UNIVERSITY OF CAPE COAST

INSTRUCTIONAL STRATEGIES FOR TEACHING STUDENTS WITH MIXED ABILITY IN PHYSICAL EDUCATION IN THE CENTRAL REGION

RAHMAT ABOAGYE

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INSTRUCTIONAL STRATEGIES FOR TEACHING STUDENTS WITH MIXED ABILITY IN PHYSICAL EDUCATION IN CENTRAL REGION

BY

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Thesis submitted to the Department of Health, Physical Education and Recreation of the Faculty of Science and Technology Education, College of Education Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Physical Education

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:..... Date:.....

Name: Rahmat Aboagye

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:..... Date:.....

Name: Dr. Charles Domfeh

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ABSTRACT

The purpose for this study was to investigate the strategies adopted by Physical Education (PE) teachers to manage students' diversity in Mixed Ability Classes (MAC) and also to examine the factors that influence teachers' choice of teaching strategies for MAC during instruction as well as the challenges teachers encounter in teaching MAC. Descriptive survey design was adopted for the study. The entire population of 135 trained PE teachers was purposively sampled for the study. Descriptive statistics (mean and standard deviation) and inferential statistics (multiple regressions) were used in analyzing and discussing the result. The findings of the study revealed that whole class teaching strategies (M=2.98, SD=0.63) is the most frequently used teaching strategy by Senior High School (SHS) PE teachers in Central Region. Station teaching (M=2.54, SD=1.04) was the rarely used teaching strategy by SHS PE teachers in Central Region. The findings also revealed that the amount of space available to a teacher influences their decision to use group/cooperative (*S.E. =1.009, B= 1.95,* $p < 0.05$). The use of station teaching is influenced by the amount of teaching time available to them (*S.E=0.953, B=1.13, P>0.05*). It is concluded, the predominant use of whole class teaching coupled with the challenges PE teachers in Central Region encounter in their MAC will limit their ability to cater for the needs of students. It is recommended that the Ministry of Education (MoE) in conjunction with other stakeholders should provide and supply adequate facilities and equipment for the teaching of PE

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DEDICATION

To my mother, Mrs. Abiba Aboagye and my husband, Mr. Farouq Sessah Mensah

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LIST OF ACRONYMS

PE	Physical Education
MAC	Mixed Ability Classes
MoE	Ministry of Education
GES	Ghana Education Service

CHAPTER ONE

INTRODUCTION

Any group of students are likely to demonstrate considerable variation in their learning characteristics and behaviors. When the group includes students with learning deficiencies or other learning disorders, the amount of variation in learning is significantly increased. The diverse learning characteristics displayed by students in today's schools make it necessary for teachers to implement a wide variety of activities in their classes (Bender, 2012). This study explores how Physical Education (PE) teachers in the Central Region of Ghana manage students' diversity in a Mixed Ability Classroom (MAC).

This chapter is the introductory section of the study which presents the general background to the study, statement of the problem, purpose of the study, research questions, and significance of the study, delimitation and limitations, definition of terms and organization of the study.

Background to the Study

When a teacher tries to teach something to the entire class at the same time, chances are, one-third of the kids already know it; one-third will get it; and the remaining one-third will not. So two-thirds of the children are wasting their time (Katz, 1988). This is particularly true because students enter classes with vastly different and varied skill sets, levels of confidence and interests. Any group of students is likely to demonstrate considerable variation in their learning characteristics and behaviours (Gentry, Sallie, & Sanders, 2013).

Diversity is apparent in PE class and is a challenge to engage all of these students in the PE class (Kiley, 2011; Hess, 2001). The diverse learning characteristics displayed by students in today's schools make it necessary for teachers to implement a wide variety of activities in their classes (Bender, 2012). With the advent of inclusive education, the handicapped students are more frequently taught in the regular education setting, as well as the gifted and talented ones. This creates a more heterogeneous grouping of students. Even the best trained and most willing teachers have difficulty meeting the diverse needs of their heterogeneous classes, let alone the special requirements of students with moderate to severe disabilities (Tomlinson, 2004).

To be able to meet the needs of all students in the MAC, teachers must use different instructional strategies or teaching methods, resources/materials and appropriate grouping techniques that suit the level of the students and the content being taught. Through the use of differentiated instructional strategies, educators can meet the needs of all students and help them meet and exceed the established standards (Levy, 2008). Though most teachers and administrators are not familiar with the term differentiated instruction, the foundations from which it evolved are known by them. It evolved on the foundation that all students differ in one way or the other therefore content, process, and product must be adjusted to support individual needs so that each student can become an active member of a learning community (Tomlinson, 1999). This objective can be accomplished by choosing appropriate teaching methods to match each individual student's learning needs (Adami, 2004).

Teaching and learning usually involve instruction (Delvin, Kift, & Nelson, 2012). Instruction may be teacher centered, student centered or dialogue oriented (Ebert, Ebert & Bentley, 2011). Teacher centered instruction is one way where the teacher decides what students must know thus the teacher conveys the knowledge to the students as they listen/imitate. In student - centered instruction, the students are assisted to manage their thoughts, experiences and make meanings out of them. The dialogue approach allows exchange of ideas between the teacher and the students.

Instruction may be direct or indirect. Direct instruction has the teacher giving instruction with little or no input from the students, as in a lecture. It is often used when presenting new information. Indirect instruction has both the teacher and students as active participants of the instructional process. It is best used when the process of arriving at a conclusion or product is as important as the conclusion or product itself (Boleware, 2016).

Issues such as the developmental level of the students, the instructional venue (indoors, outdoors, individual desks, tables and chairs for group work, etc.), and the subject matter to be presented must be considered when choosing an instructional strategy. Instructional/teaching strategy is a frame work that arranges instructional environment for group teaching (Rink 1998). Generally speaking, there are a number of strategies from which a teacher might choose but teachers must use a variety of these strategies during instruction. As has previously been the case, students make up a diverse population with varying backgrounds, knowledge and learning styles, hence, what works well for one will not necessarily work well for another. Therefore, the teacher may well

determine that a combination of techniques would be most appropriate since varying instruction makes a teacher more likely to reach all her students (Ebert, Ebert & Bentley, 2011). Classroom teaching is a blend of whole-class, group and individual instruction (Hall, 2002).

A MAC can only be effectively taught if the teacher accepts that every lesson cannot be whole class teaching with lessons controlled from the front (Bremner, 2008). Students in mixed ability groups can maximize learning when given personalized opportunities by working in pairs or small groups during instruction (Dudley & Osváth, 2016). Pair work and group work also offer greater variety within activities, allowing individual students to work together with a number of different classmates in the same lesson and, over the course of a term. The debate on how students of different academic abilities should be organized and taught is probably as old as the introduction of formal schooling in communities (Mafa, 2003). This debate has divided the world of educational research into two distinct camps: one camp in favour of mixed ability grouping and the other one for grouping students according to academic ability. Mixed ability grouping affords all students equal educational opportunities regardless of their differences in intellectual abilities, special educational needs, gender, race and social class (Green, 2002; Mann, 2002).

Ability grouping is based on the pedagogical principle that the teacher has the advantage of focusing instruction at the level of all the students in the particular group (Ansalone, 2000). It is assumed that teachers can increase the pace and raise instruction level for high achievers whereas low level students can enjoy individual attention. Achievement is considered to increase as

teachers adjust the pace of instruction to students' needs (Mulkey et al., 2005). Ability grouping may decrease the self-esteem and aspirations of low ability children and therefore decelerate their academic progress (Welner & Mickelson, 2000; Ansalone, 2001; Wheelock, 2005).

On the other hand, teachers also face numerous challenges in their quest to meet the needs of all students in a mixed ability classroom. This is supported by Corley (2005) when he stated that, the greatest challenge of adopting instruction in a MAC relates to time: the planning time that teachers need to assess learners' needs, interests, and readiness levels; to determine key concepts and organizing questions; and to design appropriate activities for each learner. Other challenges which have been listed by other researchers (Corley, 2005; VanTassel-Baska & Stambaugh, 2005) include: lack of classroom management skills necessary to support mixed ability teaching, lack of content knowledge necessary to extend and differentiate the typical curriculum content areas, lack of materials/resources that would facilitate teaching, lack of support or encouragement by the school leadership, lack of relevant pedagogical knowledge and teaching skills to teach mixed ability class.

Statement of the Problem

A typical Ghanaian Senior High School (SHS) classroom can be likened to a mixed ability educational set-up. Students comprise advanced, moderate and slow learners. To meet the needs of all these children, several adaptations need to be made to facilitate the understanding of all so as not to disadvantage any ability group. Different instructional strategies must be

adopted so as to meet the needs of all ability groups. Teachers find it difficult to teach adaptively or modify teaching approaches to meet the diverse learners' needs in a regular classroom (Kuyini, 2013; Westwood, 2004). This implies that a category of learners are likely to be excluded from actively participating in the learning process.

A study by Kuyini and Desai (2008) revealed that teachers make limited or no instructional adaptation to support children with disabilities found in the regular classroom. Agbenyega and Deku (2011) also found that the pedagogical practices of teachers in the regular classroom in Ghana are prescriptive, inflexible, mechanistic, and do not value variety of learning styles of pupils. Again, a study by Kuyini and Mangope (2011) also revealed that most street children in Accra dropout of school because teaching and learning do not suit their learning needs. Studies have shown that teachers are not able to meet the varied educational needs of students hence the achievement of the students educational goals suffer.

PE is a subject area where attention needs to be given to students of different abilities especially in MACs. This is because the physical development of every student is very important to the total development of that student in other to meet the educational domains. Most importantly the health development of individual. Since the students are of mixed ability and the concept of individual differences cannot be over emphasized, the PE teacher must find a way in other to satisfy each pupil in his or her classroom.

It is along these line that the researcher would want to find out the strategies PE teachers in Central Region are adopting in other to satisfy individuals with mixed abilities found in their classroom.

Purpose of the Study

The purpose of the study was to examine the strategies adopted by PE teachers in the Central Region of Ghana to manage students' diversity in a MAC. The research also aimed at obtaining information in relation to how various resource constraints and demographic factors influence teaching methodologies used by P. E. teachers in teaching MAC. The study also examined the barriers teachers' encounter in teaching MACs.

Research Questions

The study sought to answer the following research questions:

1. What teaching strategies do teachers use to teach students with mixed abilities?
2. What barriers do teachers encounter in managing mixed ability in PE lessons in senior high schools?
3. What factors influence teachers' choice of strategy for teaching MACs?

Significance of the Study

The result of the study would help teachers improve students' academic achievement by teaching to meet their needs as individual students since it will provide education on mixed ability teaching. It would also help maximize students' potential by teaching them with the right teaching strategy during instruction.

Again, it will help administrators to provide appropriate support to teachers to aid in teaching students with mixed ability. Finally, it will add to existing knowledge on mixed ability teaching.

Delimitations

The study was delimited to only public SHS in the Central region, and the outcome might be different if private SHS were included. Moreover, the participants who took part in this study were only trained PE teachers teaching in SHS in the Central region of Ghana and the outcome might be different from participants in SHS from different regions.

Limitation

Self-reporting scales were used in the questionnaire to measure variables for analysis. This might have affected the result of the study since some of the respondents may have over – estimated their responses. In addition, the study cover only one region in Ghana which is the Central region. However, the literature review contextualizes the study and assist in grounding the findings and conclusions in the literature.

Definition of Terms

Mixed Ability Class: It is a class of student comprising regular, high and low achievers as well as the students who have learning difficulties.

Teaching Strategy: It is the manner in which the content is presented to the students.

Senior High School: A school that is an intermediate level between junior high school and tertiary and that usually offers general, technical, vocational, or university-preparatory curricula.

Public Schools: Schools that are formally supported by the government especially in terms of recruitment of teachers and provision of other teaching and learning resources.

Learning: Learning refers to the process whereby learners acquire and master knowledge and skills imparted in them by the teacher and through interaction with technological tools in relation to their academic work, work place preparedness and application of the acquired skills and knowledge.

Organization of the Study

The study was organized into five chapters. Chapter one is the introductory chapter which focuses on the background of the study, statement of the problem, objectives of the study, research questions, significance of the study, delimitations, limitations, definition of terms and organization of the study. In the second chapter, the study reviews the existing literature. The review was mostly related to the fundamental concept of MAC and teaching strategies.

The research design and methodology were described in Chapter three. Chapter four involves data analysis and discussion of the results from data analysis. The fifth and final chapter gives the summary, conclusion and the recommendations arising thereof from the study.

CHAPTER TWO

LITERATURE REVIEW

The purpose of the study was to examine the strategies adopted by PE teachers in the Central Region of Ghana to manage students' diversity in a MAC and the factors that influence teachers' choice of strategies for teaching mixed ability during instruction.

This chapter is to review and discuss the teaching strategies that are adopted by PE teachers in mixed ability PE class. The sources of literature include books, journal articles, newsletters, and reports. The literature review was discussed under the following themes:

1. The concept of Mixed Ability
2. Managing students with Mixed Ability
3. Teaching strategies used for MACs
4. Factors influencing teachers' choice of strategy for teaching MACs?
5. Challenges teachers encounter in mixed ability class
6. Summary

The Concept of Mixed Ability

Mixed ability or "heterogeneous" classes refers to students of same class who are different in abilities (Ur, 1991). In the opinion of McKeown (2004) teachers considered MAC as a group of students who have normal, high achievers and the students who have different learning problems. MACs in the view of Ireson and Hallam (2001) consist of students who have different strengths, weakness, learning preferences and learning styles. Learners show

different strengths of different subjects at different times and if learning doesn't coordinate with their preferred learning styles, sometimes they are unable to perform well. Mixed ability of learners can be seen in terms of their priorities, backgrounds and their needs.

The Schools Council Working Group on Mixed-ability teaching in Mathematics (1977) defines mixed-ability grouping as forming classes covering the full range of abilities that are found in the population of the school. It suggests that since any group of students will constitute a 'mixed-ability group', a better term might be 'all ability range'. According to Risst (1970), mixed ability grouping is the organization of students in such a way that each class in the year group is assumed to have an equal range of attainment. Each class remains together for all subjects, except when separately grouped by sex, (as in PE), or divided into sub-groups, (as in craftwork). The term mixed-ability is frequently used synonymously with heterogeneous, unstreamed, non-streamed, natural or unselected groups (Reid, Trout, & Schartz, 2005).

Esposito (1973) defines mixed-ability grouping as the organization of instructional classes such that a rich mixture of students who differ with respect to test performance level is assured, while Dean (1997) views mixed-ability grouping as the opposite of ability grouping, which is the mainstreaming of many students who had previously been labelled 'gifted'. According to Vivian (2001) if one teaches a class in which there is a noticeable difference in language level among students or where students have a clear difference in either aptitude, background knowledge, pace of learning

or motivation, one can say he/she is teaching a mixed-ability class. Prodromou (1996) also believes that the teacher who is involved in mixed ability teaching pays more attention to individuals and works more with individuals rather than with a class or group.

The cited sources underscore the fact that mixed-ability grouping is the assigning of students to instructional units, which results in each unit having students of varying intellectual abilities. Esposito (1973) comments that principles of ability grouping and mixed-ability grouping are essentially at opposite ends of the same yardstick or ability continuum. In as much as ability can theoretically occur only with respect to nominal variables, for example sex, it seems evident that ability grouping serves merely to restrict the range of individual differences with respect to certain continuous or ordinal criterion dimensions, for example reading achievement, mathematics achievement, IQ scores), while mixed-ability grouping tends to expand the range of individual differences on these dimensions.

According to Cohen, Manion and Morrison (1996) the notion of mixed-abilities is undergirded by the view that each student possesses multiple abilities in different subject areas. This moves educators away from the psychometric paradigm of a single overall ability in students that permeates every activity in which they are involved - such that placement in a stream or band fairly reflects a student's overall ability. On the contrary, the argument for mixed-ability grouping is based on the premise that one student may be excellent in PE but having problems in English, therefore to confine students in one stream is to underestimate their many diverse abilities. The argument

transcending this study is that mixed-ability grouping can bring about effective instruction since students endowed with different abilities might be in a position to enrich the learning experiences in MACs, all other things being equal.

Literature draws a distinction between 'teaching mixed-ability groups' and 'mixed-ability teaching'. Mixed-ability teaching implies a certain kind of teaching where all activities are undertaken based on students' differences. Whereas any kind of teaching can go on in MAC (Reid et al. 1981). Cohen et al. (1996) put it that any form of teaching that dispenses with the idea that groups of students cannot learn things at the same time and at the same rate and pass onto other topics at the same time as another, is mixed-ability teaching. Similarly, Tomlinson (1999) cogently argues that students of the same age are not all alike when it comes to learning, any more than they are alike in terms of size, hobbies, personality, or likes and dislikes. Commenting on the relationship between teaching and grouping, the Schools Council Working Group on Mixed-ability teaching in Mathematics (1977) notes that it is important to appreciate that whatever type of grouping chosen, it is the philosophy, attitudes and responsiveness of the teacher that are important. Good classroom practice depends much more on the teacher than on the particular grouping adopted. A mixed ability class can be taught in a variety of ways, but good teaching will focus on the needs of the individual pupil and will not be based on an assumption that every member of the class will learn a topic at the same time or same rate.

While students do have many things in common, they also have important differences. Teaching which does not cater for these differences only acknowledges student similarities. It is thus clear that teaching which acknowledges commonalities and builds upon them, and which makes student differences important organizers in teaching and learning, is mixed-ability teaching. This study concerns itself with the effective teaching of mixed-ability classes in PE, which is thus mixed-ability teaching. Various teaching strategies and their suitability for teaching mixed-ability classes will be discussed.

Mixed ability teaching as any other concept has disadvantages and problems, but the following advantages makes it a good approach in meeting the needs of all students in the general education classroom. Hallam and Ireson (2005) posits that mixed ability teaching helps avoid labeling students as it allows them to gain equal learning opportunity, which can improve their motivation and self-evaluation, and avoid a sense of failure. With regard to teachers, they state that teachers can also avoid being labeled as less able teachers if they teach to the lowest level. MAC can foster personal and social development in students (Tomlinson, 2001). Education does not only aim to teach students, but also to help them to identify and develop their personality. This approach gives students security, confidence, a sense of individual responsibility, and can also encourage self-sufficiency that will not only, benefit students but the whole of society. Additionally, if all students work together well, it will enable them respect each other's individual differences, and to learn to tolerate others. Tomlinson again states that, mixed ability

teaching offers a better classroom atmosphere as it prompts a feeling of security, prevents students from being prejudged, and respects those with different talents, achievements and backgrounds.

Managing Students with Mixed Ability

Base on the assumption that students do not learn the same thing at the same pace and time, teachers most make effect to manage these students in other to close the educational gap between the slow, average and fast learner. Iloanya (2014) assesses how mixed ability works in the Botswana education system. The study revealed that although some teachers handle MACs positively most teachers see MACs as problematic therefore; they approach them with negative attitudes. Based on the findings, he made recommendations on how best MACs can be managed to attain the desired education outcomes;

1. A teacher should create a supportive learning environment in the classroom, where learners are recognized as individuals with differences in abilities. This will boost their confidence and help them perform to the best of their ability.
2. Teachers should use good classroom management techniques to enable all categories of learners to be actively involved in the learning process. Students should be positively motivated through praise and encouragement, giving good instructions, knowing students names, monitoring their activity and giving timely and constructive feedback.
3. Learners should be allowed to work in groups and the lessons should be highly interactive to give every learner a fair chance to participate.

4. Learners should be taught how to be creative and resourceful.
5. Slow learners should be given special attention to boost their self esteem
6. Teachers should make their lessons interesting by varying the activities and methodologies of instruction. A boring class is not good for either fast, average, or slow learners.

These recommendations duel on making the individual confident and boost their morale in other to be active participants of the learning environment. Active participation is essential for learning; especially in the area of PE as one need to participate to acquire basic skills.

Harris and Snow (2004) suggests that an approach in making mixed ability work in English is not only by drawing more colorful flashcards or making up differentiated worksheets but also helping pupils to become more effective learners. HMIE (2007) in their publication "Modern Languages – A Portrait of Current Practice in Scottish Schools" outlined good and bad practices within 16 schools that were visited by their inspectors. Exclusively teacher led lessons were considered to be bad/poor. They were considered poor in the sense that teachers did not explain the purpose of lessons to students, relied too heavily on textbooks and there was no collaborative work among students. On the contrary, the good practices were those lessons where teachers gave students individual work, used a variety of teaching methods and shared the purposes of lessons and activities with learners, pupils were given interesting and challenging tasks to complete co-operatively in groups.

Bremner (2008) is of the opinion that is unrealistic to expect any group of pupils whatever the ability to work through a body of work at exactly the

same pace. Therefore the pace of instruction in a mixed ability class must be varied in other to suit the various ability levels in the mixed ability class. Also students must be given individual works to do in a mixed ability class. This will enable students to experience success and to learn as individuals.

Hall (2002) is of the opinion that, to be able to manage mixed ability appropriately, classroom instruction should be a blend of whole class, individualized and group teaching. Wu (2013) presented a number of instructional strategies that teachers can use to differentiate instruction in the mixed ability classroom. This was a conclusion from the interview with Carol Tomlinson. Working with smaller groups is one of the most important strategies for differentiation. Small groups of 6 to 8 student enables the teacher to see and monitor students individually, the teacher can easily ask individual questions to ascertain students' understanding. Learning stations are very useful in differentiation. Stations are predetermined areas in the classroom with specified work/activities. Instructions at the station provide guidance on how to complete work appropriately, how to get help and where to put completed work. Another equally helpful strategy is learning contract. They allow teachers to design tasks targeted to particular student needs and also to give all students some in-common tasks. Learning contracts typically entail all students having same activities or work in their contract and working on the same fundamental learning goals but the work can emphasize a student's particular next steps toward those goals.

Haertel, Walberg and Wang (1993) states that close monitoring, adequate pacing and classroom management as well as clarity of presentation,

well-structured lessons and informative and encouraging feedback are key aspects of delivery instruction for all. Krammer et al. (2006) proposed three basic dimensions of instructional quality. They are clear and well-structured classroom management (which includes key components of direct instruction), student orientation (including a supportive climate and individualized instruction), and cognitive activation (including the use of deep content, higher order thinking tasks and other demanding activities). The implication is that for teaching in mixed ability to be effective, teachers must provide students with clear information, give feedback, and present them with varied learning activities.

Teaching Strategies for MACs

Teaching is a complex matter that requires a high degree of decision-making skills and judgment on the part of the teacher (Westerman, 1991). For teaching to be effective, the teacher must be well informed regarding the various strategies and the conditions under which they can be used most effectively. Arends (1997) states that the term teaching strategy is known by several other terms in literature such as teaching model, teaching method, or teaching principle. The term refers to a particular approach to instruction that includes its goals, syntax, environment and management system. Similarly, Brown, Oke and Brown (1990) simply define a teaching strategy as the manner in which the content is presented to the students. Related to this view, is the definition by Mutasa and Wills (1995), who conceive a teaching strategy as a way that content is designed to assist a learner to learn.

Inherent in the above definitions of a teaching strategy is the existence of a body of knowledge on one side, and the students on the other side, with the teacher being the catalyst. This relationship is aptly captured by Uljens (1997), who notes that in teaching there is always somebody (who?) that teaches somebody else (who?) some subject matter (what?) in some way (how?) some time (when?) somewhere (where?) for some reason (why?) towards some goal (which?). From the facts presented, it could be concluded that the mechanism through which the body of knowledge is availed to the students constitutes teaching strategies. Basing on Uljens's conceptualization of teaching, this section concerns itself with the 'in some way (how?)' aspect.

Commenting on teaching and choice of teaching strategies ADPRIMA (2002) notes that, any instructional method a teacher uses has advantages, disadvantages, and requires some preliminary preparation. Often times, a particular method will naturally flow into another, all within the same lesson, and excellent teachers have the skills to make the process seamless. There is no one right method for teaching a particular lesson, but there are some criteria to each that can help a teacher make the best decision possible.

Small Group teaching/cooperative learning/collaborative learning

Small group teaching, cooperative learning and collaborative learning will be used interchangeably in this review. Small Group teaching will be defined as students working together in a small group small enough that everyone can participate on a collective task that has been clearly assigned. Moreover, students are expected to carry out their task with minimal interaction with teacher or without immediate supervision of the teacher.

Nelson (2008), defines a group as any two or more people with common interest, objectives, and continuing interaction. Grouping provides academic and social benefits for students. Individual academic productivity is limited by time, knowledge, physical capabilities, and other resources. Group work greatly reduces these limitations through teamwork and collaboration. A student's individual social benefits are realized by achieving psychological intimacy and achieving integrated involvement Psychological intimacy is a psychological closeness to other group members. It is important to a student's overall emotional health because it results in positive feelings of affection and warmth. Achieving psychological intimacy will also reduce feelings of emotional isolation and loneliness. Integrated involvement is closeness achieved through the involvement of students in group tasks and activities. It is beneficial to students because it provides them with opportunities to define themselves, support their beliefs and values, and be appreciated for their skills and abilities while greatly reducing instances of social isolation.

Mills and Alexander (2013) also define small group teaching as any teaching situation in which dialogue and collaboration within the group are integral to learning. They believe that though small group as the name implies, it is not defined by the numbers in the group but rather the productive dialogues and collaborations among members of the group. Since teachers have no control over their class sizes, small group teaching as a technique to divide up larger classes, involving students in smaller groups working together. This will enable all students to be involved in the teaching and

learning process hence addressing the needs of all in the heterogeneous classroom.

For a teaching technique to be indeed group teaching, Newble and Cannon (2001) are of the opinion that there should be active participation, face-face interaction and also have purposeful activities that will enable all studies to learn. Meador (2015) also considers small group teaching to be learning environment in which the teachers works with a smaller group of students on a specific learning objective. Meador believes that small group instruction always follows a whole class instruction to reinforce what is been taught. The purist view of small group teaching is that it must be learner-centred, with all students joining in free discussion of a particular topic (McCrorie, 2006).

Mills and Alexander (2013) note that group teaching is not an exact science thus, there are no specific approaches that are likely to yield the same results in any small group context. One of the principle benefits of teaching small groups is that the learning experience remains dynamic, versatile, and subject to change based on the specific nature of the interactions between teachers and students.

Small group instruction can be teacher-led or student-led. Teacher-led groups are the most common configuration used in classrooms today. Teacher-led groups are an effective and efficient way of introducing material, summing-up the conclusions made by individual groups, meeting the common needs of a large or small group, and providing individual attention or instruction in MAC. Student-led groups can take many forms, but they all share a common feature-students control the group dynamics and maintain a

voice in setting the agenda for the group to follow. Student-led groups provide opportunities for divergent thinking and encourage students to take responsibility for their own learning. One of the benefits of student-led groups is that they model "real-life" adult situations in which people work together, not in isolation, to solve problems. Students working in groups learn to work with people from varying backgrounds and with different experiences, sharpening social skills and developing a sense of confidence in their own abilities

In small group instructions, the conventional role of the teacher changes from a person who transmits information makes presentations and lectures, and one who controls and organizes largely passive learners to a facilitator of learning, recognizing the autonomy of individuals and the responsibility they have towards their own personal growth and development (Dennick, & Exley, 2004).

Small group teaching can be seen in various forms. These includes, tutorials, case studies, problem based learning (PBL), team based learning (TBL), problem-solving, Seminars and cooperative learning (Bligh 2000 Nicholl, & Lou, 2012).

Group formation/ group size

One of the goals of Small Group Teaching is to get people to be active and interact with each other. It is obvious that the number of potential conversationalists involved will influence the degree to which this can be achieved for any particular individual. Two people can clearly have a fairly equitable discussion but the content of their discussion will be from their own

point of view and experience. Increasing the numbers involved will inject greater variety into the debate and may expose individuals to a variety of alternative viewpoints that they had not previously considered. But if group numbers are increased above a certain level, individual contributions will be minimized and some people may find themselves inhibited from participating.

There is no one right size for a group. Different authors argue for different group sizes, and on different criteria. Mills and Alexander (2013) note that, though different numbers have been propounded by others, a small group could be as small as one. Some insist that the magic number is six, others also say that the number should be from 5 to 8 (Exley & Dennick, 2004). Wu (2013) is of the opinion that Small groups of 6 to 8 student enables the teacher to see and monitor students individually, the teacher can easily ask individual questions to ascertain students' understanding. The larger the group, the more complicated the dynamics and the likelihood that some remain silent or not participate.

McCrorie (2006) also argues that small group teaching comprises 8 to 12 learners facilitated by a teacher. He further states that, the number may be less in some cases and higher in others. For instance in clinical teaching, groups may be smaller. The group size may also be bigger (25-30) in higher education programmes as the numbers in such programmes larger.

Group teaching can be very beneficial to students' social and academic achievement. The controversy is therefore how students are grouped to get the best of them. Instructors have used numerous methods such as numbering, or alphabetically by last name, students have been given the option to choose

their own groups or simply grouped by seat proximity. These methods can be effective in some situations depending on the curriculum or sheer luck. The debate on how students of different academic abilities should be organized and taught is probably as old as the introduction of formal schooling in communities. This debate has divided the world of educational research into two distinct camps: one camp in favour of mixed ability grouping and the other one for grouping students according to academic ability. In the area of PE where safety is key, grouping is done based on students' body size, weights and developmental levels.

Ability grouping, simply put, is the practice of dividing students for instruction on the basis of their perceived capacities for learning. It is the practice of placing students of similar academic level within the same group for instruction. In classes with a homogenous student profile, learners' levels of knowledge, learning ability or potential learning ability are all assumed to be very similar. Ability grouping has several advantages and disadvantages on both the academic and social development of the various ability groups. Adodo and Agbayewa (2011) opine that homogeneous groups improves academic achievements of student of different ability levels in science. They further stated that ability grouping allows the teacher to better tailor the pace and content of instruction to students' ability level and needs, low achieving students feel more comfortable and are motivated to participate more when they are grouped with peers of similar or same ability. The high achievers languish, and waste off their time when grouped with the slow learners heterogeneously therefore grouping them with similar ability will help

safeguard their interest and maintain motivation to work more. Advocates of ability grouping see it as an excellent means of individualizing instruction. A meta-analysis by Slavin (1987) revealed that both low and high achieving students benefit substantially from within class ability grouping at the elementary school. This is supported by Mulkey, Catsambis, and Crain (2005) when they stated that ability grouping provides similar educational outcomes for both high and low level students.

Safety of students is very key in area of P.E therefore the first consideration for grouping is the safety of the students. Teachers of PE group students on the basis of height, weight, gender and ability. This grouping will help prevent injuries that may occur as a result of mismatch in the grouping.

Advantages of small group teaching

The learning that happens in small groups can be hugely rewarding, both for students and their teachers. Mills and Alexander (2013) outline that flexibility, interaction, reflexivity and engagement are the three major strengths of group teaching. Group teaching offers flexibility in the sense that it opens up pedagogic spaces that are protean, dynamic and responsive. Small group teaching is not only unique in being interactive but rather the intensity of this interaction. It allows the repeated restatement of ideas and responses, often in quick succession. Students get immediate and detailed formative feedback, both from each other and from their tutor. The interaction does not just mean talking. It is about negotiating understandings and differences, and cultivating shared meanings. The quality of the relationships that develops between students and tutor/teacher over time is equally important. Getting to

know your students, and finding ways to nurture their capabilities, is key to high-quality teaching in mixed ability teaching.

Group work enhances student's communication skills, (Bennett & Gadlin 2012; Jackson, Sibson & Riebe 2014). Creating facilitated opportunities for group work in the class allows students to enhance their skills in working effectively with others. Group work gives students the opportunity to engage in process skills critical for processing information, and evaluating and solving problems, as well as management skills through the use of roles within groups, and assessment skills involved in assessing options to make decisions about their group's final answer.

A meta-analysis by Johnson, Johnson, and Smith (2014) revealed that students learning in a collaborative situation had greater knowledge acquisition, retention of material, and higher-order problem solving and reasoning abilities than students working alone. Several reasons accounted for the increase. Students' interactions and discussions with others allow them to construct new knowledge, place it within a conceptual framework of existing knowledge, and then refine and assess what they know and do not know. This group dialogue helps them make sense of what they are learning and what they still need to understand or learn (Ambrose, Bridges, Lovett, DiPietro & Norman, 2010; Eberlein et al., 2008). Additionally, small groups can tackle more complex problems than individuals and large groups can and thus have the potential to gain more expertise. This is possible through quick interactions and information sharing than it is in whole class or large groups

Meador (2015) is of the opinion that small group instruction allows teachers to work more closely with each student to reinforce skills learned in the whole group instruction, and check for student understanding. It provides opportunities for students to get more of the teacher's attention and gives them a chance to ask specific questions and get immediate feedback. Teachers can use small group instruction to provide struggling students in a mixed ability classroom with intervention as well. Small group instruction gives teachers a natural opportunity to provide targeted, differentiated instruction for small groups of students. This happens as the teacher gets an opportunity to evaluate and assess what each student can do more closely and to build strategic plans for each student around those assessments. Students who may struggle to ask questions and participate in a whole group setting may thrive in a small group as they may feel more comfortable and are not so overwhelmed. Small group instruction helps maintain students focus.

Smith (2014) equally stated that in small group instruction, Students are given more of an opportunity to communicate their ideas, increased involvement in the classroom activities, less intimidating environment are created and also provides more time for discussion without interference from the whole group. More practice time is offered to student when they work in groups. All these helps to increase student involvement and participation which are core in the teaching and learning process.

Fisette (2012) in a study knowing your students discussed the importance of getting to know your students in PE The study examined how physical educators could use formative assessment during instruction to

develop self-confidence and positive self-image as well as increasing the enjoyment of PEby all students. Fisette believes that, opportunity should be given to students to express their feelings and share individual experience as participants. It is important for the teacher to get to know the students so that they can make informed decision about decisions on how to tailor instruction to meet individual needs. The PE teacher gains students cooperation and respect when they know them as individuals. In order for students to feel comfortable sharing their feelings in a PE class or with the teacher, students must feel the learning environment is safe. Teachers must take students feeling seriously. This attempt to know your students and encourage sharing of ideas can be achieved through small group instruction.

A typical situation in a mixed-ability environment is that of participation. When only a few people, usually stronger ones, participate while the rest of class tries to look invisible in order not to be asked a question or participate (Ur, 1991). Through group work, each student is involved in a collaborative task which helps to increase their confidence, interest and motivation. Variety of ideas is presented as students of mixed ability groups interact with each other.

Disadvantages of small group teaching

Meador (2015) stated that the biggest problem with small group instruction is establishing a routine and managing the other students whom you are not working directly with. Students working in groups are likely to divert their attentions from the task at hand. Some diversions are productive, some are distractions. The teacher's job is to keep the group focused enough

by 'reading' the group, responding quickly, constantly assessing how individuals and the larger group is engaging with the topic/activity at hand. If the teacher is unable to keep the focus of students, group instruction becomes destructive and unproductive. Martine (2001) stated that teachers feel like they have lost control when they teach in smaller groups.

Group work is more demanding of staff and room resources and time (McCrorie, 2006). For effective management of small groups, extra hands are needed to assist the teacher in the class control and maintenance of students' focus on their activities. Teaching assistants are needed for group teaching to be more effective as the teacher may not be able to keep an eye on five to six groups at the same time. Supervision of students work will be more effective when all groups are able to gain the teachers attention and feedback. The teacher may not be able to do it all by him/herself therefore requires an assistant.

Mills and Alexander (2013) categorized the problems of small group instruction into social and institutional. They explained that the interactions between students may be disadvantageous. This may evolve from having dominant students who tend to take all decisions in the group as the quiet ones languish. Additionally, teachers may tend to talk throughout the small group sessions. Jaqcues (2004), building on Brown and Atkins (1988), provides evidence that teachers are prone to talk for up to 60-80% of a small group teaching session, in spite of their commitment to collaborative or interactive practices in small group teaching. This situation inhibits the idea of active participation group which is at the center of group work. Group instruction

requires space and adequate human resources to be effective. Institutions can present a number of challenges from something as simple as the provision of appropriate spaces for small group teaching (Jaqcues, 2004), inadequate teachers, to the rigours and distractions of institutional or national assessment regimes as well as admission of huge number of students beyond teachers' control. For instance Higher Education Institutions do not always make effective small group teaching easy. Students who are introspective, less verbally advanced, or less confident can be intimidated by the rest of the group (Kingore, 2004). Students' interactions may be chaotic and unproductive.

In addition, instructors and students involved in small group instruction methods may have a hard time adjusting to new roles in the educational process. Educators who use small group teaching methods should be comfortable with their group process skills and with allowing the learners to become more involved in the educational process. Learners, on the other hand, may experience difficulties in assuming a more active responsibility for participating in the learning process with others.

The cited studies have provided evidence of the advantages and disadvantages of small group instruction. Surgenor (2010) believes that these disadvantages can successfully be overcome to gain the advantages of small groups if teachers do the following; know their students, tell students what to expect in a group, give students time to think, brief students in advance of the topics to be covered in forthcoming small group sessions, give students activities to help them integrate the material in large classes, delegate activities, agree ground-rules for sessions, involve students in assessing

themselves and each other, and give stents choice as to what to do. Again if teachers are sensitive to students and come to the rescue of struggling students, small group instruction can be very beneficial. Allowing student to participate in various ways and using students as projectors or models can also help teachers and their students to derive the advantages in small group instruction.

Whole class instruction/teaching

Whole-class instruction is a type of instruction in which the teacher teaches a topic to the whole class at the same time (Hughes, 2017). It involves the delivery of instruction needed by a majority of students in the class. Whole group instruction is an ideal setting to introduce or preview new concepts and skills. It is also an effective grouping structure for reviewing concepts and skills most students in the class have consolidated, or for re-teaching concepts with which the majority of the class still struggles. Smith (2014) asserted that whole-class instruction is best used in two broad situations. These situations are the introduction of a new concept or topic and facilitating a classroom discussion.

Working with the whole class to introduce new concepts can build common experiences and provide a shared basis for further exploration, problem solving, and skill development. Whole class instruction is also a means to identify students' prior knowledge and experiences that will affect new knowledge acquisition. It is essential to begin each instruction session with a whole group/class method before moving into a more personalized or

problem based approach. This will give the students the same amount of information about the problem or topic at hand. (Valentino, 2000).

Whole-class instruction is considered traditional instruction and remains a predominant form of instruction for teachers in most countries (Snow, 2003). It is the practice of teaching the same material simultaneously to an entire class; more specifically, it involves giving all students the same or similar assignments and evaluating of all students using the same assessment technique. Many educational theorists contend that whole-class instruction is the best form of instruction because: most teachers do not have the ability to teach a whole-class of students each at their own learning ability. A considerable amount of important information would be omitted from instruction if there were no standard curriculum Grade by Grade and Students' benefits from learning in the same classroom setting with other students where they can hold class discussions, plan, and present programs.

Whole-class instruction is teacher centered. The idea of a teacher working with a classroom full of students and having the responsibility of instructing them all at once, keeping them focused, and developing their character is the basis for whole class instruction. Despite the availability of new, innovative instructional strategies such as differentiated instruction, cooperative learning, peer tutoring, and computer-aided instruction, teachers still rely heavily on whole-class instruction (Snow, 2003). Whole-class instruction is the predominant form of instruction because the structure of most schools are built and designed to facilitate a whole-class instruction environment (Snow, 2003). Whole-class instruction is designed to create a

shared learning experience and allows the whole-class to explore and analyze a topic and to learn across a range of performance levels (Radencich, McKay, & Paratore, 2001). Whole-class instruction is teacher-centered and supports the notion of one group of students, one set of outcomes, and one instructional plan (Craft, 2002).

According to Abrami et al. (2000), whole-class instruction is considered as an efficient form of instruction because the teacher spends preparation time on developing a single set of materials as opposed to many sets of materials. Also it allows a teacher to emphasize a single set of instructional goals as standards- based curricula require that teachers focus on a single set of instructional goals.

Radencich, McKay, and Paratore (2001) are of the opinion that whole class instruction is most effective if there is an opportunity for discussion. This effectiveness is achieved as the mixed ability groups create a livelier and more interesting group discussion. A major challenge in a mixed ability class is that of time. Through whole class instruction this problem is address as the teacher carefully plans one instructional content for all. The time spent to design instruction for individual student by teachers is saved. Teachers can cover or complete large instructional task within a shorter period of time. Radencich, McKay, and Paratore (2001) additionally argues that whole class instruction in mixed ability setting can help boost the self-esteem of students especially the low performers.

Although whole class instruction can be very advantageous, several disadvantages also do exist which makes its exclusive use in a mixed ability

class less effective (Hall, 2002). Radencich, McKay, and Paratore (2001) outline three major disadvantages of whole class instruction in MACs; Attention to individual needs is minimal, less opportunity for student participation and minimal interaction between students. These come as a result of the instruction been controlled entirely by the teacher. Participation, attention to individual student and students' interaction are essential in mixed ability teaching (Bremner, 2008) therefore lack of these in the use of whole class instruction can lead to low students attainment. So it is critical that whole class teaching not take up bulk of the classroom instructional time but rather complemented with other instruction methods.

Luster (2008) investigated the effects of whole class and differentiated instruction on students achievements in mathematics. The purpose of the study was to determine which method was more effective for mixed ability classroom. Sixty seven general education students received whole class instruction as 68 received differentiated instructions. The criterion reference competency test (GPRCT) was used to measure students' attainment. The difference in attainment was examined with independent sample t-test. The t-test revealed a statistical significant difference on the GCRCT between students taught with whole class instruction and differentiated instruction. These differences were attributed to the lack of participation and interaction among students receiving whole class instruction.

Kelly (2017) stipulated that whole class instruction promote interaction between the teacher and the students and also offer the teacher the opportunity to control what is been taught as they steer the entire discussion. Again it

enables the teacher to review students understanding through questioning which have a tendency of making students to stay focused on the lesson because they might be called on to answer questions. She adversely noted that though whole group instruction is important, students who are not good in listening and note taking will be disadvantaged. Additionally, some students may not feel comfortable being put on the spot during a whole group instruction hence will not participate. Whole group instruction may not be effective if teachers are not good facilitators of discussion and questioning.

Moody, Vaughn, and Schum (1997) assed the grouping and instructional strategies used by general and special education teachers. The purpose of the study was to examine teachers' perceptions about grouping patterns and their teaching strategies. Forty nine general education and 20 special education teachers were interviewed. The teachers in the general education setting preferred mixed ability grouping and reported predominant use of whole group instruction while those in the special education classes preferred ability grouping and used individualized instruction.

Individualized instruction

Individualized instruction is a system of instruction that focuses on individual differences and allows individuals to learn independently. It therefore allows students to progress at a rate that coincides with their individual abilities. Warlick (2013) defines individualized instruction as instructional strategies that are developed and used with an understanding of individual student learning style, readiness, and interest. Warlick believes that

the learner is expected to be responsible for learning, being an active participant in the learning process, thereby able to express what they understand and bring out their personal opinion on the subject of study. This implies that unlike the traditional method that believes the learner must be a recipient, the learner is actually a contributor to the content, method, evaluation, and outcome of learning. Individualized instruction operates a multiage/mixed ability classroom where students of various ages and abilities are taught together in the same class without grade denigrations or ability grouping. This is often done by properly planned peer learning, collaborative small group, and individual instruction which is based on the needs and interests of the students (Hoffman, 2002).

Altman (1971) describes Individualized Instruction as "the way a teacher arranges children, equipment and materials so that each child can learn eagerly at the peak of his potential without stress or strain". He also says that it is "an instructional system where the characteristics of each student play a major part in the selection of objectives, material, procedures and time. It is achieved when the decisions about the objectives and how to achieve them are based on the individual student. To Keefe and Jenkins (2002) individualized instruction is the effort on the part of a school to organize the learning environment to take into account individual student characteristics and needs to make use of flexible instructional practices. Individualized instruction is a system where teaching-learning activities are organized to take into account the individual interests and needs as well as the learning speed and capabilities of the students (Maisano, 2005; Worsley, Landzberg & Papagiotas, 2004).

MACs contain substantial numbers of student with diverse learning needs. Many of these students display characteristics resulting from such factors as language, intellectual and cognitive abilities, behavior, culture, or limited experiential backgrounds that can significantly interfere with successful learning (Polloway & Patton, 1997). Individualized instruction represents comprehensive attempts to improve learning by tailoring instruction to these individual characteristics. To effectively differentiate instruction, the teacher must forgo the traditions roles of the teacher as discipline providers and information distributor in teaching-learning process (Keefe & Jenkins, 2002). Therefore the teacher must possess qualities such as a guide to facilitate learning, a mentor, a friend or a consultant and carry on various roles such as scheduling the lesson, motivating students to learn, assigning tasks and evaluating performance tasks.

Individualized instruction pre-assess and identify student placement in an established sequence of learning tasks in which students can progress at an individual pace with assessment for mastery before moving to the next task (National Association for Sport and PE NASPE, 2006). This procedure automatically arranges students in small groups, moving to a variety of tasks, each of which may require different equipment and space. Individual instruction is an excellent way for students to assume responsibility for their own learning.

Individualized instruction focuses on the needs of the individual student. Teaching is specific and targets one need at a time. Individualized instruction does not mean that the child works alone at all times neither does it

mean the teacher relinquishes his responsibility as to some sort of machine or other teaching materials (Duane, 1973). Duane further states that, while the child works alone more than in traditional, the teacher has to diagnose his/her progress frequently and offer small group and whole-class instruction as well. Again children cannot learn effectively through individualized instructions though they progress at their own pace with the traditional materials and equipment. Specially prepared materials and improvised equipment are essential to enable them learn effectively.

Green (2013) outlined four benefits of individualization in the mixed ability class room.

1. **Individualized instruction helps to close learning gaps.** In any classroom, there often are significant learning gaps between individuals. These gaps may exist in the area of PE as a result of students prior experiences with sports and physical activity, motor abilities, age, gender, height and body types. The challenge is to assist struggling students while simultaneously engaging gifted learners, but that is exactly what individualized instruction aims to do: delivering material at an optimal pace that caters to each student's interests and abilities. Persistence in difficult topic areas while moving at a 'just right' pace through areas in which the student excels is the way to close learning gaps, and bring everyone to their highest personal level of achievement. Practically, providing all students with age, height, gender appropriate materials will enhance their performance hence closing learning gaps.

2. **Build confidence in students.** One of the main reasons that struggling students continue struggle is that they lose confidence in themselves and their intellectual capabilities. Individualized instruction can help students gain self-confidence as learners, because lessons are tailored to their specific abilities. For instance in a PE class, teaching with a size 3 handball will frustrate some students since they may not be able to grab. An improvised or a smaller size ball can be used as they can all handle it better. As students gradually build comprehension and mastery of more complicated skills, they gain the self-assurance that they have the skills they need to be successful. This, in turn, helps them progress more quickly.
3. **Greater engagement for teachers and students.** Implementation of an individualized learning approach to education has been shown to be a more engaging experience for both teachers and students. Instead of standing in the front of the classroom and explaining new concepts, stopping to pause as students (hopefully) calmly and patiently raise their hands, teachers have more opportunities to interact with students one-on-one when using individualized instruction in their classrooms. Self-directed, more independent learning frees up opportunities for teachers to talk with students, assess where they are academically, and how their individual learning plan can be managed to achieve maximum results.
4. Individualized instruction provides the opportunity for students to learn at their own pace, in their own way. One of the greatest strengths of individualized instruction is that it gives students the opportunity to work

at different paces and on different areas without affecting the learning of their peers. Gifted students may work ahead while students who are struggling in a particular area can take the time they need to review and master a concept they may have previously not fully understood as it all happen in the same classroom.

Green (2013), aside his advantages, also noted that without extra preparation on the part of teachers, an adjustment to the new paradigm of teaching and restructuring of the teaching environment individualized instruction will never be successful. The extra preparation will aid the teacher to gain adequate data on the students and also enable them plan their lessons well. With the many changes associated with the transitions to individualized instruction, many teachers are questioning where they fit in the modern classroom. There is fear of been replaced by computers and not getting to do what they love doing best. However, teachers must accept new paradigms of teaching (the use of technology) as it frees them to spend more time with individuals or small groups while the remainder of the class is enabled to work at their own pace. Classroom structures may need to be adjusted to accommodate individualized learning. In other words, instead of the traditional rows of desks facing the blackboard, classroom seating arrangements may need to be more flexible, so that the teacher can work with individuals or small groups while the majority of students work independently. Also more teachers must be employed to assist in teaching. An investment into technology is equally a requirement to make individualized instruction a reality.

Nnamani and Oyibe (2016) investigated the effects of individualized instruction on secondary school students' achievement in social studies in general education. The study comprised of two thousand seven hundred and ninety three secondary students drawn from public secondary school in the Onueke educational zone in Ebonyi State. Means and standard deviations were calculated for all research questions. The results showed an increase in mean of the students who received individualized instructions than those students who were taught with the traditional teaching method. The increase in achievement was seen as a result of students' independence and active participation. Based on the results, the researchers recommended that teachers should blend the traditional teaching methods with individualized instruction as it enables the students to be active members of the learning environment not just passive listeners.

Peer tutoring/teaching

This is an instructional strategy that transfers the teacher's responsibility for instruction to a student (Rink, 1993). Nguyen (2013) also defines peer tutoring as an instructional method that uses pairings of high-performing students to tutor lower-performing students in a class-wide setting or in a common venue outside of school under the supervision of a teacher. This term can also be referred to as peer assisted learning (PAL). Peer teaching is mostly used in conjunction with other teaching strategies although it can be used separately. It can be used to teach a whole lesson or part of a lesson. One major challenge in MACs is that of provision of feedback to

students. Teachers have difficulty in giving feedback because of large class size and limited time. Peer teaching enables the teacher to overcome this challenge as students to receive feedback on their performance or progress while they work closely with the student teachers. Scruggs, Mastropieri, and Marshak (2012) indicated that peer teaching is an effective way to deal with students' diversity in the classroom without stigmatizing and alienating them.

Peer teaching has been established by several studies as an effective teaching strategy (Lazarus, 2014; Black & MacKenzie, 2008; Cohen, Kulik & Kulik, 1982; Havnes, 2008; Rink, 1993). Students' ability to express their ideas, mastery of different concepts, time management, and sense of responsibility, sharing, self-discipline, self-reliance, self-confidence, resourcefulness, cooperation and obedience are greatly improved through peer teaching (Vassay 2010). Cohen, Kulik and Kulik (1982) in an analysis of peer tutored programmes found an increased performance by peer tutored students than those who were tutored by the teacher. Students also developed positive attitudes towards the subject matter as well as a better understanding of the subject.

Fulk and King (2001) support the opinion that peer tutoring improves all students learning. He add that serving in the role of tutor seems to be particularly beneficial for improving the self-esteem of students with low achievement while they may, for example, count their partner's trials in a particular skill practice.

A number of studies have indicated significant gains academically and socially for both the tutor and the tutee. For the tutor, benefits result from

reinforcing existing knowledge of fundamental concepts and gaining a better understanding of the concepts. In addition tutors develop a sense of efficacy, gain insight in the teaching and learning process, and discover meaningful applications of the subject matter. Subsequently, recipients of tutoring can derive benefits such as individualized instruction, more contact time with a 'teacher', the opportunity to discuss material and to ask questions in a non-threatening and supportive setting, and interaction and bonding with peers (Goodlad & Hirst, 1989).

Topping (1998) indicated that aside the student teacher and the student, the classroom teacher in turn, benefits from this model of instruction. These benefits include an increased opportunity to individualize instruction, increased facilitation of inclusion or mainstreaming and opportunity to reduce inappropriate student behaviours. Individualization is core in MACs (Bremner, 2008) therefore this strategy is appropriate for MACs. Peer tutoring works best when students of different ability levels work together (Kunsch, Jitendra, & Sood, 2007). The old adage, "those who teach learn twice" holds true for peer tutoring and when it is used, learning becomes more effective because learners are teaching themselves (Whitman, & Fife, 1988). While one student may excel in mathematics, another student may be top-notch in English. These students can work together to help each other understand difficult concepts, while deepening their own knowledge of the subject.

A study conducted in Nigeria by Okilwa and Shelby (2010) on the effects of peer tutoring on academic performance of students with disabilities in Grades 6 through to 12 reported peer tutoring as effective for special

education students in both general education and special education settings. Peer tutoring implemented across subject areas such as language, arts, mathematics, science and social studies showed positive academic effects. Additionally, Bowman-Perrot et al (2013) conducted a meta-analysis on the effect of peer tutoring across 26 single-case research experiments for 938 students in Grades 1 – 12. The findings were that peer teaching is an effective intervention regardless of dosage, grade level or disability status.

Oloo, Mutsotso, and Masibo (2016) examined the effects of peer teaching on students' performance in mathematics in the teaching and learning process. The study was guided by Vygotsky's social interaction theory of learning. Participants were 12 heads of department, 42 mathematics teachers and 166 form three students. The instruments for data collection were teachers and students questionnaires, interviews for head of department, and students' achievement test. The conclusions made from the study were that peer teaching encourages students' motivation to learn mathematics, enhances understanding of mathematics concepts and builds confidence in the students.

Also, Tracey, Natasha, and Johanna (2007) also conducted a research in South Africa which describes the experiences of learners involved in a cross-cultural peer teaching initiative between a privileged private school and a township school in Port Elizabeth. The aim was to explore the possible advantages of cross-cultural peer tutoring on certain sections of the new mathematics curriculum. It was found that the understanding of the mathematics topics dealt with during peer teaching session was enhanced and both groups gained from the peer teaching interaction. Consistent use of peer

teaching improves learners' achievement scores in mathematics. Peer teaching is highly effective in raising the standard of understanding of mathematics concepts; students performed significantly better as evidenced in the students' scores which increased in the students' achievement test following the administration of peer teaching and group discussion. It builds confidence in the students and allows them to interact and share ideas. However, this has not translated into good performance in national examinations due to other factors such as inadequate teaching and learning resources.

Station teaching

Station teaching is a teaching strategy that arranges the environment in a way that two or more tasks are going on in the classroom simultaneously (Anderson, 2007). In station teaching, each task or activity is assigned a place in the classroom or gymnasium. These places are referred to as the stations. It enables the teacher to present different task at the same time. Anderson again, is of the opinion that station teaching is one of the most effective strategies for teaching PE as it allows the teacher to present same activity with different level of difficulty for student to practice. An example can be the teaching of handball. A group of students at one station can work with improvised balls in passing, another can work with smaller sized ball over shorter distances while the other group works with the normal size balls. Station teaching is an effective strategy for MACs because it gives the teacher the opportunity to work closely with students needing help.

Rink (1998) stated that for station teaching to be effective tasks must be simple and clearly stated, task at each station must take about the same time

to be completed and must be self-motivating. He further explains that, task must be simple since teachers have limited time for task presentation in station teaching. They must take the same time to finish so that students do not wait for the others to finish and self-motivating to keep students working.

Station teaching requires a lot of planning on the part of the teacher to be able to select different tasks for each station (Rink, 1998).

Factors Influencing Teachers' Choice of Teaching Strategy

Education systems all over the world have put a lot of emphasis on skill development. This emphasis is quite-pronounced among PE which places emphasis on performance of basic fundamental skills. How students acquire these skills depends on how they are taught or how they are previewed to information about the particular skill. Therefore teachers are expected to have a clear understanding of the basis for his/her practices (Ezeji, 2000). Molder (2015) states that teachers choice of teaching strategy is influenced by the age of learners, their level, individual learning styles class size and the purpose/goal of the lesson. Additionally, Black and Wiliam (2006) agrees that the crucial factors to be considered when selecting teaching strategy are the needs of the learners, subject matter, the objectives, facilities and other factors in relation to the learners needs. Some of those most important needs are the learners' aspirations, which become a reality through knowledge and skills previously acquired in school.

Instructional practices depend on what teachers bring to the classroom. Thus teachers' professional competence is believed to be a crucial factor in classroom and school practices (Campbell, 2004; Kubiatko, Torkar, &

Rovnanova, 2017). This means that teachers may select or choose a teaching strategy based on their competence and knowledge about that strategy. Teachers' professional knowledge and actual practices may differ not only among countries but also among teachers within a country and also teachers on different subjects (Klieme, & Vieluf, 2009). These differences in practices and strategies are dependent on the instructional objective, availability of teaching and learning materials, teachers' ability and preferences, needs of students, rate of learning for learners, examination set up, class size, time and space available to teacher, nature of content and students learning styles.

Kiplagat (2004) investigated the factors influencing the choice of teaching strategies by biology teachers in Nairobi Province. This study sought to identify the teaching methods used in teaching biology and also to bring to light the factors that influence teachers' choice of the teaching techniques and problems that hamper use of effective teaching methods and to make recommendations for their improvement. The study employed descriptive survey design with a sample of 160 biology teachers drawn from public secondary schools. Questionnaire and an observation check- list were used to collect data. The analysis of data was done through use of descriptive statistics such as percentages and frequencies. Contingency coefficient test was used to determine the extent of relationship among different variables related to the teacher. The findings revealed that there was still heavy use of expository teaching methods in biology. Several factors were studied among them curriculum, administrative/school, pupil and teacher factors in relation to choice of teaching techniques. The findings indicated that younger teachers

used more effective methods than older ones. Experience appeared not to add much value to use of more effective methods. Male teachers seemed to use higher order inquiry oriented methods compared to females. It was also found that teachers ignored the needs of students when selecting a teaching strategy.

Rotumoi and Too (2012) investigates the influence of resource availability on the choice of teaching methodologies by pre-school teachers in Baringo District. The purpose of the study was to investigate how various resource constraints influence the choice of teaching methodologies by pre-school teachers in Baringo district. The sample comprised of 30% of 103 schools with two teachers per school in the selected sample. A descriptive survey approach was employed as a design for the study. Data was collected by means of questionnaires, an observation schedule and an interview schedule for the head teacher. The findings revealed that the institution one had attended had a great influence on the approaches he or she adopted in teaching. The availability and adequacy of classroom space, teaching/learning facilities and the number of children a teacher handled were also found to have had great influence on the teaching methods the teacher adopted.

Obi (2009) conducted a study to examine the factors influencing the choice of strategies used in teaching Agriculture in Senior Secondary School. The purpose of study was to examine the factors influencing the choice of teaching strategies and to determine the factors that have a more pronounced influence on the choice of teaching strategies. The population consisted of all the 330 Agriculture teachers in the state. Data collection was done through the use of a closed response questionnaire. The results revealed that all the 20

factors influenced the choice of teaching strategies. Six factors, namely class size, inadequate staffing, availability of instructional materials, availability of physical facilities, professional training/qualification and professional experience have a more pronounced influence on the choice of teaching strategies than the remaining 14 factors.

Balachandran (2015) examined the factors influencing teachers' choice of teaching styles. The purpose of the study was to explore why teachers teach the way they do. More specifically, it investigated the factors that influence educators' perceptual teaching style when teaching mathematics. It employed a mixed method to collect both qualitative and quantitative data from six teachers. The results indicated that although teachers had a higher learning style preference for visual learning, tactile learning, and kinaesthetic learning over auditory learning they did not use one perceptual teaching style over the other. The results also indicated four groups of factors that influenced teachers' choice of strategies. Thus the lesson which included variables like desire to foster real life experiences and connections, the unit of study, and the teaching styles used in other subjects. The second group of variables are related to the students, including the class composition, the grade level, the stage of students' development and their ability to profit from the teaching style, perceptions of the level of engagement attained through the strategy, and behaviours of students in the classroom. The third factors center on the classroom environment, such as the resources available and their accessibility and influences of the teacher. The final group of variables are related to the teacher themselves, including their knowledge and ability to use resources,

ability to manage the classroom and openness to giving some control over to the students, ability to determine student's learning style, ability to incorporate perceptual styles, constraints based on time and effort, understandings from their own learning experiences, and knowledge from their teaching experiences.

Biggs (2011) investigate the factors that influence secondary school PE (PE) teachers' selection of teaching styles during. A qualitative research methodology was used through observing the teaching styles being implemented during two KS3 lessons by the participants and through semi-structured interviews. The results revealed that the weather, activity being taught, the learning outcomes, ability of pupils, maturity of the pupils and teaching experience were all factors that affected teachers teaching style selection. Moreover, they demonstrated that the participants teach in a way according to their teaching philosophies and that experienced teachers and NQT's respectively appeared to teach in similar ways. Additionally, experience of being involved in teaching, the school environment and working with a variety of pupils allows teachers to develop their range of teaching styles.

Djajalaksana, Dedrick, and Eison (2013) assessed the factors associate with the selection of instructional strategies in information systems discipline. This study investigated whether gender, rank, age, course level, delivery format, class size, years of prior teaching experience, and availability of teaching assistants are among the factors that relate to the selection of instructional strategies within this discipline. A web-based survey

questionnaire was distributed to members of the Association of Information Systems who were teaching in the United States institutions. There were 695 valid responses (24.4% response rate) obtained from 2,835 valid participants. A multiple regression analyses were performed against the top 9 strategies that were frequently used by information systems faculty. The results revealed that gender, rank, age, course level, delivery format, class size, and availability of teaching assistants were significant factors associated with the selection of instructional strategies in the information systems discipline. Years of teaching experience was not found to be significant.

Obi (2009) examined the factors influencing the choice of teaching strategies used in teaching agriculture in Senior Secondary School in Adamawa State. The population consisted of all the 330 Agriculture teachers in the state. The instrument used for data collection was a closed response questionnaire. The results revealed that all the 20 factors examined influence the choice of teaching strategies but class size, inadequate staffing, availability of instructional materials availability of physical facilities professional training/qualification and professional experience had a more pronounced influence on the choice of teaching strategies than the remaining 14.

Hamzeh (2014) investigated the use of teaching strategies among Mathematics Teachers at the Public schools in Jordon, and its relationships with teachers' gender, experience, and scientific level. A sample of 75 teachers was drown through a stratified random sampling. Questionnaire was used to collect data. The results showed that the general level of using teaching strategies was moderate, while the level of the behavioral strategies

used by the teachers was high; whereas the cognitive and affective strategies were moderate. The results also showed that there were no significant differences ($\alpha \leq 0.05$) in the Teaching strategies use related to teachers' gender, but there were significant differences in the Teaching strategies use related to experience variable in the affective strategies domain in favor of the teachers with less than 5 years' experience. The results also showed significant differences in the teaching strategies use related to scientific level variable in favor of the post graduate teachers.

Laird, Garver, and Niskodé (2007), compared teaching styles of men and women to determine whether there is gender differences in how they taught. Participants included 107 colleges and universities in US. Results from our study suggest that, compared to men, women spend a smaller proportion of class time lecturing and a greater proportion of class time on active classroom practices. However, these women dent to move from active classroom practices as the class gets huge.

Challenges Teachers Encounter in Mixed Ability Class

Teaching students of mixed abilities is a real and genuine problem that teachers face, one that needs serious attention from professionals (Hedge, 2001) and one that is literally impossible to solve (Rose, 1997). Millroods (2002) concurs by stating that there is no clear strategy in the teacher's paradigm for dealing with MACs. Since no two pupils are the same, this lack of strategy is a challenge that might keep mixed ability teaching eternally problematic, therefore it requires greater seriousness in-terms of curriculum

development. The differences which cause problems in mixed classes are in physical ability, knowledge, cultural background, learning style, attitude towards PE, intelligence, world knowledge, learning experience, age, gender, personality, confidence, motivation, interests, materials, participation and discipline (Ur 1991).

Teachers who view mixed ability positively deals positively with the learners and use the mixed ability as an asset while those who see them negatively sees it as more challenging. A mixed ability class allows for more of a social mix but relies heavily on the expertise of the teacher in helping a wide range of pupils achieve their potential (Bremner, 2008).

According to Ur (1991) teacher may face different challenges while managing mixed ability students as;

a. Teachers may find MACs as difficult to control and manage. Discipline problems occur when learners feel discouraged, lose attention, and are bored or showing troublesome behaviour. It may also be difficult to control because different learners respond differently to the subject matter. Some may find it difficult while some may find it easier.
b. There is also difference in the learners' learning styles, motivation and interests. So, it's challenging for teachers to provide such material or activities that are motivating and interesting to all learners in a class.
c. It is difficult to provide successful learning for all learners in mixed ability class. Some learner may find the content or activities in a lesson too easy and some too difficult. Teachers has variety of tasks like practical activities with different levels for physically strong and physically weak

learners, gymnastics exercises, silent viewing in mixed ability class to provide the students an opportunity to choose activities of their own level.

d. Often materials are firmly aimed at a definite kind of learner and it may not have options or flexibility. So it is up to teachers to know how he/she manages a given material to the advantage of all learners for effective learning

e. It may be difficult for teachers to know the progress of all the learners in a class. In such classes where the learners are different from each other it is difficult for teachers to equally devote time and attention to all learners (Šimanová, 2010). But a good teacher manages it to increase the improvement in learners by focusing their problems individually and modifying lesson.

f. In MACs, more advanced learners tend to participate more actively than weaker learners. Learning may be hampered if learners are emotionally disturbed. So, it teacher must manage the confidence, self-esteem and anxiety of learners to promote the learning. Lack of participation or attention from the teacher, may further affect weaker learners' proficiency in the subject. It is the teacher's responsibility to create a supportive, encouraging and collaborative environment in class where stronger and weaker students may participate equally.

g. Teachers may feel it a burden to assess students and correct their mistakes. Assessment is an important part of learning. In MACs teacher may manage it in such a way that students may learn not only from their own mistakes but also from others' like from their groups and peers. While making

groups teachers keep in mind pairing of students in such a way that they cooperate with each other and can be changed by the time. Teachers can also draw opinions of learners about their groups which they make in the class. It helps the teacher to change teaching method if needed (Harmer, 2001).

Baker (2002) argues that it is not just the fact that there are many students in a class, but that all of them are at so many different ability levels that provide the biggest challenge. She further claims that in mixed-ability classes it can be difficult to keep the attention of all students. Their motivation can be poor and the teacher can feel frustrated because he/she does not have enough time to help the weaker students.

Whipp, Taggart and Jackson (2014) explored PE teachers' perception about the need for differentiating and their actual use of differentiated instruction in their swimming classes. The results revealed that, although PE teachers were successful in their differentiation of content and process, space, numbers, time and student readiness were major limitations to differentiating.

A qualitative study of the perceptions of secondary school teachers towards mixed ability classrooms by Mirani1 and Chunawala (2015). Semi-structured interviews and classroom observations were conducted to gauge teachers' ideas about incorporating quick learners and slow learners in the same classroom. Teachers' perceptions of ability grouping and their own application of proven instruction methods for inclusion, like collaborative projects, open ended questions and interaction in classroom have been reported. The study found that while teachers were aware and had practiced

various possible classroom strategies to deal with mixed ability situations in classrooms, they felt incapable of implementing these strategies consistently due to constraints such as limited time, extensive syllabus and huge class size.

Although several instructional strategies have been proven beneficial in dealing with students diversity in MACs, many teachers continue to feel unequipped to accommodate the diverse instructional needs of students in their classrooms (Mastropieri & Scruggs, 1997; Vaughn, Gersten, & Chard, 2000). The problem, perhaps, lies more in the inaccessibility of these strategies. That is, teachers have insufficient opportunity for training and on-site assistance to become proficient in using them, as many are not easy to implement, especially with large groups of students with a wide range of academic needs (Fuchs & Fuchs, 1998; Marston, Muyskens, Lau, & Canter, 2003; Vaughn & Schumm, 1995; Vaughn et al., 2000).

Domfeh, Ladani, Adeyanju and Kabido (2012) assessed the constraints of teaching and PE in Ghana public schools. The population consisted of head teachers of first cycle schools, classroom teachers, and P. E. tutors of training colleges. Questionnaire was used to collect data. The study revealed that, all the constraints examined were significant constraints to teaching and learning of PE in Ghana. They included attitudes of head of schools and classroom teachers towards the subject, lack of trained personnel, lack of facilities and equipment to conduct PE, large class size, nature of PE programme in the college of education, the non-examinable nature of PE in Ghana and inadequate funding. They recommended that PE should be made a core subject at the training college and PE bias programmes should be reintroduce.

Most teachers in developing and also developed countries are still grappling with how to successfully implement learner-centred teaching practices. Challenges however, with class sizes growing past 30 in many schools, teachers are finding that the amount of time they have to spend with each student is being dramatically reduced. Rather than being replaced by personalized learning programs, many educators are finding that they are excellent teaching partners. The use of technology is designed to free the teacher to spend more time with individuals or small groups while the remainder of the class is enabled to work at their own pace with the program. And by leveraging the detailed student information many of these programs provide, the interactions between the teacher and the students can become even more productive. However, additional professional development will likely be required to fully realize these and other benefits of a move to a blended or individualized learning program.

Haung (2014) explored teachers' attitude towards mixed ability teaching in Taiwan. The study also sought to find out the challenges teachers face in teaching MACs. Questionnaire was given to 80 English teachers. The findings revealed that majority of the teachers saw the mixed ability approach as a better approach to teaching while one third of them also did not agree that students can learn effectively in mixed ability classroom. More than half reported that they had difficulties catering for different individuals, especially the ablest and weakest students. They further stated that the class size, limited learning hours and equipment are the major factors that causes difficulties for

mixed ability teaching. Additionally some teachers saw the lack of teaching assistance as a challenge in teaching MACs.

Bremner (2008) also states that the expertise of the teacher is an important factor in managing MACs. Inexperienced teachers find MACs more challenging than experienced teachers. Teachers lack the knowledge of strategies to use in the classroom to cater for a wide range of ability. Setting reduces the range of ability in the class but does not remove the fact that all pupils have individual needs and learning preferences. More staff training is needed to inform teachers about catering for the different learning styles, using Bloom's taxonomy to provide challenging differentiated work and the social and academic benefits of using collaborative group work.

Iloanya (2014) states that teachers' learning and teaching objectives/outcomes indicate that, most teachers do not cater for all groups of learners. Some teachers recognize only fast learners. Even when some teachers put students in groups, they think about the teaching resources, not the abilities of the students, which affects the effective handling of children with learning difficulties in mixed-ability classes .Worse still, some instructional materials used by teachers do not cater for the abilities of all the students in the actualization of the intended learning outcomes (Iloanya, 2014). It can be concluded from the above that the lack of or inadequacy of teaching materials and resources poses a challenge in MACs.

Bremner (2008) argues that an attempt to bridge the achievement gap between students has been through setting/ability grouping although setting reduces the range of ability in the class; it does not remove the fact that all

pupils have individual needs and learning preferences. She further stated that the real challenge is that teachers often lack sufficient knowledge of strategies to use in mixed ability classrooms to cater for a wide range of ability. Therefor more staff training is needed to inform teachers about catering for the different learning styles. Using Bloom's taxonomy can help teachers provide challenging differentiated work and reap the social and academic benefits of using collaborative group work. Teachers also need to be trained to desist from their role as the 'the all-knowing' but rather be facilitators of learning so that whole class teaching does not predominate in most lessons.

A qualitative study was conducted by Hartweg (2016) exploring the ways three planetarium educators at an informal science center teach school programs and the factors that influence the teaching methods they use. Data was collect through interview and observations of educators teaching planetarium programming Results from this study revealed that teaching methods used by the participants included questioning, explanation, kinesthetic, modeling, observation, identification skills, reinforcement, prediction, and story-telling. The teaching methods of participants were informed by previous astronomy and professional experiences, education, purposes and goals for planetarium education, audience, and technology.

Brabo (2014) examined the impact of class size on differentiating instruction in high school PE The purpose of the study was to assess the effects of class size on instruction in PE It examined the experiences of physical educators, challenges of teaching large population, managerial problems, teachers' perception of students' engagement, implementation of

assessment in large classes, safety of students as well as support from administration and colleagues. The study adopted a qualitative design with a purposive sample of PE teachers with teaching experience ranging from two to twenty years. The findings indicated themes including teachers' inability to do deliver quality instruction, students' engagement, provision of timely positive feedback to all, large class behavioral management, assessment and the provision of a variety of teaching styles. Delivering quality instruction is affected as teachers spend time managing students' behavior. Time spent on Redirecting students to stay on task can affects the time for planned learning opportunities. Large class size limits the amount of time students are engaged, the teacher's ability to deliver specific positive feedback to all students as well as increasing the amount of time teachers spend on managing students' behavior. Teachers were found to be using a variety of teaching strategies. This shows that these physical educators are able to handle some of the challenges of teaching large classes and are willing to create a more engaging learning environment.

Summary

MACs has been defined in terms of students' strength and weakness, background, interest, learning styles/preferences, needs/priorities, physical abilities, performance levels and prior knowledge. The term is used synonymously with words like heterogeneous, unstreamed, unselected and natural classrooms. Although these classes are overwhelming when teaching, it presents a lot of opportunities for teacher and students. Since no two students are alike, several strategies are used to facilitate the understanding of

all. MACs can be taught without mixed ability teaching strategies. Teaching that takes into account the ability levels of students is termed as mixed ability teaching. The group of abilities in the class doesn't really matter but rather what goes on the classroom during instruction thus how students are managed and the strategies used to teach these students.

MACs can be managed by giving lower students more time to complete an activity, through group work, creation of good classroom environment, student involvement, using variety of activities and materials to cover different topics and modify instruction and materials to cater for individual needs. Group work, cooperative learning, peer assisted learning station teaching, and whole class instruction are effective teaching strategies for MACs. The strategy to be used is influenced by students' individual abilities and motivation differences, their learning styles and the lesson objective to be achieved. Research has also shown that, some teachers choose certain strategies because that is how they were taught, they are conversant with them and it helps them to cover the syllabus in a short time available. The time and teaching and learning material available to a teacher also influence the particular strategy a teacher may choose for a particular instruction. The appropriateness of any teaching strategy for MACs depends on its ability to promote students involvement, participation, interaction, opportunities for individualization and give equal opportunities for all students.

Whole class instruction is the most predominant form of teaching and it affords the teacher the opportunity to instruct the entire class at the same

time within a shortest possible time. It enables the teachers to keep students focused as he controls the entire class throughout the instructional period. It also eradicates the problem of time in mixed ability teaching. Participation, students interaction and attention to individual needs are minimal in whole class instruction therefore the over reliance on only this strategy in MACs maybe less effective. Group work enables the teacher to work closely with students and also afford students the opportunity to collaborate with each other and improve their communicative and social skills. It also offers students more practice time in practical and affords the teacher the opportunity to know his/her students individually. Aside its numerous benefits, if group work is not well organized, introspect and less verbally advanced students may feel intimidated by their peers and may not participate.

Individualized instruction helps the teacher to focus on students as individuals rather than as a group. It helps him to organize instruction for students based on their individual needs. It gives students' academic security as they are given the chance to learn as individuals. Although individual instruction offers students individualized learning opportunities, it does not mean students learn alone throughout the entire lesson. For individualized instruction to be effective, specially prepared materials and improvised equipment must be used. Peer teaching provides mastery of concepts, sharing, self-discipline, self-reliance, resourcefulness, economy of time and a sense of responsibility for students. It equally relieves teachers off some of his responsibilities. Peer teaching equally enhances the provision of feedback during instruction. Station teaching gives students more time to practice and

allows the teacher to set the lesson using different resources to teach various aspects of a lesson. It allows improves participation and collaboration among students.

The major challenge in teaching MAC is the student involvement which is affected by the amount of time the teacher has and the teaching and learning resources available. Huge class sizes immensely affect teachers' ability to cater for individual students. Teachers in MACs also finds it difficult in dealing with MACs not only as a result of the lack of time and resources but also as a result of their lack of knowledge and training on how to teach in MACs.

Several teaching strategies have been explored about its effectiveness in MACs and how and why they are used in different context and subject areas. Majority of these studies are in the area of English language and mathematics. Teaching in PE has different demands due to the subject matter and the context. The effectiveness of these strategies, the frequency of its use and their challenges in the PE context has not been explored enough hence little information is available. This study is to explore the strategies PE teachers use in teaching MACs, the reasons for their choice of strategy and the challenges they encounter in teaching MACs.

CHAPTER THREE

RESEARCH METHODS

The purpose of the study was to examine the strategies adopted by PE teachers in the Central Region of Ghana to manage students' diversity in Mixed Ability Class (MAC) and the factors that influence teachers' choice of strategies for teaching mixed ability during instruction. This chapter provides detailed description of the methodology that was employed in the study. This includes the population, sample and sampling procedures, research design, research instrument, data collection procedure and the method of data analysis that was used to find out how SHS PE teachers manage students' diversity in a MAC.

Research Design

The study used a descriptive survey research design. Survey research design is a procedure in quantitative research in which investigators administer a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviours, or characteristics of the population (Creswell, 2012). Surveys use a standard set of questions to get a broad overview of a group's opinion's, attitudes, self-reported behaviours, and demographic and background information (Onley & Barnes, 2008).

Survey research was selected for quantitative assessment because it provides an economy of design and ease to generalize from a sample to a given population. A survey also provides a quick turn-around time for collecting data and identifying attributes of a population from a comparative small group of people (Babbie, 1990).

Study Area

The study was conducted in the Central Region of Ghana. It occupies an area of 9,826 square kilometers or 4.1% of Ghana's land area, making it the third smallest in area after Greater Accra and Upper East. It shares common boundaries with Western Region on the west, Ashanti and Eastern Regions on the north, and Greater Accra Region on the east. On the south is the 168-kilometre length Atlantic Ocean (Gulf of Guinea) coastline. The region's economy is dominated by services followed by mining and fishing. The figure below shows the study area.

Figure 1: Map of Central region showing Districts

Population

The population for this study comprised all public SHS PE teachers in the Central Region of Ghana. There are 68 public SHS in Central Region with 135 PE teachers (GES, 2016).

PE teachers are specialist in the teaching of the PE as a subject. SHS PE teachers receive four year training from the University of Cape Coast or University of Education, Winneba. Teachers after the four years are awarded degrees. Others further pursue post graduate studies to get second degrees. The training exposes them to how knowledge on how to teach PE in the school, their major responsibility is teaching of PE to help students acquire knowledge and basic skills. They further nurture talents for competitive sports.

Sampling Procedure

The entire population was purposively sampled for the study. A purposive sampling was employed because the PE teachers are experts in the area of PE (Ogah 2013; Tolmie,Muijs & McAteer, 2011) and possess the information and experience that is of interest to the researcher. Since the population was small enough, data was collected from all members to create valid knowledge about them. The respondents were all 135 trained PE teachers from the 68 public SHS in the Central Region.

Demographic information of SHS PE teachers

The demographic information of PE teachers included gender, age, teaching experience, academic qualification and average class as shown in Table 1. Of the 129 teachers used in the study, 79.1% (*n = 102*) were males and 20.9%

(*n* = *27*) were females. It was not surprising that majority of the teachers were male because PE is a male dominated discipline hence few females offer PE at the pre-service education level.

Also pertaining to the age of the teachers as shown in Table 1, the findings indicated that, most PE teachers 86% (*n* =111) were 35 years and above, and only a small proportion of the PE teachers 14% (*n* = 18) were below 35 years. Table 1 indicated that a majority of the PE teachers are very experienced as 80% (*n* =103) had experience of six years and beyond. Experience of PE teachers might influence how they choose teaching strategies in MACs.

On the academic qualification of respondent, majority 65% (*n* = 84) of the respondent had their first degree. This may be as a result of the fact that, the minimum requirement to teach in the SHS in Ghana is first degree. Also, 85% (*n* = 113) of the respondents reported having an average class size of 31 and above while 15% (*n* = 20) reported having an average class size below 30. The demographic distribution of PE teachers is presented in Table 1.

Table 1- *Demographic Information of SHS PE Teachers*

Variable	Category	Frequency	%
Gender	Male	102	79.1
	Female	27	20.9
	Total	**129**	**100.0**
Age	20-25 years	4	3.1
	26-30 years	14	10.9
	31-35 years	24	18.6
	36-40 years	33	25.6
	Above 40 years	54	41.9
	Total	**129**	**100.0**
Teaching Experience	Below one year	4	3.1
	1 - 5 years	22	17.1
	6 – 10 years	32	24.8
	11 – 15 years	28	21.7
	16 – 20 years	21	16.3
	21 – 25 years	14	10.9
	26 – 30 years	5	3.9
	Above 30	3	2.3
	Total	**129**	**100.0**
Academic Qualification	Masters	45	34.9
	Degree	84	65.1
	Total	**129**	**100.0**
Average Class Size	Below 21	4	3.1
	21 – 30	16	12.4
	31 – 40	28	21.7
	41 – 50	36	27.9
	51 – 60	16	12.4
	Above 60	29	22.5
	Total	**129**	**100.0**

Source: Field Data, 2018

Data Collection Instrument

The instrument used in gathering information was a researcher generated questionnaire. The questionnaire was designed based on the issues from literature of previous studies, as well as the key variables in the research questions. The instrument consisted of four sections (section A-D) with a total of 26 items. Section A had 5 items which sought to collect background information of participants.

Section B had five items exploring the teaching strategies teachers use in teaching MACs. The items were presented on an ordinal scale (Never, Rarely, Often, Very often and Always). The respondents were to choose responses applicable to statements given by ticking in the appropriate column. Section C had seven items exploring the factors that influence teachers' choice of a particular teaching strategy. It was represented on a four point Likert scale (strongly disagree, disagree. Agree and strongly agree).

Section D had 9 items exploring challenges teachers face in teaching MAC. It was also presented on a four-point Likert scale, Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The questionnaire contained items of closed-ended type. The respondents were to choose responses applicable to statements given by ticking in the appropriate column.

Validity of the instrument

Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are (Joppe, 2000). To check for the validity of the instrument, the researcher gave it to three lecturers at

the Department of Health, Physical Education and Recreation at the University of Cape Coast to evaluate the questionnaire for content and construct as well as face validity. After their feedback was received, the necessary changes to the content of the questionnaire were made. The instrument was finalized with the help of my supervisors.

Reliability of the instrument

After the validity of the instrument was ascertained, the improved questionnaire was pilot-tested to establish not only its reliability but also to identify defective items, and ensure that the instrument is clearly understood by respondent. Reliability, according to William (2006) refers to consistency or 'dependability' of the measurement or the extent to which an instrument measures the same way each time it is used under the same condition with the same subjects.

It is easy to overlook mistakes and ambiguities in question layout and construction when designing a questionnaire (Wilkinson & Birmingham, 2003). Besides, Awanta and Asiedu-Addo (2008) also cautioned that it is possible to design a questionnaire that is reliable because the responses are consistent, but may be invalid because it fails to measure the concept it intends to measure. In view of this, the survey instrument was pilot tested. A pilot test of a survey questionnaire is a procedure in which a researcher makes changes in an instrument based on feedback from a small number of individuals who complete and evaluate the instrument (Creswell, 2012). A sample of 30 trained PE teachers in Ashanti Region of Ghana was used for the pilot study. The feedback of the

respondents helped to improve the quality of the survey in terms of content coverage, content validity and reliability. The Cronbach alpha was calculated to check the reliability of the questionnaire using SPSS. SHS PE teachers' survey questionnaire showed a Cronbach alpha of 0.74 which was highly reliable.

Data Collection Procedures

An introductory letter was obtained from the Department of Health, Physical Education and Recreation at University of Cape Coast. The Introductory letter was then given to the Headmasters/Headmistress of the participating SHS. With consent from the Headmasters/Headmistress, the Heads of the PE department of the participating schools were informed about the study. Ethical clearance was also sought from the institutional review board of the University of Cape Coast. Participants were assured of the anonymity and confidentiality of their responses. Informed consent form was given to participant to sign and they were also assured of their withdrawal from participation at any point when they are not comfortable. The questionnaire was then administered personally to the PE teachers. The questionnaire was administered personally to help improve the collection and response rate of the questionnaire. The questionnaire was collected as soon as it was completed by the respondents. This enabled the researcher to obtain a higher response rate.

The questionnaire was given to the teachers during the Regional Schools and Colleges Athletics competition. The few teachers who were not present at the competition were given questionnaires to complete in their schools.

Data Processing and Analysis

The questionnaires after retrieval were screened to check if they were duly completed. After screening the questionnaire, the responses were coded. The data after entry was processed using the Statistical Package for Social Science (SPSS), a computer program software package that provides statistical analysis and data management system. To answer research question one, the mean and standard deviation was calculated. In order to ascertain the level of usage of a particular teaching strategy by PE teachers, the deviations used in Ngugen and Godwyll (2010) were used depending on the mean of each as follows: 1.00 to 2.60 – rarely used, 2.61 to 3.40 – often used and 3.4-5.00 – frequently used. This statistical tool was used because it helped in determining the distribution of teachers' practices and their strategies. This aided in giving a general description of PE teachers' teaching strategies used in their MACs and their implication on students learning.

To answer research question two, the means and standard deviations were calculated for each of the barriers. A mean score greater than or equal to 2.0 indicated a barrier while a mean score less than 2.0 indicated that the statement is not a barrier. This criteria was used because the items to answers this question was on a four – point scale average. This brought to light which barrier teachers see as the more challenging and the least based on their means

Research question three was also analyzed through the use of multiple regression. Five multiple regression models were developed with the independent variables remaining the same (demographics, class size, availability of teaching

and learning materials, allocated time, student's needs, knowledge of the teaching strategy, availability of space and the objective of the lesson). The dependent variables were the teaching strategies. The b constants, standard deviation and betas were calculated for each model. The measures of significance were calculated through inferential statistics (f-score) and coefficient of determination (R) at a significance level of .05 ($p < 0.5$).

CHAPTER FOUR

RESULTS AND DISCUSSION

The purpose for this study was to investigate the strategies adopted by PE teachers to manage students' diversity in a MAC and also examined the factors that influence teachers' choice of these strategies for teaching MAC during lesson in the Central Region of Ghana. The results are presented under the following themes: (1) teaching strategies adopted by PE teachers in MAC (2) factors that influence teachers choice of a teaching strategy (3) Challenges PE teachers' face in teaching mixed ability student.

Research Question One: What Teaching Strategies do Teachers use to Teach Students with Mixed Abilities?

The purpose of this research question was to explore the teaching strategies adopted by PE teachers in Central Region to teach their MAC. To answer this question, the mean, standard deviation, the percentage, and the percentile grade for each of the teaching strategies, and the total grade were calculated. A mean of 3.41 and above indicate that a teaching strategy is frequently used, between 2.61 - 3.40 indicate that a teaching strategy is often used and a mean score below 2.61 indicate that a teaching strategy is rarely used.

The results showed that PE teachers often use the teaching strategies as indicated by a general mean and standard deviation of (M = 2.98, SD = 0.63). Whole class teaching strategies was the most frequently used teaching strategy by PE teachers with a mean score of (M = 3.75, SD = 1.008) while Corporative/group teaching, individualized teaching and peer teaching strategies

were also often used as indicated by the mean scores of (M = 3.19, SD = 1.004), (M = 2.75, SD = 1.238) and (M = 2.67 SD =1.048) respectively. Station teaching is the rarely used teaching strategy by PE teachers with the mean score of (M = 2.54, SD =1.038). The result is presented in Table 2.

Table 2- *Means, Standard Deviations, Ranks, and Grade of Strategies by PE Teachers to Teach Students with Mixed Abilities*

Teaching Strategies	**Mean**	**Std. Deviation**	**Rank**	**Grade**
Cooperative/Group Teaching	3.19	1.044	2	Medium
Whole Class Teaching	3.75	1.008	1	High
Station Teaching	2.54	1.038	5	Low
Peer Teaching	2.67	1.048	4	Medium
Individualized Teaching	2.75	1.238	3	Medium
Overall Teaching Strategies	**2.98**	**0.627**		**Medium**

Source: Field Data, 2018

The findings of the study revealed that whole class teaching strategies is the most frequently used teaching strategy by SHS PE teachers in Central Region. It is not surprising that SHS PE teachers are using whole class instruction most frequently as it is the most appropriate to use to introduce new topics or skills and the use of other strategies precede whole class instructions. The predominance in the use of whole class instruction by PE teachers can also be linked to the fact that the structure of most schools (student-teacher ratio, allocated time, physical space, etc.) are built and designed to facilitate a whole-class instructional environment.

This result means that, although SHS PE teachers in Central Region are using various instructional strategies in their MACs, they may not be able to adequately manage students' diversity as they predominantly use whole class teaching. This is because whole class instruction enables the teacher to manage their time and resources but do not encourage individualization. Individualization, interaction between student and opportunity for students' participation are also minimal during whole class instruction as described by Hall (2002). This makes its predominant usage by PE teachers in their MACs less effective for managing students' diversity.

The finding is in line with that of Snow (2003), who concluded that whole-class teaching strategy is considered traditional instruction and remains a predominant form of instruction for teachers in most countries. Similar results were revealed in the study of Kulinna and Cothran (2003) with American PE teachers when they found that teachers frequently use teacher centered instruction. This similarity in the finding can be linked to the similarities in the population and the sample sizes used in both studies. The population comprised trained PE teachers and the samples were quite small. Different populations and larger sample sizes may produce different results.

The findings also revealed that corporative/group teaching, individualized teaching and peer teaching strategies were often used strategies by PE teachers. Based on this finding, it can be said that new and innovative student-centered strategies are not frequently used by PE teachers in the Central Region. This implies that students are not always given the chance to work as in groups neither

are they always allowed to work as individuals. This confirms the conclusion by Snow (2003) that despite the availability of new and innovative instructional strategies such as differentiated instruction, cooperative learning, individualized teaching, peer tutoring, and computer-aided instruction, teachers hardly use them but rather rely heavily on whole-class instruction.

Additionally, the findings revealed that station teaching was rarely used teaching strategy by PE teachers in the Central Region. Station teaching being rarely used strategy can be related to the fact that station teaching requires extra time which PE teachers do not have for both planning and delivering lessons as a single teacher has to teach a number of classes with large number of students. As stated by Anderson (2002), station teaching is one of the most effective strategies for teaching MAC in PE. This is because, it allows individualization, student interaction, increased participation and decreases students waiting. More importantly, it allows the teacher to present the same activity with different level of difficulty at the same time during instruction. This helps to keep students' interest in an activity as they will get the opportunity to skip stages they already know and start from a more advanced stage. The implication of its less use by PE teachers is that teachers may not be able to engage all students at the same time during instruction which may bring about destructive behaviours as students wait to have their turns in individual activities. It may also bring boredom as all students will have to go through all stages of the lesson even if they can perform the activity.

This finding is supported by Kulinna and Cothran (2003) who found that teachers frequently use teacher - centered instruction rather than student - centered strategies. Teacher - centered instruction is time efficient as the teacher controls and engages all students in the lesson hence less time wasted on class control. It also helps to keep students' attention as they are afraid they may be called by the teacher to answer question. Teachers use more teacher - centered instruction to manage their limited resources. Additionally, teachers use more teacher - centered instruction because they feel apprehensive about losing their hold over their students.

Research Question Two: What Barriers do Teachers Encounter in Managing Mixed Ability in PE Lessons in Senior High Schools?

The purpose of this research question was to explore the challenges PE teachers face in teaching MAC. To answer this question, the means and standard deviations for each barrier were calculated. A mean score greater than or equal to 2.0 on the scale indicates a barrier while a mean score below 2.0 on the scale indicates that a statement is not a barrier in managing MAC by PE teachers in Central Region. This criteria was used because the average of 4.0 on the scale was 2.0 and therefore any score above the average means the challenge exist.

The results showed that all the challenges investigated were perceived as barriers by PE teachers in the Central Region with a total mean score of$[M = 2.62, SD = .588]$. However large class size was the biggest challenge PE teachers encounter in teaching MAC with a mean score of $[M = 3.03, SD = .943]$ followed by inadequate allocated time $[M = 2.94, SD = .925]$, inadequate equipment $[M = 2.80, SD = .930]$, inadequate facilities$[M = 2.80\ SD = .913]$,

lack of teaching assistants[$M = 2.42, SD = 1.005$], inadequate teaching space[$M = 2.42, SD = .899$], managing classroom behaviour [$M = 2.35, SD = .845$], lack of experience [$M = 2.28, SD = .935$], and lack of knowledge[$M = 2.16, SD = .900$]. The result is presented in Table 3 on page 80.

The findings of the study enumerate the perceived barriers of teaching MACs in the Central Region of Ghana. These challenges have been examined by several studies and have been proven to be real challenges in MACs. Large class size was the most prevalent barrier PE teachers in the Central Region encounter in teaching MACs. The reality of teaching a class of over 30 students is a difficult endeavor. In addition, these students have their own individual levels of abilities which make the situation more difficult to deal with. As revealed by the demographic information, 85% of the PE teachers in Central Region teach an average class size of 30 students or more. This reality makes large class size a barrier to teachers in the Central Region. The implication of this finding is that the increased number of the students in the classroom weakens the ability of the PE teacher to teach the students using different kinds of teaching strategies and to take into account the individual differences, as well as to provide students with the feedback to correct their errors.

This finding is supported by Domfeh et al. (2012) who stated that lack of facilities and equipment coupled with minimal time allotted for PE on the time table and the practical nature of the subject makes large class size major constraint to teaching PE in schools in Ghana. This similarity can possibly be explained by the fact that both studies used descriptive survey design.

Table 3 – *Challenges Facing the Teaching of Mixed Ability Student*

Challenges of Teaching Mixed Ability Classes	Mean	Std. Deviation	%	Degree of Challenge
Large class size limits my ability to attend to individual students	3.03	.943	75.8	High
Inadequate allocated time limits my ability to meet the needs of individual students	2.94	.925	73.5	High
Inadequate equipment limits my ability to attend to individual students	2.80	.930	70.0	High
Inadequate facilities limits my ability to attend to individual students	2.80	.913	70.0	High
Lack of teaching assistant pose a challenge in mixed ability classes	2.42	1.005	60.5	Medium
Inadequate teaching space pose a challenge in teaching mixed ability classes	2.42	.899	60.5	Medium
I find it difficult to manage classroom behavior in mixed ability classes	2.35	.845	58.8	Low
I do not have adequate experience in dealing with students with mixed ability	2.28	.935	57.0	Low
I do not have adequate knowledge on how to teach mixed ability classes	2.16	.900	54.0	Low
Overall Challenge	2.62	.588	65.5	Medium

Source: Field Data, 2018

The study area and the population in both studies could also be a factor as Ghanaian public schools have similar characteristics in terms of staff, structures, and their enrolment levels hence similarities in the finding.

Additionally, increased numbers affects distribution of equipment and students' practice time. This finding is supported by Whipp, et al. (2014) who agrees that although PE teachers are aware and had practiced various possible classroom strategies to deal with mixed ability situations, large class size limits their ability to implement mixed ability teaching. The similarities in these results can possibly be related to the fact that the population in both studies is PE teachers and their subject characteristics are the same. Miranil and Chunawala, (2015) also postulated that the large number of students found in classrooms makes it difficult for teachers to pay attention to students' individual needs in MACs. Again, Harrison (1992) also opined that many of the sports programmes are difficult to apply due to the increased number of students in the classroom, and also insufficient learning time required for applying. Similar findings have also been reported by Haung (2014) and Brabo (2014). The similarities in the findings can be associated with the fact that the population in both studies was purposively sampled PE teachers. They all taught PE at SHS level and had similar characteristics in terms of education and gender compositions. Haung and Brabo also used descriptive survey and collected data by use of questionnaires and these may account for the similarities in the findings.

Inadequate allocated time was found as another barrier PE teacher's encounter in teaching MACs. This can be attributed to the fact that PE teachers in

Central Region have one or two 45 minutes periods a week for each class they teach. Since equipment is also seen as a barrier in this study, it means the limited time the teachers have may be wasted as students wait to have their turns. The implication of this finding is that PE teachers may not be able to attend to students individually. This barrier can have a negative influence on student achievement as stated by Silverman et al. (1988) that time spent with the subject matter is strongly correlated with student motor skill achievement in PE The finding corroborates with Haung (2014) that limited hours of instruction causes difficulties in mixed ability classes as the teacher may not be able to give attention to individual students as they wish. Miranil and Chunawala (2015) also had similar findings stating that despite teachers' knowledge on a number of strategies to use in mixed ability class; limited instructional time makes it difficult to implement these strategies. Whipp et al. (2014), equally agrees that one of the major challenges PE teachers face in MACs is limited time for teaching PE in schools.

Facilities and equipment were also found to be barriers PE teachers encounter in the teaching of MACs. Adequate facilities and equipment are essential to every instruction or contact as these will facilitate the teacher-student interaction. The inadequacy of equipment and facilities makes teaching in MAC more challenging as more resources are needed to cater for individual student's needs. The plausible reason for this outcome could be lack of funds/financial supports for schools from organizations in the school community; the high prices of the sports equipment and facilities; and the decline of the budget given to the

schools from Ministry of Education for PE This finding affirms Haung (2014) and Illoanya (2014) stating that lack of resources, facilities and equipment pose a great deal of challenge in MACs. Haung's employed a descriptive survey and collected data through the use of questionnaire. These are similar to that of this study. These similarities may account for the similarities in the findings.

Classroom behavior management was also found as a barrier teachers encounter in teaching MACs. Classroom behavior management is a challenge because PE teachers in this study teach large classes. The number of students found in the PE class makes it difficult for teachers to manage students' behaviour. This means that students may exhibit destructive behaviors during instructional period which will affect teaching and learning. This finding is in line with Baker (2002) who contends that it is difficult to manage students' behaviour and keep their attention in MACs as well as Ur (1991) who also found that one of the major challenges in MAC is managing student behaviour.

Finally, knowledge and experience was also found as a barrier by PE teachers in managing MACs. It is surprising that PE teachers in the Central Region see knowledge and experience as a challenge since majority of the teachers in the study were degree holders and had a minimum of six years teaching experience. This is in line with the findings of Bremner (2008). She found out that teachers lack of knowledge and experience to explore different instructional strategies in mixed ability classes. This similarity can be explained by the fact that the sample sizes for both studies were quite small. Larger sample size may generate different findings.

Research Question Three: What Factors Influence Teachers' Choice of Strategy for Teaching Mixed Ability Classes?

The purpose of this research question was to explore the factors that influence PE teachers' choice of a teaching strategy in teaching MAC. To answer this question, multiple regression was used. Multiple regression was used because there was one dependent continuous variable and more than two independent variables. There was a linear relationship between the dependent and the independent variables. Independent variables were not highly correlated therefore there was no multicollinearity. The data did not show any significant outliers and was normally distributed. Five multiple regression models were developed with the independent variables being the demographic factors (i.e., gender, age, and years of teaching experience), and teaching/subject characteristics (class size, availability of teaching and learning materials, allocated time, student's needs, knowledge of the teaching strategy, availability of space and the objective of the lesson) as cooperative/group teaching, peer teaching, individualized teaching, whole class instruction and station teaching been the dependent variables

Test of correlation between the predictor variables ranged from low ($r = 0.01$) to moderate($r = 0.62$) hence I used the enter method multiple regression analysis. The results showed that, the overall model for predicting cooperative/group teaching was significant (*S.E. =1.009, B= 1.95,*$p < 0.05$) and contributed 14% of the variance in cooperative/group teaching. However, only availability of space was a significant predictor of cooperative teaching strategy with a contribution of 13% at $p < 0.05$. The overall model for predicting whole

class teaching was significant (*SE*= 0.981, *B=1.80, p<0.01*) and contributed 13% of the variance in whole class teaching. However, gender, experience and class size were significant predictors of whole class teaching with contributions of 41%, 5% and 29% at *p<0.0.5* respectively. The result also showed that the overall model for predicting station teaching was not significant (*S.E=0.953, B=1.13, P>0.05*). However, allocated time is a significant predictor of station teaching with a contribution of 51% at *p<0.001.*

The multiple regression additionally showed that the overall model for predicting peer teaching was significant (*SE*= 0.996, *B=1.8, p <0.01*) and contributed 17% of the variance in peer teaching. However, age, experience and knowledge of the strategy were significant predictors of peer teaching with contributions of 30%, 15%and 32% at *p<0.01, 0.0.5,* and *0.01* respectively. The multiple regression further showed that the overall model for predicting individualized teaching was significant (*SE*= 1.174, *B=1.65, p<0.05*) and contributed 17% of the variance in individualized teaching. However, gender, age, and objective of the lesson were significant predictors of individualized teaching with contributions of 17%, 52%and 32% at *p<0.0.5.* The result is presented in Table 4 on page 86.

The findings revealed that PE teachers' decision to use cooperative/group teaching is mostly determined by the space available to them during instruction. Availability of space is a crucial factor which determines the success of cooperative/group teaching especially in the area of PE.

Table 4– *Predictors of Instructional Strategy Choice*

Predictor	Dependent Variables														
	Cooperative/Group Teaching			Whole - Class Teaching			Station Teaching			Peer Teaching			Individualized Teaching		
	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta
(Constant)	1.95*	.66		1.80**	.64		1.13	.63		1.8**	.65		1.65*	.77	
Gender	-.03	.12	-.03	.41*	.22	.20*	-.05	.21	-.02	.05	.22	.02	-.52*	.26	-.17*
Age	.20	.13	.18	-.00	.10	-.00	-.19	.10	-.21	-.30**	.10	-.33**	-.13	.12	-.12
Experience	.05	.14	.04	.05*	.07	.078*	.10	.07	.16	.15*	.07	.23*	.04	.09	.05
Class Size	.06	.13	.05	.29*	.11	.24*	-.06	.11	-.05	.14	.12	.11	.09	.14	.06
Availability of TLM	.15	.12	.13	-.10	.12	-.09	-.11	.12	-.10	.04	.13	.04	.23	.15	.17
Allocated Time	-.26	.12	-.24	.17	.13	.13	.51***	.13	.37***	-.01	.13	-.01	.09	.16	.06
Student's Needs	.10	.12	.10	.02	.13	.02	.09	.12	.07	.07	.13	.06	.07	.15	.05
Knowledge of Strategy	.04	.11	.04	.16	.12	.15	.12	.11	.11	.32**	.12	.28**	-.04	.14	-.03
Availability of Space	.13*	.08	.20*	-.01	.11	-.01	-.03	.11	-.03	-.16	.11	-.15	-.04	.13	-.03
Objective of Lesson	-.24	.23	-.09	-.16	.11	-.16	.12	.11	.12	.07	.11	.07	.32*	.13	.27*
F	1.91*			1.71			3.40***			2.38*			2.43*		

Note: $* p < 0.05$, $** p < 0.01$, $*** p < 0.001$, *Mode 1:* $R = 0.373, R^2 = 0.139, R^2_{adj} = 0.066, SE = 1.009, F = 1.91$

Mode 2: $R = 0.356, R^2 = 0.127, R^2_{adj} = 0.053, SE = 0.981, F = 1.71$

Mode 3: $R = 0.473, R^2 = 0.224, R^2_{adj} = 0.158, SE = 0.953, F = 3.40$

Mode 4: $R = 0.410, R^2 = 0.168, R^2_{adj} = 0.098, SE = 0.996, F = 2.384$

Mode5: $R = 0.413, R^2 = 0.171, R^2_{adj} = 0.100, SE = 1.174, F = 2$

When students are working in groups during PE lessons, each group needs a considerable amount of space so that they do not disrupt or impede on each other's movement. Group/cooperative teaching environments create classrooms within the classroom. This tends to be making the classroom noisy due to the fact that each student expresses himself or herself or take part in the activity within the group. When the space is not enough then the teaching environment will be extremely noisy which will negatively affect teaching and learning. Therefore when teaching space is not enough then it is advisable to use whole class instruction to be able to control students' behaviour. Additionally, availability of space enhances the clarity in the presentation of learning task which positively enhance learning. This implies that PE teachers who have enough teaching space are more likely to use cooperative/group teaching than those without teaching space as students will have enough room to maneuver during instruction. Therefore PE teachers who teach in schools with limited space will not choose cooperative teaching as a teaching strategy. This finding is in line with Rotumoi and Too (2012) who found availability and adequacy of teaching space among others as a factor that influences the choice of teaching strategy. The possible reasons for this similarity can be related to the fact that both studies used the same design and used questionnaire as instrument for data collection. This could also be as a result of the fact that the dynamics in organizing a successful group instruction is the same across all contexts.

The findings also revealed that PE teachers' gender, experience and class size influence the use of whole - class teaching. Whole-class instruction is a type

of instruction in which the teacher teaches a topic to the whole class at the same time. The teacher has the responsibility of instructing them all at once, keeping them focused, and developing their character. It is characterized by good class control therefore males utilise whole class teaching more in order to keep close control of their classes than females, perhaps because their feelings of self-worth are more closely tied to good discipline. Again, as stated by Mills et al., (2004), male teachers have a different way of connecting with students. They are often in a better place in terms of dealing with problem students. This quality may inform male teachers' use of whole - class instruction. Female teachers are usually attached to students which will negatively affect their use of whole class instruction as they may be detached from the students in whole class setting. Again females may be quiet reluctant in controlling or punishing destructive behavior in whole - class work.

Additionally, female teachers are more concerned about their work and that of their students (Majzub & Rais, 2010) therefore they may need more intimate time with the students in other to be able to monitor their progress. This makes them less likely to use whole class teaching. This implies that male PE teachers in the Central Region are more likely to use whole class teaching than their female counterparts. This result supports a study by Al-Mulla (1998) who found that male teachers used whole class teaching strategies more often than female teachers. PE Teachers experience influence their use of whole - class instruction.

Although younger teachers were previewed to new/innovative ways of teaching, their inexperience may cause them to use more traditional strategies as they observe their mentors use them. Experienced teachers may also use whole class instruction because they are resistant to change and think they are comfortable with what they already know. This finding shows that experienced teachers are more likely to use whole - class teaching than inexperience teachers. This finding contradicts that of Ahmed (2013), who found that experienced teachers are more likely to use student - centred strategies than whole - class instruction. The contradictions in the findings can be linked to the fact that the teachers that made up the population of the Ahmed study taught more matured students (higher education) hence their use of student - centred instruction. Matured and higher level students are more autonomous in terms of decision making taking responsibilities for their learning. Therefore the students in the Ahmed study were more responsible learners than the SHS students in this study hence the use of more student centered strategies in the Ahmed study. Additionally, younger students need more attention, detailed instruction and more time to complete a task. These needs are met with experienced teachers as their practices are more refined with constant practice. The contractions can also be linked to the fact that the teachers in the Ahmad study have received a number of in service - trainings which has improved their pedagogical practices.

Hamzeh (2014) also found that teachers experience significantly affect their use of whole class instruction. These studies were similar in terms of research design and instrument for data collection. Descriptive survey was used

and data was collected through questionnaire. These similarities may have accounted for the similarities in the findings.

The number of students a teacher teaches predicts the teacher's use of whole - class instruction. This is because as the number of students in a class increases, class control and behaviour management by the teacher becomes more difficult. Equipment and time available to the teacher also become inadequate. Therefore, teachers with large number of students are more likely to use whole - class instruction as it enables them to control behaviour and manage time. This finding mirrors that of Bolachandran (2015) with the assertion that class composition in terms of numbers influences a teacher's decision to use teacher - centred instructions. Although the teachers in Bolachandran's study were mathematics teachers, their class composition in terms of number of student was similar to what was found in this current study. Both teachers taught large class sizes. This could explain why class size influenced the type of strategy they used.

The finding additionally revealed that allocated time for teaching PE is a significant predictor of station teaching. Station teaching is a teaching strategy that arranges the environment in a way that two or more tasks are going on in the classroom simultaneously. The amount of time a teacher has influences their decision to use station teaching. This can be related to the fact that station teaching allows the PE teacher to set same activities at different levels of difficulties at the same time. Teachers are able to put students at different stations to practice based on their abilities or entry levels hence his ability to manage time. Station teaching enhances practice time either the teacher has limited or adequate

time. This finding confirms the assertion of Obi (2009) that the class size influences a teacher's decision to use station teaching. These similarities in the finding can be associated with the populations studied in both research as they comprised of SHS teachers who taught practically oriented subjects.

Furthermore, the study revealed age, teaching experience and knowledge of a particular teaching strategy as informative of PE teachers' decision to use peer teaching in teaching PE in the Central Region of Ghana. Peer teaching is an instructional strategy that transfers the teacher's responsibility for instruction to a student. Although teachers gather more experience with age and several years of teaching, their confidence to try new and innovative teaching practices decreases (Nicklin, 1992). Other teachers may not have the opportunities for in-service training to improve their pedagogical practices. Younger teachers may possess more knowledge on new and innovative teaching strategies. The finding implies that a teacher's age and experience inform their use of peer teaching strategies. This result is in line with Broady, Chan and Caputi (2010) who concluded that age and experience are significant predictors of peer teaching as younger teachers are quick to explore new strategies. The smaller sample sizes and the research designs used in both studies may have accounted for the similarities in the findings. Again this similarities can also be tied to the fact that majority of the participants in both studies were quiet old and had taught for a minimum of 5 years.

Consequently, the findings revealed that a teacher's decision to use individualized instruction is influenced by gender, age and objective of the lesson.

Objectives are statements of desired student outcomes, thus the knowledge, skills, attitudes, values, and dispositions that you want to develop in your students. It helps the teacher to establish a direction to guide learning (Pintrich & Schunk, 2002). It also helps the teacher to maintain a standard teaching pattern and not let the class deviate from the topic. The predictive power of lesson objective on individualized teaching can be attributed to the fact that individualized teaching is mostly used for remedial purposes (Green, 2013). Female and younger PE teachers may fraternize and work more closely with their students at their level due to the closeness of their age bracket and their tenderness which will influence the use of individualized instruction. Again Al-Shammakhi & Al-Humaidi, (2015) stated that female teachers could be more interested in the profession. So they are enthusiastic during their lessons and they try to keep closeness with students to encourage and motivate them more to participate. Additionally, females may use individual instruction on the basis of their attention to details. This will get them close to students to monitor their progress.

This finding supports that of Klieme and Vieluf (2009) who found that age, gender and the lesson being taught influence a teachers' innovation in terms of teaching strategy. It is also in line with Williams (1993), who suggested that the learning outcome is an important determinant of a teaching strategy. On the contrary, Macfaden and Campbell (2006) reported that PE teachers least consider the lesson objectives when considering a teaching strategy. This contracts in findings could possibly be explained by the population in the two studies. Macfaden and Campbell studied teachers who taught in basic school therefore the

teachers could be more concerned about the students' safety as compared to the teachers in this study who taught SHS students. Also the teachers in the Macfaden and Campbell study choose their teaching strategies based on the resources they had at hand hence had no choice to consider the objective of the lesson.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to investigate the strategies adopted by PE teachers to manage students' diversity in a MACs and also examined the factors that influence teachers' choice of these strategies for teaching MACs during instruction in the Central Region of Ghana as well as the challenges teachers encounter in teaching MACs. This chapter presents summary, conclusions based on the results and findings and the recommendations.

Summary

Descriptive survey design was adopted for the study. This design is considered appropriate because it provides an economy of design and ease to generalize from a sample to a given population. A survey also provides a quick turn-around time for collecting data and identifying attributes of a population from a comparative small group of people. The population for the study involved all 135 trained PE teachers in the Central Region of Ghana. The entire population was purposively sampled for the study. Researcher - generated questionnaire was used for data collection. The questionnaire was designed in relation to the research questions and knowledge of existing literature. Reliability and validity of the instrument were ensured. Descriptive statistics (Frequency, percentages, mean and standard deviation) and inferential statistics (multiple regressions) were used in analyzing and discussing the result.

Key Findings

The findings of the study were as follows;

1. SHS PE teachers in Central Region frequently use whole - class instruction to teach their MAC. It also revealed that peer teaching, cooperative/group instruction and individual instruction are often used teaching strategies by PE teachers in Central Region. Station teaching was revealed as the rarely used teaching strategy by PE teachers in Central Region.
2. Large class size was the most prevalent barrier PE teachers in the Central Region encounter in teaching MACs followed by inadequate allocated time, inadequate equipment, inadequate facilities, lack of teaching assistants, inadequate teaching space, managing classroom behavior, lack of experience, and lack of knowledge.
3. The findings also revealed that SHS PE teachers in Central Region decision to use whole class instruction is influenced by the teacher's gender, experience and the number of students they taught. The amount of space available to a teacher influences their decision to use group/cooperative. The use of station teaching by SHS PE teachers in Central Region is influenced by the amount of teaching time available to them. PE teachers' age, experience and knowledge influences the use of peer teaching.

Conclusions

Based on the findings, it is concluded that the needs of a percentage of students are likely not to be met by PE teachers in the Central Region due to the over reliance of whole - class instruction as a strategy for their mixed ability class. Teachers are more likely to use different instructional strategies for their mixed ability classes when there is a reduction in the number of students per class. The reliance on whole - class teaching strategy is influenced by factors such as gender of teachers, age of teachers, large class size, unavailability of facilities and equipment, limited time allocation, lack of teaching assistance and inadequate knowledge and experience.

Recommendations

A number of recommendations were made in this study. Some of the recommendations are for action by stakeholders in education while others are for further research.

Recommendations for Practice

1. School administrations should organize regular in-service training for PE teachers to upgrade their knowledge and pedagogy for their MACs. This will increase teacher confidence and enhance the use of more student centered instructional strategies than teacher centered.
2. Ghana Education Service in Central Region should train and employ more PE teachers. This will reduce the teacher student ratios in the schools. It will also enable teachers to teach fewer students per lesson hence increasing their ability to tailor instruction to students' needs.

3. Educational stakeholders in Central Region need to provide and supply adequate facilities and equipment for the teaching of PE. When facilities and equipment are available and adequate, it will motivate PE teachers to explore different instructional strategies that require the use of more equipment. Again the school Heads and administrators are advised to include in their budget monies for facilities and equipment.
4. School administrators should increase the time allocated for the teaching of PE Increased teaching time means more contact hours with student hence more practice time. The more time spent on practicing a particular skill, the better the chance of acquiring it. Therefore, student achievement in PE will improve when time allocated is increased. Teachers will also be able to plan and teach individual lessons comprehensively when they have enough teaching time.

Recommendations for Further Research

1. Further studies involving larger samples using PE teachers in SHS in Ghana should be undertaken. This would be helpful to evaluate the extent to which the validity of the present findings can be confirmed.
2. A further study involving the use of interviews and observations is recommended. This will help to have in-depth knowledge of teachers' strategies and challenges and also ascertain the validity of their self-reported practices.

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APPENDICES

APPENDIX A

PE TEACHERS' QUESTIONNAIRE

Dear Colleague,

*This questionnaire is meant to solicit your contribution towards gathering data for a research on the title '**instructional Strategies for Teaching Students with Mixed Ability in Physical Education.** The project is in partial fulfillment of the requirements for the award of a master of philosophy degree in Physical Education. Your thoughtful and truthful responses will be greatly appreciated. Please answer each question to the best of your knowledge. Your name is not required. All data included in this questionnaire will be used only for academic research and will be strictly confidential. After all questionnaires are collected and analyzed, interested participants of this study will be given feedback on the overall research results*

SECTION A
BACKGROUND CHARACTERISTICS

Instruction

Please tick [√] in the appropriate space provided below and supply answers where required.

1. Gender: Male [ ] Female [ ]

2. Age: 20-25 [ ] 26-30 [ ] 31-35 [ ] 36-40 [ ] above 40 [ ]

3. Teaching Experience: below 1year [ ] 1-5 [ ] 6-10 [ ] 11-15 [ ] 16-20 [ ] 21-25 [ ] 26-30 [ ] above 30 [ ]

4. Academic Qualification: PhD [ ] Masters [ ] Degree [ ] Diploma [ ]

5. Average class size: below 20 [ ] 21-30 [ ] 31-40 [ ] 41-50 [ ] 51-60 [ ]

SECTION B

Instruction

From your experience as a PE teacher, please indicate by a tick [√] your degree of use of the following teaching strategies used in teaching mixed ability class.

	Teaching Strategies	Never	Rarely	Often	Very Often	Always
6.	Cooperative/Group Teaching					
7.	Whole Class Teaching					
8.	Station Teaching					
9.	Peer Teaching					
10.	Individualized Teaching					

SECTION C

Instruction

Please indicate by a tick [√] the degree to which the following factors affect your choice of a teaching strategies used in teaching mixed ability class.

	Factors	Strongly Disagree	Disagree	Agree	Strongly Agree
11.	Class size				
12.	Availability of Teaching and Learning Materials				
13.	Allocated Time				
14.	Students needs				
15.	Knowledge of the teaching strategy				
16.	Availability of space				
17.	Objective of the lesson				

SECTION D

Instruction

Please indicate by a tick [√] the degree to which the following statements pose a challenge to you as a PE teacher in mixed ability classes?

	Challenges of teaching mixed ability classes	Strongly Disagree	Disagree	Agree	Strongly Agree
18.	Large class size limits my ability to attend to individual students				
19.	Inadequate equipment limits my ability to meet the needs of individual students				
20.	Inadequate facilities limits my ability to meet the needs of individual students				
21.	I find it difficult to manage classroom behavior in mixed ability classes				
22.	Inadequate teaching space pose a challenge in teaching mixed ability classes				
23.	I do not have adequate knowledge on how to teach mixed ability classes				
24.	Inadequate allocated time limits my ability to attend to individual students				
25.	Lack of teaching assistant pose a challenge in mixed ability classes				
26.	I do not have adequate experience in dealing with students with mixed ability				

APPENDIX B

INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
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UNIVERSITY, CAPE COAST

Our Ref: **ED/MPE/15/0001/4**

5th February, 2018

TO WHOM IT MAY CONCERN

INTRODUCTORY LETTER

The bearer of this letter, Rahmat Aboagye with index number ED/MPE/15/0001, is an MPhil student of the above-named department. In partial fulfilment of the requirements for the programme, she is collecting data for her thesis titled **"Strategies for Teaching Students with Mixed Ability in Physical Education"** and would need assistance from your outfit.

We would therefore be most grateful if she could be given approval to enable her conduct the research.

We count on your usual co-operation.

Thank you.

Dr. Charles Domfeh
HEAD

APPENDIX C

INFORMED CONSENT

Title: Instructional Strategies for Teaching Students with Mixed Ability in Physical Education in Central Region

Principal Investigator: Rahmat Aboagye

Address: University Of Cape Coast, Cape Coast

General Information about Research

I am an M.Phil. Student at Physical Education at the Department Of Health Physical Education and Recreation in University of Cape Coast. I am conducting a study on the strategies for teaching students with mixed ability in physical education in Central Region. The study seeks to examine the teaching strategies used in mixed ability physical education classes, reasons why teachers choose such strategies and the challenges they face in teaching students of different ability levels in the same classroom.

Procedures

Answering of this questionnaire will last for 10 minutes. The questionnaire will be distributed and collected after completion by Rahmat Aboagye. You are being invited to take part in this survey because your experience as a physical education teacher can help me solicit information on the teaching strategies you use, why you use them and the challenges you face in teaching student with different abilities in the same class.

Possible Risks and Discomforts:

There are no possible risks.

Possible Benefits:

The result of the study will help educators to identify effective teaching strategies for teaching mixed ability students. It will also bring to light the challenges physical education teachers face in teaching students with varied needs in the same classroom. These can help stakeholders to find solutions to those problems.

Compensation:

There is no financial or material compensation to be given to you as participant in the study.

Voluntary Participation and Right to Leave the Research:

Participation in this study is voluntary and you may withdraw from it at any point. You may also refuse to answer any question that makes you feel uncomfortable

Contacts for Additional Information:

You can kindly contact Dr. Charles Domfeh (on mobile 0544756528/0504595527) for further clarification.

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of University of Cape Coast (UCCIRB). If you have any questions about your rights as a research participant you can contact the Administrator at the IRB Office between the hours of 8:00 am and 4:30 p.m. through the phones lines 0332133172 and 0244207814 or email address: irb@ucc.edu.gh.

VOLUNTEER AGREEMENT

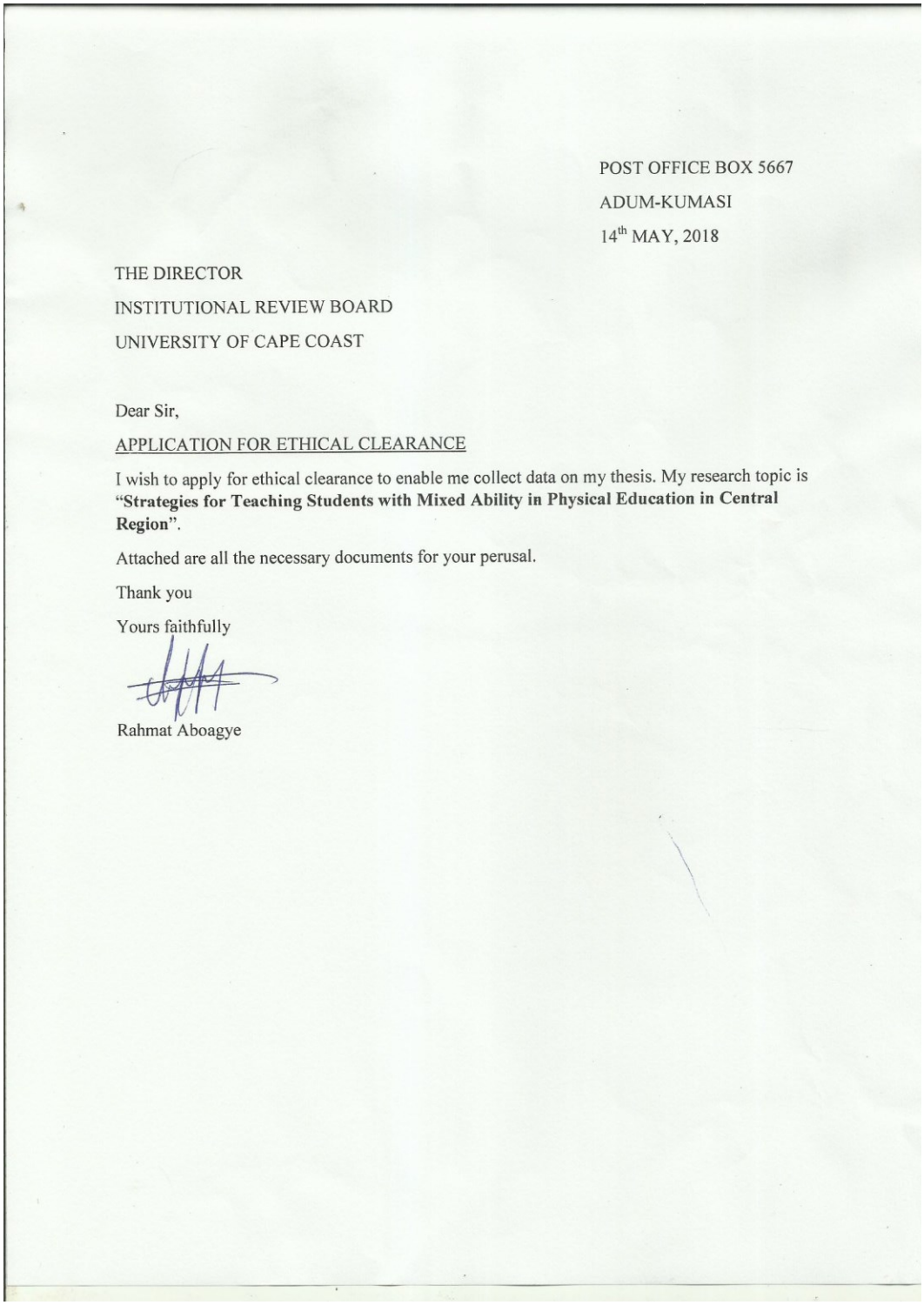
The above document describing the benefits, risks and procedures for the research title "Strategies for Teaching Students with Mixed Ability in Physical Education has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_____ _____

Date Name and signature or mark of volunteer

APPENDIX D

REQUEST FOR ETHICAL CLEARANCE



POST OFFICE BOX 5667

ADUM-KUMASI

14th MAY, 2018

THE DIRECTOR

INSTITUTIONAL REVIEW BOARD

UNIVERSITY OF CAPE COAST

Dear Sir,

APPLICATION FOR ETHICAL CLEARANCE

I wish to apply for ethical clearance to enable me collect data on my thesis. My research topic is **"Strategies for Teaching Students with Mixed Ability in Physical Education in Central Region"**.

Attached are all the necessary documents for your perusal.

Thank you

Yours faithfully

Rahmat Aboagye

APPENDIX E

ETHICAL CLEARANCE

UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309/ 0244207814
E-MAIL: irb@ucc.edu.gh
OUR REF: UCC/IRB/A/2016/252
YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

C/O Directorate of Research, Innovation and Consultancy

15TH MAY, 2018

Ms. Rahmat Aboagye
Department of Health, Physical Education and Recreation
University of Cape Coast

Dear Ms. Aboagye,

ETHICAL CLEARANCE –ID: (UCCIRB/CES/2018/01)

The University of Cape Coast Institutional Review Board (UCCIRB) has granted **Provisional Approval** for the implementation of your research protocol titled ***Strategies for Teaching Students with Mixed Ability in Physical Education.*** This approval requires that you submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research.

The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

Please note that any modification of the project must be submitted to the UCCIRB for review and approval before its implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

Samuel Asiedu Owusu (PhD)
UCCIRB Administrator

ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST
Date: 15/05/2018