

## **Cooperative Learning as a Predictor of Inclusive Education among Persons with Disabilities in Some Secondary Schools in Buea Municipality**

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**Abstract:** *The aim of this study was to investigate “Cooperative learning as a predictor of inclusive education among persons with disabilities in some secondary schools in Buea Municipality”. The study adopted a survey research design using quantitative methods to collect data and perceptions about a phenomenon over a given population area. The participants involved in this study were students from Bilingual Grammar School (BGS) Molyko, Government Bilingual High School (GBHS) Muea and Government Secondary School (GSS) Bomaka. The target population comprised of learner with disabilities and 72 participants. A sample size of 24 students was used in each school for the three schools mentioned above. Structured questionnaires were used to collect data from the field. The research instruments were pretested to establish their validity and reliability using the expertise of the university supervisor and statistician. The quantitative data collected were analyzed using the descriptive statistics and coded in statistical package for social sciences (SPSS). However, the findings indicated that formal, informal and base-cooperative learning groups are good predictors of inclusive education among persons with disabilities with base percentage figures of 81.7%, 61.9% and 72.8% respectively. Therefore, the study recommended that there should be a look into the academic achievement outcomes for students with disabilities on individualized education plans (IEPs) and cooperative learning strategies should be a stimulator to motivate learners to learn in small groups and attain learning goals.*

**Keywords:** *Cooperative learning, formal cooperative groups, informal cooperative groups, base cooperative groups, inclusive education, persons with disabilities*

### **Introduction**

Education is the passage of knowledge from persons with knowhow to the persons with a desire to get enlightened (Robyn, 2014). This is due to the ability to integrate interpersonal relationship to social interdependence theory (You, 2014). Cooperative learning also enables students with disabilities to effectively accomplish practical procedures, perform valid research hence making it easier for the educators to manage student’s learning. In addition, cooperative learning encourages the students to effectively contribute towards problem solving leading to better understanding of the subjects (Davidson & Major, 2014). Students’ participation and active involvement in subjects increases their level of understanding (You, 2014). Through making learning fun, enjoyable and autonomous; cooperative learning could be effective in enhancing the understanding of students (You, 2014).

The Ontario Ministry of Education defines inclusive education as education that accepts all students (2009). Inclusive education includes having students see themselves reflected in the curriculum, in the classroom and in the school community no matter the state of their disabilities. The Ministry of Education believes that all students and families should feel safe, welcomed and part of the school community (2009). Inclusive education is an approach to fostering equity by educating learners with learning differences, in general classrooms rather than creating separate spaces for their learning (Mayrowetz and Weinstein, 1999). The most common approach to instructing students with learning modifications in the classroom is through the development of an Individualized Education Plan (IEP)

# Kresna Social Science and Humanities Research

Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

to direct and track their learning. These plans allow teachers to design individualized instruction for children who have been identified as having a learning disability within their classroom (Deng, 2010). Teachers create plans that reflect the grade level a student is currently capable of working at, based on an assessment of their skills.

## **Background of the study**

Cooperative learning is when individuals learn in a small group with the help of each other. Cooperative learning is a technique for helping to maximize the benefits of cooperation among students (Baloche 1998). The principles of cooperative learning brings about great collaborative learning. That is, heterogeneous grouping; that students participate in mixed ability groups, including gender, personality just to name a few; cooperative skills, the skills needed to work efficiently with others; group autonomy, which encourages students to look for themselves for help instead of depending on the teacher, maximum peer interaction; in this case, the teacher ask questions, redirect them, prompt and probe learners to be engaging, equal opportunity to participate, individual accountability, and positive interdependence, anything that helps a member, helps the team.

Cooperative learning has been proven to equip the students with ability to derive better understanding of subjects (Molly, Dingel, & Aminul 2014). Compared to traditional learning methods, cooperative learning improves interaction in groups, promotes individual responsibility for learning, and meta cognitive awareness (Dallmer, 2007). The benefits of cooperative learning also include increased cooperation and more well-developed social skills, motivation, inclusion and retention of knowledge (Davidson & Major, 2014). The research on the advantages of cooperative learning suggests that it is a worthy topic of study in Cameroon. Cooperative learning has begun to show potential benefits in the Cameroon education system in many aspects. For example, it increases student's understanding of content, academic achievements, and participation in class (Al-Enazi, 2007). Hence, cooperative learning condition enables students to be challenged by their colleagues; this triggers the desire and agility to spend extra time to digest learning contents that are not well understood. In fact, the students get to learn from their colleagues through consultations in cooperative learning environment (Dallmer, 2007). Formal, informal and base cooperative learning grounds are very essential in this study. Formal cooperative learning groups range in length from one class period to several weeks that is well structured, facilitated and monitored by the teacher over time. In a formal cooperative learning group, students work together for several class sessions to achieve shared learning goals (Sherman, 1994). Informal cooperative learning group, here students work together temporary, ad hoc groups that last for only one discussion or class period and base group cooperative learning groups are long-term heterogeneous cooperative groups that can last for a semester or a year.

## **Statement of the Problem**

Most persons with disabilities in our society today are excluded from school, its activities, educational opportunities and career achievements as a result of their physical and health conditions. The practise of inclusion is very problematic as most regular teachers have not been trained to understand inclusive practices and limited resources to address it, is a call for concern. So cooperative learning strategies becomes instrumental for students to work in mixed ability groups in order to exchange ideas and attain learning goals.

## **Objectives of the Study**

### **General Objective**

To investigate the extent to which cooperative learning predicts inclusive education among persons with disabilities in some secondary schools in Buea Municipality.

### **Specific Objectives**

- To investigate how formal cooperative learning groups predicts inclusive education among persons with disabilities.
- To find out the extent to which informal cooperative learning groups predicts inclusive education among persons with disabilities.

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- To investigate the extent to which base-cooperative learning groups predicts inclusive education among persons with disabilities.

## LITERATURE REVIEW

### Conceptual Review

#### The Concept of Cooperative Learning

Cooperative learning is an instructional method in which students work together in groups in order to complete an activity (Johnson and Johnson, 1999; Emmer and Gerwels, 2002). There are five basic elements that are essential to the successful implementation of cooperative learning in the classroom. Johnson and Johnson (1999) created the five essential components needed in the instructional practice of cooperative learning. The five basic elements are: positive interdependence, individual accountability, face-to-face interaction, social skills and group processing. Positive interdependence is the understanding that peers influence their own learning, whereby an individual cannot succeed on their own. Individual accountability requires children to understand that they cannot take from their group members and not contribute. This aspect of cooperative learning provides the opportunity for students to understand their stake within the group and their accountability not only to themselves but also to their peers. Face-to face interaction requires students to work in small groups where they will interact with one another closely (Johnson and Johnson, 1999). Students need to be taught the social skills that are required for working in cooperative groups. Students cannot be expected to understand how to interact collaboratively without being taught how to do so. Group processing occurs as students work through their academic tasks, strive to achieve goals and solve problems along the way (Johnson and Johnson, 1999). The students can then process their cooperation with a view to learning how well the activities went and what can be improved for future experiences.

During cooperative activities, students learn from one another in a meaningful way and deepen their understanding of the content being discussed. This type of learning has been found to have the potential to diminish the competitiveness of classrooms and focuses on bringing students together to complete activities (Emmer and Gerwels, 2002). Students work collaboratively to discuss topics, argue their own opinion as well as help enhance one another's understanding of material (Veenman et al., 2002). The successful use of cooperative learning is completed in a structured and meaningful way; students are not placed into groups without understanding their accountability to one another. It is this individual accountability that allows students to achieve more academically in cooperative groups. Students are accountable to themselves as well as to their group members, which increases their engagement in the activity (Slavin, 1992). Veenman and colleagues (2002) suggest that students should work in heterogeneous groups, with high achieving students working with lower achieving students. They argue that these groupings can have positive effect on inclusion and can promote more positive attitudes towards students with learning difficulties. Other studies have similarly found that heterogeneous grouping can promote acceptance and enhance the social skills development of all children involved (Emmer and Gerwels, 2002). The five elements of cooperative learning can mould together to provide meaningful opportunities for all students in a classroom and not only for students on Individual Education Plans. Cooperative learning opportunities allow students to engage in a different type of instruction where they are learning more from their peers and less from their teacher (Slavin, 2014). These strategies allow students with learning difficulties to speak with their peers about the misunderstandings rather than always going to the teacher or being singled out. Cooperative learning has become more prominent in the past few decades, with teachers learning how to implement this type of instruction in their classroom environment (Dick, 1991; Veenman et al., 2002).

There are many different instructional strategies that can be used in a cooperative learning classroom and it is not to say that all classrooms that participate in cooperative learning do so in a strict manner without other forms of instruction. However, cooperative learning as an instructional strategy allows educators to plan lessons that include all children and incorporate all of their educational needs (Emmer and Gerwels, 2002). Goor and Schwenn (1993) suggest that there are five common formats of cooperative learning activities; teachers are able to structure these activities to the needs of their

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Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

students and tailor each activity to the curriculum area being covered. These five activities include: student teams-achievement divisions, think-pair-share, jigsaw, team-accelerated instruction and group investigation. Student teams and achievement division includes having students completing worksheets together but taking individual tests.

Think-pair-share involves students thinking about a topic or question on their own, then moving on to share their ideas with a partner and finally sharing both ideas with the whole group (Goor and Schwenn, 1993). Jigsaw requires students to take a piece of information and teach it to their group members; each student becomes an expert on a particular aspect of a topic. Team accelerated instruction involves students working together on a team to accumulate points, while completing individual assignments. Finally, group investigation involves decision making surrounding responsibility with the group. Each group of students work together to attain goals set out for the achievement of learning goals and the group decides which role each student will take on (Goor and Schwenn, 1993). Goor and Schwenn (1993) suggest that students with learning differences can have difficulty understanding their roles within a group. Therefore, it is important for educators to explain to students in detail their role within the group and what is expected of them in the group activity. It is also important to continually check understanding throughout. Teachers and students are accountable for monitoring their actions and providing feedback to the group members. A study by Emmer and Gerwels (2002) suggested that successful cooperative learning lessons incorporated the following characteristics: high individual accountability, high teacher monitoring, and use of manipulative, task interdependence and a high amount of feedback. Teacher monitoring and feedback are essential components to cooperative learning (Goor and Schwenn, 1993). It is important that teachers set guidelines from the outset of cooperative learning. Students need to understand the appropriate behavior when working in groups and how to support one another as they learn (Goor and Schwenn, 1993). Students need reassurance and guidance that they are completing the task correctly or may need assistance in solving group disputes. Educators can enhance student learning in a cooperative setting by monitoring their progress and asking thoughtful questions that raise a discussion in the group (Emmer and Gerwels, 2002; Dick, 1991). Monitoring is also important when integrating students on Individual Education Plans into cooperative learning groups. The teacher must monitor whether or not students are benefitting from the lesson plan and then modify accordingly.

## **The Concept of Inclusive Education**

Creating a learning community that integrates inclusive education and cooperative learning provides support for students on Individual Education Plans (Cross and Walker-Knight, 1997). In a study by Gillies and Ashman (2000) students who work together collaboratively help their peers who do not understand a concept and explain the concept in terms that the student can understand, students relate to one another on a level that teachers have difficulty reaching in some contexts. Gillies and Ashman (2000) have suggested that students with learning difficulties who work collaboratively with non-identified peers have a higher rate of success than students who did not participate in collaborative learning opportunities. Jenkins and colleagues (2003) found a similar result in a study on cooperative learning for students with learning differences. It was found that many students were able to accomplish more through cooperative groups than individual instruction. Students produced better work products and were able to articulate their learning in a more concrete way (Jenkins et al. 2003).

## **The Concept of Disability**

Disability is an impairment that may be cognitive, developmental, intellectual, mental, physical, sensory, or some combination of these. It substantially affects a person's life activities and may be present from birth or occur during a person's lifetime.

Disability is an umbrella term, covering impairments, activity limitations and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. Disability is thus not just a

# Kresna Social Science and Humanities Research

Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives, (World Health Organization).

Disability is a contested concept, with different meanings for different communities. It may be used to refer to physical or mental attributes that some institutions, particularly medicine, view as needing to be fixed (the medical model). It may refer to limitations imposed on people by the constraints of an ablest society (the social model). Or the term may serve to refer to the identity of disabled people.

## **The Concept of Formal Cooperative Learning**

Formal cooperative learning groups may last for one class period to several weeks to complete specific tasks and assignments (such as solving a set of problems, completing a curriculum unit, writing a report or theme, conducting an experiment, or reading a story, play, chapter, or book) (Johnson, Johnson, & Holubec, 2013). Any course requirement or assignment may be reformulated to be cooperative. In formal cooperative learning groups the teacher specifies the objectives for the lesson (one academic and one social skill). He makes a series of decisions about how to structure the learning groups (what size groups, how students are assigned to groups, what roles to assign, how to arrange materials, and how to arrange the room). Similarly, he teaches the academic concepts, principles, and strategies that the students are to master and apply and explains the task to be completed and the criteria for success, the positive interdependence, the individual accountability, the expected student behaviors, and the criteria for success. Also monitors the functioning of the learning groups and intervenes to teach collaborative skills and provide assistance in academic learning when it is needed. He goes further to evaluate student performance against the preset criteria for excellence and ensures that groups process how effectively members worked together.

Johnson & Johnson in 1989 says formal cooperative learning should be used whenever the learning goals are highly important, the task is complex or conceptual, problem solving is required, divergent thinking or creativity is desired, quality of performance is expected, higher level reasoning strategies and critical thinking are needed, long-term retention is desired, or when the social development of students is one of the major instructional goals.

## **The Concept of Informal Cooperative Learning**

The nature of informal cooperative learning are temporary and ad-hoc groups that last from a few minutes to one class period (Johnson & Johnson, 2013). During a lecture, demonstration, or film they can be used to focus student attention on the material to be learned, set a mood conducive to learning, help set expectations as to what will be covered in a class session, ensure that students cognitively process the material being taught, and provide closure to an instructional session. During direct teaching the instructional challenge for the teacher is to ensure that students do the intellectual work of organizing material, explaining it, summarizing it, and integrating it into existing conceptual structures. Informal cooperative learning groups are often organized so that students engaged in three-to-five minute focused discussions before and after a lecture and three-to-five minutes turn-to-your-partner discussions interspersed throughout a lecture.

## **The Concept of Base-Cooperative Learning**

Base-cooperative learning is long-term, heterogeneous cooperative learning groups with stable membership (Johnson & Johnson, 2013). The purposes of the base group are to give the support, help, encouragement, and assistance each member needs to make academic progress (attend class, complete all assignments, learn) and develop cognitively and socially in healthy ways. Base groups meet daily (or whenever the class meets). They are permanent (lasting from one to several years) and provide the long-term caring peer relationships necessary to influence members consistently to work hard in school. They formally meet to discuss the academic progress of each member, provide help and assistance to each other, and verify that each member is completing assignments and progressing satisfactory through the academic program. Base-cooperative learning groups may also be responsible for letting absent group members know what went on in class when they miss a session.

# Kresna Social Science and Humanities Research

Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

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, personalizes the work required and the school experience, and improves the quality and quantity of learning. The larger the class or school and the more complex and difficult the subject matter, the more important it is to have base groups.

## Theoretical review

### **Cooperative Learning Theory by David W. Johnson and Roger T. Johnson (1990)**

The way we teach and learn in modern educational environments has been transformed through the advent of cooperative learning (Johnson & Johnson, 2009). Different researchers have different definitions of cooperative learning. For example, Johnson and Johnson (1990) define cooperative learning as “the instructional use of small groups so that students work together to maximize their own and one another’s learning”. On the other hand, Sharan (1994) defines it as “a group-centered and student-centered approach to classroom teaching and learning” while Slavin (2011) refers to cooperative learning as “instructional methods in which teachers organize students into small groups, which then work together to help one another learn academic content”. Although researchers have not used the same official definition of this term, all of them refer to cooperative learning as a “set of methods in which students work together in small groups and help one another to achieve learning objectives” (Johnson & Johnson, 2009). In other words, cooperative learning is the pedagogy, within which students are active constructors of knowledge in the learning process instead of passive receivers of any given knowledge (Liang, 2002).

There are three main types of cooperative learning groups, namely informal cooperative learning groups, formal cooperative learning groups, and cooperative based groups (Johnson & Johnson, 2008). Informal cooperative learning, lasting from a few minutes to one class period, are short-term and ad-hoc groups in which students are required to work together to achieve a shared learning goal. Informal cooperative learning may be used to help students engage in the learning task, and focus their attention on the material they are to learn through focused-pair discussions before and after a lecture. Cooperative based groups usually last a semester or an academic year, or even several years. They are long-term and heterogeneous learning groups with committed relationships, in which students support one another to complete assignments and make academic progress. Formal cooperative learning groups last from one class period to several weeks. These are cooperative learning groups in which students work together to complete the learning tasks assigned and achieve shared learning goals. In order to engage students in learning, five elements: positive interdependence, face-to-face interaction, individual accountability, interpersonal & social skills and group processing, must be present in the cooperative classroom (Johnson & Johnson, 2008).

Positive interdependence is the first essential element of cooperative learning. Learning situations are not cooperative if students are arranged into groups without positive interdependence (Johnson & Johnson, 2009). Positive interdependence means that in cooperative learning situations, students are required to work together as a cohesive group to achieve shared learning objectives (Yager, 2000; Jensen, Moore & Hatch, 2002). In the process, students must be responsible for their own learning and for the success of other group members’ learning (Slavin, 2011). In other words, students must ensure that other members in their group complete the tasks and achieve the academic outcomes. The lesson will not be cooperative if students do not “swim together” in the group learning activities (Johnson & Johnson, 2008). If group members are not dependent on each other and fail to have shared interest in working together to accomplish the tasks, the success of the group will decrease (Ballantine & Larres, 2007). In other words, if one group member fails to complete his or her learning task, all the other group members will suffer the consequences of that member’s poor presentation. More specifically, the achievement of the group depends on that of each member (Kose, Sahin, Ergun, & Gezer, 2010). All group members must be cooperative in learning activities and are responsible for the success or failure of each member in their group (Jensen et al., 2002).

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# Kresna Social Science and Humanities Research

Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

Hence, positive interdependence needs to be constructed in cooperative learning groups to help students work and learn together. Positive interdependence may be structured through the assignment of complementary roles (Thomas 1957), group contingencies (Skinner 1968), dividing information into separate pieces (Aronson et al. 1978) or divisions of labor (Johnson & Johnson, 2008). To ensure interdependence operates effectively, the roles of readers, summarizers, examiners, note-takers and encouragers in learning groups should be assigned (Knight & Bohlmeier, 1990). Specifically, readers read lessons and problems aloud for other group members; summarizers summarize the lessons; note-takers write the group's decisions or reports; and encouragers stimulate all group members to participate in discussion and exchange their opinions and feelings. Many research studies demonstrate the positive effects of positive interdependence on productivity and achievement. Positive interdependence produces higher achievement and productivity (Johnson & Johnson, 1993; Johnson & Johnson, 2008). One group member's performance affects the success of other group members and tends to create "responsibility forces" that increase each member's efforts to achieve (Mesch, Johnson & Johnson, 1988). Individuals achieve better under positive goal interdependence than when they worked individually (Johnson & Johnson, 2005). When positive interdependence is clearly perceived, individuals realize that their efforts are required in order for the group to succeed so that it is not possible to get a "free-ride" (Kerr & Bruun, 1983) and they have a unique contribution to make to the group's efforts. When members of a group do not see their efforts as necessary for the group's success, they may reduce their efforts (Kerr & Bruun 1983). In contrast, when they perceive their potential contribution to the group as being unique, they increase their efforts (Harkins & Petty 1982).

The second element of cooperative learning is face-to-face promotive interaction. Positive interdependence results in reciprocal interaction among individuals, which promotes each group member's productivity and achievement. Promotive interaction occurs as individuals encourage and facilitate each other's efforts to accomplish the group's goals. In cooperative learning groups, students are required to interact verbally with one another on learning tasks (Johnson & Johnson, 2008). As part of the cooperative learning condition, students are required to interact verbally with one another on learning tasks (Johnson & Johnson, 2008), exchange opinions, explain things, teach others and present their understanding (Ballantine & Larres, 2007). The quality of interaction depends on the group size, and frequency of students' cooperation on their learning tasks (Johnson & Johnson, 1989). Hence, groups should be small when students begin learning together to help them develop cooperative learning skills. Moreover, the quality of group interaction depends on the academic level of all members in the group. The learning ability of all members in the group should be identified to help them to give feedback to and support one another in their learning. In addition, the quality of group interaction depends on the learning environment. If a positive learning environment is established, students in the cooperative group work and learn together effectively (Slavin, 2011).

Many research studies characterize the positive effects of face-to-face interaction in cooperative classrooms. Such effects comprise providing group members with effective assistance (Johnson & Johnson 1981, Webb & Cullian, 1983), exchanging information and materials (Crawford & Haaland, 1972; Johnson & Johnson, 1974), providing group members with feedback for improving the subsequent performance of their assigned tasks and responsibilities (Ryan, 1982), challenging each other's conclusions (Johnson & Johnson, 2007), advocating the exertion of effort to achieve mutual goals (Wicklund & Brehm 1976), influencing each other's efforts to achieve the group's goals (Crombag, 1966), acting in trusting and trustworthy ways (Johnson & Noonan, 1972), being motivated to strive for mutual benefit (Deutsch 1949; Johnson & Johnson, 2005), and exploring different points of view (Johnson & Johnson, 1989).

The third essential element of cooperative learning is individual accountability. Individual responsibility means that students ask for assistance, do their best work, present their ideas, learn as much as possible, take their tasks seriously, help the group operate well, and take care of one another (Johnson, 2009). Positive interdependence is recognized to create "responsibility forces" that increase the individual accountability of group members for accomplishing shared work and facilitating other group members' work (Johnson & Johnson, 2008). Individual accountability is considered as the

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# Kresna Social Science and Humanities Research

Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

degree to which the achievement of the group is dependent on the individual learning of all group members. If there is no individual accountability, one or two group members may do all the work while others do nothing. If the achievement of the group depends on the individual learning of each group member, then group members are motivated to ensure that all group members master the material being studied (Slavin, 1996). When group accountability and individual accountability exist in the group, the responsibility forces increase (Johnson & Johnson, 2008).

Group accountability exists when the overall performance of the group is assessed and the results are given back to all group members to compare against a standard of performance. Similarly, individual accountability exists when the performance of each individual member is assessed; the results are given back to the individual and the group to compare against a standard of performance and the member is held responsible by group-mates for contributing his or her fair share to the group's success. The provision of information on the level of understanding of each student in the learning process can be considered as significant feedback, with the aim of defining the achievement level of each group member (Johnson & Johnson, 1999). It is necessary for other members in the group to provide assistance if one or some group members cannot finish the assigned tasks (Kagan, 1985). In an examination of cooperative learning on student's learning, Hooper, Ward, Hannafin & Clark (1989) found that cooperation resulted in higher achievement when individual accountability was structured rather than when it was not and argued that a lack of individual accountability may reduce feelings of personal responsibility.

According to Yamarik (2007), in order to make cooperative activities in the group effective, each group member must be responsible for a defined part of the learning materials, and all group members must take individual accountability for their group members' achievement (Yamarik, 2007). All group members are required to ask for assistance, do their best work, present their ideas, learn as much as possible, do their tasks seriously, help the group operate well, and take care of one another (Robertson, 1990). Individual accountability may be constructed through keeping the size of the group small (Johnson, Johnson & Holubec, 1994). The smaller the size of the group, the greater the individual accountability may be (Johnson & Johnson, 1994). As the group size becomes smaller, group members tend to communicate more frequently, which may increase the amount of information utilized in arriving at a decision (Gerard, Wilhelmy & Conolley, 1965; Messick & Brewer, 1983). In contrast, as the group becomes larger and larger, members are less likely to see their own personal contribution to the group as being important to the group's chances of success (Kerr, 1989).

Interpersonal and social skills are the fourth essential element of cooperative learning. In reality, students cannot work effectively if socially unskilled students are arranged into one group (Johnson & Johnson, 2006). If basic learning skills on cooperative interaction are not taught, group members cannot work together effectively to finish their tasks (Sharan, 1990). Cooperative learning, compared with individualistic or competitive learning, is more complex because it requires students to engage in learning tasks and work together (Johnson & Johnson, 1990b; Ballantine & Larres, 2007). Therefore, social and interpersonal skills, such as listening attentively, questioning cooperatively and negotiating respectfully need to be taught, to help students cooperate effectively in the group (Killen, 2007).

In addition, each group member should know how to manage the group, how to make decisions and how to solve conflicts that arise among group members. If these skills are not taught, cooperative learning activities are rarely successful (Slavin, 1996). Interpersonal and social skills can be taught using techniques such as role playing, and modeling in group activities (Slavin, 2011). Group members must have, or be taught; the interpersonal and small group skills needed for high quality cooperation, and be motivated to use them. To coordinate efforts to achieve mutual goals, participants must; get to know and trust each other, communicate accurately and unambiguously, accept and support each other and resolve conflicts constructively (Johnson & Johnson, 2009). In their studies on the long-term implementation of cooperative teams, Lew and Mesch (Lew, Mesch, Johnson & Johnson, 1986; Mesch et al., 1988) found that the combination of positive goal interdependence, a contingency for high performance by all group members, and a social skills contingency, promoted



# Kresna Social Science and Humanities Research

Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

the highest achievement and productivity. Archer-Kath, Johnson & Johnson (1994) found that giving participants individual feedback on how frequently they engaged in targeted social skills was more effective in increasing participants' achievement than group feedback.

Thus, the more socially skillful participants are the more social skills are taught and rewarded, and the more individual feedback participants receive on their use of the skills, the higher the achievement and productivity of the cooperative groups tends to be. Not only do social skills promote higher achievement, they contribute to building more positive relationships among group members. For example, Putnam, Rynders, Johnson & Johnson (1989) demonstrated that when participants were taught social skills, observed, and given individual feedback as to how frequently they engaged in the skills, their relationships became more positive.

The fifth essential element of cooperative learning is group processing. Group processing is defined as reflecting on a group session to help students describe what member actions were helpful and unhelpful and make decisions about what actions to continue or change (Johnson et al., 1994). Group processing helps improve the effectiveness of the members in contributing to the shared efforts to achieve the group's goals via reflection on the learning process (Yamarik, 2007). In other words, the purpose of group processing is to clarify and improve the effectiveness of the members in contributing to the joint efforts to achieve the group's goals. There are two levels of processing: small-group and whole class. At the level of small-group processing, teachers should allocate some time at the end of each class for cooperative groups to process how effectively members worked together. Such group processing:

- Enables cooperative groups to maintain good relationships among group members
- Facilitates cooperative skills of group members
- Examines the group's tasks and gives students feedback on their participation
- Examines students' knowledge on their own learning parts and
- Celebrates the success of the small group, and reinforces group members' positive behaviors (Johnson et al., 1994).

## **Research Methodology**

### **Research Design**

The research design used for this study was the Survey Research Design. This is a quantitative method used to describe behaviors and collect people's opinions, perceptions and attitudes about a phenomenon over a population area within a specified period of time. Survey design involves the planning of the whole project and outlining steps to take when conducting the survey.

### **Area of Study**

The study was carried out in Buea Municipality. Buea is a town located in the southwest region of Cameroon. This town is situated on the slopes of Mount Fako or Mount Cameroon. The climatic condition of Buea is moderately warm during the dry season to moderately cold during the raining season. The temperature ranges between 23°C to 32 °C. Down the eastern foot of Mount Fako

### **Population of the study**

The sample was taken from the whole or the accessible population of the study. Sampling technique refers to the method used to select members or items from the accessible population which can be either probability or non-probability sampling technique.

# Kresna Social Science and Humanities Research

Proceedings of the International Conference on Sustainable Development:  
Problems, Analysis And Prospects | Volume 3, February 2022

**Table 1: Distribution of Respondents According to Demographic Characteristics**

Characteristic		N	%
School	BGS Molyko	24	33.3
	GBHS Muea	24	33.3
	G.S.S Bomaka	24	33.3
	<b>Total</b>	<b>72</b>	<b>100.0</b>
Class	Form 4	28	38.9
	Form 5	28	38.9
	Lower sixth	16	22.2
	<b>Total</b>	<b>72</b>	<b>100.0</b>
Age group	12-15	32	44.4
	16-20	37	51.4
	21-24	03	4.2
	<b>Total</b>	<b>72</b>	<b>100.0</b>
Sex	Male	30	41.7
	Female	42	58.3
	<b>Total</b>	<b>72</b>	<b>100.0</b>

From table 1 above, an equal proportion (33.3%) of respondents were selected from the three schools which constituted part of the study that is an equal number (24) were selected from BGS Molyko, GBHS Muea and GSS Bomako. Furthermore, based on the class of the respondents some (38.9%) respondents were selected each from form 4 and form 5 while few (22.2%) respondents were selected from lower sixth. Moreover, based on the age group distribution, majority (51.4%) of respondents were between the ages of 16-20 years. Equally, some (44.4%) respondents were between the ages of 12-15 years. However, very few (04.2%) of respondents were between the age of 21-24 years. This shows that most respondents in secondary schools fall within the age bracket of 12 to 20 years. Similarly, majority (58.3%) of the respondents were female while some (41.7%) respondents were males. This is because there were more girls in secondary schools than boys.

## Instrument for Data Collection

The instrument used for data collection was a questionnaire. The questionnaire was structured into two sections; section 1 requested demographic concerns of the respondents. Section 2 was drafted objective by objective according to the three main objectives examined in the empirical review of this study, plus inclusive education as a dependent variable and each objective contained 5 questions each making a total number of 20 questions.

## Findings

**Table 2: Findings**

Research Question	Tests Statistic	Comment
<b>Research question 1:</b> How does formal cooperative learning groups predict inclusive education among persons with disabilities?	Pearson product moment correlation ( $r = 0.254$ ; $P=0.05$ ).	The findings revealed that, there is weak relationship between formal cooperative learning groups and inclusive education practices among persons with disabilities in Buea municipality
<b>Research question 2:</b> How does informal cooperative learning groups predict inclusive education among persons with disabilities?	Pearson product moment correlation ( $r = 0.357$ ; $P=0.05$ ).	The findings revealed that there is a significant positive influence informal cooperative learning groups on inclusive education of persons with disabilities.

<p><b>Research question 3:</b> How does base-cooperative learning groups predict inclusive education among persons with disabilities?</p>	<p>Pearson product moment correlation <math>r=0.522</math>; <math>P = 0.05</math>)</p>	<p>The finding revealed that there is a strong positive relationship between based cooperative learning groups and inclusive education among persons with disabilities in Buea municipality.</p>
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## Discussions

### Formal Cooperative Learning Groups and Inclusive Education among Persons with Disabilities

The researcher issued questionnaires to the respondents and sought from the analysis of the findings that, a greater percentage of students agreed that; they feel motivated when given assignments in groups. Also, many students agreed that their teachers encourage them to participate in group discussions. Similarly, majority of the respondents made mention of the fact that they like socializing with their peers and teachers. Likewise, more of the learners agreed that their opinion counts during group work session. Lastly, many respondents agreed that they like studying in a mixed ability group. Therefore, the multiple responses rate is 81.7% of the learners who agreed to the research objective that formal cooperative learning groups predicts inclusive education among persons with disabilities while 18.3% disagreed. Formal cooperative learning opportunities allow students to engage in a different type of instruction where they are learning more from their peers and less from their teacher (Slavin, 2014).

### Informal Cooperative Learning Groups and Inclusive Education among Persons with Disabilities

The findings on informal cooperative learning groups were perceived as follows by the respondents. A lesser percentage of students agreed that they are willing to assist their peers acquire specific skills during social club meetings such as dancing while a greater percent were not willing to assist their peers in gaining dancing skills. Thus, a self-centred attitude is noticed among peers having specific skills. Also, more students agreed that they are hardly selected to participate in major school activity such as sport competition. Similarly, only a few students agreed to the fact that they like doing extracurricular activities in the evening with peers while many disagreed to this considering the fact that the evenings are not very good to do sports. Majority of the class agreed that they are comfortable learning in the midst of slow and fast learners likewise taking responsibility for their success or failure in academics. As a whole, the multiple response rate percentage was 61.9% for learners who responded positively to informal cooperative learning groups and 38.1% for those who disagreed with some of the notions. This discussion is supported by some ideas such as those of Vygotsky in his socio-cultural theory (1978) on the Zone of Proximal Development which is meaningful to learning, the conceptual review by Johnson and Johnson (1999) expressing the fact that informal cooperative learning groups are temporary, ad hoc groups that last from a few minutes to one class period.

### Base-Cooperative Learning Groups and Inclusive Education among Persons with Disabilities

The outcomes of the respondents can be discussed as follows when considering based-cooperative learning groups. Many students agreed that they receive encouragement and support from their peers. In addition, more students also agreed that they still meet once in a while and study with others. Similarly, many students agreed that their parents and teachers do encourage them to invite or visit friends and study together; and the minimum number to commence a study session is two persons. Lastly, majority of the respondents agreed that facilitation of the study group is strength-based and non-strength based. Hence, the multiple responses set was 262 agreed against 98 that disagreed, giving an agreed percentage of 72.8% and disagreed percentage of 27.2% of the respondents' feedback.

However, the above discussion is supported by some facts stated in the empirical review of literature in this wise. Base-cooperative learning groups are long-term, heterogeneous cooperative learning groups with stable membership (Johnson, Johnson, & Holubec, 2013). The purposes of the base group are to give the support, help, encouragement, and assistance each member needs to make academic

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progress (attend class, complete all assignments, learn) and develop cognitively and socially in healthy ways.

## Conclusion

Cooperative learning is very vital in inclusive classrooms, it help learners share ideas, learn from each other, learn to accept the strength and weaknesses of each other and interact as a group to attain a common goal. Students therefore, feel very motivated when put in mixed abilities group to learn. Cooperative learning groups therefore is positive cognitive teaching strategy in inclusive classrooms.

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