3. The quality of classroom management of cooperative learning influences classroom assessment	Quality of classroom management	-Management to ccommodate group work -Monitoring activities in group work -Discipline -Rules -Communication	Agree Strongly Agree Disagree Strongly Disagree	Classroom Assessment	Relevance of knowledge constructed -Mastery of content (learners' performance -output, skills and competence)	Agree Strongly Agree Disagree Strongly Disagree	Interval scale	<b>1</b> (Correl ation) Pearson Product Moment r
4. To what extend does didactics quality of cooperative learning of cooperative learning influences classroom assessment	H4. The Didactics quality of cooperative learning influences classroom assessment	Didactics quality	-learning content -learning activities -learning materials	Agree Strongly Agree Disagree Strongly Disagree	Classroom Assessment	Relevance of knowledge constructed -Mastery of content -learners' performance (output, skills and competence)	Agree Strongly Agree Disagree Strongly Disagree	Interval scale	<b>1</b> (Correl ation) Pearson Product Moment R

SYNOPTIC TABLE: "EVALUATION OF THE QUALITY OF COOPERATIVE LEARNING AND ITS IMPACT ON CLASSROOM

ASSESSMENT"

#### 2.4.4. CONCLUSION

In this chapter, there has been a presentation, examination, and discussion of the writings and views of various authors and publications with respect to cooperative learning and classroom assessment. Evaluation has been examined from the perspectives of program evaluation, types, purposes, and approaches, while cooperative learning has been examined from the perspectives of its influences and challenges in its implementation, and assessment has been examined from the perspectives of the different types and purposes. Also, the quality of cooperative learning has been examined from the perspectives of academic quality, pedagogic quality, didactic quality, and classroom assessment. Furthermore, empirical works have been presented and discussed. The CIPP (context, input, process, and product) evaluation model, Kirkpatrick's four-level evaluation model, social constructivism by Vygotsky, social independence theory by Lewins, and social learning theory by Albert Bandura have been discussed based on the variables of this work.

## **CHAPTER THREE**

## METHODOLOGY

#### **3.0. INTRODUCTION**

This section describes the method and instrument used to collect data for the study. It examines the research design, area of study, population of the study, sample and sampling technique, instrumentation, validation of research instruments, data collection and method of data analysis, and ethical considerations.

#### **3.1.0. Research Design**

According to Amin (2005), "research design is the stated structure and process of conducting a research project, detailing the plan and method for systematically and scientifically obtaining the data to be analyzed." Thus, a research design is concerned with specifying how the data collected from the problem under investigation is analyzed. A quantitative and qualitative research design was employed; according to Denzin (1978), a research design that combines a number of methodologies in a study of the same phenomenon is called triangulation. Campbell et al. (1959) argue in Amin (2005) that triangulation has to do with collecting and analyzing data using quantitative and qualitative methods. Triangulation is the combination of two or more theories, data sources, and methods of investigation in one study or a study of a single phenomenon. Triangulation is used to ensure that the bias inherent in particular data sources and methods is neutralized when used together with other data sources and methods (Aim 2005).

In the same light, Gay (1996) in Amin (2005) say triangulation is the term used for multiple methods, data collection strategies, and data sources. Elliott (1992, p. 82) says that *"the basic principle underlying the idea of triangulation is that of collecting observations or accounts of a situation from a variety of angles or perspectives and comparing them"*. Thus, the use of a multi-method approach is aimed at provoking contrasts, similarities, comparisons, or responses in research. It explains the richness and complexity of the study from various points of view. The triangular methods use both a qualitative and quantitative approach to a particular phenomenon under study. According to Amin (2005), quantitative research designs are plans for carrying out research oriented towards quantification and applied in order to

describe current conditions to investigate relationships, including cause-and-effect relationships.

Quantitative research involves the collection of data that is numerical in nature to explain, predict, and control the phenomenon under study. The collected data is statistically analyzed. In quantitative research designs, there is the collection of data to test hypotheses or answer issues concerning the subject under investigation. Quantitative research is used to describe current conditions or investigate relationships, including cause-and-effect relationships. Quantitative research tries to control many variables at the same time and thus makes use of research strategies like random sampling, random assignment, treatment groups, standardized instruments, and the equalizing of conditions of groups to be compared (Amin, 2005). As a quantitative instrument, this research design employs questionnaires.

While qualitative design is diverse and used in studying multiple realities found in a complex field situation, Amin (2005) says qualitative research gives room for understanding the way things are and why they are the way they are. They can be achieved through discussions, intensive and extensive interviews, and observations. Qualitative research enhances understanding of social activity from the perspective of the researcher or participants. Qualitative research is based on observable and empirical experiences that are observable and require accurate observation and interaction with respondents in the environment. Qualitative research data is descriptive in nature, implying that it is expressed in non-numerical terms. This study employs a structured interview consisting of structured questions as a qualitative instrument.

#### 3.2.0. Area of the study

This study is carried out in six (6) out of the ten (10) regions of Cameroon. This includes the north (Garoua), Adamawa (Ngaoundere), east (Bertoua), center (Yaounde), north-west (Bamenda), and littoral region (Edea). Cameroon is a country in central Africa, situated in the bay of the East Atlantic Ocean called the Bight of Biafra (World Population Review, 2019). It consists of 10 regions and 360 subdivisions, with headquarters in Yaounde. Cameroon is bounded to the west and north by Nigeria, to the northeast by Tchad, to the east by the Central African Republic, Gabon, and Equatorial Guinea, and to the south by the Republic of the Congo. It is often referred to as Africa in miniature due to its cultural and geological diversity. It is a country with a land surface of 475,442 square kilometers and an estimated population of

about 25.88 million inhabitants, according to the current population census (World Population Review, 2019). The official languages are English and French, which owe their origins to Britain and France (former colonial masters, respectively).

Cameroon is made up of ten (10) regions headed by governors, fifty-eight divisions (58) headed by presidentially appointed divisional officers, and three hundred and sixty (360) subdivisions headed by sub-divisional officers. Yaounde is the headquarters and political capital of Cameroon, and Douala is the economic capital. Yaounde, the political capital of Cameroon, has a population of about 1,299,369 and a surface area of 180 square meters. This study is carried out at the regional headquarters of the selected regions, except for the Littoral (Edea). This is due to the fact that GBTTC's regional headquarters are bilingual in nature, and with this, we can have a balance in results. Thus, the following areas were chosen for the study:

#### **Government bilingual teacher training college Garoua**

According to Britannica, Garoua is located in northeastern Cameroon. It is the headquarters of the Northern Region and lies along the banks of the River Benue. It is located at the road junction between Maroua and Ngaoundere and the Benue waterway and is the chief commercial center of the region. The population stood at approximately 436,899 inhabitants in 2018 and has a total surface area of 66.090 km2. GBTTC Garoua is situated in the Garoua 2 subdivision, some two hundred meters (200m) from the Roumde Adjia Stadium. The school shares infrastructure with Lycee Technique de Garoua, which consists of 67 classrooms and a multipurpose hall that serves as a classroom. It is a temporary site. The classes are divided into O' Level classes (that is, a three-year course), six (6) OLevel classes, or one (1) ALevel class, which is a s a two- course, and an A' Level class (one-year course). Equally, the inspectorate of bilingualism is located on this same site. GBTTC Garoua occupies a section of the school that comprises three (3)-story buildings: the administrative block, which comprises seven different offices, including the Dean of Studies office, the senior and junior discipline master offices, which are all located on the left-hand side of the building.

#### Government bilingual teacher training college Ngaoundere

Next, we have Ngaoundere, the headquarter of the Adamawa Region. According to Britannica, Ngaoundere is situated in north-central Cameroon on the Adamawa Plateau; it is the northern terminus of the Trans-Cameroon Railway to Yaounde and Douala and lies on the major north-south road from Garoua to Bertoua and Yaounde. Local development projects focus on animal husbandry and have industries like darying, slaughtering, hides and skins, perfume manufacture, and cotton ginning. Ngaoundere is an important Fulani capital; it was founded in the first half of the 19<sup>th</sup> century as a part of the Adamawa emirate by the Fulaniemir Madibbo Adama and has a surface area of 476,350 square kilometers. GBTTC Ngaoundere is located in the Vina division of Ngaoundere 1 subdivision around the Champ de Prier neighborhood, in a quarter known as Baladji 2. It is opposite Lycee Technique de Madock, and to the west, it is bounded by Gare Manchandise and the customs office. The school is made up of 10 blocks. Amongst the ten blocks, we have one administrative block, which hosts the offices of the principal, vice principal, busar, discipline, and the office in charge of budget and materials, as well as the secretariat.

One of the blocks is hosting the library; another is hosting the staff room, the Anglophone and Francophone dean of studies offices, as well as the staff toilettes. We equally have one block hosting the multimedia hall, which equally serves as a classroom. Two of the buildings serve as dormitories, one for the boys and one for the girls. The rest of the buildings serve as classrooms, which are divided into O' Level classes (that is, three courses), six (6) OLevel classes, or one (1) ALevels class, which is a s a two- course, and A' Levels classes (one-year course). There is also a staff quarter with three (3) houses, which are for the principal, bursar, and discipline mistress, respectively.

## Government bilingual teacher training college Bertoua

The next area of the study is Bertoua. According to Britannica, Bertoua, also spelled Bertua, is the headquarters of the Eastern Region and the transition zone between the South Forest and the Northern Savanna. Even though it was once a traditional regional administrative and commercial center, it was isolated not until the rail road construction to the nearby Belabo and the opening of the airport in 1976. Contemporary development projects consist of road construction from Bertoua to Belabo, the creation of a cassava (manioc) processing complex, and the construction of a peanut (groundnut) oil factory. Bertoua covers a surface area of 109002 km2, and the population stands at 88,462 (as of the 2005 census).

GBTTC Bertoua is found in Bertoua 2 subdivision in the Lom and Djerem Division. It shares its neighborhood with renowned structures like Bertoua central prison, the presidential lodge, and the governor's residence. The school consists of six (6) blocks. Amongst the six buildings, we have one-story buildings: eleven (11) classrooms, one computer laboratory, one (1) refectory, a multipurpose hall, and an administrative building. The lower section of the building houses the staff room, the refectory, the computer laboratory, an archives office, and the guard's residence. The upper part of this building hosts four (4) classrooms and the library. Two other buildings host the other two classes, respectively; there is another building hosting the multipurpose hall. The classes are divided into O' Level classes (that is, three-year courses), six (6) OLevel classes or one (1) ALevel class (two-year courses), and A' Level classes (one-year courses). There is also another block having four (4) rooms, where two (2) of the rooms are used as classes and one is the office of the Anglophone Dean of Studies, while the last room is empty; amongst the six blocks of the school, one serves as the administrative block.

#### Government bilingual teacher training college Yaounde

Then we have the center region, in which Yaounde doubles as the headquarters of the region, equally the headquarters of Cameroon, and equally the political headquarter of Cameroon, with a population of 1.299,369 and a surface area of 180 square meters. This study was carried out in Yaounde 1, Sub Division, Mfoundi Division, in the Central Region of Cameroon. GBTTC is located in the northwest from the governor's, divisional, and sub-divisional officer's offices in the Nlongkak residential neighborhood (camp SIC). The school shares the same campus with Government Technical Secondary School, Nsam. The school has three GCE Ordinary Level classes (BEPC 1, 2, and 3), two classes (1 and 2), GCE Advance Level one paper (probatoire 1 and 2), and three Advanced Level classes (BAC A, B, and C).

The administrative block is located on the southwest of the campus, and on its west are the multimedia hall, bursars' office, and discipline office. The extreme west has a building that hosts the vice principal's office and a section of the Technical College. While the Northeast is occupied by a building that serves as classrooms and the office of the service in charge of studies and internships, behind this building are some classrooms used by the Technical College. The northwest of the campus is occupied by the building that hosts the classes, while on the west of this building is another building that serves as a technical college. At the center, there is a football pitch, and the south has the entrance to the college. The school is surrounded from the north, east, west, and south by the Nlongkak residential quarters.

#### Government bilingual teacher training college Edea

The next area of study is Edea, according to Britannica. It is a town located in southwestern Cameroon and situated at the head of steamboat navigation of the lower Sanaga River. It is located in the littoral region and produces aluminum ingots, sheet metal, and household products; the aluminum from Fria in neighboring Guinea is the base of Edea's aluminum industry; power for the plant and other industries comes from Edea's dam on the Sanaga. Edea has some stone quarries, palm-oil mills, and cacao and rubber plantations in the vineyard. The town is connected by rail and roads to Douala (Northwest) and Yaounde (East) and by road to Kribi (South). Pop (2005) GBTTC Edea is located in Sanaga Maritime Division, Edea 1 subdivision in Mbondadick quarter, around the road that goes to Kribi, commonly referred to as "Carrefour Kribbi". The school comprises five (5) buildings, of which two are story buildings.

The administrative block comprises the principal's office, the Dean of Studies office, the bursar's office, and the vice principal's office. The same building equally hosts the staffroom, the principal's secretariat, and two staff toilets. One of the story buildings hosts the Anglophone classes and the multipurpose hall, as well as the junior discipline master's office; the other story building and two other blocks host the classes for the Francophones. The classes are divided into O' Level classes (that is, a three-year course), six (6) OLevel classes or one (1) ALevel class, which is a two-year course), and A' Level classes (one-year course). The last block is the computer room, which serves as the secretariat during organized and official exams. The campus has staff quarters with three houses: one for the principal, one for the senior discipline mistress, and one for the bursar, respectively. The site has two dormitories, one for the boys and the other for the girls, with a school canteen.

#### Government bilingual teacher training college Bamenda

Finally, Bamenda is the headquarters of the North West region. The northwest region has a population of 1702559, a surface area of 17300 square meters, and comprises 7 divisions. GBTTC Bamenda is located in the Bamenda 3 subdivision of the Mezame Division of the North West Region and is located on the top of a hill where you can easily have a view of the town. It comprises eight (8) blocks, with one hosting the dormitory and one block hosting the administrative blocks, with the six (6) others hosting classrooms. The classes are divided into O' Level classes (that is, a year's course), six (6) O-Level classes, or one (1) A-Level class,

which is a two-year course), and A' Level classes (one-year course). In the administrative block, we have the principal's office, the vice principal's office, the dean of studies office (that is, the Anglophone and Francophone dean of studies), the secretariat, the sports office, and the office of one of the discipline mistresses. The office of the bursar is found in another building that equally hosts some classrooms and offices of other discipline mistresses.

The researcher chose the above government bilingual teacher's training colleges because they possess the characteristics and variables under investigation. Moreover, teacher training colleges at the regional headquarters are easily followed up by inspectors and receive new innovations early enough before any other parts of the division or subdivision. They are usually equipped in terms of materials and personnel compared to those in the subdivision. Thus, innovation to be introduced in their programs starts at the regional headquarters before going down to other subdivisions. Hence the reason why the researchers say there is a lot of follow-up as far as pedagogy (the teaching and learning process) is concerned. Also, the choice of the above area is due to the fact that the researcher has lived a reasonable part of life in these areas.

#### **3.3.0.** Population of the Study

Kanla (2000), defines a population as a group of people living within a particular geographical location with common characteristics. Further, according to Polit and Hungler (1999), population refers to the total number of all subjects that conform to a set of specifications, representing the entire group.

#### **Target Population**

According to Amin (2005), the target population is the population to which the researcher wants to generalize his or her findings. He equally refers to it as the parent population. The total number of student teachers for all the GTTC's in Cameroon for 2018/2019 stood at 11390.

Academic	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
year							
GTTC/ENIEG	24867	22603	17881	15359	13475	10797	11390

Source: MINESEC (2019)-secretarait of state to the Ministry of Secondary Education incharge of Teacher Training statistics Archive

Withrespect to the six (6) Government Bilingual Teachers training Colleges in Cameroon, the target population is made up of one thousand, three hundred and two (1,302) student teachers from some 6 Government Bilingual Teacher Training colleges in Cameroon; that is: Government Bilingual Teacher Training College Garoua with a student-teacher population of two hundred and forty six (246); 230 francophone and 16 Anglophone; Government Bilingual Teacher Training Ngaoundere with a student- teacher population of one hundred and eighty-seven (187) that is 163 Francophone and 24 Anglophones; Government Bilingual Teacher Training College Bertoua having a student-teacher population of two hundred and twenty seven (227) that is 199 Francophone and 28 Anglophones; Government Bilingual Teacher Training College Yaounde which has a student- teacher population of three hundred and thirty (330) that is 47 Anglophones and 283 francophone; Government Bilingual Teacher Training College Edea having a student-teacher population of three hundred and ninety-nine (399); 294 Francophone and 105 Anglophones and finally Government Bilingual Teacher Training College Bamenda with a student-teacher population of three hundred and twelve (312) that is fifty five (55) Francophone and two hundred and fifty seven (257) Anglophones. Source: from the administrators of the various schools (2019)

#### The Accessible

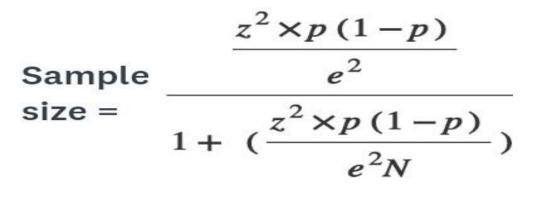
The accessible population of this study comprises Ordinary Levels (O'L), that is, those with a three-year course (O'levels classes 1, 2, and 3), 5 O'levels or 1 A'level Class, which is a two-year course (Probatoire 1 and 2), and Advance Level Class (A'L), which is a one-year course. The accessible population consisted of 411 student-teachers of both Anglophone and francophone expressions from the above-mentioned teacher training colleges. Government Bilingual Teacher Training College Garoua consisted of sixty-eight (68) student-teachers; Government Teacher Training College Bertoua consisted of sixty-four (64) student-teachers; Government Teacher Training College Yaounde consisted of seventy-five (75)

student-teachers; Government Teacher Training College Edea consisted of eighty (80) studentteachers; and Government Teacher Training College Bamenda consisted of seventy-two (72) student-teachers, giving a total of 411 participants.

#### 3.4.0. SAMPLE AND SAMPLING TECHNIQUE

Sampling according to Ogula (2005) is a process or technique used in choosing a subgroup from a population to participate in the study. Amin (2005) sees a sample as a subgroup drawn from a larger population and it's meant to represent all members. This study makes use of the probability sampling (Random sampling); according to Henry (1990) it's a type of sampling procedure that is characterised by non-zero probability. This implies that every individual in the group under study has equal chances of being selected for the study. Other sampling procedures associated to the probability sampling includes the simple random sampling, the stratified sampling and the clustered sampling.

This research equally employs the simple random sampling as student teachers were randomly selected from the different bilingual teacher training colleges that constituted the sample hence all the student teachers of the selected teacher training colleges had the chance of being selected. Here pieces of paper were written with odd and even numbers; that is, odd numbers bore the code '1'and even numbers bore the code '2'. They were all mixed up in a basket where students and teachers were asked to choose or pick a paper from. Those who picked the code '2' (even number) were chosen for the sample, hence automatically becoming participants. The sample was calculated as thus;



# N = population size • e = Margin of error (percentage in decimal form) z = z-score

www.surveymonkey.com is an online calculator used in calculating the sample size. The researcher used it in calculating the sample size of 1302 student-teachers, with a confidence level of 95% and an error margin of 4%. This resulted in a sample size of 411. It is equally important to note here that those of the interview (structured interview) were also drawn from this sample population, as shown below.

#### **Sampling Technique**

The study employed two sampling techniques: the probability technique was used, in which a simple random sample was used to select the four hundred and eleven student-teachers (411), which served as the sample of the study. Equally, non-probability sampling was used, wherein the participants chosen for the interview were drawn from the sample that resulted from simple random sampling. In addition to simple random sampling, the convenience sampling technique was used, which is a non-probability sampling technique. According to Amin (2005), the convenience method is also referred to as an "accidental" sample, whereby the researcher selects units that are convenient, close at hand, or easy to reach. Thus, six student-teachers were chosen from the sample for the interview (structured interview), for they were the most convenient and readily available participants for the study. This explains why Cohen et al. (2000) say the convenience sampling technique is employed to choose the most convenient and readily available subjects for the study.

Nº	Schools	Target	Sampled	Distribution of
		population	population (+	participants for
			interview)	interview
1	Government Bilingual	246	68	1
	Teacher Training Garoua			
2	Government Bilingual	187	52	1
	Teacher Training			
	Ngaoundered			
3	Government Bilingual	227	64	1
	Teacher Training Bertoua			
4	Government Bilingual	330	75	1
	Teacher Training Yaounde			
`5	Government Bilingual	399	80	1
	Teacher Training Edea			
6	Government Bilingual	312	72	1
	Teacher Training Bamenda			
7	Total	1,302	411	6

**Table 1: Distribution of Sample Population** 

Source: MINESEC (2019)-secretarait of state to the Ministry of Secondary Education incharge of Teacher Training Statistics Archive

## **3.5.0. INSTRUMENTS USED FOR DATA COLLECTION**

Takona (2002) sees research instruments as essential tools used to measure variables like opinion, attitude, concepts, and composition; hence, she suggests that interviews and questionnaires are effective research tools. A questionnaire and a structured interview guide were used to collect data for the study. According to Silverman (1997), questionnaires are tools designed for collecting quantitative data in a research study and are a good research instrument for collecting standardized data and making generalizations; hence, questions should reflect research aims and objectives. The questionnaire constructed for this study was constructed taking into consideration the following:

- Firstly, the objectives of the study
- Examining the target population to identify the means through which copies of the questionnaires will get to them
- Thirdly, the design of the questionnaire and the structured interview guide
- pre-test of the questionnaire
- Administration of the above instruments

• Finally, analyze the data as well as interpret the results.

According to the Robert Wood Johnson Foundation (2006), an interview consists of asking questions and getting answers from participants. Interviewing has a variety of forms, including face-to-face interviews and face-to-face group interviewing. The asking and answering of questions can be mediated by the telephone or other electronic devices (like computers). A structured interview was used; it is a kind of interview in which the same questions are asked to all the participants following the same order, and choices of alternative answers might be restricted to a predetermined list. This type of interview is scientific due to the fact that it brings out controls that are necessary to permit the formulation of scientific generalizations (Amin 2005).

Thus, a structured interview was used in the construction of the interview guide because it follows a list of predetermined questions. According to Amin 2005, structured interview are more scientific in nature as they introduce the controls that are required to permit the formulation of scientific generalisation. The structured interview was carried out face-to-face as well as through mass media (WhatsApp, texts, and voice mail, which could take the form of video or audio calls). Hence, the discussion guide or questionnaires were sent to the inboxes of participants in cases where a face-to-face interview was not possible. Structured questions were posed to participants, who answered them individually without being interrupted by any social pressures.

## 3.6.0. Validation of Research Instruments

According to Amin (2005), validity refers to the ability to produce findings that are in agreement with theoretical and conceptual values, hence to produce accurate results and measure what is supposed to be measured. Furthermore, Mbua (2003) refers to validity as the accuracy with which an instrument measures what it intends to measure. The supervisor of this work examined the questionnaire and the interview guide. After that, the instruments were equally examined and validated by two other specialists in measurement and evaluation; they examined the construct validity of the questionnaire through the use of Indices,, c'' of Cliff's Consistency, which is considered strongest for validation of the above instrument. Through the Indices,, C'' of Cliff's Consistency, they were able to verify and make sure the instruments were equally corrected before being approved, indicating that they were good for pilot validating

testing. The questionnaire was administered to 35 randomly selected student-teachers from the different government bilingual teacher's training colleges exposed to cooperative learning who were not part of the sample.

NRTVB, which is a computer program, was used in calculating the construct validity of the data through the use of the indices C'' of Cliff's Consistency Indicies. The results obtained here stood at 0.61, implying the instrument was appropriate and useful. It is important to note that with the use of Indices,, C'' of Cliff's Consistency Indices, anything from 0.32 and above qualifies the instrument to be validated. The questionnaires were administered face-toface to participants by the researcher in schools that were accessible for her and through WhatsApp to the different schools where it was difficult for her to be in person. Here, the researcher forwarded the electronic copies through WhatsApp to the different inboxes of the different colleagues (assistance) who helped her in the administration of the said instruments. The different colleagues printed out the numbers expected for their samples and administered them. With the structured interview, it was done face-to-face in some schools that were accessible to the researcher and through WhatsApp, where it was difficult for her to be in person; thus, the researcher forwarded the structured questions to the inboxes of participants.

With regards to the reliability of the research instrument, reliability is the type of measurement that gives consistent results with equal values (Blumberg et al., 2005); it is a kind of measurement that deals with consistency, repeatability, precision, and trustworthiness. It shows the extent to which there is no bias (error-free). The results of research are said to be valid if the results obtained in identical situations, though in different circumstances, are consistent (Charkrabartty, 2013). Test-retest reliability was used in this study. The questionnaires were randomly administered to 35 student-teachers exposed to cooperative learning in the different government bilingual teacher training colleges who constituted the pilot study. Four weeks later, the same instrument was administered to the same population (but the student teachers did not constitute the sample). Amin (2005) says that when an instrument is repeatedly administered to as test-retest reliability.

The two sets (2) of responses gotten from above were correlated with the help of NRTVB software. Results obtained through the calculated correlation coefficient have a value of.01 level of significance, indicating that test-retest reliability for the instrument is significantly high with a standard error of 1.98 and a 0.016 standard error of correlation

coefficient; hence, the high test-reliability of the research instruments renders the questionnaire reliable for the study.

#### **3.7.0. DATA COLLECTION**

As earlier mentioned, the researcher did not work alone; she worked with other colleagues with whom she had created a working relationship in the different selected teacher's training colleges, colleagues whom she trained on the awareness and administration of questionnaires. These assistants were trained on how to administer and collect the answered questionnaires; hence, scanned copies of questionnaires were sent through the inboxes of the various assistants (colleagues) in GBTTC Garoua, GBTTC Ngaoundere, and GBTTC Bamenda due to the distance, insecurity, and health condition of the researcher. But for GBTTC Yaounde, GBTTC Edea, and GBTTC Bertoua, the researcher personally administered the questionnaire since these areas were closer and more accessible to her.

The assistants (colleagues) wired money through the mobile money network to facilitate their task. This money was used to print the required number of copies needed for the different samples from the various schools. The printed copies were distributed to the sampled population by the assistance. After participants in the various selected colleges had responded, the answered questionnaires were sent to the researcher through transport mail services (bus agencies) and also through individuals who came to Yaounde during that period for one reason or another.

The structure interview was carried out alone by the researcher through face-to-face and WhatsApp. Through WhatsApp, the researcher inboxes the different questions on the interview guide to the conveniently selected sample. In this light, the researcher worked with participants of GBTTC Garoua, GBTTC Ngaoundere, and GBTTC Bamenda through WhatsApp, and for participants of GBTTC Yaounde, GBTTC Edea, and GBTTC Bertoua, she worked face-to-face with participants for the interview. The students and teachers equally responded directly to the researcher through the medium that was used, respectively.

#### 3.7.1. The study tools used in collecting data

The tools used in collecting data comprise the questionnaire and the structured interview. The questionnaire was constructed in relation to the Likert scale. It consisted of

twenty-five (25) question items, which were divided into five sections: academic quality, pedagogical quality, classroom management quality, didactic quality, and classroom assessment. It graduated as follows: strongly agree (SA) = 4 scores, agree (A) = 3 scores, disagree (D) = 2, strongly disagree (SD) = 1 score. Implying that each section had a maximum score of 25 and a minimum of 5 scores.

Hence, the total maximum score was 100 and the minimum score was 25. The questionnaire for this study consisted of closed-ended questions or statements graded from 4 to 1 with five (5) sections. Each section had five (5) question items, giving a total of twenty-five (25) items reflecting the major variables of the study. The questionnaire had items relating to the background of the participants, such as age, institution, religion, and age. The questionnaire had a 100% return rate. With regards to the structured interview, the data was collected through the face-to-face and WhatsApp inboxes of the different participants. The researcher made use of a laptop and Android phone connected to the internet.

The questionnaire was used as the research instrument for data collection because it is good for collecting and analyzing quantitative data. A questionnaire is a data collection instrument that is widely used for survey studies due to the fact that it is structured and numerical and can be easily administered, taking into consideration that it can be administered with or without the researcher's presence. It is easier to analyze due to its straight-forward nature (Wilson and Mclean, 1994) in Cohen et al. (2007), hence the choice of it by the researcher. Moreover, the questionnaire ensures confidentiality, which guarantees the anonymity of respondents and goes a long way toward enhancing a favorable working environment for the participants.

Thus, participants are free and void of any pressure or influence, rendering the instrument valid and reliable. Nevertheless, despite the above advantages, questionnaires are time-consuming because they are constructed, piloted, corrected, and refined. Moreover, the scope of collecting data is limited due to the fact that it has a limited scope and is inflexible in response (most often, question items are closed-ended in structure and are specific).

Distributed	Returned	Return Rate	Incomplete	Complete	Adjusted
					Return Rate
411	411	100%	00	411	100%

Table 2: Questionnaires distributed and responded to by students

Table 2 shows that 411 copies of the questionnaire were distributed to the different chosen schools. We had a return rate of 100% because all of the copies distributed to the respondents came back as they were directly collected by the researcher and assistant colleagues in the respective schools. Moreover, all of the different items were responded to by the respondent, which gave 411 completely answered questionnaires and an adjusted return rate of 100%.

#### **Structured Interview**

The researcher used a structured interview to collect quality data on the evaluation of the quality of cooperative learning and its impact on classroom assessment. Here, six (6) student teachers were selected for the interview. It is important to note that these six (6) chosen from the selected teacher's training colleges equally constituted part of the sample; the researcher was the moderator. The interview guide and structured questions were drafted by the researcher and sent to the WhatsApp inboxes of the different participants in GBTTC Garoua, GBTTC Ngaoundere, and GBTTC Bamenda, as earlier mentioned, due to health reasons, distance, and insecurity in some of these regions. But for GBTTC Bertoua, Edea, and Yaounde, the researcher went down the field on three different occasions to interview participants since it was accessible to her. The participants equally answered by expressing their views in relation to the subject under study.

The interview guide required more than a straight-forward response like the questionnaire; students- teachers had to respond by expressing their views. Thus, it was a little demanding and lengthy. The interview was carried out as such; the researcher constructed 24 questions (items), which were divided into five main sections based on the main variables of the study. She worked with the participants of GBTTC Garoua, GBTTC Ngaoundere, and GBTTC Bamenda for five different weeks. The first week, she asked the participants the first five questions (items) based on some main variables of the study. Since the interview required lengthy writing and expressions, the participants spent the whole week responding to the above questions.

Their responses were sent directly to the researcher's inbox and came in through the following means: voice mail, text, video, and audio calls through WhatsApp. The following week, the researcher equally sent the next five sets of questions (items) on the structure interview guide based on the variables of the first research question through the WhatsApp inboxes of the participants. The participants did the same by sending their responses through text messages, video calls, and audio calls through WhatApp. The same procedure was repeated for the third, fourth, and fifth weeks based on the different variables of the second, third, and fourth research questions, respectively. At the end of the fifth week, the findings were analyzed according to the different research questions. This technique enabled the researcher to gather in-depth knowledge on the subject under study due to the fact that participants' feelings, attitudes, and opinions could be seen and judged, which was relevant for the study.

#### **3.8.0. METHOD OF DATA ANALYSIS**

The collected data were analyzed using descriptive statistics. The responses to the questionnaire collected were analyzed using the NRTVR software and statistical package (SPSS). Thus, SPSS version 26 was the statistical package used at the different stages of data analysis. The questionnaire was analyzed using mean, standard deviation, and Pearson correlation, while the in-depth interview was analyzed using percentages.

This study made use of four hypotheses. These hypotheses were verified based on the answers to research questions on the evaluation of the quality of cooperative learning (an independent variable). The hypotheses are as follows:

**RH1:** The academic quality of cooperative learning influences classroom assessment.

**RH2:** The pedagogical quality of cooperative learning influences classroom assessment.

**RH3:** The quality of classroom management in cooperative learning influences classroom assessment.

**RH4:** The didactic quality of cooperative learning influences classroom assessment.

This study has a dependent variable, which is classroom assessment. Questions were analyzed under the factors relating to classroom assessment. To establish a correlation between the dependent and independent variables, correlation analysis was used, and the findings were reported through the American Psychological Association (APA).

#### **3.8.1. Ethical Considerations**

Ethical consideration is one of the many elements that need to be taken into consideration when dealing with research in education. Ethics is concerned with the wellbeing of participants and protecting their personal interests in the research during and after the research process. Ethics greatly influences the data collected. Thus, to avoid damaging findings, participants have to be assured of the confidentiality of their responses. To this end, some elements were taken into consideration prior to, during, and after the research processes.

#### **Concern Clearance**

The authorization obtained from the Faculty of Sciences of Education, University of Yaounde 1, enabled the researcher to collect data from the field.

## **Voluntary Participation**

Student teachers voluntarily participated in the study, both by responding freely to the questionnaire items and the interview questions. Participants were educated on how to respond to questions both in the questionnaire and interview. They were free and never worked under duress.

#### Anonymity and confidentiality

Psychological and physical assurances were given to the participants; to this end, anonymity and confidentiality were respected throughout the process. This explains why the names of participants were not written on the questionnaire; private data were not exposed to the public. The discussions from the in-depth interview were confidentially treated and kept.

#### **3.9.0. CONCLUSION**

This section has described the method and instruments used to collect data for the study. It has presented the research design, the area of the study and population of the study, sample and sampling procedure, instrument for data collection, validation of research instruments, data collection and method of data analysis, and ethical considerations in research. This chapter gives an insight into the discussions in the next part on data presentation and interpretation.

## **CHAPTER FOUR**

## PRESENTATION AND ANALYSES OF FINDINGS

#### **4.0. INTRODUCTION**

This part of the work presents and analyzes the data collected from the field and results with the help of tables of frequency, percentages, charts, graphs, and correlation. This part consists of three sections: the descriptive analysis of identification characteristics, the verification of hypotheses, and the structured interview, respectively.

## 4.1.0. DATA PRESENTATION

This part of the work presents and analyzes the data collected from the field and results with the help of tables of frequency, percentages, charts, graphs, and correlation. This part consists of three sections: the descriptive analysis of identification characteristics, the verification of hypotheses, and the structured interview, respectively.

This work sought to evaluate the impact of the quality of cooperative learning on classroom assessment in six bilingual government teacher's training colleges in Cameroon. Students' questionnaires and structured interviews were used to bring out the results. The following were the research questions for the study:

- To what extent does the academic quality of cooperative learning influence classroom assessment?
- To what extent does the pedagogic quality of cooperative learning influence classroom assessment?
- To what extent does the quality of classroom management and cooperative learning influence classroom assessment?
- To what extent does the didactic quality of cooperative learning influence classroom assessment?

The questionnaires for this study were carried out in January 2020, and the structured interview was carried out from the end of January to February 2020. Thus, from the above instruments, there was a presentation of demographic information, responses to research

questions, verification of hypotheses, and a summary of findings with respect to the objectives, research questions, and hypotheses of the study. Data analysis served the purpose of effectively describing and measuring the strength of relationships between variables. The background characteristics (gender, marital status, region of origin, age category) of the 411 student teachers of the six government bilingual teacher training colleges in Cameroon were equally of interest in this study.

# 4.1.1. PRESENTATION OF THE DISTRIBUTION OF THE SAMPLE POPULATION FOR EACH OF THE VARIABLE

#### **Demographic (Background) Information**

Institution/ school	Respondents	Percentage
GBTTC Garoua	68	17%
GBTTC Ngaoundere	52	13%
GBTTC Bertoua	64	16%
GBTTC Yaounde	75	18%
GBTTC Edea	80	19%
GBTTC Bamenda	72	17%
TOTAL	411	100%

Table 3: Distribution of the respondents according to institution

From the above table, Government bilingual teacher training college Garoua (GBTTC Garoua) had 68 participants giving a p ercentage of 17 of the total sample, Government Bilingual teacher training college Ngaoundere (GBTTC Ngaoundere ) had 52 participant giving us 13% of the sampled population and had the least of participants. Government bilingual teacher training college Bertoua had 64 participants, hence 16% of the sample and Government bilingual teacher training college Yaounde had 75 participants with a percentage of 18 of the sampled population. Government bilingual teacher training college Bamenda with 72 participants of the sampled population, with a percentage of 17.

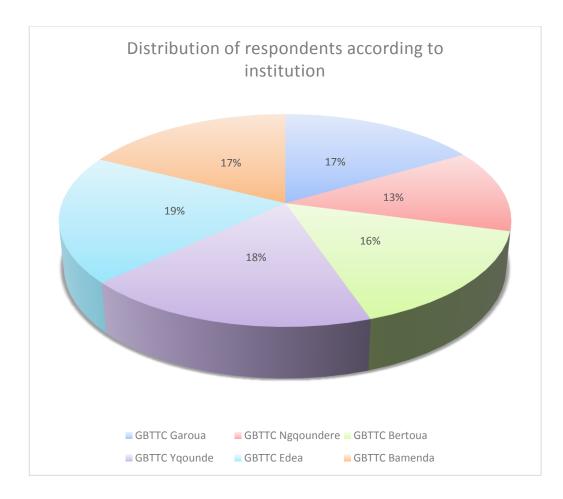


Figure 1: Distribution of respondents according to institution

Table 4: Frequency distribution by region of origin

Region	Frequency	Percentage
Adamawa	37	9%
Centre	60	15%
East	20	5%
Far North	24	6%
Littoral	44	11%
North	33	8%
North West	62	15%
South	25	6%
South West	46	11%
West	51	12%

Undeclared	09	2%
Total	411	100

Table 4 shows that the majority of respondents in this study originate from the North West and Center regions with a percentage of 15 (62) and 15 (60), respectively, and the least were from the East, Far North, North, and South regions with percentages of 5 (20), 6 (24), 8 (33), and 6 (25) respectively. The South West had 11% (46) while the West region had 12 % (51). The littorale region equally had 11% (44) and 9% (37) for Adamawa, while 2% (9) of the respondents, due to insecurity, did not declare their region of origin. This gives a total of 411 participants with a percentage of 100%. This is best explained and illustrated by Figure 5.

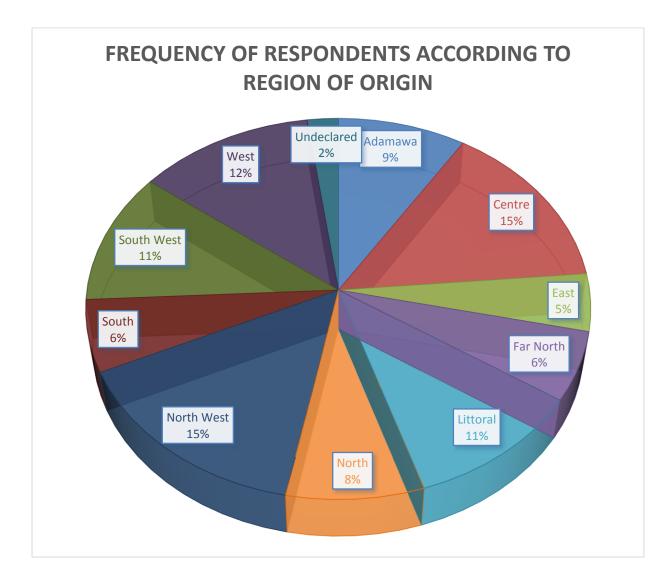


Figure 2: Fequency respondents according to regions of origin

Gender	Frequency	Percentage
Males	97	23.7%
Females	305	74.2%
Undeclared	09	2.18
Total	411	100

**Table 5: Frequency by Gender** 

Table 5 establishes females as the majority of the participants (305) with a percentage of 74.2, while males (97) constituted 23.7% of the participants. Nevertheless, 2.18 percent (09) did not declare their gender for security reasons. This is better illustrated by Figure 9.

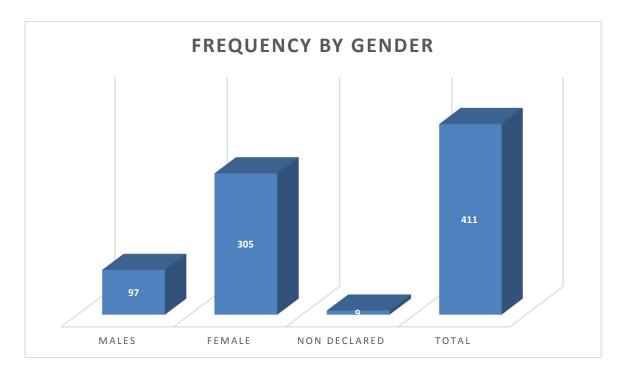


Figure 3: Frequency distribution by gender

Table 6:	Frequency	by Marital status	
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Marital status	Frequency	Percentage
Single	238	58%
Married	124	30%

Divorce	29	7%
Widow/er	11	3%
Non declarer	09	2%
Total	411	100

Table 6 shows the marital status of the respondents. The majority of the participants are single, giving a percentage of 58 (238), while those who are married constitute 30% (124) of the participants. 7% (29) are divorced, with 3% (11) being widows or widowers, and 2% (9) did not declare their marital status. This is explained in Figure 11.

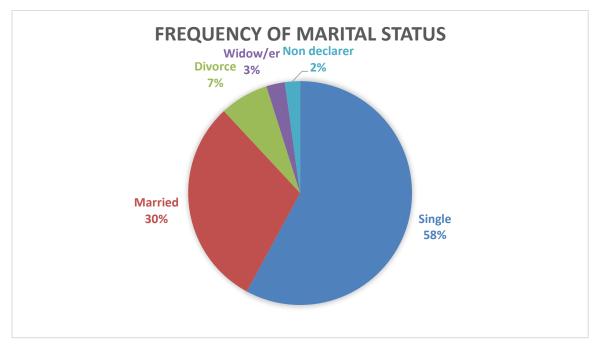
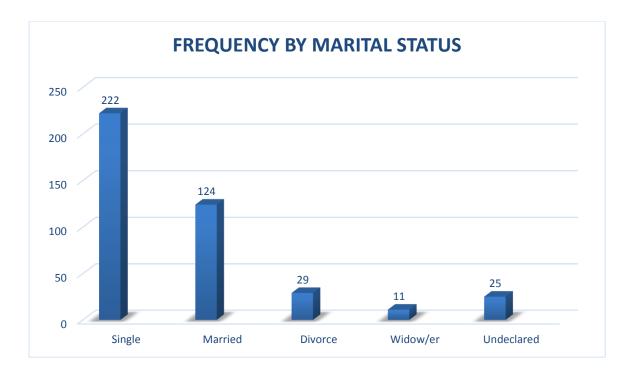


Figure 4: Frequency of marital status



**Figure 5: frequency of marital status** 

 Table 7: Frequency by Age category

Age Category	Frequency	Percentage
<= 20 years	71	17%
21-25 years	203	50%
26-30 years	98	24%
> 30 years	09	2%
Non declared	30	7%
Total	411	100

Table 7 shows that the highest number of participants (161) with a percentage of 37 are between the ages of 20 and below, closely followed by the ages 21 to 25 (127) with 29%. Then we have 26 to 30 years (59), 13%, and the least was that of 30 and above (19), with a percentage of 4. While (30), or 17%, did not declare their ages and therefore could not be classified, this is best illustrated by the pie chart in Figure 14.

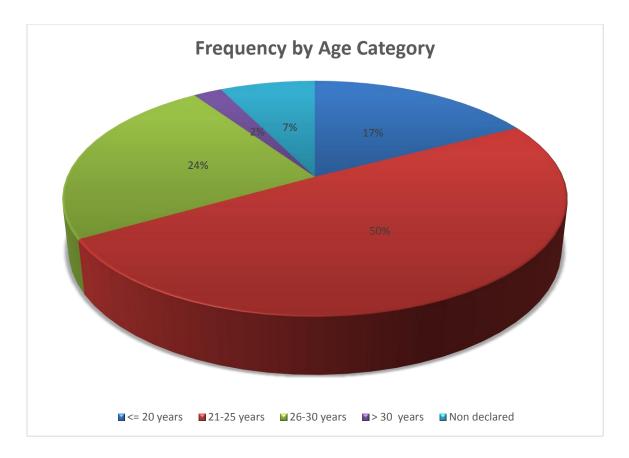


Figure 6: Frequency by age category

Institution /school	Structured interview	Percentage
GBTTC Garoua	1	
GBTTC Ngaoundere	1	
GBTTC Bertoua	1	
GBTTC Yaounde	1	
GBTTC Edea	1	
GBTTC Bamenda	1	
Total	6	100

**Table 8: Frequency of structured interview** 

From table 8, GBTTC Garoua had 1 participant (16%), GBTTC Ngaoundere, GBTTC Bertoua, and GBTTC Yaounde had 1 respondent, respectively, giving a percentage of 16 for Ngaoundere, 17 for Bertoua, and 17 for Yaounde. Equally, GBTTC Edea and Bamenda had each respondent give a percentage of 17 in each case. As better illustrated in Figure 16.

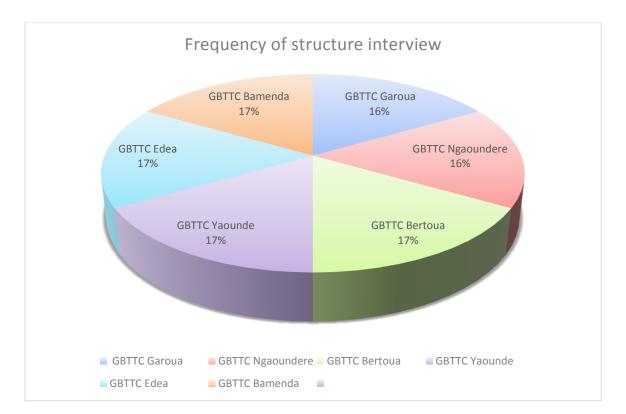


Figure 7: Frequency of structured interview

#### 4.2.0. PRESENTATION OF DATA COLLECTED FROM STUDENT-TEACHERS

The data presentation was done with respect to the four research questions. Nevertheless, one other section was presented on the dependent variable. The research questions were thus:

### 1. To what extentdoes thes academic quality of cooperative learning influence classroom assessment?

SN	STATEMENT	Strongly	Agree	Disagree	Strongly
		Agree (SD)	(A)	( <b>D</b> )	Disagree
					(SD)
		4/4	3/4	2/4	1⁄4
	ACADEMIC QUALITY				
1	Building knowledge on your own enhances better	223	177	08	03
	understanding and mastery of content				
2	Knowledge stays longer in the memory when	199	191	15	06
	constructed by you				
3	Knowledge does not stay longer in the memory when	13	16	159	223
	constructed by you				
4	Discussion and correction during group tasks foster	201	171	32	07
	mastery of content learnt				
5	Contributing in group tasks, makes individual learners	238	151	13	9
	to work harder and contribute to group goals which				
	equally influences classroom assessment				

Table 9: Response rate on the academic qu	ality section of the questionnaire
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Table 9 shows that the majority of the respondents strongly agreed and agreed that knowledge constructed by the learners enhances mastery and understanding and pushes the learners to work; as such, knowledge lasts longer in the memory of the learners. thus enhancing the academic quality of cooperative learning and influencing classroom assessment. Hence, knowledge construction, validity, reliability, and group processing—all elements of academic quality—should be taken into account when making use of cooperative learning to enhance learners' performances.

The total marks or points for each section of statements on the questionnaire were 20 (4 marks x 5 statements). The questionnaire had a total of twenty-five (25) items in five (5) sections or parts, with each section or part having five (5) items, with one of them being a distractor. Therefore, in each section, a respondent who responded to all the items in the section could not score below 4 marks or above 20 marks. In the section of academic quality, the highest number of respondents is 225 with a total score of 17, followed by 130 respondents with a total score of 16, and then 40 respondents who scored a total score of 15 and 18, respectively, as shown in the histogram in figure 18

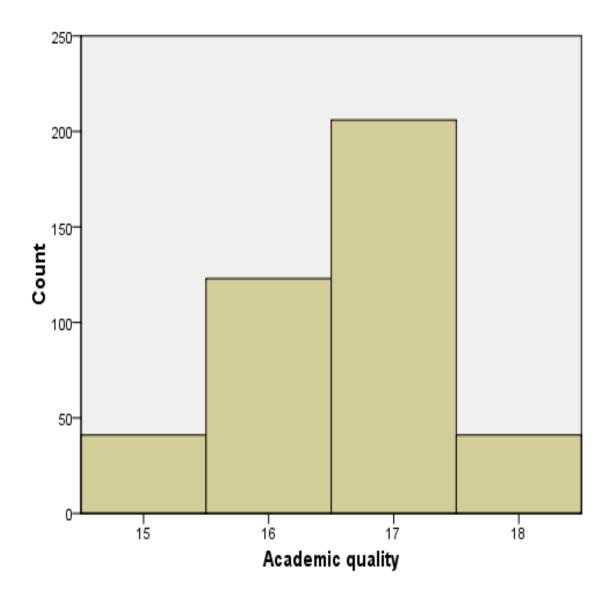


Figure 8: Response rate on the academic quality section of the questionnaire

To what extent does the pedagogical quality of cooperative learning influence classroom assessment?

SN	STATEMENT	Strongly	Agree	Disagree	Strongly
		Agree (SD)	(A)	( <b>D</b> )	Disagree
					(SD)
		4/4	3/4	2/4	1⁄4
	PEDAGOGICAL QUALITY				
1	Learners competition in groups with others	185	204	15	07
	encourages them to work harder and this				
	influences classroom assessment				
2	Learners are motivated to learn when lessons are	214	17	13	6
	interesting				
			8		
3	Interesting lessons enhance knowledge acquisition	189	192	18	12
4	imitating a hardworking student makes you	212	177	14	08
	perform better				
5	imitating a hardworking student does not make	27	29	161	194
	you to perform better				

UHNTable 9: Response rate of the pedagogical quality of the questionnaire

Table 9 shows that the majority of the participants focused their responses on strongly agree and agree, meaning that group competition, motivation, imitation, and individual accountability, which are all components of the pedagogic quality of cooperative learning, greatly influence learners' performances, hence classroom assessment. Thus, the above elements should be considered when using cooperative learning in teacher training colleges.

On the questionnaire, the section on pedagogical quality had the highest number of respondents (175) with a total score of 20, followed by 131 respondents with a total score of 19, and 130 respondents with a score of 18. This can best be explained by the histogram in figure 20.

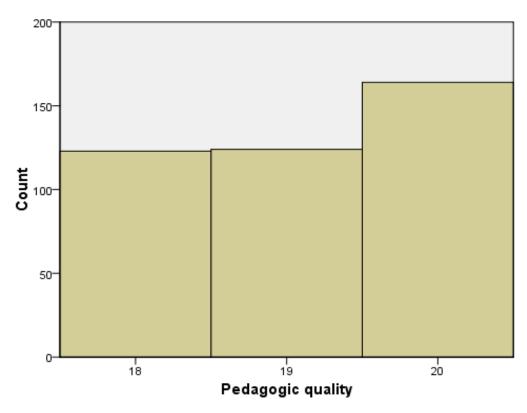


Figure 9: Response rate of the pedagogical quality of the questionnaire

3. To what extent does the quality of classroom management and cooperative learning influence classroom assessment?

Table 10: Response rate on classroom managemen	t quality of questionnaires
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S	STATEMENT	Strongly	Agree	Disagree	Strongly
Ν		Agree (SD)	(A)	<b>(D</b> )	Disagree (SD)
		4/4	3/4	2/4	1⁄4
	CLASSROOM MANAGEMENT QUALITY				
1	Smaller groups give learners the opportunity to work better than larger groups	186	179	36	10
2	Smaller groups do not give learners the opportunity to work better than larger groups	39	42	175	155
3	A teacher seeking to know what learners are doing in their various groups makes learners to be serious in carrying out group tasks	189	197	15	10

4	Setting simple rules to be respected by group	201	177	19	14
	members enhances better working conditions				
	and influences knowledge acquisition				
5	Clearly communicated task as well group	191	187	19	14
	members talking when given the floor enhances				
	learning				

Table 10 shows that a gross majority of respondents focused their responses on strongly agreeing and agreeing. Indicating that monitoring learners' activities as they work in groups, the size of the group, discipline, and setting simple rules and regulations enhance smooth functioning and better working conditions in groups Thus, fostering classroom management quality of cooperative learning and learners' performances because learners are able to work in a conducive atmosphere Hence, if cooperative learning should have an impact on learners' performances in teacher training colleges, the above should be taken into consideration.

On the questionnaire, the section of classroom management quality had the highest respondents of 225 with a total score of 17, followed by 80 respondents with a total score of 16, 40 respondents scored 14 equally, 40 respondents scored a total of 15, and finally 40 respondents who scored 18 points on the section, as described by the histogram on figure 22.

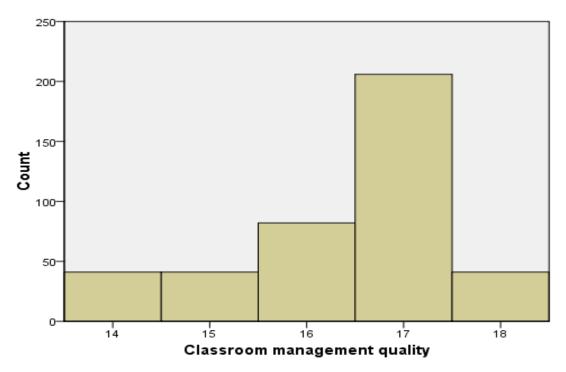


Figure 10: Response rate on classroom management quality of questionnaires

The distribution of respondents according to sum scores of responses on classroom management quality of cooperative learning

# 4. To what extent does the didactic quality of cooperative learning influence classroom assessment?

Table 11: Response rate of the didactic quality section of the questionnaire

SN	STATEMENT	Strongly	Agree	Disagree	Strongly
		Agree	(A)	<b>(D</b> )	Disagree
		(SD)			(SD)
		4/4	3/4	2/4	1/4
	DIDACTIC QUALITY				
1	The arrangement of content in the different subjects	183	195	21	12
	facilitates learning				
2	Contents that reflect the local reality of learners'	201	198	8	4
	background are better understood and mastered				
3	Contents true to learners' environment motivates them	189	197	19	6
	to learn and influence their performance				
4	Different activities carried out by the teacher and	170	189	35	17
	learners during a lesson facilitates knowledge				
	acquisition				
5	The use of instructional materials makes lessons	198	193	11	9
	interesting and facilitates knowledge acquisition				

Table 11 shows that a huge majority of the respondents focused their responses on strongly agree and agree. Indicating that qualities from the perspective of learning content, learning activities, and learning materials (didactic materials) as components of the didactic quality of cooperative learning significantly influence the didactic quality of cooperative learning and enhance classroom assessment in teacher training colleges In this regard, the above should be considered in the implementation of cooperative learning so as to enhance learners' performances.

On the questionnaire, the section on didactic quality had the highest respondents of 180 with a total score of 20, followed by 135 respondents with a total score of 19, and equally 135

respondents who scored 19, 75 points on the section. This can best be explained by the histogram on figure 24.

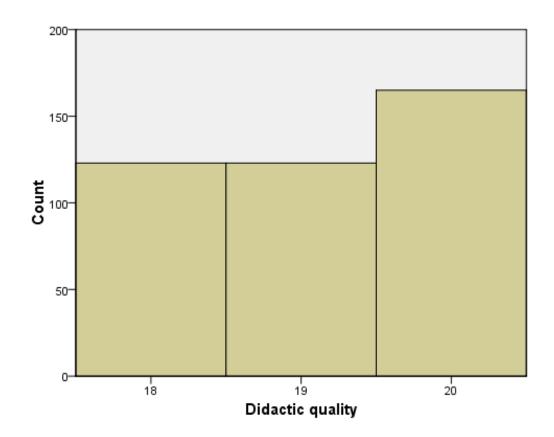


Figure 11: Response rate of the didactic quality section of the questionnaire

Distribution of respondents according to sum scores of responses on didactic quality

#### 5. Classroom Assessment (dependent variable)

SN	STATEMENT	Strongly Agree	Agree	Disagree	Strongly Disagree
		( <b>SD</b> )	(A)	( <b>D</b> )	(SD)
		4/4	3⁄4	2/4	1⁄4
	DEPENDENT VARIABLE (Classroom				
	Assessment)				
1	Mastery of content learnt influences	223	164	14	10
	classroom assessment				
2	Knowledge construction influences	193	197	14	7
	classroom assessment				
3	Knowledge construction does not influence	16	11	181	203
	classroom assessment				
4	Learners performance influences classroom	186	179	23	23
	assessment				
5	Acquisition of skills, output and competence	206	192	09	04
	influence classroom assessment				

#### Table 12: Response rates of classroom assessments of the questionnaire

Table 12 shows that a majority of participants focused their responses on strongly agree and agree. Indicating that relevance of knowledge constructed, mastery of content, learners' performances, acquisition of output, skills, and competence as components of classroom assessment in relation to cooperative learning are significantly influenced by academic quality, pedagogical quality, classroom management quality, and didactic quality of cooperative learning, which in turn influences learners' performances, hence classroom assessment in teachers training colleges.

On the questionnaire, in the section of classroom assessment, the highest respondents were 170 with a total score of 17, followed by 130 respondents with a total score of 14, 85 respondents scored 15, and 45 respondents scored 16. This can best be explained by the histogram in figure 26.

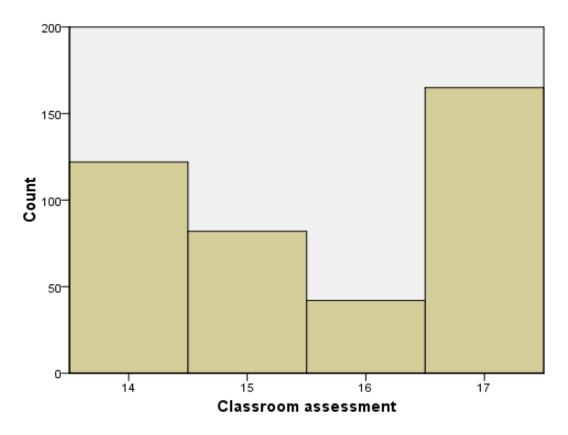


Figure 12: Response rates of classroom assessment of questionnaire

#### 4.3.0. VERIFICATION OF RESEARCH HYPOTHESIS

**Research Hypothesis I:** The academic quality of cooperative learning has a significant influence on classroom assessment.

#### Table 13: The mean and standard deviation of the responses to research hypothesis 1

Descriptive Statistics					
	Mean	Std. Deviation	Ν		
Academic quality	16.60	.800	411		
Classroom assessment	15.61	1.280	411		

# Table 13 presents the academic quality mean, which stands at 16.60 against 15.61 for classroom assessment for the 411 respondents. The standard deviation of academic quality is 0.800, while that of classroom assessment is 1.280, implying that most of the scores were not

far from the mean. N, which is 411, represents the total number of participants who responded to the questionnaire.

		Academic	Classroom
		quality	assessment
Academic quality	Pearson Correlation	1	.133**
	Sig. (2-tailed)		.007
	N	411	411
Classroom assessment	Pearson Correlation	.133**	1
	Sig. (2-tailed)	.007	
	Ν	411	411

### Table 14: Correlation of academic quality and classroom assessment

Correlations

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 14 shows the Pearson correlation for academic quality and classroom assessment, which stands at 0.13 with a significance of 0.00, indicating a significance level of 0.01 (2tailed). N is the total number of respondents. To obtain the coefficient of determination (r2), given that the Pearson correlation coefficient stands at 0.02,  $(0.13)^2 = 0.02$ , multiply by a hundred (100) = 2%. Thus, the variance value of 2% shows that 2% of the variance in the dependent variable is caused by the independent variable; hence, 2% of the variance in classroom assessment is explained by academic quality. Here we have a bidirectional correlation with two-tailed significance. Implying that 2% of the variance of academic quality is influenced by classroom assessment. Version 26 of SPSS was used in analyzing the academic quality of cooperative learning and classroom assessment. The Pearson product-moment correlation coefficient (r) for students with respect to Pearson correlation for academic quality and classroom assessment resulted in a coefficient of 0.13; significance stood at 0.00, indicating a significance level of 0.01 (2-tailed). This shows that there is a significant relationship between the academic quality of cooperative learning and classroom assessment, thus confirming hypothesis 1. Hence academic quality of cooperative learning positively influence classroom assessment.

**Research Hypothesis II:** The pedagogical quality of cooperative learning has a significant influence on classroom assessment.

	Mean	Std. Deviation	N
Pedagogic quality	19.10	.831	411
Classroom assessment	15.61	1.280	411

### Table 15: The mean and standard deviation of the responses to research hypothesis II Descriptive Statistics

Table 15 shows the mean of the pedagogical quality, which is 19.10 against 15.61 for classroom assessment for the 411 respondents to the study. The standard deviation of the pedagogical quality stands at 0.83, while that of the classroom assessment is 1.280, showing that the majority of the scores were close to the mean. N, which is 411, represents the total number of respondents who answered the questionnaire.

#### Table 16: Correlation of Pedagogic Quality and Classroom Assessment

Correlations			
		Pedagogic	Classroom
		quality	assessment
Pedagogic quality	Pearson	1	.142**
	Correlation		
	Sig. (2-tailed)		.004
	N	411	411
Classroom assessment	Pearson	.142**	1
	Correlation		
	Sig. (2-tailed)	.004	
	N	411	411

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 16 presents the Pearson correlation for pedagogical quality and classroom assessment, with a 0.14 coefficient. The significance stood at 0.00, indicating a significance level of 0.01 (2-tailed). The total number of respondents was represented by N (student teachers). To have the coefficient of determination ( $r^2$ ), given that the Pearson correlation coefficient stands at 0.02,  $(0.14)^2$ =0.02. Multiplied by a hundred (100), it gives 2%. The variance value of 2 indicates that 2% of the variance in the dependent variable is caused by the independent variable. Implying that 2% of the variance in classroom assessment is explained by pedagogical quality Here we have a bidirectional correlation with two-tailed significance.

Hence, 2% of the variance in pedagogical quality is influenced by classroom assessment. Here, the Pearson product-moment correlation (r) for the pedagogic quality of cooperative learning and classroom assessment stood at 0.14 with 0.00 significance, indicating a significance level of 0.01 (2-tailed). Thus, there is a significant relationship between the pedagogical quality of cooperative learning and classroom assessment, conforming to hypothesis 2. From the above analysis, the pedagogic quality of cooperative learning enhances learners' performances.

Research hypothesis III: Classroom management quality influences classroom assessment

Table 17: The mean and standard deviation of the responses to research hypothesis III

	Mean	Std. Deviation	Ν
Classroom management quality	16.40	1.114	411
Classroom assessment	15.61	1.280	411

Table 17 presents the mean of classroom management quality at 16.40 and 15.61 for classroom assessment for the 411 respondents. The standard deviation stands at 1.114 for classroom management quality against 1.280 for classroom assessment, which shows that most of the scores were close to the mean. N, which is 411, represents the total number of participants who responded to the questionnaire.

### Table 18: Correlation of Classroom Management Quality and Classroom Assessment Correlations

		Classroom management quality	Classroom
Classroom management quality	Pearson Correlation	1	.396**
	Sig. (2-tailed)		.000
	N	411	411
Classroom assessment	Pearson Correlation	.396**	1
	Sig. (2-tailed)	.000	
	N	411	411

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 18 presents the Pearson correlation for classroom management quality and classroom assessment, which resulted in a coefficient of 0.4. The significance stood at 0.00, showing a significance level of 0.01 (2-tailed). N represents the total number of participants (student teachers). To get the coefficient of determination ( $r^2$ ), given that the Pearson correlation coefficient is 0.16, (0.4)2 = 0.16. Multiplied by a hundred (100), the result is 16.

This 16% variance value indicates that 16% of the variance in the dependent variable is caused by the independent variable. Therefore, 16% of the variance in classroom assessment is explained by classroom management quality. The significance is two-tailed, and the correlation is bidirectional. Showing that 16% of the variance in classroom management quality is influenced by classroom assessment. The Pearson product-moment correlation (r) for classroom management quality and classroom assessment resulted in a coefficient of 0.4 with a significance of 0.00, showing a significance level of 0.01 (2-tailed). Thus, there is a significant relationship between classroom management quality, cooperative learning, and classroom assessment, confirming hypothesis 3. Meaning classroom management of cooperative learning enhances the performances of student teachers.

**Research hypothesis IV:** The didactic quality of cooperative learning has a significant influence on classroom assessment.

 Table 19: The mean and standard deviation of the responses to research hypothesis IV

 Descriptive Statistics

	Mean	Std. Deviation	Ν
Didactic quality	19.10	.832	411
Classroom assessment	15.61	1.280	411

Table 19 presents the mean of the didactic quality which stands at 19.10 against 15.61 for classroom assessment of the 411 respondents. The standard deviation of the didactic quality is 0.832, while that of classroom assessment stands at 1.280 which shows most of the scores were not far from the mean. N which is 411 shows the total number of respondents in relation to the questionnaire.

### Table 20: Correlation of didactic quality and classroom assessment Correlations

			Classroom
		Didactic quality	assessment
Didactic quality	Pearson Correlation	1	.509**
	Sig. (2-tailed)		.000
	N	411	411
Classroom assessment	Pearson Correlation	.509**	1
	Sig. (2-tailed)	.000	
	N	411	411

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 20 presents the Pearson correlation for didactic quality and classroom assessment, with a 0.51 coefficient. The significance stood at 0.00, indicating a significance level of 0.01 (2-tailed). N represents the total number of participants (student teachers). To obtain the coefficient of determination ( $r^2$ ), given that the Pearson correlation coefficient stands at 0.26,  $(0.51)^2$ =0.26. Multiplied by a hundred (100), the result is 26. This 26% variance value indicates that 26% of the variance in the dependent variable is caused by the independent variable. Therefore, 26% of the variance in classroom assessment is explained by didactic quality. This case has two-tailed significance, and the correlation is bidirectional. Thus, 26% of the variance in didactic quality of cooperative learning and classroom assessment resulted in a coefficient of 0.51, whose significance stood at 0.00, indicating a significance level of 0.01 (2-tailed). Therefore, there is a significant relationship between the didactic quality of cooperative learning and classroom assessment. This shows that didactic quality of cooperative learning the 4<sup>th</sup> hypothesis. This shows that didactic quality of cooperative learning the system.

Measures (summary) of the quality of cooperative learning and classroom assessment

### Table 21: Summary presentation of the mean(s) and standard deviation of the statistics on qualities

	Mean	Std. Deviation	Ν
Academic quality	16.60	.800	411
Pedagogic quality	19.10	.831	411
Classroom management quality	16.40	1.114	411
Didactic quality	19.10	.832	411
Classroom assessment	15.61	1.280	411

**Descriptive Statistics** 

Table 21 presents a summary of the different means and standard deviations of the four research hypotheses. The mean of the academic quality of cooperative learning stands at 16.60, that of the pedagogical quality is 19.10, and that of classroom management quality of cooperative learning is at 16.40 and 19.10 for didactic quality of cooperative learning against 15.61 for 411 responses on classroom assessment. The standard deviation of the academic quality of cooperative learning is 0.80, and that of the pedagogical quality of cooperative learning is 0.83; that of classroom management quality of cooperative e-learning stands at 1.11,

while that of didactic quality of cooperative learning is at 0.83, against 1.28 of the 411 responses on classroom assessment. This shows that a majority of the scores were found to be close to the mean.

Correl	lations
Corre	iations

				Classroom	
				management	
		Academic quality	Pedagogic quality	quality	Didactic qu
Academic quality	Pearson Correlation	1	241**	.623**	-
	Sig. (2-tailed)		.000	.000	
	Ν	411	411	411	
Pedagogic quality	Pearson Correlation	241**	1	146**	
	Sig. (2-tailed)	.000		.003	
	Ν	411	411	411	
Classroom management quality	Pearson Correlation	.623**	146**	1	-
	Sig. (2-tailed)	.000	.003		
	Ν	411	411	411	
Didactic quality	Pearson Correlation	239**	.695**	150**	
	Sig. (2-tailed)	.000	.000	.002	
	Ν	411	411	411	
Classroom assessment	Pearson Correlation	.133**	.142**	.396**	
	Sig. (2-tailed)	.007	.004	.000	
	Ν	411	411	411	
** Correlation is significant at the	- 0.01 lovel (2 to ited)				

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 22 presents a summary of the Pearson correlation for the four research hypotheses, which resulted in a coefficient of 0.13, 0.14, 0.4, and 0.51, respectively, for academic quality, pedagogical quality, classroom management quality, didactic quality, and classroom assessment, with a significance level of 0.00 for all of them. With significance levels of 0.01 (2-tailed) for all of the above variables. N represents the total number of respondents (students and teachers). The coefficient of determination ( $r^2$ ) was 0.02, 0.02, 0.16, and 0.26, respectively, for academic quality, pedagogical quality, classroom management quality, and didactic quality of cooperative learning.

The variance value, which stood at 2%, shows that 2% of the variance in the dependent variable of classroom assessment has as cause the independent variable of academic quality as

well as the 2% of pedagogical quality, 16% of classroom management quality, and 26% of didactic quality, indicating that 2% for academic quality, 2% for pedagogical quality, 16% of classroom management quality, and 26% for didactic quality indicate that 2%, 2%, 16%, and 26% of the variance in classroom assessment is explained by academic quality, pedagogical quality, classroom management quality, and didactic quality, respectively.

Hence, 2% of academic quality, 2% of pedagogical quality, 16% of classroom management, and 26% of didactic quality are all influenced by classroom assessment. Thus, there exists a significant relationship between academic quality, pedagogical quality, classroom management quality, and didactic quality of cooperative learning and classroom assessment, and this confirms the main hypothesis. From the above, the a ademic, pedagogic, classroom management and didactics quality of cooperative learners enhance the perormances of student teachers; hence classroom assessment

# 4.4.0. PRESENTATION OF QUALITATIVE DATA COLLECTED FROM A STRUCTURED INTERVIEW

This section presents findings gotten from the interview guide. Findings obtained from participants are rated in percentages according to similarities or differences in the participants' responses.

#### 4.4.1. FINDINGS OF A STRUCTURED INTERVIEW

This section presents the summary of the findings of the structured interview on the impact of the quality of cooperative learning on classroom assessment, which took place from January 2020 to the first week of February 2020, hence giving a duration of 90 minutes with an average of 15 minutes maximum for each session for 5 weeks. Due to the fact that participants were found in six different regions of Cameroon, WhatsApp and direct contact were used as a medium of communication and exchange between the participants and the researcher. WhatApps responses took the form of text messages, video calls, and audio calls. It is important to note that WhatsApp was used in the cases of GBTTC Garoua, GBTTC Ngaoundere, and GBTTC Bamenda due to health reasons, distance, and insecurity.

But for GBTTC Bertoua, GBTTC Yaounde, and GBTTC Edea, the researcher went down the field on about three different occasions to interview participants since it was accessible to her. Be it through WhatsApp or physical contact, participants responded by expressing their views in relation to their understanding of cooperative learning and how the different qualities can influence classroom assessment. Six student-teachers were chosen from the sampled population for the structured interview, and the researcher was the moderator. Responses gotten here were used for qualitative information to reinforce data collected through a survey. The structured interview gave the researcher an opportunity to collect in-depth feedback by expressing their point of view as they discussed and expanded their understanding of the different concepts under study. Hence, it gives a better understanding of the findings of the questionnaire. Qualitative data was exploited under the following five themes

#### Theme 1: Cooperative Learning and Classroom Assessment

#### **Questions:**

- 1. What do you understand by cooperative learning?
- 2. What do you think of classroom assessment?
- 3. Do you think cooperative learning can influence classroom assessment?
- 4. How?

From the various definitions postulated by the different respondents, at least 5 out of the six respondents have an understanding of the concept of cooperative learning, giving a percentage of 83.33% for the idea of learners working in groups and being able to construct their own knowledge. This runs through all five definitions, except for one respondent, who sees it as classroom-based education with practical work experience.

It can be determined from all six respondents that they do have an understanding of the concept of classroom assessment. Thus, the understanding of that concept stands at 100%, even though with varied definitions, concepts like tests, evaluations of competence, examinations, evaluations, and exercises given after lessons to see if objectives have been attained implicitly or explicitly run in the different definitions.

All six respondents shared the view that cooperative learning can influence classroom assessment, giving us a 100% yes. Looking at their diverse reasons as to why, some hold that it enhances higher achievements and increases retention, while others advance reasons like it reduces failure, for both intelligent and slow learners are put together in groups where there is

interaction. And to a greater extent, this interaction enhances group members' understanding and causes the learners to be able to attain the learning objectives

#### **Cooperative learning qualities**

This part focuses on responses, that is, the views of participants on the relationship between cooperative learning qualities (academic, pedagogical, classroom management, and didactic) and classroom assessment.

#### **Theme 2: Academic Quality**

#### Theme 2: Academic quality of cooperative learning

#### **Questions:**

- 1. What do you understand by academic quality?
- 2. Do you think we can obtain academic quality through cooperative learning?
- 3. Why?
- 4. Do you think learners constructing knowledge themselves can influence classroom assessment?
- 5. How?

#### Findings

All six respondents have a minimum understanding of the term academic quality, thus giving a 100% understanding of that concept. Although they have advanced different definitions of the said concept, nevertheless, they are still in line with the meaning of academic quality, as some see it as that which learners have learned so well and have a mastery of and enhance integration in society; others hold that it is the value of that which learners have learned; it is all the learning opportunities offered to learners so that they can achieve rewards or the learning objectives outlined in the official syllabuses.

Here we have a 100% yes to the fact that academic quality can be achieved through cooperative learning, as seen in the view of all six respondents. They think cooperative learning can enhance academic quality because learners interaction during group work brings about an increase in learning, which fosters academic gains and helps them to complete their work and be rewarded at the end of the course. Other participants hold that in heterogeneous groupings, we have different abilities, which strengthen slow learners and provide them with a platform to easily acquire skills and improve on their performances. The last set of respondents held that it puts learners at the center of the teaching and learning process; thus, learners are able to construct their own knowledge based on mastery. Mastery equally enhances transferability. With all this, academic quality is enhanced.

A majority of the participants accept the fact that classroom assessment can be influenced when learners construct their own knowledge, giving a percentage of 83.33% yes, against 16.66% who do not share the same view. Those who accepted advanced reasons, like, since some questions might be open-ended and may require learners to bring in their different experiences, To others, if learners are well guided on the assigned task, they will construct useful knowledge that will influence classroom assessment. Some others think that since the main objective of assessing learners is to see if objectives have been attained and if learners can construct knowledge related to the objectives, classroom assessment will be influential. The last school of thought here holds that learners constructing their own knowledge facilitates the teaching and learning process and enhances understanding and mastery, which will ease assessment on the teacher's part. From the above, one can judge that the academic quality of cooperative learning fosters learners performances.

Hence with respect to the achievement of academic quality through cooperative learning, the respondents with a 100% rating accepted that academic quality can be achieved through cooperative learning, even though different reasons were advanced, such as learners' interaction during group work enhancing learning, which fosters academic gains and helps them to complete their work and be rewarded at the end of the course. To others, learners are at the center of the teaching and learning process; thus, learners are able to construct their own knowledge based on mastery. At 83.33%, respondents accepted that learners constructing knowledge, which is an element of academic quality, influences classroom performances because, for some of the participants, knowledge construction gives the learners the opportunity to have a mastery and understanding of what they have learned, while for others, constructing knowledge in their different groups gives other group members the opportunity to learn from the experiences of others.

#### Theme 3: Pedagogical Quality of Cooperative Learning

#### **Questions:**

- 1. How is the use of group work, group competition, and motivation different from other instructional strategies?
- 2. Do you think making use of the above various techniques can influence classroom assessment?
- 3. How?
- 4. How does cooperative learningfacilitates the teaching and learningprocess?

#### Findings

Although the different participants have their own reasons as to why group work is different from other instructional strategies, they all had common concepts running through their different responses, like: in group work, usually there are group competitions that push the learners to work harder. Another school of thought holds that all members are active in group tasks as well as construct their own knowledge for the accomplishment of group tasks. Others hold that group work is a learner's-centered strategy that engages learners in the assigned tasks and encourages them to work hard so as to achieve rewards. Thus, learners engagement in the teaching and learning process as they interact in group tasks will influence their performances, hence classroom assessment.

All six respondents agree with the fact that the above instructional strategies can influence classroom assessment, thus giving us a 100% yes. For the first group of participants, when learners are assigned tasks, they are given clear instructions as to how to carry out the task. To another, it is because it gives the learners the possibility to build self-esteem, build knowledge, and clarify themselves; this enhances the attainment of assessment objectives. Others hold that it makes learners active, thus the slow learners are pulled up by the intelligent ones; moreover, when learners are active and construct knowledge, it gives them an added advantage to their performance during assessments in the classroom.

Some of the reasons advanced as to how cooperative learning facilitates the teaching and learning process are as follows: The first group of participants holds that since learners are engaged in accomplishing assigned tasks, they end up building their own knowledge, which fosters understanding as they interact, and the teacher is just a guide. Another group holds that since cooperative learning is learner-centered, it enhances retention of knowledge in learners and encourages them to work harder, making the work load of the teacher light. In the third group of participants, learners are assigned tasks, and they work in their little groups where they brainstorm and construct knowledge. Constructing knowledge enhances their understanding and mastery of that which is learned, while teachers, on their part, just give clear instructions and guide them in the work, hence facilitating the teaching and learning process. Thus one can judge from the above that the pedagogical quality of cooperative learning influences classroom assessment.

Hence findings showed that at a 100 percent rate, participants agreed that the pedagogical quality of cooperative learning can be enhanced through the use of group work, group competition, and motivation as instructional strategies that push learners to work harder and make them engaged in the assigned task. Making learners work harder and engage in assigned tasks provides them with the opportunity to perform better, hence classroom assessment. The following reasons were advanced as justification for the above response: the above strategies provide learners with the opportunity to build knowledge and build self-esteem; they make the learners more active, and slow learners are pulled up by stronger learners.

#### Theme 4: Classroom Management Quality of Cooperative Learning

#### **Questions:**

- 1. What do you think the quality of classroom management is?
- 2. How will you maintain a favorable atmosphere in the classroom when learners are working in groups?
- 3. How can you ensure that all learners are contributing to the accomplishment of the task given to them?
- 4. Generally, what are some of the measures you will put in place in a cooperative classroom to enhance the smooth functioning of the classroom?

#### Findings

From the different meanings given to classroom management quality, a majority of 66.66% of the responses have something in common, which deals with the organization of the classroom to enhance the smooth running of the teaching and learning process. Thus, a majority of the participants were familiar with the above concept. Against a 33.33% whose idea of the said concept consisted of the organization of the class and the teacher exercising control and authority over the classroom

The different participants advanced different ways of maintaining a favorable climate in group work, which were in line with maintaining a favorable working condition. Nevertheless, 33.3% of the respondents share a common view when they talk of teachers monitoring learners frequently to give them some assurance as well as motivate them. While 66.66% gave diverse means such as addressing learners' needs, celebrating the learners' success, and asking questions about group work to individual group members.

Participants advanced diverse means of ensuring learners participation in tasks. The first group of respondents holds that a teacher should have a good mastery of the different types of learners so as to make sure to directly ask questions to slow learners as he monitors work in their groups. The next group holds that learners should be occupied by apportioning responsibilities to them. To some others, tasks assigned should make use of visual aids and didactic materials to captivate the learners' interest so they can stay focused.

For a smooth run of cooperative learning in the classroom, 50% of participants think constructing heterogeneous groups and groups that are not large is one of the measures that can enhance the smooth functioning of cooperative learning. To other participants, as a measure, learners should be assigned tasks, there should be division of labor, and everyone should be engaged in doing something to the general accomplishment of group tasks. In a nut shell, classroom management of cooperative learning fosters classroom assessment.

Hence, 66.66% of the responses from participants looked at classroom management to deal with maintaining order and discipline so as to enhance a favorable learning condition in the classroom in order to improve learners' performances. This explains why 50% of the responses of participants examine some measures to be put in place to enhance the smooth functioning of cooperative learning, such as the formation of heterogeneous groups and the formation of smaller groups so as to avoid group members idling and making noise. With the above, there will be order in the classroom, which will foster a smooth running of the teaching and learning process and, in turn, enhance learners' performances.

To maintain a favorable atmosphere as learners work in groups, 66.66% of the respondents hold that learners' needs be addressed, learners' success be celebrated, and prompt questions be asked to individual group members so as to enhance classroom management quality as well as influence classroom assessment.

#### Theme 5: Didactic quality of cooperative learning

#### Questions

- 1. Does making learners responsible for their own learning influence classroom assessment?
- 2. How?
- 3. How can you use didactic materials to influence classroom assessment?
- 4. How does content that relates to learners background and experiences influence the didactic quality?

#### Findings

100% of the participants share the view that learners being responsible for their own learning influences classroom assessment. To this end, the following reasons were given: responsibility for their learning simply means learners constructing knowledge. To this end, their skills for learning are built, and they are able to understand their own learning. Moreover, when they construct knowledge, it's possible to get additional knowledge and have a better understanding, which enhances mastery. This will go on to influence learners' performances as well as classroom assessment.

The responses of all six participants illustrate that classroom assessment can be positively or negatively influenced by didactic materials. Some of the reasons postulated by respondents show that, on the one hand, when didactic materials used reflect the local color of learners' environments, there will be a positive influence and vice versa. The next group of participants holds that didactic materials have a way of making lessons concrete and interesting, thus influencing learners' performance. The last group of respondents shared the view that interesting and captivating lessons have a way of increasing learners understanding of the subject matter. Thus, learners' understanding will certainly influence classroom assessment. Implying that we can not undermind the place of didactics quality of cooperative leaning as it influences classroom assessment.

Thus, respondents, at a rate of 100%, accepted that learners being responsible for their own learning influences classroom assessment. According to them, learners being responsible for their learning simply means learners constructing knowledge, which enhances understanding and mastery, hence influencing learners' performances as well as classroom assessment. In relation to the use of didactic materials as a means of enhancing didactic quality, 100% of responses hold that didactic materials can positively influence classroom assessment, especially in cases where the didactic materials reflect the learner's environment. When didactic materials and teaching content reflect the learner's background, lessons become concrete and interesting and enhance understanding and mastery of content.

#### 4.5.0 SUMMARY REPORT ON THE STRUCTURE INTERVIEW (FINDINGS)

Discussions on the structured interview will examine the extent to which the quality of cooperative learning affects classroom assessment with regards to the relevance of knowledge constructed, mastery of content, learners' performance, output skills, and competence. The interview was carried out under five overarching themes, wherein the different views and expressions of participants were presented in the context of the quality of cooperative learning and classroom assessment.

Academic quality, pedagogical quality, classroom management quality, and didactic quality of cooperative learning formed the basis of the interview, even though they are not the only elements that can influence the quality of cooperative learning. The structured interview was carried out for five weeks successfully with regards to participants who were inaccessible to the researcher; since the work is divided into five themes, at the end of every week a theme was treated. In areas that were accessible to the researcher, such as GBTTC Bertoua, Yaounde, and Edea, the researcher went down to the field on three different occasions to complete the interview on five themes. The sample was made up of 6 participants, which is one participant each from the selected schools that comprised the sample.

#### Theme 1: cooperative learning and classroom assessment

The majority of the respondents agreed that cooperative learning is an approach or strategy of learning that makes use of group work or teamwork, wherein learners construct their own knowledge.

In my opinion, it is a teaching method that consists of learners working in groups and constructing their own knowledge under the guidance of the instructor. The construction of knowledge is possible here due to the interaction that takes place amongst group members. It is important to note here that interaction is a very vital element for cooperative learning to take place since it enhances knowledge construction.

Most of them defined classroom assessment as some sort of test, examination, or evaluation, as well as exercises given to the learners after a lesson or at the end of the teaching and learning process to see if objectives have been met.

To me, classroom assessment has to do with tests, evaluations, and examinations given to learners at the end of the instructional process. This helps the instructor gather information on whether the lesson's objectives have been attained and whether to change his teaching method or techniques. Thus, classroom assessment helps teachers gather information about their teaching and learning.

All participants accepted that cooperative learning can influence classroom performance. Implicitly, their responses show that cooperative learning positively influences classroom assessment. In their responses, they expressed ideas like cooperative learning reduces failure because both fast and slow learners interact in their groups as they work to accomplish group tasks.

According to the researcher, cooperative learning can positively influence classroom assessment. Interacting in their little groups enhances understanding of the notions under study. There is equally individual accountability that comes into play in cooperative learning, which spurs every group member to work. Interactions and discussion during group sessions enhance understanding and retention. Cooperative learning creates a situation where nobody is left behind as the fast and slow learners advance at the same pace as they interact in their groups.

#### **Cooperative Learning Qualities**

This section examines the responses of the structured interview participants with respect to academic, pedagogical, classroom management, and didactic qualities that generally influence the quality of cooperative learning.

#### **Theme 2: Academic Quality of Cooperative Learning**

A majority of participants accepted that academic quality is all the learning opportunities offered to learners in relation to the curriculum. All that learners are able to learn well and master, so as to be able to transfer or integrate it where needed.

In my opinion, academic quality refers to how relevant what learners have learned can be to their society in their daily lives. To be able to integrate or transfer knowledge, the question of mastery and understanding must come into play. In a nutshell, academic quality will look at how well learners have understood and mastered what is taught in relation to the curriculum so that they can use it in their daily lives when needs arise.

All of the participants agree that academic quality can be achieved through cooperative learning because cooperative learning brings about group work where there is interaction. This interaction fosters understanding and mastery of the concepts under study. Also, the fact that cooperative learning puts the learner at the center of the teaching and learning process enhances understanding and mastery, which fosters academic quality.

To me, cooperative learning can influence academic quality. This is because understanding and mastery can be enhanced through the interaction and knowledge construction of learners who are at the center of the teaching and learning process. More interaction is another factor that fosters understanding, and why not mastery? With this, learners can use knowledge anywhere they find themselves.

#### Theme 3: Pedagogic Quality of Cooperative Learning

Most of the respondents hold that group work, group competition, and motivation differ from other instructional strategies because they are more learner-centered, implying that learners are fully engaged in the teaching and learning process. More importantly, the above techniques make use of motivation that pushes the learners to work harder to achieve rewards, which only go to the best group.

To the researcher, the above instructional strategies are learner-centered. When we talk of learner-centered, it means learners are responsible for their own learning, which pushes them to be engaged in the teaching and learning process. The fact that group competition ends up with a reward that goes just to the best group means that all groups will put in their very best to achieve the said rewards. Notwithstanding, motivation in itself pushes learners to work harder as it encourages learners, either intrinsically or extrinsically, to put in their very best to achieve the reward; this pedagogic quality is enhanced.

Respondents all agreed to the fact that group work, group competition, and motivation can influence classroom assessment. To this end, they say the above instructional strategies give learners the opportunity to build knowledge and clarify themselves through interactions that enhance understanding. Also, the above strategies ensure that none is left behind, for the slow learners are pulled up by the intelligent ones through collaboration and interactions in their different groups, which gives them a plus during assessment.

In my opinion, the above strategies can influence classroom assessment because they spur learners to work, to be committed, and to be engaged in assigned tasks so as to receive rewards. This enhances their understanding and mastery of what they are learning and thus influences their performance during classroom assessment.

A majority of the participants accepted that cooperative learning facilitates teaching and learning because it is a learner-centered method; thus, learners are engaged as they interact and construct their own knowledge, and the teacher is only a guide showing the path learners have to follow. Discussions and interactions in groups enhance understanding and retention, which makes the work lighter than if he had to do the explanation all alone.

In my opinion, cooperative learning facilitates the teaching and learning process on the teacher's part because learners are at the center of the teaching and learning process, thus they are engaged in the task assigned to them. By accomplishing such tasks, they interact, they brainstorm, they discuss, they understand, they clarify themselves, and they gain mastery. Thus, the teacher is just a guide, and this reduces his work.

#### Theme 4: Classroom Management Quality of Cooperative Learning

According to the responses of the majority of participants, classroom management quality has to do with the organization of the classroom to enhance the smooth functioning of the teaching and learning process. To them, it entails all that the teacher does to make sure the teaching and learning process goes on hitch-free. Although a few of them hold that classroom management is the act of the teacher exercising his control or authority over the classroom,

To me, classroom management consists of all that the teacher does in the classroom to enhance the teaching and learning process to take place in a favorable condition, such as maintaining order in the classroom and using diverse teaching methods, techniques, and procedures to ensure a favorable learning climate or working conditions for the learners.

To maintain a favorable climate while learners work in groups, a majority of the participants say frequent monitoring will be of great help. They equally hold that questions be asked of individual group members so as to make them engaged in the task as well as give the assurance that the teacher is still in control.

In my opinion, I will not differ very much from the participants. I think to maintain a favorable working climate in the different groups, the teacher should frequently visit the different groups to know what is happening and if they are actually working. The teacher can equally call on individual members to answer one or two prompt questions to make sure everyone is involved.

To ensure that all group members are participating in the task, respondents say they will make sure to know the kinds of learners in the different groups so they can directly monitor and ask questions of slow and recalcitrant students. To some, apportioning responsibilities to members will keep them focused. Some equally talked of the use of attractive didactic materials to captivate and sustain learners interest as they carry out their tasks.

To me, individual accountability is the key here. Group members should be assigned different portions of the task that need to be put together to complete the whole. With this, everyone will be focused on their own portion of the work, which will keep them engaged and busy. Moreover, assigning different responsibilities will also keep them focused and engaged.

A majority of the participants put forward the following measures to enhance the smooth functioning of cooperative learning in the classroom: that heterogeneous groups consisting of mixed abilities be formed. Also, learners will be assigned different tasks and responsibilities as they carry out tasks. There should be a question of division of labor where everyone has something to do for the accomplishment of a group task.

To the researcher, for the smooth functioning of cooperative learning, the teacher should make sure he forms heterogeneous groups that are not large. This is because smaller groups have a way of maintaining discipline. Equally, the idea of division of labor is a good one, for it makes all group members actively engaged in tasks, thus reducing disturbances and noise. In addition to this, groups can set up simple rules and regulations that will guide them in carrying out tasks.

#### Theme 5: Didactics and Quality of Cooperative Learning

All of the respondents agreed with the fact that classroom assessment will be influenced when learners are responsible for their own learning. Being responsible for their own learning means the learners construct their own knowledge, which enhances understanding and mastery. Thus influencing their performances, hence classroom assessment.

To the researcher's responsibility in their learning, firstly, make them fully engage in tasks, conscious, and take tasks seriously. Secondly, they are able to construct their own knowledge through the teacher's guidance. All these go a long way in fostering understanding and mastery and influencing classroom assessment.

The use of didactic materials influences classroom assessment, according to the majority of the respondents. Didactic materials make lessons attractive and captivating, thus sustaining the interest of learners in the lesson. It equally makes the learners concretely understand the concept under study, thus enhancing their performances.

In my opinion, the use of didactic materials puts the learners on the same level of experience since they can concretely see and manipulate what is being taught. The use of didactic materials has a way of captivating learners' interest during lessons and equally fostering understanding. Thus enhancing learners' performances and classroom assessment.

A majority of the respondents agreed that content that is related to learners' backgrounds has a way of influencing didactic quality in that the acquisition of knowledge is faster as learners can easily identify with such realities in their societies. This makes them

interested in the lesson; knowing what is being taught to them can be of great help in their individual communities, thus influencing how they will learn.

According to the researcher, content related to learners' experiences makes the teaching and learning process easier, and understanding is enhanced. Learners will pay attention to such lessons, knowing that such content will serve them in their communities.

#### 4.6.0. CONCLUSION

This chapter has reported and presented results obtained from data collection and analysis with the help of percentages, tables, charts, frequency, graphs, and correlation. The first section focused on the descriptive analysis of the identified characteristics; the second section examined the structure interview; and the third section examined the verification of hypotheses. It equally presented the distribution of the target population for each of the variables through demographic (background) information. More, the presentation of data collected from student teachers, the findings of the structured interview, and the summary report on the structured interview Findings were presented in relation to themes (academic quality, pedagogic quality, classroom management quality, and didactic quality) with respect to their relationship with classroom assessment. This chapter equally presented the verification of research hypotheses and measures (summary) of the quality of cooperative learning and classroom assessment, which were analytically discussed.

#### **CHAPTER FIVE**

### DISCUSSION, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDIES

#### **5.0. INTRODUCTION**

This section discusses the findings of the study, interprets the results obtained, and makes recommendations to remedy the phenomenon under study. It equally presents suggestions for future researchers for further research in the said domain.

#### **5.1.0. SUMMARY OF FINDINGS**

The study was aimed at evaluating the qualities of cooperative learning variables that influence classroom assessment. This study was realized with the help of four research hypotheses that were formulated, questionnaires, and a structured interview. The mean, standard deviation, and Pearson correlation were used in analyzing the data collected. Thus, the following results were obtained from data analysis:

- 1. The academic quality of cooperative learning has a significant influence on classroom assessment.
- 2. The pedagogical quality of cooperative learning has a significant influence on classroom assessment.
- 3. The classroom management quality of cooperative learning has a significant influence on classroom assessment.
- 1. The didactic quality of cooperative learning has a significant influence on classroom assessment.

#### 5.1.1. Summary findings according to research questions

### **Research Question 1: To what extent does the academic quality of cooperative learning influence classroom assessment?**

There exists a correlational relationship between elements of academic quality in cooperative learning and classroom assessment. Findings show that, on average, according to responses obtained from student teachers, 2% of the variance of classroom assessment is

explained by academic quality and vice versa. Implying that 2% of the variance in academic quality is influenced by classroom assessment and vice versa. Hence, components of academic quality such as knowledge construction, validity, reliability, and group processing all influence classroom assessment. Thus, to conclude, there is a significant correlation between the academic quality of cooperative learning and classroom assessment, confirming research question one (1).

Findings from the structured interview in relation to achieving academic quality through cooperative learning: the respondents with a 100% rating accepted that academic quality can be achieved through cooperative learning, even though they advanced different reasons for why they said so, such as that learners interaction during group work brings about an increase in learning, which fosters academic gains and helps them to complete their work and be rewarded at the end of the course. To others, learners are at the center of the teaching and learning process; thus, learners are able to construct their own knowledge based on mastery. At 83.33%, respondents accepted that learners constructing knowledge, which is an element of academic quality, influences classroom performances because, for some of the participants, knowledge construction gives the learners the opportunity to have a mastery and understanding of what they are learning, while for others, constructing knowledge in their different groups gives other group members the opportunity to learn from the experiences of other members.

To conclude, from both findings—the survey (questionnaires) and the structured interview—there is a significant correlational relationship between the academic quality of cooperative learning and classroom assessment. Thus confirming research question one (1)

### **Research Question 2: To what extent does the pedagogical quality of cooperative learning influence classroom assessment?**

There exists a correlational relationship between the elements of the pedagogic quality of cooperative learning and classroom assessment. The results of the findings show that an average of 2% of the variance of classroom assessment is explained by pedagogical quality and vice versa. Thus, 2% of the variance in pedagogical quality is influenced by classroom assessment and vice versa. Implying that 2% of the variance in pedagogical quality is influenced by classroom assessment and vice versa. Hence, components of pedagogical quality like group competition, motivation, imitation, and individual accountability influence

classroom assessment. Thus, there is a significant correlational relationship between the pedagogical quality of cooperative learning and classroom assessment, and this confirms the second research question (research question number 2).

Findings on the same research questions from the structure interview showed that at a 100 percent rate, participants agreed that the pedagogical quality of cooperative learning can be enhanced through the use of group work, group competition, and motivation as instructional strategies, which pushes learners to work harder and be engaged in the assigned task. Making learners work harder and engage in assigned tasks provides them with the opportunity to perform better, hence classroom assessment. The following reasons were advanced as justification for the above response: The above strategies provide learners with the opportunity to build knowledge and build self-esteem; they make the learners more active, and slower learners are pulled up by stronger learners.

Therefore, there is a significant correlational relationship between the pedagogic quality of cooperative learning and classroom assessment, which is the conclusion arrived at from both findings: survey and structured interview; hence, these findings entirely confirm research question two (2).

### Research Question 3: To what extent does the quality of cooperative learning in classroom management influence classroom assessment?

There exists a correlational relationship between the elements of classroom management quality, cooperative learning, and classroom assessment. Findings showed that an average of 16% of the variance of classroom assessment is explained by classroom management quality and vice versa. Thus, 16% of the variance in classroom management quality is influenced by classroom assessment, and vice versa. Implying that 16% of the variance in classroom management quality is influenced by classroom management quality is influenced by classroom assessment and vice versa. Hence, components of classroom management quality, like classroom management to accommodate group work, monitoring activities in group work, discipline, and rules and regulations, are influential to classroom management quality of cooperative learning and classroom assessment, and this confirms the third research question (research question number 3).

Findings from the structure interview on the same research question showed that 66.66% of the responses from participants see classroom management as having to deal with maintaining order to enhance a favorable learning condition in the classroom. This explains why 50% of the responses of participants examine some measures to be put in place to enhance the smooth functioning of cooperative learning, such as the formation of heterogeneous groups and the formation of smaller groups to avoid group members idling and making noise. With the above, there will be order in the classroom, which will enhance the smooth running of the teaching and learning process and influence learners' performances. To maintain a favorable atmosphere as learners work in groups, 66.66% of the respondents hold that learners' needs should be addressed, learners' success should be celebrated, and prompt questions should be asked of individual group members to enhance classroom management quality as well as influence classroom assessment.

Thus, based on both the survey and the structure interview, there is a significant correlational relationship between classroom management quality and classroom assessment. Thus confirming research question three (3)

### **Research Question 4: To what extent does the didactic quality of cooperative learning influence classroom assessment?**

There exists a correlational relationship between elements of the didactic quality of cooperative learning and classroom assessment. Findings show that, based on the average responses obtained from student teachers, 26% of the variance in classroom assessment is explained by didactic quality and vice versa. Implying that 26% of the variance in didactic quality is influenced by classroom assessment and vice versa. Hence, components of didactic quality, such as learning content, learning activities, and learning materials (didactic materials), all influence classroom assessment. Thus, to conclude, there is a significant correlation between the didactic quality of cooperative learning and classroom assessment, hence confirming research question 4.

Findings from the structured interview in relation to achieving didactic quality through cooperative learning: the respondents with a 100% rate accepted that learners being responsible for their own learning influence classroom assessment. According to them, learners being responsible for their learning simply means learners constructing knowledge, which enhances understanding and mastery, hence influencing learners' performances as well as classroom

assessment. In relation to the use of didactic materials as a means of enhancing didactic quality, 100% of responses hold that didactic materials can positively influence classroom assessment, especially in cases where the didactic materials reflect the learner's environment. When didactic materials and teaching content reflect the learner's background, lessons become concrete and interesting, which fosters understanding and mastery of content.

To conclude, from both findings-the survey (questionnaires) and the structured interview-there is a significant correlational relationship between the didactic quality of cooperative learning and classroom assessment. Thus, confirming research question 4

# 5.1.2. SUMMARY FINDINGS ACCORDING TO HYPOTHESES

The following alternative hypotheses were used in this research work:

# **Research Hypothesis 1: The academic quality of cooperative learning has a significant influence on classroom assessment.**

The null hypothesis (Ho), which states that the academic quality of cooperative learning has no significant influence on classroom assessment, was scientifically rejected, while the alternative hypothesis (Ha), which states that the academic quality of cooperative learning significantly influences classroom assessment, was scientifically retained.

The above conclusion is further reinforced by the findings of the structure interview where by, the null hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was retained. Therefore, the academic quality of cooperative learning has a significant influence on classroom assessment, as proven by the survey analysis (questionnaires) and the findings of the structured interview.

# **Research Hypothesis 2: The pedagogical quality of cooperative learning has a significant influence on classroom performance.**

The null hypothesis (Ho), which states that the pedagogical quality of cooperative learning has no significant influence on classroom assessment, is rejected scientifically, while the alternative hypothesis (Ha), which states that the pedagogical quality of cooperative learning has a significant influence on classroom assessment, is scientifically retained.

This result was backed by the findings of the structured interview where, the null hypothesis (Ho) is rejected while the alternative hypothesis (Ha) is retained. Therefore, the pedagogical quality of cooperative learning has a significant influence on classroom assessment, as proven by the survey analysis (questionnaires) and structured interview findings.

# **Research Hypothesis 3: The classroom management quality of cooperative learning has a significant influence on classroom assessment.**

scientifically, the null hypothesis (Ho), which states that classroom management quality of cooperative learning has no significant influence on classroom assessment, is rejected, while the alternative (Ha), which states that classroom management quality of cooperative learning has a significant influence on classroom assessment, is retained.

Equally, based on the findings of the structured interview, the hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is retained. Therefore, the quality of classroom management in cooperative learning has a significant influence on classroom assessment, as shown by the survey analysis (questionnaires) and findings of the structured interview.

# **Research Hypothesis 4: The didactic quality of cooperative learning has a significant influence on classroom assessment.**

Therefore, the null hypothesis (Ho), which states that the didactic quality of cooperative learning has no significant influence on classroom assessment, is scientifically rejected, and the alternative hypothesis (Ha), which states that the didactic quality of cooperative learning has a significant influence on classroom assessment, is scientifically retained. Thus, the didactic quality of cooperative learning has a significant influence on classroom assessment.

This is reinforced by the results of the structured interview, where in the null hypothesis (Ho) is rejected while the alternative hypothesis (Ha) is retained. Therefore, the didactic quality of cooperative learning has a significant influence on classroom assessment, as proven by both the survey analysis (questionnaires) and structure interview findings.

#### **5.2.0. INTERPRETATION OF RESULTS**

This section examines the different hypotheses of the study based on the obtained results and the backed views of the authors. This study sought to investigate if the quality of cooperative learning has a relationship with classroom assessment. The qualities we are referring to here consist of academic, pedagogical, classroom management, and didactic qualities that bring out findings. Questionnaires were used to carry out surveys amongst student teachers in six (six) government bilingual teacher training colleges in Cameroon. Also, structured interviews were used in the above-mentioned institution for qualitative data. The research hypotheses will be discussed below.

# The academic quality of cooperative learning has a significant influence on classroom assessment.

Findings showed that the academic quality of cooperative learning significantly influences classroom assessment. The above results are in conformity with the findings of the structured interview, where by, respondents accepted that academic quality influences classroom assessment even though diverse reasons were advanced, such as: learners' interaction during group work enhances learning, which fosters academic gains and helps them to complete their work and be rewarded at the end of the course. To others, learners are at the center of the teaching and learning process; thus, learners are able to construct their own knowledge, which fosters mastery.

Hence, the above findings correlate with those of the Teacher Union (ETUCE, 2002), which sees academic quality as the relevance of subject matter taught as well as the objective of education. To them, academic quality is the type of education that meets changing times. Implying that what was considered quality yesterday might not meet the standard of what will be called quality today or even tomorrow, taking into consideration the changing world. Academic quality has to do with the acquisition of basic skills such as reading, writing, and arithmetic before progressing to complex ones. Academic quality fosters interaction between teachers and the learners and is not just a process of consumption; hence, quality education should give the individual opportunities for personal development and the ability to adapt to new situations and changes where needed.

This is equally inline qith Vygotsky social constructivism theory (1978) that stipultes that collaboration through cooperative learning enhances better understanding, hence fostering cognitive development since learners are under the guidance of teachers, parents, peers and higher intelligent abilities at the zone of proximal development. Hence an effective way of developing skills and strategies. In addition to that, Coombs (1985) in Ulf Fredriksson (2004), who sees the academic quality of education as simply referring to how well the knowledge imparted to learners fits the present and future needs of the learners.

Hence, cooperative learning is a type of teaching method that provides opportunities for interaction for knowledge construction. This process of construction in itself enhances learners' mastery of content. Content that is mastered can be used whenever and wherever a need arises as learners go about their daily lives. Learners interacting to attain a common goal enables them to meet changing times, just like Johnson et al. (2000) say that without the cooperation of its members, society cannot survive, for it is the cooperativeness of its members that has made survival possible and not an advantageous individual. Thus, through academic quality, learners are provided with opportunities to acquire skills that will enable them to master content, perform better, and integrate into society.

Moreover, findings of the structured interview showed that respondents accepted that learners constructing knowledge, which is an element of academic quality, influences classroom performances because, to some participants, knowledge construction gives learners the opportunity to have a mastery and understanding of that which is learned; to others, constructing knowledge gives group members the opportunity to learn from others experiences. These findings correlate with those of the National Research Council (2000), which sees the need for an active social classroom. If the environment is not active and there are no interactions, then constructing knowledge will certainly be difficult.

It takes interaction between learners in the right environment to construct the right knowledge; even though an active social classroom is required, care must be taken to make sure learners are constructing the right knowledge because bad company corrupts good ones. This is further supported by Vygotsky social constructivism (1972) who holds that the upper limit in the Zone of Proximal Development can only be fruitful through social and interactive support from peers and teachers. this theory, states that cognitive development comes from social interaction, from guided learning within the zone of proximal development, as the learners and partners or group members construct knowledge. Hence cooperative learning

enhances cognitive development; learners learn and cross over to their zone of proximal development through ideas and interactions from other intelligent group members during interaction and discussions.

More specifically, Devey (1916) in Kasemvilas et al. (2009) reiterates that knowledge construction makes use of constructivism rather than instruction. This implies that learners are not passive receivers of knowledge but are active in the teaching and learning process. The instructor's role is just to facilitate knowledge as the learners themselves carry out activities to enhance their construction of knowledge and management of their learning. Hence, to construct knowledge, learners have to be active by exploring possibilities, coming up with new possible solutions, trying out new hypotheses and ideas, collaborating with other learners, and presenting the best solution they can derive (O' Longhlin, 1992; Cole, 2009). This explains why in vygotsky social constructivism (1972) when the little girl was given the puzzle it was noticed thats, she behaved poorly to solve the puzzle on her first attempt, but after the teacher demonstrated to her some basic strategies like finding the edge piece as well as providing a couple of pieces for the child to put it together alone, the child became competent and worked independently.

Based on the above findings, classroom assessment is significantly influenced by academic quality through validity and reliability, which are its components. It is in the same view that Coombs (1985), in explaining the concept of academic quality or quality in education, sees it as how well one has mastered that which he has learned. Learners whose mastery enhances reliability for knowledge, skills, abilities, and aptitude acquired through cooperative learning have a higher capacity to be reliable because of knowledge construction by the learners themselves.

This is inline with vygotsky social constructivism (1972) when the little girl was given the puzzle it was noticed thats, she behaved poorly to solve the puzzle on her first attempt, but after the teacher demonstrated to her some basic strategies like finding the edge piece as well as providing a couple of pieces for the child to put it together alone, the child became competent and worked independently. Having good mastery today will still mean the same tomorrow, and why not the week after? Hence, similar results or performances will be produced during assessment because what learners have constructed with the help of cooperative learning cannot be easily forgotten for understanding, and mastery is needed for knowledge to be constructed. From the above, it shows that academic quality through group processing significantly influences classroom assessment. This is in conformity with Johnson et al. (2006), who hold that group processing enables the group to continue improving their work over time. Group members always sit down at the end of their session to examine the contributions of members so as to say whose work was helpful and those that were not. Thus pushing group members to keep on working so as to ameliorate their work overtime as they put in their best to positively contribute to the assigned task. Hence, academic quality is enhanced, and classroom assessment is equally influenced.

Also, it focuses on members' contributions so as to enhance individual accountability. Members' works are examined at the end of each working session. Thus, everyone has a contribution to make. No one folds the arm and expects other group members to go on with the work. There is individual accountability on the part of group members; everyone has a contribution to make to the attainment of the group's objectives. That is why, at the end of the day, it is possible to tell whose work was helpful and which was not, so that members continue to work to improve on their next task. Thus fostering quality in academics as well as classroom assessments.

# The pedagogical quality of cooperative learning has a significant influence on classroom assessment.

Results showed that the pedagogical quality of cooperative learning significantly influences classroom assessment. This finding is in line with Pramling (1994) who says instructors should be capable of coming up with teaching and learning opportunities that will challenge learners to think, to reflect, to solve problems; while on their own part, they should be able to listens, be sensitive get involved as they engaged learners in the different learning activities, through communications and interactions.

This is in accordance to Bandura social learning theory (1977) that illustrates that much learning takes place through observing and imitating models. The major premise of social learning theory is that learners can improve their knowledge as well as retention through observing and modeling the desired behavior, attitudes, and reactions of others. Cooperative learning, on its own part, puts learners in groups and teams to work toward a common goal. Thus, through interaction in their little groups, members are given the opportunity to learn from others by observing, imitating, and modeling desired behaviors from other group members. Moreover, NAEYC (1999) holds that the teacher has a great role to play when it comes to pedagogic quality, the approach used by the instructor, be it in class or transmission of new knowledge has an effect on the pedagogic quality. This implies quality in pedagogy examines if the approaches used by the teacher enhance communication, interaction and cooperation amongst the learners.

This is in accordance with the findings of the structured interview. Respondents accepted that pedagogical quality of cooperative learning can be enhanced through the use of group work, group competition and motivation which are instructional strategies that pushes learners to work harder and make them to be engaged in the assigned task, hence influencing classroom assessment. The following reasons were advanced as justification for the above response: the above strategies provide learners with the opportunity to build knowledge and build self-esteem, more it make the learners to be active and slow learners are pulled up by stronger learners.

According to Schunk (2007) in Bandura's Social learning theory (1971), highlights that much learning occurs when we observe, model, and imitate models; with this, learners can retain knowledge by observing and modeling the desired behavior, attitudes, and reactions of others. Learning together in small groups and teams permits group members to observe and model the desired behavior and reaction of group members as they interact, which enhances much learning.

This is also in conformity to Verhoeff (1997) who says competition if well-organized have a lot of advantages in the classroom, because it pushes the learners to put in their best. In other words, competition encourages motivation to learning. Human beings do not act in isolation, their actions are mostly influenced by others or the environment as they interact. Lawerence (2004) equally supports that competition brings about active learning and motivation on the part of the learners, thus influencing classroom assessment.

Moreover, findings shows that motivation which is an element of pedagogical quality of cooperative learning influences classroom assessment. This is in conformity to Lucas (1990) who says student learn by carrying out activities like writing, doing, creating, designing and solving problems, thus indulging them in such activities brings about motivation and curiosity on their part. Teachers should pose question, encourage them to guess results of experiments, suggest approaches to problem and work in groups where they lead discussion. The instructors should equally make use of collaborative learning methods than lecturing so as to enhance methods that encourage active participation of learners and bring about motivation.

More so, Bandura (1986: p. 6) in his social learning theory reports that "*In a social cognitive theory, people are neither driven by inner forces nor automatically shaped and controlled by the motivation, behavior, and development within a network of reciprocally interacting influence. Persons are in terms of the number of basic capabilities*". That is to say, learners are not just motivated to work by an inner force, but most especially, they are able to learn through interaction in their different groups as they observe and imitate desired attitudes and behaviors.

From the above findings, classroom assessment is influence by pedagogical quality through the use of imitation. It is in the same light that Hurley et al. (2005); Zentall (2006) say imitation as an important aspect of learning goes beyond learners just copying the same behaviour of the person they are observing; it requires participant to copy behaviour with an understanding of the goal of such a behaviour; moreover to understand that, same behaviour can be acquired by other behaviours. This aspect of the learners being able to imitate observers through understanding of the goal of the said behaviour is that which makes imitation different from other forms of social learning.

In addition to that, Johnson et al. (2010), in Bandura's social learning theory (1978) holds that learners learn more through observation and imitation of the desired behavior of other members or learners; thus, there is a strong connection between this theory and the practice of cooperative learning because the social behavior and actions of effective learners in the cooperative learning group are expected to be modeled and adopted by other learners through interaction between observed behavior, cognitive factors, and the external environment.

Inaddition to the above, findings from both the survey analysis and structure interview shows that pedagogical quality influences classroom assessment because of individual accountability. This is inline with Johnson et al. (1994) who hold that individual accountability ensures that all members of the group take responsibility for their learning and their own share of work. Thus it is not like in a traditional group were the work of the group weighs on individual and others members are just getting a free ride. With individual accountability, group members are equally accountable for the work of other group members; they teach other group members rather than tell them the answers so group members are responsible for each other share of work. The question of individual accountability is to avoid group members having free ride on work as well as preventing that low quality of work be accepted by peers in the group (Johnson et al., 1991).

The above findings positively response to the second research question which states that; does the pedagogical quality of cooperative learning influence classroom assessment?

# Classroom management quality of cooperative learning has a significant influence on classroom assessment

Results obtained here showed that the quality of classroom management and cooperative learning significantly influences classroom assessment. Vygotsky in his Social constructivism (1962) examined how social environments influence the learning process. He suggested that learning takes place through the interactions students have with their peers, teachers, and other experts. Consequently, teachers can create a learning environment that maximizes the learners' ability to interact with each other through discussion, collaboration, and feedback.

This is also in conformity with Emmer et al. (2001), who believe that classroom management deals with the ability of the teacher to organise and manage learners' behaviours, which in turn enable them to achieve positive educational outcomes. Hence, classroom management establishes a good environment that makes the teaching and learning process effective and possible.

The above findings are in accordance with those of the structured interview. The results of the structure interview show most of the participants accepted that classroom assessment is influenced by classroom management quality. This is because classroom management deals with maintaining order and discipline to enhance a favourable learning environment in the classroom in order to improve learners' performances. This is supported by Evertson et al. (2006), who see classroom management as having a double function: firstly, it is concerned with maintaining order in class to get learners fully engaged in the lesson, and secondly, it fosters the social and moral growth of the learners, hence playing a great role in achieving classroom assessment. Equally, Vygotsky in his social constructivism (1978), holds that the Zone of Proximal Development should be the area where the most sensitive guidance or

instruction should be given in order to allow the learners to develop skills they will use individually; through this, they will develop higher mental functions.

In conformity with the research work, some participants in the structured interview advanced certain measures to be put in place to enhance the smooth functioning of cooperative learning in the classroom, such as the formation of heterogeneous groups and the formation of smaller groups so as to avoid group members idling and making noise. With the above, order will be maintained, teaching and learning will take place in a favourable atmosphere, and classroom assessment will be influenced. The above findings show that classroom management, through the size of the group, influences classroom assessment.

This is inline with social constructivism of Vygotsky's (1972) in which he says in the Zone of Proximal Development, attention is placed on learners work in teams or small groups, so weaker students will benefit from the more knowledgeable ones as they collaborate, more so learners' cognitive skills that are in the process of maturing can be honed This is in conformity with Felder et al. (1994); Felder et al. (2001) who see the size of the group as a factor that influences the quality of classroom management; the largeness and smallness of the group make it either easier or more difficult to accommodate the different activities in the group. They proposed forming three- to four-person teams for most assignments.

This is supported by Gillies (2003), who reiterate that for group work to be successful, group members need to have the skills to communicate effectively through listening, explaining, and sharing ideas. Notwithstanding, effective group work involves more than the above; members have to learn to trust and respect each other. They need skills on how to plan, organise, and evaluate their group work. Thus, for cooperative learning to be successful, learners need to be able to communicate, to trust and respect other group members, to fogged ahead in accomplishing group tasks, and to not settle disputes based on misbehaviours, according to (Galton, 1990; Kutnick, 1988).

More importantly, the results of the structured interview show that respondents agreed that classroom management quality influences classroom assessment when learners activities are monitored as they work in groups. This finding correlates with Johnson (1999), who say individuals should assume each of the following roles or some suitable variation during the course of the assignment: coordinator (organises tasks and assigns responsibilities), checker (monitors the team's solution for correctness, completeness, and accuracy), recorder (writes

the solution), and sceptic (plays devil's advocate to ensure various perspectives are considered in determining the final solution). These administrative responsibilities are in addition to performing work towards the actual solution. Equally it is inline with CIPP Model by Stufflebeam (2007) where by his input evaluation examines the materials, time, physical, and human resources for effective working in school,

Pearson correlation (r) for classroom management quality and classroom assessment shows that classroom assessment is influenced by classroom management through discipline and the setting of simple rules to bring the class under control. This is supported by Vygotsky social constructivism (1978), which states that cognitive development comes from social interaction, from guided learning within the zone of proximal development, as the learners and partners or group members construct knowledge. In this light, one can say that cooperative learning enhances cognitive development; thus, when there is collaboration, learners learn and cross over to their zone of proximal development through ideas and interactions from other intelligent group members through interaction and discussions.

This is also in line with Hochweber et al. (2014); Mirra (2014), who hold that a classroom is a micro-organization where we have multiple interactions during the teaching and learning process, hence making the classroom a crowded place that will need rules, procedures, and routines that are clear enough to make interaction take place in a conducive atmosphere. Orders and procedures are established to help the teachers maximise the time allocated for instructions. This implies teaching and learning as well as interaction in cooperative learning groups can be maximised for good when simple rules and regulations are put in place guiding learners' behaviours, and this will influence classroom assessment.

Thus, the above findings and results positively answer the third research question that stipulates, Does classroom management quality influence classroom assessment?

# The didactic quality of cooperative learning has a significant influence on classroom assessment.

Findings obtained here showed that the didactic quality of cooperative learning significantly influences classroom assessment. This is in conformity with Camilloni (2007), who sees didactics as a theory concerned with social practices geared towards the design, implementation, and evaluation of teaching and learning programmes.

It is equally concerned with designing teaching and learning situations and the orientation and support of students learning, judging from the fact that it identifies and analyses problems coming from the teaching and learning processes so as to provide the best possible learning opportunity to all learners in educational institutions. This implies that teachers, through didactics, carry out teaching, taking into consideration the content and the activities to be carried out in the course of delivering the content, as well as putting in place the right instructional materials that will enhance learners understanding. This is in line with Stufflebeam CIPP Model (2007) which evaluates the effectiveness of programme outcome; at the level of process evaluation phase, all the teaching and learning process are checked and evaluated so that learners acquire just the right knowledge, more so his product evaluation phase equally focuses on the quality of the teaching and learning process.

This is also in accordance with Lewins social interdependence theory where in Johnson et al. (2008), who says positive interdependence brings about promotive interaction as group members encourage and facilitate each other's effort to complete tasks as well as accomplish groups' goals. Promotive interaction comprises mutual help and assistance, the exchange of needed resources, effective communication, mutual influence, trust, and constructive management of conflict; hence, cooperative learning enhances learning as well as productivity.

In addition to the above, classroom assessment is influenced by didactic quality through learning content. This is in accordance with Schubert (1986); Ornstein et al. (1986) in Tambo (2003) who say emphasis should be laid on successful learning experiences built on preceding ones. Content should be arranged, taking into consideration the sequence. By sequence, he means content in the syllabuses should be organised taking into consideration certain principles like simple to complex, concrete to abstract, part to whole or whole to part, and the developmental stage of the learners (Schubert, 1986; Ornstein et al., 1986) in (Tambo 2003).

More to that, its in accordance to Stufflebeam CIPP Model (2007) which evaluates the effectiveness of programme outcome; at the level of process evaluation phase, all the teaching and learning process are checked and evaluated so that learners acquire just the right knowledge, more so his product evaluation phase equally focuses on the quality of the teaching and learning process This is equally supported by Erickson (1978), who stipulates that learners are motivated to learn when the course or subject is well organised and taught by enthusiastic teachers who have genuine interest in the learners and what they learn.

Instructional materials have a lot to play with when it comes to didactic quality. They are alternative materials that the teacher uses in his classroom to make lessons concrete. They are alternative means of communication that a classroom teacher employs in the classroom to enhance understanding of the concepts taught. Instructional materials give room for variations through which messages are sent across to ease communication (Tyler, 1987; Dike, 1989). Instructional materials or didactic materials sustain the learner's interest, they motivate the learners to learn, and they equally make the teaching and learning process concrete and enjoyable. Thus, different content in different disciplines will require different materials, apart from the most common ones like chalk, chalkboards, and the recommended text books. Vygotsky in his social constructivism theory holds that.

This is in accordance with the findings of the structured interview, which showed that participants accepted that the didactic quality of cooperative learning influences classroom assessment through the different learning activities employed in exploring content. Respondents accepted that learners being responsible for their own learning influences classroom assessment; according to them, learners responsible for their learning simply mean learners constructing knowledge, which enhances understanding and mastery, hence influencing learners' performances as well as classroom assessments.

This is in conformity to the CIPP Model of stufflebeam (2007), in his evaluation phase, he examines the materials, time, physical, and human resources for effective working in school and Cooperative learning is a less costly teaching method; it is not very demanding as far as didactic materials are concerned. Equally, Beetham et al. (2007), holds that learning of a lesson. These activities could consist of debate, discussion forums, manipulating data on a spreadsheet, finding and summarising materials from the web, constructing reports, and synthesising important points from podcasts. This point of view is also supported by Siemens et al. (2009), who say learning activities consist of a range of activities used in order to promote learning, such as discovery activities, demonstrative activities, and discussion activities.

Pearson correlation (r) for didactic quality and classroom assessment showed that classroom assessment is influenced by didactic quality through learning materials, and this is in accordance with the structured interview in which participants accepted that the use of didactic material enhances the didactic quality of cooperative learning and fosters classroom assessment. This is in line with CIPP Model of stufflebeam (2007), his evaluation phase, examines the materials, time, physical, and human resources for effective working in school and Cooperative learning is a less costly teaching method; it is not very demanding as far as didactic materials are concerned

This is in conformity with Tyler (1987); Dike (1989), who reiterate that instructional materials bring about variation through which messages can be sent across to ease the process of communication. Instructional material or didactic materials sustain the learner's interest, motivate the learners to learn, and make the teaching and learning process concrete and enjoyable. Implying that, the content of different disciplines will require different materials apart from the most common ones, like chalkboards, chalk, and recommended test books.

The above positively responds to the fourth (4) research question, which stipulates: to what extent does the didactic quality of cooperative learning influence classroom assessment?

With regards to the above findings, it is clear that cooperative learning influences learners' performances positively; hence, it is a positive element as far as the teaching and learning process is concerned. Findings are supported in relation to cooperative learning, as seen by Johnson et al. (2000), whose conviction is that, without the cooperation of its members, society cannot survive, and the society of man has survived because of the cooperativeness of its members, who make survival possible. It was not an advantageous individual here and there who did so, but the group.

Also, Vygotsky (1978), in his social constructives theory, holds that cognitive development comes from social interaction, from guided learning within the zone of proximal development, as the learners and partners or group members construct knowledge. In this light, one can say that cooperative learning enhances cognitive development; thus, when there is collaboration, learners learn and cross over to their zone of proximal development through ideas and interactions from other intelligent group members through interaction and discussions.

In human societies, the individuals who are most likely to survive are those who are best enabled to do so by their group. Johnson et al. (1989) say cooperation means people coming together to work to accomplish a shared goal. That is, individuals work for outcomes that are profitable not only to themselves but equally to the whole group. That is to say, cooperative learning is the instructional use of small groups so that the learners work together to maximise their own as well as each other's learning. According to Slavin (1994), cooperative learning is an "*instructional programme in which students work in small groups to help one another master academic content*". He equally suggests that cooperative learning has the potential to capitalise on "the developmental characteristics of adolescents in order to harness their peer orientation, enthusiasm, activity, and craving for independence within a safe structure.

### **5.3.0. LIMITATION OF THE STUDY**

In carrying out this study, the researcher was faced with some challenges worth stating:

- Mobilising assistants: it was not easy to convince and train the different assistants on the awareness and administration of questionnaires. Most of them were reluctant and not interested. This is because most of them had never carried out such an activity and considered it to be so demanding as well as time-consuming on their part, as they had to undergo thorough training before assisting.
- 2. Inadequate finances: The study was very demanding, and the researcher single-handedly financed it. Taking into consideration that respondents were found in six different regions of the country, the researcher needed to travel to these different areas, which was financially demanding. Finances were equally required for the internet connection for the structured interview since most of the student teachers were not financially viable. Financial assistance was equally given to the different trained and recruited personnel (assistance) who assisted the researcher with the administration of questionnaires for credit, transportation, and motivation, and that too was demanding. Moreover, the researcher printed out questionnaires for a sample of 411 participants, which was also costly. Equally, tips and compensations were given to participants after they responded to the questionnaires through different travel agencies.
- 3. Scepticism made some of the respondents unwilling to provide preliminary information that concerned them. Some felt insecure, some were not too sure of what the findings were needed for, some thought it was a spy on them, and others saw it as a trap. No matter how much we tried convincing them, not all of them were convinced. With this, the accessible and target populations were affected, as some of them shied away from the study.

#### 5.4.0. PEDAGOGIC INNOVATION AND IMPLICATION

This research work, entitled 'An Evaluation of the Quality of Cooperative Learning and Classroom Assessment', has given the researcher an opportunity to initiate a model for evaluating the quality of cooperative learning and its impact on classroom assessment. This is an innovation with concrete pedagogic implications for the educational system of Cameroon, the teacher training sector, as well as curriculum implementation and evaluation of quality as a field of study. This innovation will facilitate the job of evaluators of quality and will serve as an orientation for teachers and educators in general to know what should be taken into consideration as far as the curriculum implementation of cooperative learning is concerned.

#### **Pedagogic Innovation**

As a pedagogic innovation, this work brings in a "model on evaluation of the quality of cooperative learning and classroom assessment"; it brings out the qualities and the indicators to be taken into consideration during the evaluation of the cooperative learning process. These qualities can either be quantitatively or qualitatively evaluated. The educational system in general and the teacher training education sector are in need of good quality, and this quality can only be improved when specific components come into play in curriculum implementation.

# 5.4.1.1. PROPOSED MODEL ON EVALUATION OF THE QUALITY OF COOPERATIVE LEARNING AND CLASSROOM ASSESSMENT

# **Quality of Cooperative Learning**

Evaluating the quality of cooperative learning and determining how it impacts classroom assessment has a series of qualities to be examined. These qualities are academic quality, pedagogical quality, classroom management quality, and didactic quality.

Academic quality: To be able to determine academic quality, the following components are examined and established within standard norms: knowledge construction, reliability, validity, and group processing. They have an important role to play as far as classroom assessment is concerned because they enhance learners' mastery and understanding of knowledge, which makes integration of knowledge possible. Hence, evaluating the above is important for the purposes of innovation, invention, and improvement.

This model is inspired by the view of Teacher Union ETUCE (2002), who sees academic quality as the relevance of subject matter taught as well as the objective of education. To them, academic quality is the type of education that meets changing times. Implying that what was considered quality yesterday might not meet the standard of what will be called quality today or even tomorrow with respect to the changing world. It is the place of education to train learners to keep up with the changing times. This explains why education in general and teacher training education in particular should put in place teaching methods and strategies that can enhance academic quality.

Methods and strategies that foster interaction, collaboration, mastery, and integration are needed for learners' development and integration into a changing society. It is in the same light that Johnson et al. (2000) say that without the cooperation of its members, society cannot survive, for it is the cooperativeness of its members that has made survival possible and not an advantageous individual, implying that academic quality provides learners with opportunities to acquire skills that foster content mastery, better performances, and integration into society. Hence, academic quality simply refers to how well the knowledge imparted to learners fits the present and future needs of the learners (Frederickson, 2004). Thus, academic quality has a chance of training learners for a changing society.

**Pedagogic quality**: In evaluating pedagogical quality, group competition, motivation, imitation, and individual accountability were employed. They play a great role in classroom assessment because they enhance learning by making lessons interesting and sustaining learners' interest.

This finding is in line with Pramling (1994), who says instructors should be capable of coming up with teaching and learning opportunities that challenge learners to think, reflect, and solve problems, while on their own part, they should be able to listen, be sensitive, and get involved as they engage learners in the different learning activities through communications and interactions. In the same light, NAEYC (1999) holds that the teacher has a great role to play when it comes to pedagogic quality; the approach used by the instructor in the transmission of new knowledge has an effect on the pedagogic quality. These pedagogic activities can only be effectively and efficiently planned and implemented if components of pedagogical quality are constantly evaluated, especially in cooperative learning, and improved upon.

**Classroom management quality:** It is difficult to implement academic quality and pedagogical quality if there is no classroom management quality; hence, class management to accommodate group work, monitoring activities in group work, discipline, and rules were examined to establish their quality. This is in conformity with Emmer et al. (2001), who believe that classroom management deals with the ability of the teacher to organise and manage learners' behaviours, which in turn enable them to achieve positive educational outcomes.

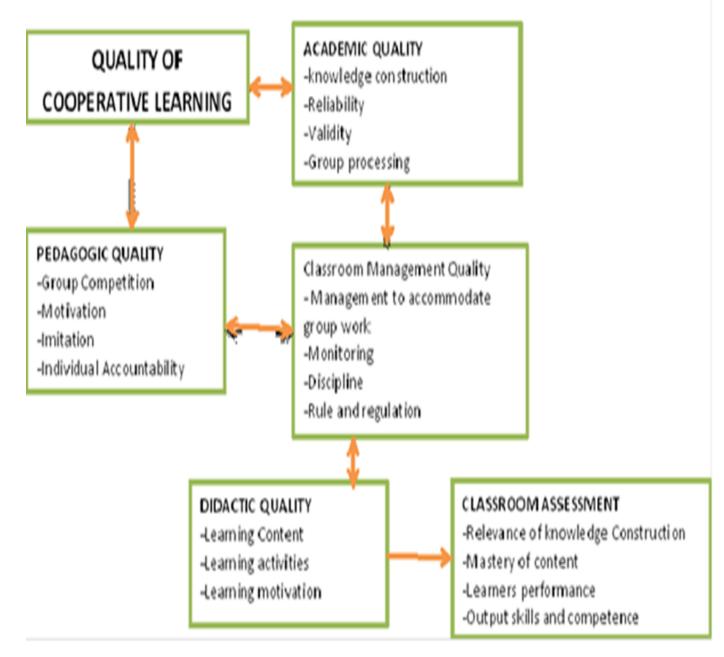
Hence, classroom management establishes a good environment that makes the teaching and learning process effective and possible. This is supported by Evertson et al. (2006), who see classroom management as having a double function: firstly, it is concerned with maintaining order in class so as to get learners fully engaged in the lesson, and secondly, it fosters the social and moral growth of the learners, hence playing a great role in achieving classroom assessment. Thus, implementing and evaluating the above classroom management qualities improves education acquired at the level of teacher training education and specifically on learners' performances, which cannot be overlooked in today's society.

**Didactic quality**: Moreover, didactic quality is determined by the standard of learning content, learning activities, and learning materials (didactic materials). This is important in classroom assessment because pedagogical quality cannot be implemented without didactic quality. This implies that teachers, through didactics, carry out teaching, taking into consideration the content, the activities to be carried out in the course of delivering the content, and putting in place the right instructional materials to enhance learners understanding and improve classroom assessment.

Moreover, instructional materials give room for variations through which messages are sent across to ease communication (Tyler, 1987; Dike, 1989). Instructional materials or didactic materials sustain the learner's interest, they motivate the learners to learn, and they equally make the teaching and learning process concrete and enjoyable. Hence, evaluating didactic quality renders it more productive because it enables us to carry out assessments within standards so as to improve the teaching and learning process in general and classroom assessment in particular. This proposed model for evaluating cooperative learning quality and classroom performances is illustrated by figure 12 below.

# MODEL ON THE EVALUATION OF COOPERATIVE LEARNING QUALITIES AND CLASSROOM ASSESSMENT.

Figure 12: Model for the Evaluation of Cooperative Learning Qualities and Classroom Assessment



Source: Makoge 2021

#### 5.4.1.2. CLASSROOM ASSESSMENT

Angelo et al. (1993) define classroom assessment as a technique in which ungraded activities are carried out in a classroom setting. Such activities are carried out in order to give the teacher feedback on the learners' understanding of course materials and ameliorate where needed before moving on to the end of the programme, test, or course material. This light classroom assessment assures learners of the teacher's interest in their learning process. Classroom assessment is important because it gives regular feedback on misconceptions and poor performances on tests, quizzes, and projects. Moreover, classroom assessment gives the teacher insight into his day-to-day teachings and how learners learn; as such, modifications can be made where necessary. Hence, classroom assessment makes learners modify their own learning styles and strategies to appropriate ones. This explains why classroom assessment should be carried out in relation to the teaching style and classroom time limit.

The goal and purpose of classroom assessment should be explained to the learners whenever it is carried out, and the findings and plan of feedback should be communicated to students. In this context, classroom assessment is based on the following components: the relevance of knowledge constructed, mastery of content, learners performance and output, skills, and competences. Thus, the use of the different cooperative learning qualities can positively influence classroom assessment. Johnson et al. (1994) hold that through group processing of cooperative learning, members' actions and works can be reflected upon. Group processes enable cooperative working groups to tell members whose actions and contributions were helpful and unhelpful in order to take decisions on what to change or continue with, thus influencing classroom assessment.

Angelo et al. (1993; p. 34) say classroom assessment "*is an approach designed to help teachers find out what students are learning in the classroom and how well they are learning it*". Classroom assessment has the following characteristics: First, it can be learner-centered. This implies classroom assessment is based on the teachers and learners improving learning rather than teaching. Hence, classroom assessment provides information to both students and teachers so as to adjust and make improvements in learning. Another characteristic of classroom assessment is that it is teacher-directed, meaning the teacher has autonomy, academic freedom, and professional judgement on what to assess, how to assess, and how to respond to the information gained from assessment. Formative assessment is another characteristic of classroom assessment that has the purpose of improving the quality of students learning. In addition to the above, classroom assessment is context-specific, implying that the characteristics of the teachers, students, and subject should be taken into consideration when assessing so that assessments will respond to their particular needs. This explains why what works well in one class may not work in another.

#### The relevance of knowledge constructed

Learners come to school to acquire knowledge, skills, and competence; they want to see themselves succeed in education as well as contribute to the development of their respective communities as far as this knowledge can be used in society. This explains why examining the relevance of the knowledge constructed is very important. Holye (1986) in Anyi (2017) sees the school as being created with the main aim of imparting knowledge as well as skills to those who go through them and equally enhancing better academic performance. The school creates an environment that gives the learners the opportunity to interact so as to achieve better academic performance. Thus, the relevance of the knowledge constructed is one of the many elements that can greatly influence learners' performances, hence classroom assessment. Cooperative learning is a teaching method that provides learners with the opportunity to build relevant knowledge.

Ambrose et al. (2010) see the relevance of knowledge construction as a way of helping students develop and learn pathways to becoming expert learners whose conceptual frameworks are deeply interconnected, transferable, rooted in a solid memory and skills foundation, and easily retrieved. Learners constructing knowledge give them the possibility of understanding and gaining mastery of what is learned, and this goes a long way in influencing classroom assessment and the integration of such knowledge.

Huang (2006) says learning should be concerned with the learners constructing knowledge and not receiving it; constructivism is concerned with the ability of learners to understand and apply knowledge rather than recalling and memorising knowledge. Hence, for learners to be able to understand and construct knowledge, they need to work in small groups and teams. The teacher needs to employ healthy competition in the classroom and motivate learners to get them engaged and follow them through group processing and individual accountability. This implies that to obtain relevance in knowledge construction, learners should be provided with the opportunity to work in small teams and groups to accomplish assigned tasks, for much learning takes place through interaction and collaboration as learners construct their own knowledge.

#### Mastery of content

Mastery of content plays a very vital role in influencing classroom assessment of the learners and enhancing the educational system in general, which is a goal of the educational system; hence, the relationship between mastery of content and classroom assessment cannot be undermined. The 1995 educational forum needed pedagogy that fosters reproduction rather than production; the question of production can only come in when learners have a mastery of that which they have learned. Cooperative learning as an instructional method enhances mastery and understanding as it provides learners with the opportunity to interact and collaborate to build new knowledge. The reason why it is important that we evaluate the quality of cooperative learning is to influence mastery and, to a greater extent, classroom assessment.

Establishing a relationship between mastery of content and classroom assessment, it is worthy of note that content mastery helps learners build a strong foundation in order to identify and fill knowledge gaps. Mastery of knowledge equips the learners with the pre-requisite skills to solve more problems in the future. Mastery of concepts builds confidence in learners, which enhances a positive relationship with learning. This positive relationship motivates the learners to actively participate in their own learning; they ask questions, collaborate with the instructors, and apply feedback.

Schwartz et al. (2019) Content mastery prepares learners for the future; hence, the main purpose of content mastery is to train learners to be self-motivated and independent—learners who are not afraid to take on new challenges and work with others to solve more complex problems. Internalised content will always help learners, be it in the near, immediate, or long run, to be successful. Learners' performances will be improved based on their mastery of content because it fosters reliability. Hence, classroom assessment will be influenced by mastery of content, which comes as the result of the interaction, collaboration, and knowledge construction employed in cooperative learning.

#### Learners' performances

Certainly, it is only when objectives are achieved that we can talk about learners; performances or academic performances. This explains why Collabero et al. (2007) define academic performance as students achieving the stated goals, achievements, and objectives of the official programme or course. This explains why grades are assigned, which can either pass or fail through assessment. Nevertheless, amongst many other factors, academic performance or the learner's performance can be one means of improving the quality of education. Learners' performance, which is reflected in academic performance, is also the level of knowledge shown in a subject in relation to the norm and measured generally using the grade point average. Torres et al. (2006) in Willcox (2011) with respect to this, cooperative learning through interaction, collaboration, and knowledge construction fosters understanding, mastery, and integration of knowledge, which goes a long way in enhancing learners' performances the acquisition of knowledge, cognitive, and social skills, and these foster classroom assessment.

#### Output, skills, and competences

Schreyer (2009b); Fraumeni et al. (2008) see output as an educational concept that defines the level of acquisition of knowledge, skills, and competence of the learners. Educational output tries to measure the effectiveness of a programme or activity to see if objectives were achieved. Output shows the performance of an educational system with respect to knowledge of the subject, progression and completion rates, competences, and also the satisfaction of employers. On the other hand, skills, according to Further and Education Unit (1982), are a wide concept that includes the ability for one to perform specific manipulative occupational tasks that consist of reading, measuring, writing, speaking, listening, calculating, coordinating problem solving, coping with interpersonal relationships, computer literacy, and learning. Competence, according to Hartel et al. (2004), is a statement that describes the knowledge, skills, and behaviour that students acquire after completing a course. It is the

applied skills and knowledge that enable people to successfully perform in educational, professional, and life contexts.

Cooperative learning through interaction, collaboration, knowledge construction, and individual accountability enhances the acquisition of knowledge, output, skills, and competences, thereby improving the quality of education. The aspect of learners constructing knowledge through interaction and collaboration as they carry out group tasks fosters understanding and mastery, which enhances the acquisition of skills and competences. Implying that learners will perform well, hence classroom assessment.

#### 5.5.0. PEDAGOGIC IMPLICATION OF THE RESEARCH WORK

Educational research, in one way or another, works towards ameliorating the instruction (teaching) and learning processes, which are at the core of education. Therefore, most educational works seek to ameliorate and improve quality. If quality improvement is void of the pedagogic component, then there is bound to be disruption along the line. Therefore, this work has shown not only how to evaluate quality but also how to use cooperative learning qualities to improve the quality of instruction and learning processes, which are the basis and core of education practices.

# Students

This study has made learners conscious of the role cooperative learning quality in enhancing their performances based on the fact that it enhances understanding, mastery, and integration of knowledge through its different qualities. This work makes student teachers understand that the evaluation of academic, pedagogical, classroom management, and didactic qualities is a means of evaluating the teaching and learning processes in order to improve and enhance learners' performances (classroom assessment). As such, this work is an opener for the student teachers to be committed and participate during the teaching and learning process with the use of cooperative learning qualities. For this will go along way to improve on their performances based on the understanding, mastery, and transferability of knowledge, skills, and output.

#### **Teachers and Tutors**

This work is an eye opener to teacher to understand that cooperative learning should not just be used for the sake of using it; it should be exploited for quality purposes to enhance better academic performances through the implementation and evaluation of academic, pedagogical, classroom management, and didactic qualities. Through this work, teachers are able to understand why its necessary to employ the quality of cooperative learning in their classroom and monitor learners during the process as far as classroom assessment is concern. This study has equally enlightened them of how to effectively exploit and evaluate cooperative learning activities during the teaching and learning process for better results.

#### **Educational administrators**

This study has given educational administrations an understanding of not only promoting the use of the quality of cooperative learning in their different institutions but also exploiting it for quality purposes. Through this work, they will be able to carry out seminars and pedagogic days to train teachers on the use and assessment of the different qualities of cooperative learning in order to enhance classroom performances. This study will enable them to provide instructional materials and appropriate exploitation to enhance cooperative learning and influence classroom assessment through the relevance of knowledge-constructed, mastery of content, output, skills, and competences acquired. This work will also empower educational administrators who have been given the responsibility to improve programmes through evaluation to follow up on teaching and assessment through the different qualities of cooperative learning (academic quality, pedagogical quality, classroom management quality, and didactic quality).

#### Parents, Sponsors, and Community

An understanding of the place of the quality of cooperative learning in the lives of learners will encourage parents and the educational community to promote the use of cooperative learning qualities through the provision of necessary instructional materials and infrastructure. Also, seeing that which learners can acquire as a result of the different qualities of cooperative learning (academic quality, pedagogical quality, classroom management quality, and didactic quality) will push them to invest in and sponsor programmes in relation to quality of cooperative learning inorder to improve its quality and enhance learners' performances and integration.

### **Educational community**

This study enlightens international and national non-governmental organisations and governmental organisations such as the United Nations Educational Scientific and Cultural Organisation (UNESCO) and the CONFEMEN Education System Analysis Programmeme, known in French as the Programmeme d'Analyses de System Educative CONFEMEN (PASEC) and local associations like the PTA (Parents Teachers Association), respectively; to understand how they can enhance classroom performances through the use of the different qualities of cooperative learning by providing funds, sponsoring programmes, providing infrastructure, and appropriate instructional materials to improve the teaching and learning processes as far as the quality of cooperative learning qualities is concern in teacher training colleges.

#### **Policymakers and the State**

This study will help the state and policymakers understand the importance of the quality of cooperative learning and how it can enhance improvement in educational practices through its different qualities. Such a study will motivate the state and policymakers to ensure that school programmes and syllabuses are drawn up and implemented in light of the quality of cooperative learning in order to improve on education in general and classroom assessment in particular. Moreover, the state will be able to provide infrastructure and instructional materials as well as train teachers for the purposes of achieving quality in the educational system through the use of the different qualities of cooperative learning.

# 5.6.0. RESEARCH WORK AND THE MODEL OF COOPERATIVE LEARNING QUALITY EVALUATION AND CLASSROOM ASSESSMENT

The results obtained from the evaluation of cooperative learning qualities and classroom assessment have initiated the model of cooperative learning quality evaluation and classroom assessment. With the fast-changing world and the continuous search for better instructional methods to meet up with the changes and improve the quality of education, the instructional and learning processes cannot be indifferent. It must be geared towards quality so as to improve and ameliorate education. This model on the quality of cooperative learning and classroom assessment presents to educators in general and educational evaluators of cooperative learning (educational qualiticians) the procedures and qualities to be taken into consideration during the process of evaluating cooperative learning so as to establish its quality in relation to an educational variable.

This study and model have exposed us to the outcome of educational products based on the role of quality in educational components. All the different educational practices introduced in education in general and teacher training education in particular are geared towards improving educational outcomes and the educational system in general. Thus, this study has presented a model for teacher training colleges to enhance learners' performances and improve the quality of education in general. Learners need to develop social skills and be able to interact and collaborate to fit in with the fast-moving world. To this end, this research has been able to present that education has a lot to play in ensuring learners get there through cooperative learning as an instructional method. Hence, this study has been able to present some cooperative learning qualities and components that can be used to foster the teaching and learning processes and impact classroom assessment, which is an important factor in education today. In this light, scientifically, this study has contributed to education through the initiation of a cooperative learning evaluation model, theories, and literature.

### **5.6.1. RECOMMENDATIONS**

Based on the findings of this work, the researcher made the following recommendations, which, to her, have the potential to improve the quality of cooperative learning used in our different classrooms as well as generally improve the teaching and learning processes.

### To students or student teachers

Learners should understand that the different qualities of cooperative learning has the ability to make them have a good mastery of what is taught them; as such, knowledge acquired in the classroom can easily be used anywhere and at any time due to mastery. Moreover, cooperative learning equips learners with social skills as they interact and collaborate with others in teams, which are skills greatly sought in today's companies and jobs. This explains why Johnson et al. (2000) say society survives today not because of an individual but due to

the cooperativeness of its members. Thus, learners should take work seriously whenever they are assigned different task in their respective group inorder to enhance comprehension and mastery which will facilitate transferability. Hence, the question of wanting to have a free ride should not be an option for them if they have to perform better.

#### **Teachers**, lecturers, or tutors

Teachers should understand that the use of the different qualities of cooperative learning is very important when it comes to developing learners academically and socially. The end product of the teaching and learning processes is to see learners succed this explain why comtemporay society talks of learner center pedagogy. To this end, they should be willing to make use of cooperative learning and its qualities during the teaching and learning processes in their respective classrooms. They should ensure learners are followed up so the right things be done. It shouldnot be time for resting, idling, and browsing on the phone while learners are not sure of what they are doing, or not doing the required thing. It should not be the time for vacation when teacher just sit and listen to any rubbish presented by learners on their assigned task without personal findings. Teachers should guide and monitor learners as they carry out tasks so as to produce fruitful results at the end of the day and influence classroom assessments. Teachers should not be lazy about making use of the quality of cooperative learning in their classrooms, but instead should be encouraged to come up with better strategies to facilitate its use in their respective classrooms inorder to enhance classroom assessment.

### To policymakers and states

The youth of today are the future of tomorrow. Whatever we produce today is what will be reflected in our society tomorrow. The quality of cooperative learning has the capacity to build learner's persona and self-esteemt, it also has the capacity to enhance comprehension and transferability of knowledge which goes a long way in improving on learners' performances. To this, those incharged of the school curriculum/syllabuses should ensure that content and teaching approaches that will enhance the use of cooperative learning qualities in schools be included. They should equally provide teachers with the necessary facilities for the implementation of the quality of cooperative learning as well as the basic skills needed to implement the qualities of cooperative learning during seminars and workshops. With this, academic performances of learners will be enhanced and the finished products leaving school will not only be academically equipped, but socially too.

### To the parents

The dream of every parent is to see their children succeed. Every community wishes to have responsible citizens; they love to have citizens who contribute to their wellbeing. To this end, parents are called upon to encourage the learners by providing them with the necessary materials, equipment, and finances that will help them accomplish the assigned group tasks. Parents can equally help the school by donating necessary materials for successful cooperative learning qualities in school, such as a spacious classroom with benches for everybody and didactic materials that learners could used during group task. They can also sponsor seminars to train teachers on the use of the quality of cooperative learning so as to foster classroom assessment.

### To the educational community

This work has enlightens educational partners, especially local organisations such as national and international non-governmental organisations and governmental organisations such as the United Nations Educational Scientific and Cultural Organisation (UNESCO) and the CONFEMEN Education System Analysis Programmeme, known in French as the Programmeme d'Analyses de System Educative CONFEMEN (PASEC), respectively, to understand that they can be of help by providing materials, infrastructures, and finances to encourage the quality of education through the use of cooperative learning qualities in our different classrooms to foster efficiency and productivity in the educational system.

### 5.7.0. SUGGESTIONS FOR FURTHER RESEARCH

This work evaluated some qualities of cooperative learning (academic, pedagogical, classroom management, and didactic quality) and their impact on classroom assessment in teacher training colleges in Cameroon. Other works can be carried out in the following dimensions for further research:

- Out of the pedagogic quality, academics quality, classroom management quality and didactics quality, what other element can enhance the quality of cooperative learning
- Challenges in the implementation of the quality of cooperative learning in comptemporary classroom
- The influence of cooperative learning qualities on teachers' out put

### **5.8.0. CONCLUSION**

In this chapter, there have been examinations and discussions on the findings of the study, interpretations of the results obtained, and recommendations to remedy the phenomenon under study. Also, a proposed model for evaluating the quality of cooperative learning and its effects on classroom assessment was developed from the findings of the study. This chapter finally, equally, stated and presented suggestions for future researchers for further research in the said domain.

# **GENERAL CONCLUSION**

Cooperative learning has the ability to influence classroom assessment through interaction, individual accountability, and knowledge construction, which enhances mastery and integration, thereby improving the quality of education. Goal number 4 of sustainable development (SDG) dwells on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. Quality education is that which inculcates in learners the ability to master and integrate knowledge, skills, and abilities that foster lifelong learning through the "development of human potentials through a continuously supportive process that stimulates and empowers individuals to acquire all the knowledge, skills, and understanding they will require throughout their lives and apply them with confidence, creativity, and enjoyment in all roles, circumstances, and environments" (Longworth et al., 2014, p. 22).

This work has examined the impact of the quality of cooperative learning on classroom assessment. The quality of cooperative learning examined consisted of academic, pedagogical, classroom management, and didactic qualities. Quality in Academics and Education to Teachers Union in their ETUCE Publication Quality in Education (2002) is equipping learners with all that it takes to carry out the different tasks they may be confronted with in the future. Education needs to prepare learners to participate in the political, economic, and cultural life of their respective societies and individually in their future private lives. Education should provide learners with the possibility of acquiring the necessary skills and knowledge that will enhance integration and contribute to the future development of their respective societies. Quality education should be able to lay the foundation for change and equally maintain the quality at the moment; thus, every generation should ameliorate and develop its society through quality education, which is a factor that influences development. Academic quality is more like the mirror of society in some way.

Hence, this work has examined the academic quality, pedagogic quality, classroom management quality, and didactic quality of cooperative learning to meet the demands of democracy, decentralisation, effective management, accountability, pedagogic reforms, and relevance in education. This was the cry of the 1995 Educational Forum that was held due to the problems facing the educational system, like poor teaching quality and irrelevant curriculum content. The quality of cooperative learning enhances the relevance of knowledge

constructed, which, according to Ambrose et al. (2010), is a way of helping students develop and learn pathways to becoming expert learners whose conceptual frameworks are deeply interconnected, transferable, rooted in a solid memory and skills foundation, and easily retrieved.

Classroom assessment and the quality of education are fostered through concept mastery, which helps learners build a strong foundation to identify and fill knowledge gaps. Mastery of knowledge equips the learners with the pre-requisite skills to solve more problems in the future; hence, the main purpose of content mastery is to train learners to be self-motivated and independent, learners who are not afraid to take on new challenges and work with others to solve more complex problems. Internalised content will always help learners, be it in the near, immediate, or long run, to be successful (Schwartz and Kreg, 2019).

A qualitative and quantitative design was used for the study; hence, the questionnaire and structured interview were used as instruments for data collection from a sample of 411 student teachers from six government bilingual teacher training colleges in Cameroon. Findings showed that the quality of cooperative learning significantly influences classroom assessment in particular and the quality of education in general, as shown in the tested research hypotheses:

- The academic quality of cooperative learning has a significant influence on classroom assessment. The examined components of academic quality consist of knowledge construction, validity, reliability, and group processing. Academic quality fosters interaction between teachers and learners; hence, learning is not just a process of consumption. Thus, quality education should give the individual opportunities for personal development and the ability to adapt to new situations and changes where needed. This explains why Coombs (1985) and Ulf Fredriksson (2004) say the academic quality of education simply refers to how well the knowledge imparted to learners fits the present and future needs of the learners.
- The pedagogical quality of cooperative learning has a significant influence on classroom assessment. Components of pedagogical quality consisted of group competition, motivation, imitation, and individual accountability. This is because when instructors come up with new instructional and learning processes that challenge learners to reflect, think, interact, communicate, and be engaged in different learning activities, classroom assessment will greatly improve (Pramling, 1994). This explains why NAEYC (1999) says teachers have great roles to play as far as pedagogic quality

is concerned; the approach used by the instructor, be it in class or the transmission of new knowledge, has an effect on the pedagogic quality. Thus, quality in pedagogy examines if the approaches used by the teacher enhance communication, interaction, and cooperation amongst the learners so as to influence their performances.

- Classroom management quality and cooperative learning have a significant influence on classroom assessment. The components examined here consisted of management to accommodate group work, monitoring activities in group work, discipline, and rules. Classroom management quality deals with the ability of the teacher to organise and manage learners' behaviours, which in turn enable them to achieve positive educational outcomes. Emmer and Stough (2001) Hence, classroom management establishes a good environment that makes the teaching and learning process effective and possible. Classroom management consists of maintaining order and discipline to enhance a favourable learning environment in the classroom in order to improve learners' performances. Classroom management plays a double function; firstly, it is concerned with maintaining order in class to get learners fully engaged in lessons, and secondly, it fosters the social and moral growth of the learners, hence playing a great role in achieving classroom assessment (Evertson and Weinstein, 2006).
- The didactic quality of cooperative learning has a significant influence on classroom assessment. As didactic quality, this study examined the learning content, learning activities, and learning materials (instructional materials). Didactics is a theory concerned with social practices geared towards the design, implementation, and evaluation of teaching and learning programs. More, it is concerned with designing teaching and learning situations and the orientation and support of students learning, judging from the fact that it identifies and analyses problems coming from the teaching and learning processes so as to provide the best possible learning opportunity to all learners in educational institutions.Hence, teachers, through didactics, carry out teaching, taking into consideration the content and the activities to be carried out in the course of delivering the content, as well as putting in place the right instructional materials to enhance learners understanding, thus classroom assessment (Camilloni (2007)).

The strength of the quality of cooperative learning cannot be overemphasised in contemporary society, where employers are in need of workers who are flexible and adaptable to work in collaboration with others for the success of their organization. This explains why Johnson and Johnson (1989, 1988) declare that it is the cooperation of members that has made society survive and not an advantageous individual; hence, it is not due to personal efforts that society has survived. Moreover, through cooperative learning, learners are able to acquire social skills that are necessary for their integration in their respective societies; they learn how to talk when given the floor, they learn to listen to other points of view, and they learn to equally accept and accommodate individual differences, which is important for their socialisation and interaction in the community.

Also, the quality of cooperative learning fosters mastery of knowledge, skills, and abilities needed in the educational sector, where professionalisation has become the norm. Contemporary society encourages mastery for professionalisation so as to enhance quality, efficiency, and productivity as far as education and performances are concerned. Contemporary society is in need of quality education—education that is not limited to the four walls of the classroom but enables learners to acquire skills and competences to solve daily life problems and can be obtained through the quality of cooperative learning, which enhances mastery through knowledge construction, individual accountability, and group processing. This goes in line with Johnson and Johnson (1989, 1999), who say that without the cooperation of its members, society cannot survive, and the society of man has survived because the cooperativeness of its members made survival possible. It was not an advantageous individual here and there who did so, but the group of humans in societies; the individuals who are most likely to survive are those who are best enabled to do so by their group, thus reiterating the concept of cooperative learning.

Hence, this research work, in all five chapters, has examined the impact of cooperative learning qualities on classroom assessment. The qualities evaluated consisted of academic Squality with components such as knowledge construction, validity, reliability, and group processing. The second is the pedagogical quality, with components such as group competition, motivation, imitation, and individual accountability. The third is classroom management quality, under which we examined management to accommodate group work, monitoring activities in group work, discipline, and rules and regulations. The last but not least examined quality is that of didactics, in which the learning content, the learning activities, and the learning materials (didactic materials) were evaluated. The above elements greatly influence classroom assessment as they enhance the relevance of knowledge constructed, mastery of content, and learners' performances (output, skills, and competences).

Thus, to enhance classroom assessment and the quality of education in Cameroon, there must be quality in the implementation of the curriculum that can be seen through the instructional and learning processes. The collective support of teachers, administrators, parents, educational policymakers, and the state can greatly influence quality in education through the improvement of learners performances through classroom assessment by improving the quality of cooperative learning used in our institutions. Education simply refers to how well the knowledge imparted to learners fits the present and future needs of the learners.

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# **APPENDIXES**

#### **1.QUESTIONNAIRE FOR STUDENT TEACHERS**

Dear respondent, This questionnaire is designed to collect data on the evaluation of the quality of cooperative learning and its impact on classroom assessment. The data collected will go a long way towards determining if the quality of cooperative learning influences classroom assessment; all information will be used only for research purposes. Your responses will be treated with the utmost confidentiality. Thanks

#### A: PRELIMINARY INFORMATION

Demographic information

i. Region of						
origin	_division		subdivisio	nii.		
Gender: male female						
iii. Marital status: single	married		divorce widow	Qualification		
iv.Institution:		_Faculty		_Department		
v. Age:						

# B. AN EVALUATION OF THE QUALITY OF COOPERATIVE LEARNING AND Its IMPACT ON CLASSROOM ASSESSMENT

**Instruction:** Please rate the various aspects of the quality of cooperative learning in terms of the extent to which you agree with the various statement by marking "X" in one of the boxes against: **SA**=Strongly Agree (4/4), A=Agree (3/4), **D**= Disagree (2/4), and **SD**= Strongly Disagree (1/4).

SN	STATEMENT	SA	Α	D	SD
	ACADEMIC QUALITY				
01	Building knowledge on your own enhances better understanding and mastery of content				
02	Knowledge stays longer in the memory when constructed by you				
03	Knowledge does not stay longer in the memory when constructed by one person				
04	Discussion and correction during group tasks foster mastery of content learnt				
05	Contributing in group tasks, makes individual learners to work harder and contribute to group goals which equally influences classroom assessment				

	PEDAGOGICAL QUALITY		
06	Learners competition in groups with others encourages them to work harder and		
	this influences classroom assessment		
07	Learners are motivated to learn when lessons are interesting		
08	Interesting lessons enhance knowledge acquisition		
09	Imitating a hardworking student makes you to perform better		
10	Contributing to the success of group goal pushes you to work harder		
-	CLASSROOM MANAGEMENT QUALITY		
11	Smaller groups give learners the opportunity to work better than larger groups		
12	Smaller groups do not give learners the opportunity to work better than larger		
	groups		
13	A teacher seeking to know what learners are doing in their various groups makes		
	learners to be serious in carrying out group tasks		
14	Setting simple rules to be respected by group members enhances better working		
	conditions and influences knowledge acquisition		
15s	Clearly communicated task as well group members talking when given the floor		
	enhances learning		
	DIDACTICS QUALITY		
16	The arrangement of content in the different subject facilitates learning		
17	Contents that reflect the local reality of learners are better understood and mastered		
18	Contents true to learners' environment motivates them to learn and influence their		
	performance		
19	Different activities carried out by the teacher and learners during a lesson		
	facilitates knowledge acquisition		
20	The use of instructional materials makes a lesson interesting and facilitates		
	knowledge acquisition		
	DEPENDENT VARIABLE		
21	Mastery of content learnt influences classroom assessment		
22	Knowledge construction influences classroom assessment		
23	Knowledge construction does not influence classroom assessment		
24	Learners performance influences classroom assessment		
25	Acquisition of skills, output and competence influence classroom assessment		

## **B) STRUCTURE INTERVIEW GUIDE FOR STUDENT TEACHERS**

# An Evaluation of the Quality of Cooperative Learning and its Impact on Classroom Assessment

#### PRELIMINARY INFORMATION

#### Theme 1: Cooperative learning and classroom assessment

- 1. What do you understand by cooperative learning?
- 2. What do you think of classroom assessment?
- 3. Do you think cooperative learning can influence classroom assessment?
- 4. How?
- 5. Cooperative learning cannot influence classroom management.

#### **Theme 2: Academic Quality**

- 1. What do you understand by academic quality?
- 2. Do you think we can obtain academic quality through cooperative learning?
- 3. why
- 4. Do you think learners constructing knowledge themselves can influence classroom assessment?
- 5. How?

#### Theme 3: Pedagogic Quality

- 1. How is the use of group work, group competition, and motivation different from other instructional strategies?
- 2. Do you think making use of the above techniques can influence classroom assessment?
- 3. How?
- 4. Do you think the use of motivation, group work, and group competition does not influence classroom assessment?
- 5. How does cooperative learning facilitate the teaching and learning process?

#### Theme 4: Classroom management quality

1. What do you think is classroom management quality?

- 2. How will you maintain a favourable atmosphere in the classroom when learners are working in groups?
- 3. How can you ensure that all learners are contributing to the accomplishment of the task given to them?
- 4. Generally, what are some of the measures you will put in place in a cooperative classroom to enhance the smooth functioning of the classroom?

#### Theme 5: Didactic Quality

- 1. Does making learners responsible for their own learning influence classroom assessment?
- 2. How?
- 3. Learners who build knowledge and are responsible for their own learning do not influence classroom assessment.
- 4. How can the use of didactic materials influence classroom assessment?
- 5. How does content that relates to learners' backgrounds and experiences influence the didactics quality

#### C.STRUCTURE INTERVIEW TRANSCRIPT

# An Evaluation of the Quality of Cooperative Learning and Its Impact on Classroom Assessment

Total participant time required: 90 minutes

15 minutes for every session for five (5) weeks

Moderator: Yvette NYAKE MAKOGE

Participants (coded names)

#### **GBTTC Garoua**

A: Mis (female)

#### **GBTTC Ngaoundere**

B: Agi (female)

#### **GBTTC Bertoua**

C: Kai (male)

#### **GBTTC Yaounde**

D: Ban (female)

#### **GBTTC Edea**

E: Pet (male)

#### **GBTTC Bamenda**

F: Kel (male)

#### 1. Introduction

Moderator: Greetings to all the participants in this structured interview. Here, our discussions will centre on the quality of cooperative learning and its impact on classroom assessment."The raison d'être of this exercise is for us to share our views and experiences as to the quality of cooperative learning and classroom assessment. Please note that there is no wrong or right answer here, so please feel free to express yourselves clearly. Expression of one's self here can be done through face-to-face (direct contact), text, audio messages, and video calls through WhatsApp. Please feel free to express your views and opinions clearly. Please let me remind you all that all information gotten from this structure interview is solely for research purposes. To this end, all information will be treated with confidentiality, which explains why the names of participants will not be used during the exploitation and analysis of the said information.

#### **PRELIMINARY INFORMATION**

#### 1. Theme 1:cooperative learning and classroom assessment

Moderator: What do you understand by cooperative learning?

**A:** I understand that cooperative learning is a structured method of combining classroom-based education with practical work experience.

**B**: It refers to a type of teaching strategy in which learners work in small groups and each learner has a part to contribute to learning.

**C:** understands cooperative learning to be an educational approach, strategy, and technique that aims at organising classroom activities into small heterogeneous (mixed ability) groups that help the learners learn amongst them. It promotes teamwork and competition.

**D**: A teaching method that enhances interaction and knowledge construction during the teaching and learning process through the use of group and team work.

**E:** cooperative learning is an educational approach in which educators work with the learners in a coordinated manner, grouping them in heterogeneous groups during the teaching and learning process.

**F:** understands cooperative learning to be the grouping of learners into small groups to work on a particular task.

#### Moderator: What do you think is classroom assessment?

**A**: classroom assessment is a systematic approach to formative evaluation used by instructors to determine how much and how well students are learning.

**B**: It is a test or evaluation that the teacher gives to his learners after his lesson.

**C:** Classroom assessment is a systematic strategy, approach, or technique that enables the teacher or instructor to measure and determine "how much" and "how well" the learners have understood a topic or lesson.

**D**: It can be a test, exercise, or examination that the teacher in class gives to learners to see whether their objectives have been attained.

**E:** It is the process of observing, collecting, analysing, and interpreting evidence that can be used to draw inferences and information for decision-making.

**F:** is a test used by the teacher to determine how much and how well learners have learned and to see if the curriculum responds to the needs of society at the time, as well as if the skills and competencies acquired match the stated objectives in the curriculum.

#### Moderator: Do you think cooperative learning can influence classroom assessment?

A: Yes
B: Yes
C: Yes
D: Yes
E: Yes

F: Yes

#### **Moderator: How?**

**A:** Due to the fact that learners have the floor to exchange talks with their mates, reducing the chance of failure and a greater possibility of attainment of the objectives

**B:** When learners work with other group members, they understand better since they interact with each other; to this end, they can perform better since they have a good understanding of what they have learned. So cooperative learning will make the learners perform well.

**C:** Cooperative learning can influence classroom assessment positively and negatively. Positively cooperative learning leads to higher achievement, more positive relationships, a wider circle of friendship, greater intrinsic motivation, and higher self-esteem. Greater social support, more on-task behaviour, better attitudes towards teachers, etc. Negatively cooperative learning makes learners depend on one another; there is usually a lot of talking and noise, and it is sometimes difficult to grade the learner's performance individually.

**D**: Cooperative learning can influence classroom assessment because it will help the weaker ones learn faster since they are in a small group.

**E:** cooperative learning could enhance the strength of all the learners in the classroom if they properly interact. Also, it could hide their weaknesses. This implies that classroom assessment should change or will have to change, taking into consideration that cooperative learning accommodates these points.

**F:** Slow and fast learners' working together makes them responsible for their learning outcomes, which goes a long way towards equally determining assessment outcomes.

#### **Theme 2: Academic Quality**

#### Moderator: What do you understand by academic quality?

**A:** Academic quality is a way of describing how well the learning opportunities available to students help them achieve their reward.

**B:** it is how well that which is taught to learners enables them to fit in with society; it can also be how well that which is taught is in line with the school official syllabus; it is equally how well learners can understand and master that which is taught to them in school.

**C:** Academic quality is a way of describing how well the learning opportunities available to students help them achieve their award. It is about making sure that appropriate and effective teaching support assessments and learning opportunities are provided for them.

**D**: it's a way of describing how well the learning opportunities available to students help them achieve their award, or it is about making sure that appropriate and effective teaching support assessments and learning opportunities are provided for them.

E: it refers to the nature and value of education or studies.

**F:** It can be said to be the expectation set forth by the learning opportunities and curriculum of a particular educational system or level of learning.

#### Moderator: Do you think we can obtain academic quality through cooperative learning?

A: Yes

B: Yes

C: Yes

**D:** yes

E: Yes

F: Yes

# Moderator: Why?

**A:** Due to the fact that learners interact with their mates, this will enable them to compete and work harder in order to be rewarded at the end of the course.

**B**: because when they interact in groups, they understand better; to this end, they will have a better mastery of what they have learned and can use the knowledge anywhere.

**C:** Cooperative learning requires students to engage in group activities that increase learning and add other important dimensions. The positive outcomes include academic gains, improved race relations, and increased personal and social development.

**D**: learners can construct knowledge by themselves, which facilitates the teaching and learning process and can equally help the teacher assess his or her learners.

**E:** Cooperative learning puts learners more at the centre of the learning process and also ease learning. Hence, if used or exploited properly, academic quality is enhanced.

**F:** The system sets the expectations and outcomes, yet in cooperative learning, there are different abilities working as a team, which strengthens the slow learners and provides a platform for them and others in the team to easily acquire skills, which will then improve their academic quality.

Moderator: Do you think learners constructing knowledge themselves can influence classroom assessment?

A: Yes

B: No

C: Yes

D: Yes

E: Yes

F: yes

# **Moderator: How?**

A: if learners are well guided and oriented towards the task in which they will construct their knowledge in terms of approach, techniques, and strategies to be used, then it will influence positively and vice versa.

**B**: to construct knowledge means you have a good understanding of that knowledge, so during evaluation, you can easily reproduce the knowledge without difficulties, and this will enable you to pass the exams.

**C:** It can affect assessment because some questions (items) are open-ended and the learners might have different experiences from others.

**D**: learners can construct knowledge themselves, which facilitates the teaching and learning process and can equally help the teacher assess his or her learners.

**E:** the nature of the classroom assessment will have to change with the quality of the knowledge built.

**F:** the objective of assessment is to collect data from the learners in the classroom in order to analyse if the objectives have been attained. The knowledge constructed by the learners can be related to the objectives to be attained by the teacher, influencing the assessment.

## Theme 3: Pedagogic Quality

# Moderator: How is the use of group work, group competition, and motivation different from other instructional strategies?

A: The use of group work and group competition makes the learners create new knowledge, analyse these ideas, and clear their doubts.

**B**: they are strategies that make learners very active and engaged during lessons; they also put the learners at the centre of the teaching and learning process, which makes them build their own knowledge.

**C:** Group work enables the learners to interact and share their views (socio-constructivism), which is very important in education. Groups can be created daily, weekly, or monthly, and different criteria can be used for grouping, such as:

- Alphabetic order of names
- Classroom sitting position
- Rotation system
- Random pre-assigned groups, etc.

Group competition promotes motivation, collaboration, and innovation. Learners learn to teach, they improve their vocabulary, they are exposed to various perspectives, and they learn to manage personalities and to negotiate.

**D**: In motivation, rewards are given to intelligent ones, which will make learners work harder and be emulated in group work because other learners will like to use the smart ones.

**E:** group work is different in that it is more learner-centere, promotes more interaction amonglearners,ers and facilitates learning and retentioAlso,lso learners feel more encouraged learn.arn

**F:** puts all learners in the same active position to work.

Moderator: Do you think making use of the above various techniques can influence classroom assessment?

**A:** Yes **B:** Yes

C: Yes

D: yes

E: Yes

F: Yes

## **Moderator: How?**

A: knowledge is acquired and they can clarify themselves making objectives of the assessment to be attained. The use of the above techniques gives the possibilities to the possibility to build self-esteem.

**B**: when learners acquired, ive, they build the themselves by weldge and understford better, to this, they will be able to answer examination questions correctly.

**C:** During cooperative and group learning, the following methods can be used to improve classroom assessment:

- 1. Having clear instructional goals and communicating them to learners
- 2. Selecting appropriate assessment techniques.
- 3. Using assessment to enhance motivation and confidence
- 4. Adjusting instruction based on information
- 5. Communicating with parents and guardians.

**D**: by giving the weaker learners room to work with the intelligent ones and also participate in the group

E: classroom assessment will have to be adapted to each specific technique.

**F:** All learners are active, therefore the outcome will be positive and the required competence will be acquired, if not all. A majority of skills will be easily acquired within a limited period of time, and this puts the classroom in control.

## Moderator: How does cooperative learning facilitate the teaching and learning process?

A: During practical work, learners in groups are given various tasks to perform, making the teaching and learning process easier to carry out.

**B**: the teacher does not overwork himself again, for tasks are assigned to learners, who brainstorm in their little groups and come up with the required answers under the teacher's guidance. When they bring out their own answers, they understand better, thus enhancing the learning process.

C: Cooperative learning offers a proven, practical means of creating an exciting, social, and engaging classroom environment to help students master traditional skills and knowledge as well as develop the creative and interactive skills needed in today's society and economy.

**D**: it facilitates the teaching and learning process because each learner has a task to do, and through cooperative learning, individuals will work harder.

**E:** Cooperative learning makes the teaching and learning process more encouraging, hence helping in retention and placing the learners at the centre of the teaching and learning process.

F: skills are easily acquired within a limited period of time and put the classroom in control.

#### **Theme 4: Classroom Management Quality**

#### Moderator: What do you think classroom management quality is?

A: classroom management quality refers to the wide variety of skills and techniques that the teacher uses to keep students organised, orderly, focused, attentive to tasks, and academically productive during lessons.

**B**: it involves the teacher using a variety of skills and techniques to organise his classroom and bring about order in the class so as to make learners attentive to the task given. It is all that the teacher does to ensure that the teaching and learning process runs smoothly.

**C: Classroom management** refers to the wide variety of skills and techniques that teachers use to keep students organised, orderly, focused, attentive, on task, and academically productive during a class. Classroom management is a term the teacher uses to describe the process of ensuring that classroom lessons run smoothly without disruptive behaviours from students compromising the delivery of instruction. The term also implies the prevention of disruptive behaviour preemptively as well as effectively responding to it after it happens.

**D**: it refers to the techniques and methods that the teacher uses to keep students organised and attentive during a class.

E: this refers to the value and nature of classroom organisation and control.

**F**: the level at which a teacher exercises or exerts his or her authority, control, and influence over learners based on stated learning rules and regulations while not trampling on their individual and human rights.

# Moderator: How will you maintain a favourable atmosphere in the classroom when learners are working in groups?

A: By designating a group head in each group to maintain order

-by placing learners who disturb side by side with those who are calm in order to maintain

**B:** monitoring the learners as they work in groups.

**C:** The following are some ways the teacher can use to maintain a positive classroom environment:

- Address students' needs
- Create a sense of order.
- Greet students at the doors every day.
- Let students get to know you.
- Get to know your students.
- Avoid judging
- Employ class-building games and activities.
- Celebrate success, etc.

**D:** will maintain a favourable atmosphere by

-maintaining work in silence and order

controlling the work done (task assigned)

provide appropriate materials for the group to work on.

**E:** Get each team to show appreciation for each other.

-Make space for equal and open discussions.

-Use anonymity where appropriate.

-Put in place boundaries and expectations together.

-celebrate individuals.

**F:** Groups should be well formed.

-clear working conditions be given and steps stated as guides.

-monitoring group work to motivate and give assurances to learners that the teacher is still in control of the class.

-motivate learners so as to get all of them involved in group work.

# Moderator: Making sure that clear instructions are given when learners are assigned tasks, how can you ensure that all learners are contributing to the accomplishment of the task given to them?

A: As a teacher, one element is mastery of your learners, knowing slow and fast learners in groups; therefore, regular visits to groups and asking a few questions directly, mostly to slow learners in the group. As well as a portion of the responsibilities of most members.

**B**: by monitoring them in their different groups and making sure to ask questions to individual group members even when they do not opt to answer the questions.

C: There are many ways to motivate learners, such as:

- Encourage students (approval and positive reinforcement).
- Get them involved. Make participating fun by giving each student a job to do.
- Offer incentives
- Get creative
- Draw connections to real life.

D: warm up, engage students in physical and intellectual activities before teaching,

-use visual aids that will capture the student's imagination, encouraging them to stay focused.

-set time limits and deadlines

-Remove distractions.

**E**: the teacher can ask questions to the learners about the task given to an individual to work on.

**F:** make sure everyone is occupied with the task.

-make sure that everyone contributes actively.

-provide all necessary materials and clearly state the objectives of the tasks to be carried out.

# Moderator: Generally, what are some of the measures you will put in place in a cooperative classroom to enhance the smooth functioning of the classroom?

A: consider learners differences when grouping.

- Adapt tasks to the learner's abilities.

- Clearly state the instructions.

**B:** I will make sure each group member has a small portion of the task to contribute to the completion of the whole task so as to keep everybody working.

**C:** A true cooperative learning experience requires that a number of conditions or criteria be met. Some of these include:

- Division of labour among students in the group
- Face-to-face interaction between students
- Assignment of specific roles and duties to students
- Group processing of a task
- Positive interdependence, in which students all need to do their assigned duties in order for the task to be completed

• Emphasise the importance of teamwork.

**D:** form-mix ability and heterogeneous groups of the learners. Also, make sure clear instructions are given as to how the task will be carried out.

**E:** the teacher should use different teaching strategies, like group work and teamwork.

**F:** make sure everyone is occupied with the task.

-make sure that everyone contributes actively.

-provide all necessary materials and clearly state the objectives of the tasks given and to be covered.

## **Theme 5: Didactic Quality**

Moderator: Does making learners responsible for their own learning influence classroom assessment?

A: Yes
B: Yes
C: Yes
D: yes
F: Yes
G: Yes

## **Moderator: How?**

**A:** it gives them the the opportunity to get additioinformation, tion whbrings aboutings changes in the teaching and learning process that are necessary.

**B:** making learners responsible for learning means they brainstorm, interact, and construct knowledge. If the learners go through these phases, they will certainly have a good mastery of what is learned.

**C:** By building the students skills for learning to learn and to teach. This can be done by applying any of the following methods:

- Placing emphasis on the process of teaching and learning and actively involving students in that process
- Building students skills for self and peer assessment
- Helping students understand their own learning

**D**: because they are at the centre of the teaching and learning process, they will understand notions well.

**E:** by presenting the didactic materials for learners to identify so they can assimilate faster in the classroom.

**F:** because the assessment will have to comprise other things (elements) like content, initiative, etc.

## Moderator: How can you use didactic materials to influence classroom assessment?

A: The assessment will have to incorporate aspects of the quality of the didactic materials used.

**B**: when learners are captivated by colourful didactic materials, they can learn and understand better, and the knowledge acquired will stay longer in their memory.

**C:** it can influence both positive and negative Positively, when didactic materials are related to learner's environment, that will facilitate learning since the material is adapted to the learners and will influence classroom assessment.

**D**: Didactic material makes one see concretely what the teacher is teaching, so they will better understand.

**E:** didactic materials make lessons interesting and enhance understanding, so it will influence assessment.

**F:** constant and regular usage that adapts to learners ability and curriculum. This will facilitate the acquisition of the required skills.

# Moderator: How does content that relates to learners' backgrounds and experiences influence the didactic quality?

A: content that relates to background and experiences may improve the quality.

**B**: content real to the learner's foster understanding because learners can easily figure out concretely what the teacher is teaching. Content that is real to learners also makes them interested in the lesson since they know the material will be useful to them even outside of school.

**C:** Learners lean faster and easier with things closer to them, things they are aware of. As such, content should relate to the learners environment so as to furnish them with the required information in an easier manner.

**D**: content real to learners captivates their interest because they see that it will be useful to them in their environment.

E: content that is real to learners makes learning concrete and interesting and fosters understanding.

**F:** if the learners are aware of, know the subject, or can identify themselves with the content being taught, it will be easier to answer questions during evaluation.

# C. RSEARCH AUTHORISATION

# **D. PUBLICATION CERIFICATES**