ADEQUACY OF UNIVERSITY STUDENT-TEACHER PREPARATION PROGRAMME TOWARDS ACHIEVING INCLUSION OF LEARNERS WITH DISABILITIES IN PRACTICAL PHYSICAL EDUCATION LESSONS IN GHANA

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A THESIS SUBMITTED IN FULFILMENT OF REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY (PHYSICAL EDUCATION) IN THE DEPARTMENT OF PHYSICAL EDUCATION, EXERCISE AND SPORTS SCIENCE, SCHOOL OF PUBLIC HEALTH AND APPLIED HUMAN SCIENCE, KENYATTA UNIVERSITY

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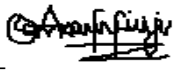
DECLARATION

This thesis is the result of my original research work and has not been presented for a degree in any other institution or university.

Signature _____  _____ Date___6TH AUGUST, 2021__

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This thesis is dedicated to the Darko and the Akuffo families.

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LIST OF ACRONYMS AND ABBREVIATIONS

APE	:	Adapted Physical Education
ATIPDPE	:	Attitude towards Teaching Individuals with Physical Disabilities in Physical Education
CoE	:	Colleges of Education (Ghana)
EFA	:	Education For All
EIPET	:	European Inclusive Physical Education Training
HPER(S)	:	Health, Physical Education, Recreation and Sports
IE	:	Inclusive Education
ITE	:	Inclusive Teacher Education
MoE	:	Ministry of Education
OCTP	:	On-Campus Teaching Practice
OECD	:	Organisation for Economic Co-operation and Development
PA	:	Physical Activity
PE	:	Physical Education
PENT	:	Positive Environments Networks of Trainers
PST	:	Pre-Service Teacher
SPSS	:	Statistical Package of Social Sciences
SWD	:	Students with Disabilities
TE	:	Teacher Education
UCC	:	University of Cape Coast
UDL	:	Universal Design for Learning
UEW	:	University of Education, Winneba

OPERATIONAL DEFINITION OF TERMS

Adaptation: Teaching and assessment approaches appropriately designed to accommodate the learning requirements of a learner with disabilities in a fixed classroom setting.

Adequacy: The sufficiency of teacher preparation programme in pedagogy, hands-on experience and intentions in relation to teaching inclusive PE.

Hands-on Experience: Practical experience or exposure in inclusive teaching.

Inclusion: Combining students with and without disabilities in the same regular education class for teaching.

Inclusive Physical Education: Teaching learners with and without disabilities in the same regular physical education class.

Instructional Skills: All the strategies and methods teachers employ to teach students.

Intention: An indication of a person's ability and readiness to execute an assigned task.

Learners with Disabilities: Students who have any form of impairment in their body.

Pedagogy Knowledge: Application of instructional, adaptation, communication and classroom management skills in a learning situation.

Practical Physical Education: Process of using physical activities to achieve skills, fitness, and knowledge that contributes to healthy living and wellness.

Student-teachers: Persons undergoing teacher training programme in a university.

Teacher Preparation: Provisions and training that student-teachers' receive in order to get a professional qualification in teaching.

University: A tertiary institution that trains teachers for all levels of education in Ghana.

University Preparation Programme: Academic training that takes place in the university which is subject specific.

ABSTRACT

Teacher preparation programmes are where prospective teachers gain a foundation of knowledge about subject matter, pedagogy and early exposure to practical experiences in all class settings. Inclusive pedagogy requires on-going development and evaluation at the pre-service stage. However, the university programme that prepares physical education (PE) teachers to teach in an inclusive practical setting is viewed as an important contributor to the quality of instruction received by students with disabilities (SWDs) in inclusive lessons. This study evaluated the adequacy of the university student-teachers preparation programmes (pedagogical skill knowledge, training methods, experiences, intentions and concerns) towards achieving the inclusion of SWDs in practical PE lessons in Ghana. The sequential mixed-method design was employed utilizing questionnaires and focus group discussion protocols in data collection. In total, one hundred and seventy-two 2018/2019 level 300 male and female student-teachers and 15 practical course lecturers of Health, Physical Education, and Recreation (HPER-UCC)-University of Cape Coast and University of Education, Winneba (HPERS-UEW) in Ghana were selected using census and purposive sampling techniques respectively. Quantitative data analysis was done using descriptive statistics of means, standard deviation and percentages. Inferential statistics of Independent sample t-test was used to test between-group differences of pedagogy and intention towards inclusion among the student-teachers. The significance level was set at $p < 0.05$. The qualitative data were transcribed into themes for analysis. Quantitative findings indicated that student-teachers from both universities had intentions to include SWDs in their practical PE classes, however, they entertained fear due to lack of practical experience in an inclusive setting. Significant difference was found to exist between the pedagogical knowledge of the student-teachers in the two universities (t (-6.010 at df (30), $p < 0.05$). Qualitative findings from both student-teachers and practical course lecturers of UCC established a concern for the introduction of an Adapted Physical Education (APE) course as part of the preparation programme. Student-teachers also advocated for the inclusion of hands-on experiences as part of the OCTP course. In conclusion, opinions were polarised for pedagogical skills in the PE preparation programme in the universities while hands-on experience was perceived to be inadequate. Concerns such as pedagogy, practical exposure and addition of disability related courses needs to be addressed. This is necessary to help improve the programme in the universities for quality development of the 21st century PE teachers for inclusive practical PE teaching. The study recommended that UCC should introduce the course APE as part of their preparation programme. Secondly, it was recommended that UEW should re-examine the course content of the student-teachers' preparation programme for Adapted PE and incorporate the practicum aspect into it. The Quality assurance divisions in the universities should ensure that subject specific content of the departmental programmes reflects the demands of policy for inclusion.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Learning how to teach all students regardless of their learning ability has become a key focus of research due to the significant impact it has on the quality of teaching and learning. Teaching is said to be challenging yet a rewarding experience when recognized as a highly multifaceted process that brings together a wide array of knowledge, skills, and competences useful in an undefined world of practice (Garrett et al., 2007). The accountability movement with its rampant educational reforms has put more emphasis on what student-teachers should know and be able to do. This in effect has also placed pressure on the continuous search for best practices for professional growth and development of teachers (Merideth, 2007).

In view of this, Adeosun et al. (2009) defined teacher education as that part of an education system charged with the preparation of teachers by developing their skills and competences in teaching for improving the quality of teachers in school systems. As a transmitter and facilitator in the acquisition of skills, knowledge and values to learners, teachers in every part of the globe, including Ghana, are considered vital assets that play a crucial role in supporting the enactment of effective inclusive physical education (PE) (Sallis et al., 2012). This is because the future of every nation's education rests on the excellent preparation and development of teachers (Ntim, 2017).

Similarly, the U.S. Department of Education (2013) looked at the teacher preparation programme as a state-approved course of study. The completion of which indicates that an enrollee has met all of the state's educational, or training requirements, or both, for a preliminary qualification to teach in the basic, or secondary schools. The term teacher

preparation programme is used variously to refer to the institution that provides teacher preparation, the programme type offered within an institution (undergraduate or graduate) or the certification offered. In this study, teacher preparation programme refers to each subject specific area in which a professional education unit offers preparation for teacher certification. Teacher preparation in PE for inclusion is the major focus for this study.

Physical Education is considered the hub of quality life within the framework of education. This is due to its positive contribution to learners' generic skills, fitness, knowledge and attitudes which are very necessary for optimal development and well-being (Walton-Fisette & Wuest, 2017). The easiest environment where learners can access PE is the school setting. Grosse (2009) reiterated that PE in schools serves as a vehicle for providing students with guided experiences that support improvement of physical health, increase motor abilities and nurture sports and leisure activity involvement. This must involve all learners, irrespective of their characteristics, ability or disability, thus the need for inclusive PE.

Inclusion, according to Block (2016) is the instruction of individuals with and without disabilities together in regular classrooms with proper support and accommodations. Rusanescu et al. (2018) also viewed inclusive PE as a procedural orientation aimed at unifying the learning process with diverse groups, which include students with and without disabilities in the PE class. PE, with its nature of practical activity, is the favourable subject for the didactic organisation of complex and challenging tasks which incite meaningful learning through problem-solving, decision-making and active methods. In the PE space, educators refine learners' gross motor skills and reinforce movements to develop kinesthetically (Klein & Hollingshead, 2015). A structured PE programme is especially

important for relaying the necessary skills and knowledge to sustain an active lifestyle (Klein & Hollingshead, 2015) among all learners throughout their lifespan.

Benefits of PE and physical activity (PA) participation for individuals with disabilities are numerous. Physical inactivity is presently viewed as a global health dilemma in modern society (WHO, 2018). Studies have shown that the obesity rates for students with disabilities (SWDs) are 38% higher than in learners without disabilities (Tovin, 2013; Klein & Hollingstead, 2015). According to Porter (2015) inclusive PE enhances the well-being of SWDs through physical activity, developing communication skills and sense of belonging, growing self-confidence, cultivating social relationships, instituting friendship as well as gaining knowledge about the rules of games. However, all these benefits can be well achieved through methodological guidelines, curricular, attitudes and intentions of the teaching staff and stakeholders involved in the educational process that favour inclusion of SWDs (Bota et al., 2017).

The education sector globally is shifting towards inclusive approaches to mitigate limitations witnessed in specialised schools. Thus, advocating inclusive methods and approaches to maximise the benefits of inclusive PE teaching. The introduction of the inclusive education policy in Ghana is currently challenging school organisations in making the general curriculum accessible to all learners (Nketsia et al., 2016). Moreover, the sustainable development goal (SDG) 4 which Ghana has adopted calls for ensuring inclusive and equitable quality education and the provision of life-long learning prospects for all. Ghana's Inclusive Education Policy (GES, 2014) also emphasises that the country's inclusive education (IE) approach should create an education system that is responsive to learner diversity and to ensure that all learners have the best possible opportunities to learn.

This is a step in the right direction towards the development of teachers with desirable qualities to enforce the 21st century inclusive education for all. Nonetheless, the implementation of this policy seems to have materialised in other subject areas in Ghana but completely overlooked in the case of PE teaching.

Further, Vickerman (2007) stated that as the inclusion movement continues, SWDs are enrolling in mainstream schools and as a result, PE teachers must be sufficiently educated and prepared to meet those needs. This includes appropriate personnel preparation and curriculum that provides the necessary information to PE teachers in the instruction of SWDs. However, if teachers are ready to plan and analyse their instructional methods, curriculum, equipment, rules and environment, then SWDs shall have full opportunity for participation in practical PE lessons (Lieberman & Houston-Wilson, 2018).

The sufficiency status of every programme determines its adequacy. However, Guerriero (2017) stated that the adequacy of a teacher training programme for all, depends on the quality of their training in pedagogical knowledge and experience. The author emphasised that the pedagogical knowledge of student-teachers needs to be processed, evaluated and transformed to ascertain its adequacy for practice. With regards to the teaching of PE, the adequacy of teacher training programme for inclusive practical PE lessons depends very much on the pedagogical knowledge (instructional and adaptation skills), practical exposure and the right intentions (behavioural beliefs and perceived behavioural control beliefs) of the student-teacher towards inclusive practical PE lessons. As to whether student-teachers have been equipped with pedagogical knowledge needs to be ascertained.

Similarly, Pederson et al. (2014) indicated that inclusive pedagogy requires on-going development at the pre-service stage in order to heighten the self-efficacy of the student-teacher in allowing for significant opportunities for SWDs in practical PE. An effective inclusive class in PE also demands knowledge in adaptation and modification. Winnick and Porretta (2017) opined that a good adaptation boosts interaction, meets the needs of all students, and improves self-esteem while providing safe experiences for all. Student-Teachers, therefore needs to have knowledge in adaptation to be able to carry out inclusion in PE.

According to Pederson et al. (2014), more practicum experiences are reflections of what pre-service PE teachers will experience in their careers and it is, therefore, needed during their training. Thus, whether the training in the universities gives student-teachers hands-on experiences needs to be established. Obrunsnikova (2008) on the other hand reported that the intentions and beliefs of physical educators become more positive as the quality of experience in handling SWDs improves.

Nevertheless, concerns about the quality of teacher preparation programmes have been raised by researchers, policy makers, experts, teacher accreditation organisations, and teachers themselves, partly because of new stress on teacher efficacy and liability (Chesley & Jordan, 2012; Ingersoll et al., 2012). At the same time, research has focused on understanding and analysing concerns of teachers, as it contributes to the reflection and improvement of programmes and practices. Raising teachers' efficacy, as well as providing them with the tools to reduce their concerns, has become an integral part of many pre-service and in-service programmes (Christophersen et al., 2016).

More so, teacher educators (lecturers) are viewed as the key players in predicting the quality of the future teacher workforce (European Commission, 2013b) as they contribute predominantly to the quality of teacher development and teaching. The role the educators/lecturers play in the development of student-teachers in the teacher preparation programme should not be overlooked in any teacher preparation study.

In Ghana, two universities have the core mandate to train PE teachers for all levels of education. The aims of the university curricula for these two institutions are to provide student-teachers with the necessary skills in pedagogy and hands-on experience. The PE teacher preparation programme in Ghanaian universities has two dimensions, viz, a general and departmental component. With the general component, PE student-teachers take educational courses in pedagogy, counselling, and special education (SPED), among others. The departmental dimension looks at the programme area courses which are offered by the department and these are run concurrently with the general courses. Each of these courses should therefore be geared towards inclusion since it has become a global phenomenon.

A survey of literature points to the fact that there is scarcity of studies assessing whether PE student-teachers have adequately acquired pedagogical knowledge (instructional and adaptation skills) and hands-on experiences during their preparation programme at the university in Ghana. This research gap in PE student-teachers' preparation and development, if not given urgent research attention, may compromise the quality implementation of inclusion in practical PE lessons for national development.

1.2 Statement of the Problem

Inclusive education is frequently associated with the Education for All (EFA) movement, stipulated by the 1990 Jomtien Declaration (GEM Report, 2015). It is an approach that is crucial to attaining the purpose and vision of EFA, which declared that all children have the right to basic quality education. At the same time, it requires that all school environments be made inclusive for all children (UNICEF, 2012). Nevertheless, evidence of isolation (Chicon et al., 2011) and less motor engagement (Qi & Ha, 2012) has been reported during PE among SWDs. It is, therefore, reasonable to assume that such real situations may largely be associated with preparation deficiencies at the PE teacher-training level for inclusion (Haegele & Sutherland, 2015). This should be an issue of concern to teacher education institutions which train PE teachers.

Common purposes for evaluating the adequacy of teacher preparation programmes include holding programmes accountable, providing consumer information on teacher preparation programmes to prospective students and their potential employers, and supporting programme improvement (Feuer et al., 2013). Inclusion of SWDs in practical PE is critical for their development, social integration and a right as per the various proclamations. Also, policies on inclusion for all levels of education is to develop curricular that is inclusive. Ghanaian teacher training institutions on their part, have implemented this policy by including courses (SPED or Adapted Physical Education-APE) that are geared towards inclusion in their teacher training programmes. The policy further states that teacher training institutions should ensure that there is sufficiently appropriate training for inclusion and also create an enabling environment to support inclusive education (MoE, 2015). However, the extent to which the university preparation programme has adequately

incorporated these policies to equip and develop PE student-teachers to man inclusive practical settings in Ghana has not been established.

PE student-teachers are expected to have acquired subject-matter content knowledge, pedagogical knowledge (instructional and adaptation skills) and hands-on experiences in all practical courses, as well as good intention of including SWDs in their regular PE practical classes during their three years on-campus preparation programme before they go out for internship. Also, the university preparation programme is supposed to merge student-teachers' subject-matter content knowledge and pedagogical content knowledge through hands-on experiences (Ntim, 2017). Inadequacy of programmes to equip university student-teachers with competences that can enable them sufficiently and successfully include SWDs in their regular practical PE lessons in an inclusive setting, may interfere with the validity of the preparation programme, if weighed in the light of the education for all policy.

Previous studies primarily explored attitudes and beliefs toward inclusion, the influence of inclusion on the learning of SWDs (Obrusnikova, 2008; Qi & Ha, 2012) and the impact of teaching strategies used to include SWDs in PE (Grenier, 2011). Studies have shown that there is a perceived lack of pedagogical competence in student-teachers at the colleges of education (CoE) level in including SWDs in general lessons in Ghana (Opoku et al., 2015; Mprah et al., 2016). However, there is negligible reflection regarding the training that student-teachers received in the university in relation to inclusion in practical PE. This follows that there is a dearth of studies that evaluate the preparation programme in the universities for inclusive teacher preparation in practical PE in Ghana. This study,

therefore, aimed at evaluating the programme adequacy and to identify any gaps for better programme reforms.

1.3 Purpose of the Study

This study aimed at evaluating the adequacy of university student-teacher preparation programmes (pedagogical skill knowledge, training methods and approaches, hands-on experiences, intentions and concerns) towards achieving the inclusion of SWDs in practical PE lessons in Ghana.

1.4 Objectives of the Study

The objectives of this study were to:

1. Determine the pedagogical knowledge on inclusion of SWDs in practical PE lessons among P.E student-teachers in two universities (UEW and UCC) in Ghana by establishing:

   a. Student-teachers' instructional skill competences on inclusion of SWDs in practical PE lessons in the two universities (UEW and UCC).

   b. Student-teachers' knowledge level on adaptation of PE practical lessons for inclusive teaching.

2. Determine the training methods and approaches used for preparing student-teachers for inclusive PE teaching in the two universities (UEW and UCC).
3. Describe student-teachers' hands-on experiences in inclusive practical PE lessons during their university preparation programme in Ghana.
4. Determine the differences in the PE student-teachers' intentions of including SWDs in practical PE lessons in the two universities (UEW and UCC) in Ghana.

a. Determine whether behavioural beliefs and perceived behavioural control beliefs predict the intentions of student-teachers' to include SWDs in practical PE lessons in Ghana.

5. Establish the concerns of PE student-teachers and practical course lecturers about the adequacy of the preparation programme for inclusive practical lessons in the two universities in Ghana.

1.5 Research Questions

The study addressed the following research questions;

1. a. What are PE student-teachers' instructional skills knowledge for the inclusion of SWDs in practical PE lessons in Ghana?

   b. What are PE student-teachers' knowledge about adaptation for inclusive practical PE lessons?
2. What are the training methods and approaches used in the two universities for preparing student-teachers for inclusive PE teaching?
3. How does the training programme in the universities equip student-teachers with hands-on experience for inclusive practical PE lessons delivery in Ghana?
4. What are the intentions of PE student-teachers towards the inclusion of SWDs in practical lessons in Ghana?
5. What are the concerns of PE student-teachers and practical course lecturers about the preparation programme for inclusive practical PE lessons in the two universities in Ghana?

1.5.1 Hypotheses

The following null hypotheses were tested:

$H0_1$: There is no significant difference between student-teachers' pedagogical knowledge for including SWDs in inclusive PE practical lessons in the two universities in Ghana.

$H0_2$: There is no significant difference between student-teachers' hands-on experiences in inclusive practical PE lessons in the two universities in Ghana.

$H0_3$: There is no significant difference between student-teachers' intentions about inclusive practical PE lessons in the two universities in Ghana.

$H0_4$: Behavioural beliefs and perceived control beliefs do not predict the intention of student-teachers to include SWDs in practical PE lessons.

1.6 Significance of the Study

The findings of this study may inform educational institutions that train PE teachers into restructuring their curricula towards equipping student-teachers for inclusive practical PE teaching. Again, the findings may help lecturers formulate pedagogical practices (instructional and adaptations skills) that will best help them equip the PE student-teachers for effective professional service, growth and development as far as inclusive practical PE lessons are concerned. It may also help in reviewing and restructuring programmes in the Department of Health, Physical Education and Recreation (HPER) in UCC and the Department of Health, Physical Education, Recreation and Sports (HPERS) in UEW, respectively. The findings can be useful to MoE for review, monitoring and evaluation of university and teacher training institutions' programmes in PE to reflect the benchmarks in their policy document on teacher training for inclusion. The findings and information gathered may serve as a basis for the designing and establishment of future teacher training

programmes in other universities and offer helpful insights to colleges of education in Ghana, as well as for future research endeavours in the area of inclusive practical PE. Finally, the findings may augment the existing literature with new knowledge about the adequacy of instructional preparation of student-teachers for inclusive practical PE lessons and professional development.

1.7 Delimitations of the Study

This study was delimited to the two public universities that train PE teachers in Ghana: University of Cape Coast (UCC) and the University of Education, Winneba (UEW), both of which are situated in the Central Region of Ghana. It was solely restricted to Physical Education as a subject. It focused on only third-year student-teachers and PE practical course lecturers in the HPER and HPERS departments of the two Universities. Therefore, the generalization of the result can only be made to the PE programmes in these two Universities in Ghana.

1.8 Limitations of the Study

One major limitation of this study was the paucity of literature on inclusive PE in relation to the university teacher preparation programme in Ghana. Another limitation was that, the inclusion and exclusion criteria did not allow every student-teacher and lecturer in the two departments to participate in the study. The study was also limited as it lacked a standardised tool to assess the practical course lecturers' inclusive practices, knowledge and inclusive preparation of student-teachers in the universities.

1.9 Assumptions of the Study

This study assumed that all the participants had adequate knowledge of the topic under investigation and gave genuine responses. The study also assumed that all responses received from both the student-teachers and practical course lecturers were the true reflections of the preparation programme for inclusive practical PE in the two universities.

1.10 Conceptual Framework

The theoretical framework for this study was an adaptation of Kolb's (1984) Experiential Learning Theory. Kolb's (1984) theory presents an approach to shaping and sequencing the curriculum and specifies how a course or a programme may be imparted to maximise a student's learning process. It proposes that learning is cyclical, comprising four phases, often referred to as knowing or feeling, observing or reflecting, thinking and doing. This theory has been used by researchers in higher education across the globe, in educational framework and development of teachers (Legge, 2014; Dakwa 2016; Girvan et al. 2016). The significant practical applications of the theory focus on the use of the whole or part of a course for systematically guiding learners through the whole cycle, with consideration for teaching strategies that are of value during practical phases of the learning cycle (Kolb, 1984). The implication is that it can be used to critically assess the learning delivery typically accessible to learners and to develop applicable teaching and learning opportunities.

Based on Kolb's (1984) theory, a conceptual framework was developed to portray the university inclusive preparation programme (pedagogy, methods and approaches, experiences) on the development of inclusive PE student-teachers as shown in Figure 1.1. This conceptual framework was developed to portray clear pathways for examining the

adequacy of university student-teacher preparation programmes towards achieving the inclusion of SWDs in practical PE as well as the resultant effect on development of PE student-teachers' for inclusive teaching. The interrelatedness of these components are presented in Figure 1.1

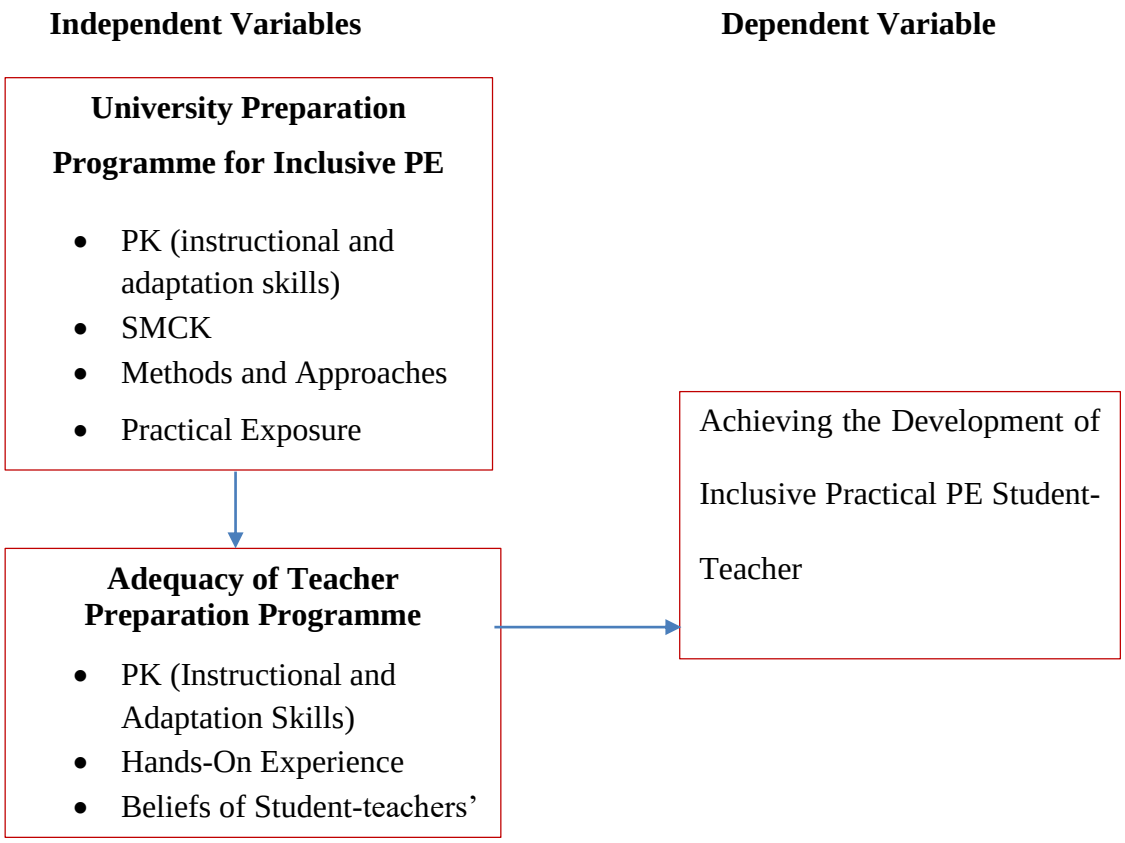

Figure 1.1: Conceptual Framework Based on Kolb's Theory of Experiential Learning.

Source: Adapted from Kolb's (1984) Experiential Learning Theory.

From Figure1.1, it is evident that the university preparation programme, aspects of pedagogical knowledge (instructional strategies and adaptation skills) subject-matter content knowledge, hands-on experience and methods and approaches employed by the lecturers for inclusive practical lessons determines the quality and adequacy of PE student-teachers' preparation and development for inclusive PE teaching. These consequently

reform the student-teachers' pedagogical knowledge, experiences and beliefs about inclusive PE teaching thereby leading to a successful student-teachers' personal and professional development. The arrows connecting the diagrams explain the essential relationship in the process of teacher preparation and development. This, in effect, leads to the student-teacher continually validating and reshaping their own beliefs and skills for inclusive teaching settings.

In summary, the adequacy of a teacher preparatory programme depends on pedagogical knowledge (instructional skills, adaptation skills (accommodation and modification), and exposure of student-teachers to hands-on experiences. These are critical to preparation, development and reshaping the future intentions and beliefs of PE student-teachers for quality teaching of PE in an inclusive setting.

CHAPTER TWO: LITERATURE REVIEW

2.1 Teacher Education

Adeosun et al. (2009) looked at teacher education as that part of any educational system charged with the training and preparation of teachers that inculcate the skills and competences of producing quality teachers for all school systems. Teacher education, therefore, denotes the procedures and policies designed to furnish teachers with the skills, attitudes, knowledge and behaviour that they require to execute their tasks effectively in the school and in the class setting (Nketsia et al., 2016).

In Ghana, teacher education is viewed as the form of preparation given to a person to make him or her professionally and academically competent and an expert educator (Republic of Ghana, 2002). There should, therefore, be sound academic preparation involving encounters with the content of various disciplines to enable the teacher to acquire a repertoire of knowledge, which builds their competence and confidence (Boakye-Akomeah, 2015). In their analysis of the teacher training programme, Boaduo et al. (2011) stated that the education and training of the twentieth-century teachers is producing student-teachers who cannot use acquired skills and knowledge in helping humans live fulfilling lives. Professional development is, therefore, important in the creation of competent teachers who can successfully manage inclusive environments.

Teacher education in Ghana is offered by institutions that award a Diploma after three years of college education and a Bachelor's degree either in Education or Science after four years at the university. The objective of Ghanaian teacher education is to nurture and develop the right type of devoted and committed teachers (Republic of Ghana, 2002). In 2015, the

Ministry of Education (MoE) in their inclusive policy document published objectives for professional training and development of teachers. The policy stated that: ‘teachers shall be equipped with pedagogical skills and ample knowledge on educational policies to meet the needs of children with special educational needs in all educational settings; the curriculum for pre-service training shall be re-aligned to inclusive education practices; and all trainees shall experience teaching using methodology that promotes the inclusion of all learners’ (MoE 2015, p. 11). This implies that the training of teachers at all levels should be linked to these objectives. However, the extent to which the university preparation programme has adequately incorporated these objectives to equip and develop PE student-teachers to man inclusive practical settings in Ghana has not been established, hence the focus of this study to address this gap.

2.2 Adequacy of Teacher Preparation Programme

The adequacy of every teacher preparatory programme is determined by its quality and sufficiency. Research has identified teacher quality as a significant factor in defining gains in student success (Munoz et al., 2012). In addition, research related to teacher preparation has identified several quality and outcome measures used to evaluate teacher preparation programmes (Noell et al., 2014). Measures of programme quality focused on programme design and implementation, the selection processes, programme resources, programme curricula, and clinical experiences. Measures of programme outcomes include teacher knowledge and skills, teacher perceptions, teacher placement and persistence, employer perceptions, teacher evaluation results, and student achievement outcomes (Noell et al., 2014).

More so, Hargreaves and Flutter (2013), reported that increasing emphasis on accountability through students' performance and ability to implement what is taught influences teaching and programme reform. Ingersoll et al. (2014) also believe that knowing how to teach is of primary importance to becoming a competent teacher. This includes, but is not limited to, preparation in the areas of coursework in teaching methods, teaching practice, preparation in how to choose and adapt instructional materials, learning theories of child psychology, opportunities to witness others teaching, and official feedback on their personal teaching (Ingersoll et al., 2014).

However, common purposes for evaluating the adequacy of teacher preparation programmes include holding programmes accountable, providing consumer information on teacher preparation programmes to prospective students and their potential employers, and supporting programme improvement (Feuer et al., 2013). Nonetheless, the adequacy of the PE student-teachers preparation programme in Ghanaian universities in terms of pedagogical knowledge, practical experience as well as intentions to include SWDs in an inclusive PE setting has not been evaluated. The current study, therefore, aimed at evaluating the programme adequacy and to identify any gaps for better programme reforms.

2.3 Inclusive Education in Ghana

The Incheon Declaration states that inclusion is both a principle and a process whereby inclusion and equity in and through education is the basis of a transformative educational agenda and that no educational goal should be considered met unless met by all (World Education Forum, 2015). The United Nations post-2015 Sustainable Development Goals agreed in September 2015 and included education as a key pillar. Goal number 4 is to

ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030.

Nevertheless, the 2015 UNICEF Report found that the global efforts toward attaining 'education for all' are yet to materialise due to discrimination, which directly restricts learners' access to education. This is particularly prevalent in Africa. Ghana as a signatory state has since taken the initiative to secure the right to education for all learners, irrespective of their abilities. There is evidence of inclusive education piloted in Ghana since the 2003/2004 academic year (Opoku et al., 2015).

Since the enactment of inclusive education in Ghana, numerous challenges and impediments that affect its understanding and operationalisation at all levels of education have been reported by Mprah et al, in 2016. The report acknowledged that student-teachers in the CoE lacked the pre-requisite skills needed to totally comprehend inclusive education in any class setting. The student-teachers expressed feelings of unpreparedness in their ability to efficiently teach SWDs (Opoku et al., 2015; Mprah et al., 2016). Consequently, these studies from Ghana reported the pedagogical preparedness of student-teachers in the colleges of education and general inclusion teaching and was not subject area specific. There is the need to establish the pedagogical preparedness of PE student-teachers in the universities, which the current study seeks to address.

2.3.1 Inclusive Policy Initiatives in Ghana

To guide inclusive education practices in the country, the Government of Ghana has developed a policy to direct its operations (MoE, 2015). The policy contains stated objectives in relation to the training of teachers for inclusive classrooms and sensitisation

on inclusive education. Another initiative taken by the Government of Ghana was the passing of the disability law (Act 715), which made inclusive education mandatory (Republic of Ghana, 2006). It is evident from research that, given the necessary resources and legislation, teachers play a crucial part in the efficient implementation of inclusion (de Boer et al., 2011).

2.3.2 Implementation of Inclusive Education in Ghana

Piloting started at the commencement of the 2003/2004 academic year with 35 schools from three regions namely Central, Eastern and Greater Accra respectively. Extension of the programme was made to 46 districts throughout the ten regions (MoE, 2015). The focus of the implementation involved the employment and training of resource teachers, orientation and sensitisation on inclusive education, and training of teaching and non-teaching staff working with SWDs in the application of suitable pedagogy (MoE, 2015). However, nothing on PE and subject area teacher training was included.

2.4 Initial Teacher Preparation for Inclusive Education

The regular education teachers are tasked with the day-to-day instruction of students and therefore, are responsible for their learning needs and outcomes. Indeed, research has acknowledged the importance of teachers for the successful implementation of IE policy (Gyimah et al., 2009). For the policies to be successfully implemented however, initial teacher education must equip teachers with the right attitudes, knowledge, skills, and competences. The 21st-century education systems have a clear need for teachers who are vibrant, competent and above all motivated and who know how to include SWDs in all class settings (Lewis & Sagree, 2013). In order to develop the skills, confidence and

experiences to include SWDs, teachers need to learn and practise IE during preliminary teacher preparation (Vickerman, 2007; Graham & Scott, 2016).

Research has established that pre-service teacher education has a positive impact on improving their knowledge of disabilities, skills, strategies and beliefs for teaching in inclusive settings (Rouse, 2008). World Report on Disability (WHO, 2011) established that in order to meet the learning needs of different categories of learners, pre-service teacher education programmes must adopt IE approaches and materials that will fully equip teachers with appropriate skills, knowledge, attitudes, and pedagogical capacities.

Similarly, a comprehensive study in some African countries, including Ghana, has established that initial teacher preparation is where teachers gain their best understanding of teaching (Akyeampong et al., 2013). Meanwhile, student-teachers felt unequipped with the knowledge and skills to address the needs of SWDs, viz, they felt unprepared to teach in inclusive settings (Hodge & Elliot, 2013; Pederson et al., 2014; Mangope & Mukhopadhyay, 2015). Ball and Tyson (2011) stressed that endorsing inclusivity through and within teacher education (TE) programmes remains a challenge and imperative for the 21st century. Although the organisation of ITE may vary, some components are critical if student-teachers are to be fully equipped to do their job effectively.

The 2013 Teaching and Learning International Survey (TALIS) identified three components considered as effective for inclusion namely: Content; (it is essential that prospective teachers have sufficient academic knowledge of the subject(s) they will teach)., the theory of teaching or pedagogy; (trainee teachers need to be theoretically prepared to teach their subject, support pupils in learning, and manage classes) and practice (trainee

teachers to gain concrete experience in real classes as soon as possible, including learning how to handle real issues inherent in teaching and class management in diverse circumstances). Practical experience may involve observation of classroom activity, as well as sole or shared responsibility for the conduct of some lessons under the guidance of an experienced teacher (OECD, 2014b).

Finally, the need for a more inclusive orientation within TE is highlighted in UNESCO's (2013) Advocacy Guide, which clearly states that educating teachers for inclusive education means reconceptualising the roles, attitudes and competences of student-teachers', to equip them to vary instructional methods and also to empower teachers as co-developers of the curriculum. The literature reviewed identified aspects such as content, pedagogy and practical exposure as a key component for the initial teacher preparation programme for inclusion. However, these studies reviewed did not identify the pedagogical knowledge gained by PE student-teachers during the initial teacher preparation programmes in Ghana. Therefore, the current study aimed at determining the pedagogical knowledge of future PE teachers for successful inclusion in practical PE.

2.5 Physical Education

A PE programme focuses on the educational value of PA oriented towards the multilateral and harmonious development of all learners in diverse class settings. PE encompasses education that emanates from knowledge resulting from experimentation in practical activities that develop skills in the cognitive, socio-emotional/affective, and psychomotor domains (Pańczyk et al., 2008).

Practical PE demands a more physically oriented learning environment, separate from classroom-based subjects. It is evidently clear, therefore, to place importance of focusing on contextual concept of SWDs in an inclusive practical PE class compared to other classroom-based subjects (Secretaria da Educação Básica, 2017). Nonetheless, one sure way to develop the requisite skills deemed irreplaceable, that enable an increase in awareness of movements, for an individual to develop autonomy for appropriation and use of bodily movement culture for diverse human purposes is through experience of the practice of bodily activities and human movement (Secretaria da Educação Básica, 2017). This is what PE practical lessons offer to all learners.

From a practical point of view, it can be assumed that the practical aspect of PE involves a deliberate selection of certain tasks, for teaching and educational purposes, subordinated to methodical units, taking into account the principles of construction of PA and ensuring the optimum conditions for personal development, physical fitness and motor exercises (Pańczyk et al., 2008). For the PE teacher to achieve the objectives and goals set for a practical lesson, it calls for a focus on the art and science of teaching, which involves vital ways of critically scrutinising and designing a transformative and genuinely pluralistic PE practices.

For a competent PE teacher to do this, there is the need to reclaim the art and science of teaching in PE. Thus, being educative and making judgements about what to bring to the practical lesson setting especially where there is diversity of learners (Quennerstedt, 2019). These unique factors of practical PE as a general education course call for teacher training programmes that equally meet the demands that the practical aspect of the subject calls for especially when considering inclusion in practical lessons. Hence, the need for this study.

2.6 University Level Teacher Education for Physical Education

Teacher educators are considered to be individuals who dutifully facilitate the formal education of student-teachers (European Commission, 2010). Indisputably, research have specified that teacher educators have a crucial role to play in assisting the enactment of inclusive education by ensuring that student-teachers are well equipped for it (Forlin et al., 2014). UEW and UCC are the two institutions that train PE teachers for all levels of education apart from the Colleges of Education (CoE) in Ghana. These teachers, like all other teachers, require knowledge and practical skills in coping with APE in inclusive settings. A study in Ireland has indicated that the training that undergraduate PE teachers receive during their initial teacher education is insufficient in preparing them for working with SWDs (Crawford, 2011). Inadequate preparation of student-teachers for inclusive settings suggests that most student-teachers in the same system are likely to have difficulty including all learners into regular classes.

A review of teacher education programmes in the Asian-Pacific region found that disability and IE were not covered well in the programmes (Sharma et al., 2013). Vietnam was the sole country found to make disability and IE as a compulsory subject for all teachers. The programmes reviewed were found to have largely covered the theoretical aspects of varied disabling conditions. It remains questionable if such a focus in teacher education programmes can really prepare teachers to teach students with diverse learning needs in mainstream settings (Sharma, 2018).

Inclusive education needs to be a sound foundation to provide quality education to all learners. Sharma et al. (2013) concluded that in universities inclusive education, courses in special education and inclusion are either offered in elective mode or not existing at all.

Often it is argued that teachers need to acquire a lot of inclusive knowledge, yet, learning to teach in an inclusive learning environment is the last priority. As countries approach the ratification of the UN conventions, this must change. However, whether the PE programme in the university pays attention to the inclusion courses (APE) formed part of this study.

The lack of adequate professional education, both in undergraduate courses and continuing education, is seen as a serious obstacle to the school inclusion process (Hodge et al., 2017; Greguol et al., 2018). Moreover, extracurricular courses that address issues related to Special Education or APE can help improve the competence and skills perceived by teachers to address situations that may arise in the process (Taliaferro et al., 2015). It is unknown to what extent Ghanaian universities have fused IE into their core teacher-training programme, and this must also be assessed and evaluated (Opoku et al., 2017). This study, therefore, sought to determine whether the teacher education programme in the two universities in Ghana adequately prepares its PE student-teachers for inclusion in practical PE.

Opoku et al. (2017) in their study reported one resource teacher saying “Each school I go to has six to eight classes and I cannot be in all these classes at the same hour of my visit” (p.13). This assertion by the resource teacher calls on all PE student-teachers to be furnished with pedagogical and practical skills at the university. This way, they can handle SWDs in an inclusive practical setting without recourse. Teacher educators are key factors in predicting the quality of the teacher workforce (European Commission, 2013b) as they make a major contribution to the quality of teaching. Boyd et al. (2011) identified the main priorities for TE induction as developing pedagogical knowledge and practice as well as assessment processes appropriate to teaching student-teachers in higher education settings.

Kolb's (1984) theory looked at how a programme may be systematically developed to increase student-teacher processes. This theory has been used extensively in educational frameworks and teacher development programmes. It is evident that the physical educators' beliefs and pedagogical knowledge (instructional strategies and adaptation skills appropriate for inclusive settings) for inclusive practical exposure directly influence student-teacher's personal and professional development and experiences. Hence, lecturers teaching in physical education teacher education (PETE) programmes needs to systematically reviewed their curricula in reference to the ultimate programme goal of preparing competent PE teachers who will be able to teach all students within a contemporary school environment (Block et al., 2013). Thus, this study sought to establish practical course lecturers' views on the adequacy of the university preparation programme towards achieving inclusion in practical PE lessons based on how they have groomed the student-teachers in terms of pedagogy and practical exposure.

2.7 Inclusive Physical Education

Inclusion is the philosophy of supporting the educational needs of SWDs in a regular education class, including general PE (Block, 2016). In inclusive PE, all students (e.g., students with and without disability) learn skills and play sport together and the diversity amongst learners is welcomed (Furrer et al. 2020). Though SWDs seldom have opportunities to study in regular classes due to cognition, most of them can engage in PA successfully (Peterson & Hittie, 2010).

PE offers immense chances for students to participate in activities and develop at different levels of ability. Many students who struggle with writing, reading and mathematics, for example, will often excel in sports (Peterson & Hittie, 2010). This connotes that PE is an

avenue for conducting inclusive education for SWDs. PE teachers must, therefore, learn to adjust the activities to match the variety of students' abilities present in the class. This can be achieved if student-teachers have the pedagogical (instructional and adaptation skills) application of skills for inclusive settings. Therefore, teacher preparation programmes must equip PE teachers with the skills, knowledge, and the competence to function effectively and to facilitate equal opportunity in practical PE for all learners (EIPET, 2009).

2.7.1 Principles of Inclusion

According to the Department of Education (2019), the principles for successful inclusion for teaching and learning are: anticipation, value and support of diversity and learner differences, high expectation for all learners, understanding of learners' strengths and needs, reduction of barriers within the learning environment, capacity building, and shared responsibilities. These principles must be taken into consideration when preparing future PE teachers to effectively mount an inclusive practical setting.

2.7.2 Inclusive Physical Education Class versus Regular Physical Education Class

According to Etzel-Wise and Mears (2004) inclusive PE class and regular PE class are not quite different from each other. The principal emphasis is on offering a developmentally appropriate education centred on mental, motor, personal and social growth. Goodwin et al. (2003) suggested that to make a general PE class accessible to SWDs all PE teachers need to do is to provide adaptations and modifications, select appropriate instructional strategies and provide assistive aids and support required to gain full benefits of PE. Furthermore, Haycock and Smith (2011) opine that including SWDs does not totally change the organisation, delivery or content of PE. The most important consideration here is how PE teachers select appropriate instructional and adaptation skills to suit all students

in their regular PE practical class. Whether student-teachers' training programmes in the universities gives them all these qualities needs to be evaluated.

Around the world, teachers of general courses are increasingly required to include varied and diverse students in their lessons as a result of global policy and legislative reforms (UNESCO, 2013). There is the need, therefore, to pay as much attention to the quality and adequacy of teacher preparation as has been paid to increasing placement opportunities, through legislation and policy mandated internationally (UNESCO, 2013).

2.7.3 Skills Required for Successful Inclusive Practical PE Class

According to Lieberman and Houstin-Wilson (2018), a successful inclusion requires teachers to plan and analyse their instructional methods, adapt or modify curriculum, equipment, rules and the environment to provide SWDs with the full opportunity for participation in practical PE lessons. Hall et al. (2011) advised that teachers need to adapt activities through task analysis and modify facilities and equipment to encourage and motivate SWDs for successful participation in PE and for derivation of self-satisfaction from the PE programmes.

Including SWDs requires curriculum adaptations, and choosing appropriate adaptations to rules, equipment and skills. Nevertheless, it appears that PE teachers view themselves as having deficient knowledge to include SWDs and also, to aid their participation. It is, therefore, probable for SWDs to become passive and spectators during practical lessons (Morgulec-Adamowicz et al., 2015).

2.7.3.1 Pedagogical Skills for Inclusive Practical Physical Education

Loreman (2007) emphasized that curriculum is what is to be taught and pedagogy denotes the way the curriculum is to be delivered. Hence, pedagogy is key for learning in any inclusive setting. Research has identified pedagogical skills as the main skills that student-teachers need for self-efficacy and to reflect their ability to attain the desired professional standards for teaching (McNeil et al., 2017). The authors further elaborated that by ensuring excellence in learning and growth of PE teachers, opportunities should be provided for student-teachers to engage in best practices for inclusive pedagogy. Several studies have highlighted that PE student-teachers struggle with knowing about teaching SWDs and the lack of self-efficacy in enacting inclusive pedagogy (Hodge & Elliott, 2013; Pedersen et al., 2014).

There is the risk that initial observation of one's own PE teachers will reveal an obstinacy regarding teaching skills and previously learned methodology that formal training will be unable to change. Such opinions about teaching are grounded on imitation and intuition of personalities relative to pedagogical ideologies (Mawer, 2014). There is the need to assess what student-teachers' know and are capable of effectively applying such knowledge in an inclusive practical PE class. The current study, therefore, sought to determine the pedagogical knowledge of student-teachers for inclusive practical PE teaching in Ghana.

2.7.3.1.1 Instructional Method for Inclusion

Instructional methods denote the educational approaches and principles used for regular class instructions in relation to a particular lesson learning objective. Instructional methods specific to inclusion include consultation and peer teaching, use of demonstrations, providing opportunity for individual work, task analysis and hierarchical development of

objectives, providing great variety in the programme and modifying content to suit the needs and interests of all students (Sherrill, 2012). Clear and concise demonstrations, minimizing time for verbal explanations, maintaining eye contact to ensure attention, the use of praise and other positive reinforcements anytime an SWD performs a task (skills or behaviours) correctly have been found to be instructional strategies that all teachers should gain for effective inclusion (Stopka, 2011). Similarly, maximizing participation time, minimizing waiting time, and giving peers the chance to assist SWDs to learn skills taught are techniques every teacher must acquire for effective inclusive PE practical teaching.

More so, the most effective ways to meet all learners' unique needs in general learning setting is to differentiate instruction. Differentiated instruction strategies are mostly used by teachers because a study has shown that it helps accommodate the unique learning style of all students and ensures their full engagement in lessons. However, this becomes difficult with large class sizes as implementing differentiated activities becomes time consuming (Cox, 2020).

2.7.3.1.1.1 Peer Teaching

Klein and Hollingshead (2015) indicated that much of the success in inclusive PE is due to peer-tutoring. According to Mullett (2017) peer teaching involves collaboration between SWDs and non-disabled colleagues. Cervantes et al. (2013) describes peer tutoring as a viable option for providing individual support and attention to SWDs while maintaining the quality of educational experience for peers without disabilities.

Research on PE has shown that peer tutoring is an effective approach to promoting inclusion (Cervantes et al., 2013), skill acquisition and exercise engagement (Stanish &

Temple, 2012) among adolescents with intellectual disability. A study by Gobbi et al. (2018) reported that peer-teaching was beneficial for adolescents with intellectual disability, particularly for those in overweight condition. In all these studies, the SWD did not take the role of a peer tutor (that is, it was unidirectional peer tutoring). Unidirectional peer tutoring takes place when one student is trained to act as a peer tutor for one student with a disability and it has been found to be the most widely used method of peer tutoring (Cervantes et al., 2013).

2.7.3.1.2 Adaptation Skills for Inclusive Teaching

For inclusive education to be successful, much depends on the general education teacher's ability to adapt and modify instructions when students have difficulties acquiring the content of the lessons taught in the regular class. Adaptation is an umbrella term that includes accommodations and modifications. Positive Environments Networks of Trainers (PENT, 2017) referred to curricular adaptations as alterations acceptable in educational settings which permit the learner equal opportunity in gaining access, benefits, outcomes and achievements. PENT elaborates that curricular adaptations permit SWDs to participate in inclusive settings by compensating for learners' weaknesses.

In analysing the concepts of PE teachers regarding the inclusion of SWDs, Fiorini and Manzini (2015) found difficulties in adapting teaching methods and strategies, and, in many instances, there was a greater predominance of individual activities with SWDs in relation to the collective ones. The greatest worries were the lack of support materials, assistants to help in classes and deficiency in experience about working with SWDs. There is a need for an adapted curriculum and specific teaching strategies to successfully include SWDs (Menear & Neumeier, 2015). Good adaptation encourages collaboration and

interaction, satisfies all students' needs in lessons, improves self-esteem, provides PA, and offers a safe and secure experience for all (Winnick, 2011). Some examples of general adaptation in PE includes but not limited to the use of a bigger or lighter ball in hand games. Also, in volleyball, the net can be lowered and students in wheelchairs can be placed closer to the net. In other ball games the size of the field can be reduced (Stopka, 2011).

It is strongly believed that if student-teachers do not acquire adaptation skills and concepts during the university preparation programme, we cannot expect inclusion in PE. Moreover, the literature reviewed placed focus on experienced PE teachers on the field and studies in European countries since literature in Africa regarding adaptation for inclusion was sparse at the time of review. Hence, the need for this study to determine the adaptation skill knowledge of PE student-teachers based on their preparation programme in the university.

2.7.3.1.2.1 Curriculum Accommodation for Inclusion

Curricular accommodations achieve objectives without altering the curriculum. PENT (2017) expounds that some curricular adaptations primarily do not change or lower values or expectations in either the instructional or evaluation stages of a course of study. These can be termed as "accommodations". Learners receiving accommodations learn the same material and take the same assessments as their able-bodied peers.

2.7.3.1.2.2 Modification in Physical Education Practical Lessons

According to the 2013-2019 Special Education Guide, modification denotes curricular adaptations, which alter or lower standards when the expectations are beyond a student's capability. Modifications can be made to space, apparatus, speed, position, or rules. In a modified activity, alterations are made to break the task in progressive steps so that all learners are involved and can participate at a level appropriate to their skill level**.** Haegele

and Sutherland (2015) have stated that modifications and mutual communication of alternative activities enhance greater participation in PE. A good teacher is the one who adapts or modifies the curriculum, task and setting so that all learners can fully participate in PE.

Modifications in the areas of cues, prompts, equipment, and assessment can be made for SWDs within the general PE lessons to ensure their successful participation (Collier, 2011). Modifications do not have to influence every element of activity. They should be limited to those necessary to meet individual needs. However, modifications to equipment, rules, or activity parameters must be done cautiously and carefully, keeping in mind the educational experiences of both the learners for whom the modifications are being made and their classmates (Collier, 2011). Modification is thus required in every minute and every moment in the inclusive PE programme. Based on this, student-teachers knowledge about modification needs to be evaluated.

2.7.3.1.2.3 Equipment Modification in Practical PE Lessons

Equipment selection will vary depending upon the activity, student, facility, surface and purpose of the lesson. Changes in size, weight, texture, colour and function should be considered when modifying equipment. Sherrill (2012) observed that SWDs need PE and sports equipment that have been adapted to accommodate their special needs. Teachers should consider how the equipment could be used in assisting a student's present functional level in attaining desired goals. Kasser and Lytle (2013) advised that, a student with variances in coordination might be allowed to select a bigger ball when involved in a catching activity with a partner whereas other group members may use smaller balls as

they practice. Targets can also be lowered or raised and distances to targets increased or decreased to provide ideal challenges for learners with diverse skill levels.

2.7.3.1.2.4 Environmental Modification in PE Practical Lessons

A positive learning environment invites all students to participate in meaningful experiences that offer a variety of opportunities for personal success. It is critical that teachers attend to the social environment in order to protect SWDs from mockery, discrimination, or exclusion. In addition, teachers must be able to make necessary curriculum modifications (what is taught) and instructional modifications (how it is taught). Possible considerations include: using small group stations, the size of the field of play, decreasing visual and auditory stimuli, incorporating cooperative games and team building activities, de-emphasising competitive team sports and games and emphasising sports skill development, fitness, and lifetime leisure activities. (Maryland State University, 2015).

The James et al. (2011) study in the United States of America found that students would rather sit out than be made fun of and laughed at by their able-bodied peers in PE practical lessons. Nevertheless, a different study reported that after modifications/adaptations to the curriculum had been made to allow SWDs to participate, they began to feel part of the class (Spencer-Cavaliere & Watkinson, 2010). However, the literature reviewed mainly focused on expectations of PE teachers and not what the training programmes in the university equip them with. Whether the university preparation programme well equips student-teachers with pedagogical skills that encompass instructional skills and adaptation skills (accommodation and modification) purposeful for inclusive practical PE teaching needs to be assessed.

2.8 Methods and Approaches used in the Teacher Preparation Programme for Inclusive PE Teaching

Research has shown that the content of the initial teacher education curricular as well as pedagogical methodologies and approaches adopted by teacher educators are both crucial to teacher preparation for inclusive education (Jorgensen et al., 2011). Block (2007) identified cooperative learning, direct instruction strategic interventions and movement education as the best training methods and approaches in inclusive PE. However, Nketsia et al. (2016) found that training methods and approaches employed by teacher educators in teaching the various courses in the Colleges of Education were largely teacher-centred approaches, such as lectures. Nevertheless, a study by Di Gennaro et al. (2014) established that teacher education courses should align teaching methods equally with inclusive values and support the way teachers deal with complex features in the context of the 21st-century education for inclusion.

Researchers of inclusive education practices in Ghana in the colleges of education (CoE), found that regardless of the majority of the teachers' endorsing inclusive education, they had inadequate knowledge about inclusive practices and their approaches to pedagogy remained punitive (Kuyini & Desai, 2009, Nketsia et al., 2016). As to whether these findings include university-trained PE student-teachers in practical lessons needs to be ascertained.

In observing 21 pre-teachers in the CoE teach for a total of 42 hours in Ghana, Agbenyega and Deku (2011) found that, the present pedagogical practices are mechanistic, prescriptive, and do not value learner diversity and diverse learning approaches. Research have shown that the tutors in CoE hold it that, their university preparation did not equip

them well to impart inclusively in the colleges, specifically in the aspect of pedagogical content knowledge (Adu-Yeboah, 2011).

This suggests that there is a need for universities that train teachers to ascertain the adequacy of their training programme for inclusive education, especially in the area of PE lessons. However, these studies reviewed did not identify the methods and approaches used in the initial teacher preparation programmes. Therefore, the current study aimed at determining the training methods and approaches being employed in the universities to groom the future PE teachers for successful inclusion in PE.

2.9 Practicum Experience in Teacher Preparation Programme for Inclusive PE

Research has shown that PE student-teachers may not experience interaction with SWDs or teach these students until they have begun teaching within schools (Travers et al., 2010). The special education courses in the initial teacher education programme have been described as too theoretical and providing limited basic knowledge and skills with no provision for practical experience (Sawhney, 2015). As such, initial teacher education programmes around the world are employing innovative pedagogies and approaches to equip student-teachers with the relevant knowledge and skills to effectively support the implementation of IE (Salend, 2010). Another innovative trend in teacher education programmes that prepare teachers to teach in inclusive settings has been identified as an infusion of inclusive knowledge and practice into all content areas and subjects of the initial teacher-education curriculum (Nash & Norwich, 2010). In Ghana, existing programme patterns of teacher preparation follow the traditional teacher education processes with emphasis on teaching a regular class with less focus on inclusion (Deku & Vanderpuye, 2017).

One of the most difficult aspects of inclusive teacher education programmes is the ability of pre-service teachers to practice inclusion in real-life lessons. This has been highlighted well in the UNICEF (2012) report. Many respondents who participated in the project felt that theoretical knowledge contained in teacher education programmes does not always translate into classroom practice. The report failed to identify the reasons for the ongoing gaps between theory and practice aspects of inclusive education. There are various reasons why theoretical information covered in teacher education programmes fail to make an impact on the teaching practices of pre-service teachers. This is because universities and schools are two dissimilar worlds. The information covered in teacher education programmes often is too distant from the realities of classrooms (Sharma & Loreman, 2014).

PE teachers are being trained, however, opportunities on how to deliver PE practical lessons to students regardless of their disabilities at initial teacher development was found to be limited, ineffective or, in some instances, not offered at all (Fitzgerald, 2012). It should, therefore, concern teacher education programmes considering to train high-quality teachers to recognise access to a high-quality practical experience as very important in the preparation of effective IE teachers (Behrstock-Sherrat et al., 2014).

A study conducted by OECD (Schleicher, 2016) found a large number of student-teachers' biggest challenge in all participating OECD countries as their lack of preparedness and unwillingness to teach SWDs. While some universities covered theoretical concepts about disabilities and inclusion, none of the universities had any practical component focused on the practice of inclusion (Shama, 2018). A similar result was reported by Conderman et al.

(2013) when examining the learning experiences of PSTs in special education teacher education and general teacher education programmes. In both cases, the researchers found that PSTs who experienced in-depth coursework and relevant practical experiences working with SWDs felt well prepared to provide an inclusive learning environment more than those PSTs who did not receive the same experiences. With this, Pereira (2017) recommended experience as the best way to prepare new physical educators to deliver inclusive practical PE. Teacher preparation programmes needs to provide increased experiences for student-teachers to observe successful inclusive PE and have the opportunity to teach and implement inclusive PE.

Most literature reviewed perceived a probable lack of experience in the teacher-preparation programmes for inclusion but that of Ghana has not been established. Thus, one aspect of the teacher training programme that needs to be given significant attention relates to addressing gaps between theory and practice of inclusion. Hence, this study aimed at evaluating student-teachers' hands-on experiences for inclusive practical PE teaching during their university preparation programme in Ghana.

2.10 Physical Education Student-Teachers' Intentions towards Inclusion

According to the theory of planned behaviour (Ajzen, 1991), a person's actual behaviour could be predicted based on the individual's intentions to perform the behaviour. For instance, whether a PE teacher will include an SWD in his or her practical lessons depends on the teacher's intention to either include the learner or not. Intentions to perform a behaviour, in turn, are influenced by three closely related psychosocial paradigms of attitudes, perceived competence, and subjective norms. Attitudes toward the behaviour relate to the person seeing the behaviour positively or adversely. Perceived competence

relates to the individual's capacity to perform the behaviour. Thus, perceived behavioural control denotes an individual's perception of the effortlessness or difficulty of executing the behaviour of interest, which is partly dependent upon available opportunities and resources for the person to implement the act (Ajzen, 1991).

Subjective norm refers to how significant people in the environment appraise the behaviour. Given satisfactory control over a behaviour, individuals are inclined to put into action their intentions when given the opportunities to do so (teacher modifies the game to include an SWD). Thus, it is theorised that intentions capture the motivational factors that impact a behaviour; they are signs of how determined people are eager to try and the amount of effort they are willing to exert in order to perform the behaviour (Ajzen, 1991). This intent to exhibit a specific behaviour assumes that the behaviour in question is under voluntary control (a teacher has the will, competencies, decision-making power, resources and support to effectively include SWDs in motor activities).

The student-teacher requires the right attitude and intention to implement the pedagogical (instructional and adaptation) skills gained in their training in order to successfully conduct practical PE lessons in an inclusive setting. Also, study by Heyder et al. (2020) on inclusive general education suggests that increased teachers' beliefs are related to a decreased gap between the social inclusion of students with and without disabilities.

According to Rust and Sinelnikov (2010), modules in APE have been shown to develop student-teachers' attitudes and intentions towards teaching SWDs. The authors indicate that well-structured coursework and experiences play an essential part in breeding favourable attitudes and intentions of PE student-teachers towards working with SWDs. Nevertheless, educational courses in the field of disability are seen as a fundamental part

of continuing teacher education and can have a positive effect on how they perceive their competence to deal with SWDs in inclusive situations (Florian, 2012). Therefore, opinions should be the initial step in altering beliefs and ultimately changing attitudes, thereby forming intentions.

It presupposes that, human beings will perform certain behaviour when they view and evaluate it in a positive way, when they feel the social pressure to act in that way, and when they think that they have the opportunities and means to do so. This also needs to be ascertained among university student-teachers in the Ghanaian context. Thus, this study sought to identify the factors predicting PE student-teachers' intentions to include SWDs in inclusive PE practical lessons.

Kudláček & Machová in 2005 used the Attitudes toward Teaching Individuals with Physical Disabilities in Physical Education instrument (ATIPDPE) to research the attitudes of 47 future general PE teachers in Chechnya. The results of their study revealed that 23% of variance in intentions can be interpreted by three belief components. Another study by Wang et al. (2015) reported that TPB components (attitude, affective beliefs, social norm, and perceived behaviour control) were identified as determinants of PE teachers' intentions to teach SWDs in their inclusive teaching practice.

Although the literature reviewed have established the intention of pre-service teachers from European universities for inclusion education, nevertheless, that of Ghanaian PE student-teachers was lacking. Therefore, the current study aimed at determining the intentions of PE student-teachers towards the inclusion of SWDs in practical PE lessons in an inclusive setting, based on their preparation programme in the university.

2.11 Concerns for Inclusive Physical Education

Another effective area of teacher development that had been investigated to determine its relationship to successful inclusion is teachers' concerns. Klein and Hollingshead (2015) found teachers identifying several factors (inadequate resources, inclusive benefits for all students and lack of adequate teacher preparation) that affect the success of inclusion. Another growing and continuous concern was that, student-teachers feel unprepared to teach in inclusive settings (European Agency for Development in Special Needs Education, 2012).

Concerns frequently voiced by most student-teachers relate to lack of opportunity to instruct in inclusive classrooms and a lack of suitable and adequate resources for effective inclusion to occur (Forlin & Chambers, 2011). Teachers' level of concern is related to other affective variables and is malleable within some educational contexts. Sharma et al. (2008) examined changes to pre-service teachers' level of concern over the course of a unit of study in inclusive education. They found that coursework was effective in decreasing the level of teacher concern in all countries of study except Hong Kong. These researchers observed that the countries where coursework decreased concerns were characterised by legislation supporting inclusion. The authors further reported that, university programmes with a strong emphasis on effective and practical inclusive teaching practices, suggesting the importance of both content and context also decreased concerns.

When dealing specifically with the assistance received by the school, which involves the availability of human, material and financial resources to work with SWDs, Fiorini and Manzini (2014) emphasised the lack of instructional resources and the unsuitable spaces for lessons as a major concern. In a literature reviewed on inclusive education, Qi and Ha

(2012) stressed that when there is enough infrastructure and support in schools, both SWDs and those without disabilities can benefit from inclusion education.

A comparative study by Sharma and Sokal (2015) examined the impact of two separate university courses on PSTs attitudes, concerns, and teaching efficacy in inclusive settings. Twenty-eight and sixty PSTs from Australia and Canada completed a survey at pre- and post-stages of the course. The authors found that after completion of the course, the attitudes of Australian participants improved, their concerns declined, and they gained more confidence in their ability to teach in inclusive settings. Similarly, the Canadian participants' teaching efficacy improved with a decline in concerns but they became more apprehensive about teaching in inclusive settings. However, none of these literatures reviewed addressed the concerns of university student-teachers and practical course lecturers in relation to the preparation programme in the universities for inclusion in practical PE lessons in Ghana, hence prompting this current study.

2.12 Summary of Related Literature Review

Most of the literature reviewed on pedagogical skills was carried out with teachers already on the field and not with university student-teachers. Moreover, the studies reviewed placed focus on experienced PE teachers on the field and PE teachers in European and developed countries since literature in Africa regarding pedagogy in PE for inclusion was sparse at the time of review. Some of the literature reviewed identified aspects such as content, pedagogy and practical exposure as key component for the initial teacher preparation programme for inclusion.

However, these studies did not identify the methods and approaches used in the initial teacher preparation programmes for inclusion in PE. Most studies reviewed also perceived a probable lack of experience in the teacher preparation programmes for inclusion but that of Ghana has not been assessed. Although studies reviewed have established the intentions of pre-service teachers from European universities for inclusion PE, there was a paucity of such studies regarding Ghanaian PE student-teachers. None of the literature reviewed addressed the concerns of university student-teachers and practical course lecturers in relation to the preparation programme in the universities for inclusion in practical PE lessons, hence justifying the current study.

It is indistinct to what extent Ghanaian universities have fused IE into their subject specific teacher-training programme, in this case, PE and this must also be assessed and evaluated. The studies reviewed also mainly focused on expectations of PE teachers and not what the training programmes in the universities equip the PE student-teachers with. Nonetheless, the adequacy of PE preparation programmes in Ghanaian universities in terms of their pedagogical knowledge, practical experience and intention to include SWDs in an inclusive PE setting has not been evaluated. The current study, therefore, aimed at evaluating the programme adequacy to identify any possible gap for a better programme reforms. The findings and information gathered may serve as a basis for a possible programme review and restructuring and, in the designing, and establishment of future teacher training programmes in other universities. It may also offer helpful insights to the Colleges of Education in Ghana and as well be helpful for future research endeavours in the area of inclusive practical PE.

CHAPTER THREE: METHODOLOGY

3.1 Research Design

This study used the sequential mixed-method design as was adopted in Creswell (2015). A mixed-method research design involves collecting and analysing both quantitative and qualitative data in a single study in order to come out with a clear picture of the research problem (Frankael et al., 2015).

Specifically, for this study, the researcher used explanatory sequential mixed-method design. This design involved two approaches. These approaches were survey questionnaires to collect quantitative data and focus group discussion (FGD) to collect qualitative data on the same group. This design enabled the researcher to use the best methods to solve the problem at stake, instead of relying on a single research method of interest (Creswell, 2014).

The quantitative phase of this study used a cross-sectional descriptive approach. This approach involved the collection of data that describe the state, form and magnitude of a phenomena at a point in time (Knight, 2016). It also helps in breaking new ground as well as gave the researcher the opportunity to conduct either retrospective or prospective inquiry (Cohen et al., 2017). In order to get a better understanding of the quantitative findings, a second phase of the study was engaged in. This second phase explored the views from student-teachers about concerns, experiences and opinions on the methods and approaches used in the preparation programme for inclusive practical PE teaching. This was done through a follow-up focus group discussion (FGD). For weighting, priority was given to the quantitative data.

3.2 Measurement of Variables

The independent variable in this study was the adequacy of the university teacher preparation programme (pedagogical knowledge (instructional and adaptation skills), hands-on experience, training methods and approaches, intention and concerns). Behavioural beliefs and perceived control beliefs were additional independent variables evaluated to predict intention. The dependent variable in this study was inclusive practical PE (student-teachers' knowledge about teaching practical PE lessons in an inclusive setting).

3.3 Study Location

This study was conducted in the Southern part of Ghana. The southern part consists of eight (8) out of now sixteen (16) administrative regions in Ghana, of which the Central Region forms part. This study focused on the two universities offering teacher education in PE. The study location was, therefore, two sites in the Central Region in Ghana (Appendix L), one in the Cape Coast Metropolis and the other one in the Winneba Municipality. The two institutions were University of Cape Coast and University of Education, Winneba. These two institutions are very prominent in the history and training of PE teachers in Ghana and are currently the only universities in Ghana that train PE teachers. These unique characteristics of the two universities made it suitable for the researcher to undertake this study in these institutions.

3.4 Target Population

The target population was all PE students in the departments of HPER and HPERS of UCC and UEW, respectively. The accessible population for this study comprised all 2018/2019 level 300 PE students from UCC and UEW. This sub-category had gone through all of the

necessary 3 years on-campus PE curriculum and were ready to go out for their teaching internship. As of the 2018/2019 academic year, the HPER Department of UCC had a total student population of 121 whereas the HPERS Department of UEW had a total student population of 538. Out of these numbers, 36 (29 males and 7 females) were in level 300 at UCC and 136 (114 males and 22 females) were in level 300 at UEW, respectively. All lecturers of the two universities who teach practical courses formed part of this study. UCC and UEW at that time had 9 and 14 (both full time and part-time) lecturers, respectively. Out of those numbers, 7 (UCC) and 8 (UEW) were teaching practical courses. Table 3.1 presents the study's target population indicating the population distribution.

Table 3.1: Distribution of Target Population across the Two Universities

Students Level	UCC		Total	UEW		Total
	Males	Females		Males	Females	
100	21	5	26	98	23	121
200	22	2	24	138	27	165
300	**29**	**7**	**36**	**114**	**22**	**136**
400	25	10	35	92	24	116
Total	97	24	121	442	96	**538**
Lecturers	**8**	**1**	**9**	**13**	**1**	**14**

Source: Departments of HPER-UCC and HPERS-UEW, 2018

3.4.1 Inclusion Criteria

The study included all 2018/2019 level 300 student-teachers in the two universities. These are student-teachers who have successfully undergone all the necessary 3 years on-campus PE curriculum during their training programme in the university. All lecturers who had ever taught practical courses to the 2018/2019 level 300 student-teachers' group were included in this study.

3.4.2 Exclusion Criteria

The study excluded all 2018/2019 level 300 student-teachers who had attended refresher or additional courses in special needs education apart from the training given by the universities. This exclusion criteria helped to evaluate the actual adequacy of the preparatory programme without accounting for any other training outside the university which might have influenced student-teachers' inclusive knowledge and skills. Lecturers who have never taught the 2018/2019 group any practical courses from level 100 to 300 were excluded from this study.

3.5 Sampling Techniques and Sample Size

3.5.1 Sampling Techniques

Census and purposive sampling techniques were used to select the sample for the study. Census sampling technique was adopted to select all the 2018/2019 level 300 student-teachers and all lecturers who teach practical courses in the two universities for the study. This is because the population size was not as large as would have warranted further sampling (Creswell, 2015). The census sampling also eliminated the sampling error and problems associated with generalisation (Ogah, 2013). Level 300 students were selected for this study because they have had enough exposure to PE pedagogy to enable them to address questions and opinions solicited in the questionnaire and during FGD.

Purposive sampling technique was used to select 15 and 5 of the 2018/2019 level 300 students from UEW and UCC for the FGD, which forms the qualitative aspect of the study. Purposive sampling was used because the better the participants are positioned in relation to the topic, the richer the data will be (Patton, 2015). Also, for the FGD, proportional

sampling was further used to select more males than females according to the ratio of the student population.

3.5.2 Sample Size

The sample size was 172 PE student-teachers and 15 practical course lecturers from both universities. The participants for the FGD were 15 (3 females and 12 males) from UEW and 5 (1 female and 4 males) from UCC, respectively (proportional sampling). According to Leavy (2017), qualitative study tends to work with quite a small number of participants due to the time and labour-intensive nature of qualitative data collection and analysis. Therefore, this study engaged a group of 5 student-teachers in each FGD session. The FGDs were four in all. Table 3.2 presents the sample distribution for the study.

Table 3.2: Distribution of Sample Size from the Two Universities

Participants	UCC		Total	UEW		Total	Overall Total
	Males	Females		Males	Females		
Level 300	29	7	**36**	114	22	**136**	**172**
FGD	4	1	**5**	12	3	**15**	**20**
Practical Course Lecturers	6	1	**7**	7	1	**8**	**15**

3.6 Research Instruments

3.6.1 Student-teachers Questionnaire

The Attitude towards Teaching Individuals with Physical Disabilities in Physical Education (ATIPDPE) instrument designed by Kudlacek et al. (2002) was adapted to collect data. The questionnaire (Appendix H) was a-7-point Likert scale type which was modified into a-5-point scale. The instrument was also adapted into six parts. Part I was

about the definition of disability and inclusion. Part II contained four items related to intention, seven items on behavioural beliefs, and five items on perceived control beliefs. The modifications made in this part of the instrument were the omission of the word "Physical" to only read "disability". Secondly, items on perception from parents, and other teachers (Normative beliefs), were removed.

In addition, Part III was added to assess pedagogical knowledge (instructional skills (13 items) and adaptation knowledge (five items) to ascertain the adequacy of the university preparation programme. Part IV, which contains eight items was also added to collect data on student-teachers' hands-on experiences in relation to inclusive practical PE. Part V collected demographic information of participants as well as information relating to their level of competence for inclusion and past training associated with APE and special needs education.

3.6.1 Lecturers Questionnaire

The researcher developed a questionnaire with both open and closed-ended items (Appendix I). The design of the items in the instrument were guided by the literature reviewed on PE educators. This questionnaire set was completed by lecturers who teach practical PE courses in the universities. It sought their views about the preparation programme for practical inclusion. The questionnaire collected information about how the lecturers train their student-teachers for inclusive practical lessons, how they rate the general preparation programme in the university as well as their concerns about the total preparation programme in the university for inclusion in practical PE.

3.6.2 Focus Group Discussion

Semi-structured focus group discussion guide (Appendix J) was used to conduct FGD with the student-teachers. The FGD guide was developed based on students reporting insufficient exposure and divided opinions on pedagogical knowledge for inclusive PE practical teaching from the survey results. The guide contained questions about student-teachers' intentions for inclusion, the pedagogical approaches and methods, practical experiences and the concerns they have about the preparatory programme. The recorded information was later transcribed into themes to augment the data collected through the questionnaire.

3.7 Pre-Testing and Training of Research Assistants

The researcher carried out the pre-test on level 400 student-teachers who had gone through the on-campus general content of the university PE teacher preparation programme. Firstly, the content and construct validation of the standardised, self-designed and semi-structured interview guide instrument was confirmed by the study supervisors. The survey questionnaires were then pre-tested using a test-retest approach on 15 UEW level 400 student-teachers who consented to take part in the pre-testing. The first and second testing took place in exactly two weeks after on the same participants. Prior to filling the questionnaire, the participants were briefed on the purpose of the study and what was required of them. The FGD questions were also tested on five of the level 400 students who also consented to take part in the study. The lecturers' questionnaire was also pretested on four lecturers who were not part of the study sample. After the pretesting, corrections were made in the instruments before using for data collection.

The researcher used two PhD candidates at UCC who were staff members of UEW as research assistants. They consented to be involved in the study and a day and time was agreed upon for the training. On the scheduled day and time, the researcher took them through a training programme on how to administer questionnaires, organize and conduct a FGD as well as on how to take notes in a verbatim manner during FGD. Also, they were trained to use audio recorders as well as mobile phones (as a backup recorder) during the FGD. Cross-checking of the transcribed responses of participants was used to verify the reliability of the FGD.

3.7.1 Validity of the Research Instrument

The validity of a research instrument denotes the degree to which a test measures what it is expected to measure (Creswell, 2014). The ATIPDPE instrument is a standardised instrument and had already been validated. The instruments were subjected to content and construct validation. Leavy (2017) defined content validity as a decision made by experts in a specific area that a measure is valid. Construct validity also refers to the measure tapping into the concept and the associated concepts into which it was proposed that it is tapping (Leavy, 2017). The instruments were reviewed and scrutinized by the university research supervisors who are specialists in the area, to ensure content and construct validity, respectively. This was done to ensure that the researcher-designed items, the semi-structured FGD items and the items on the adapted standardized instrument measures the purpose of the study. Refinements were made to the questionnaires based on the suggestions from the supervisors before pretesting them.

3.7.2 Reliability of the Research Instruments

According to Leavy (2017), reliability of a test refers to the dependability of results. The ATIPDPE instrument has a reliable Cronbach alpha coefficient between .71 and .94 (Kudlacek et al., 2002). Due to the adaptations made in the instrument, a test-retest was used to check for and ensure the reliability of the tools. The researcher administered the questionnaire to a selected sample of 15 student-teachers in 4th year in UEW and re-administered the questionnaire again to the same students after two weeks. SPSS was used in calculating the Cronbach alpha coefficient for the reliability of each scale of the instrument.

The Cronbach alpha for the intention of student-teachers' to teach in an inclusive setting scale was $\alpha = .93$. The reliability for behavioural belief outcome of inclusion in a practical PE lesson scale was satisfactory with $\alpha = .76$; the student-teachers' perceived control beliefs toward inclusive practical PE scale yielded a reliability of $\alpha = .77$; the reliability of the student-teachers' instructional skill knowledge scale was satisfactory with $\alpha = .71$; and the reliability of their adaptation skills, practical experiences, and adequacy of their training programme scale were $\alpha = .73$, $\alpha = .71$, and $\alpha = .91$, respectively. The lecturer's questionnaire yielded a reliability of $\alpha = .71$.

3.7.2.1 Trustworthiness of the Qualitative Phase

The trustworthiness of the study was established through bracketing, and peer debriefing (Patton, 2015). The study design, implementation, data analysis, and interpretation for the second phase were informed by the most widely accepted qualitative research literature (Saldana, 2016). In addition, the FGD guide was given to one senior lecturer and supervisors who are specialists in qualitative study to critique for face validity.

To ensure credibility and confirmability, the audio recording was played back for the participants to listen to and confirm their responses. The data were transcribed and to ensure that all the transcribed data corresponded with their responses, it was further subjected to member checking (Smith & McGannon, 2018).

3.8 Data Collection Techniques

Data were collected in 2019 after the relevant permits and authorisations had been obtained. The researcher visited the two universities for selection of participants and data collection. The data collection was first conducted in UCC and then in UEW.

3.8.1 Questionnaire-based Data Collection

Once the potential participants were identified for the study, the researcher sought their consent by asking them to complete the informed consent forms (Appendix F&G). The researcher accessed the student-teachers in their lecture halls at a pre-arranged date and time. The researcher then, with the help of the two study assistants, administered the questionnaire. The completed questionnaires were collected immediately after they were filled out. The research team looked through the filled questionnaire to ensure that all the items had been responded to before releasing the participants. The overall return rate for the student-teachers' questionnaire was 100%.

After identifying lecturers who fell within the inclusion criteria for this study, the researcher approached them individually after collecting all data (questionnaire and FGD) from the student-teachers. The appropriate questionnaire for lecturers was administered. The lecturers' questionnaire together with the consent forms were attached and sealed in an envelope and distributed to each of the lecturers personally. Some filled out the

questionnaire instantly and handed it over to the researcher while others filled it later and gave it to either the research assistants or the researcher. The overall return rate of the questionnaire from the lecturers was 100%.

3.8.2 Focus Group Discussion

Participants for the FGD were recruited three weeks after the collection of quantitative data from each of the institutions, starting with UCC participants. They were informed about the FGD after the questionnaire has been coded and analysed. Participants who showed interest in taking part were asked to meet the research team in the PE Master's students' lecture halls in both institutions on a scheduled date and time. This venue was chosen due to its congenial atmosphere, less exposure to intrusive noise and other interruptions.

On the scheduled date for the FGD, the participants first received an explanation of this part of the study and what was expected from them. They were then requested to sign a consent form before the commencement of the discussion. Only those who expressly consented to participate were involved in the FDG. The researcher conducted a-60-minutes FGD. First in the FGD sessions were 5 students from UCC. This was followed by 15 proportionally selected level 300 student-teachers from UEW who were put into three groups of five.

At the start of the FGD (for the qualitative phase), the researcher introduced herself and the research assistants to the participants and informed them about the purpose of the gathering, for the establishment of trust and rapport (Fraenkel et al., 2015). After signing the consent form, participants were allowed to use 'pseudonyms' they preferred in order to maintain anonymity. An Audiotape recorder was used to record all conversations during the focus group discussion based on the semi-structured FGD guide for accurate verbatim

transcription of information (Creswell, 2014). During the FGD, the researcher and the two assistants took notes in addition to the audio recording in order to get quality data for the study. The researcher, after exhausting all the questions on the guide asked for any further contributions from the participants. The audio recording was played back to the participants in each group for confirmability. The researcher thanked the participants for their time and terminated the meeting.

3.9 Data Analysis and Presentation

3.9.1 Data Organisation and Scoring

In this study, quantitative data were collected and analysed in the first phase. Then, the findings of quantitative data analyses were used to plan a follow up with qualitative data collection and analyses as the second phase. The quantitative findings were interpreted first before the use of qualitative findings to further consolidate the explanation of the quantitative results, for a better understanding of the phenomenon.

3.9.1.1 Quantitative Data

The questionnaires of the student-teachers who indicated that they had previously taken refresher courses in special needs education aside the university preparatory programme, were eliminated before coding of the data was done. A total of 161 questionnaires for student-teachers were administered, out of which 152 questionnaires met the inclusion criteria and were coded and used for all analysis.

The adapted questionnaire contained five categories, with each category assessing a unique variable. Each category had items on a 5-point Likert scale. The scale ranged from 1 to 5 with 1–representing strongly disagree/very inadequate, 2–disagree/inadequate, 3–

undecided, 4–agree/adequate and 5–strongly agree/very adequate. However, agree and strongly agree/adequate and very adequate as well as disagree and strongly disagree/inadequate and very inadequate were merged where necessary. The average point of the scale was a score of 3. A mean score above 3 signified participants' agreement with the items on the scale while a mean score below 3 showed participants' disagreement with the items on the scale. Also, in the presentation of the participants' responses on the table and the graphs, only the scales with responses were presented.

The summative index for each category of the questionnaire was derived by adding the ratings of the total number of items. For instance, the summative index for the intention subscale was derived by adding the ratings of the four intention statements (I1+I2+I3+14=TI). The summative index for pedagogy was derived from adding the ratings of all the items for instructional skill (IS1+IS2+IS3+IS4+….IS13) and adaptation knowledge (AK1+AK2+AK3+AK4+AK5+AK6). For the hierarchical regression analysis for intention, the most important independent variable was entered first. In this case, the behavioural belief summative index was entered first, followed by perceived behavioural control belief summative index. Assumptions for each statistical test (t-test and hierarchical multiple regression) were checked before using them for the analysis.

3.9.1.2 Qualitative Data

The data from the FGD were transcribed and analysed into themes to ascertain opinions of student-teachers on their hands-on experiences, concerns about the preparatory programme as well as how the programme can be improved for inclusive practical PE teaching and learning. Trustworthiness was established by applying peer debriefing (Creswell, 2014) to

remark on the analytical nature of the researcher's explanation, identification of all probable categories, and possible researcher prejudice.

At the start of the transcription of the audio, pseudonyms were used to identify each participant in order to ensure the ethics of confidentiality of participants. Secondly, the transcriptions were done by the researcher and her trained research assistants. The audio-tapes were listened to while the researcher read and re-read through the transcript files to check for accuracy, make corrections, and overall, to gain a holistic sense of the data. Finally, the data was qualified through peer debriefing to ensure that the study was conducted in an appropriate and systematic manner (Smith & McGannon 2018). Before doing the actual analysis, the transcribed texts were examined and coded by the researcher using thematic analysis.

This analysis went through phenomenological analysis procedure (Leavy, 2017). The first step was reading the texts across all responses to identify macro-level themes. This was followed by reading of each case to further identify less pervasive themes and gaps in the text. The final step was the researcher summarizing all cases for each research question under similar emerging themes with the intent to understand the adequacy of the university teacher preparation programme towards achieving inclusion in practical PE lessons. Also, the open-ended item on the lecturers' questionnaire which sought their concerns about the programme in the university for inclusive PE student-teacher preparation were subjected to thematic analysis.

3.9.2 Data Analysis and Presentation

Data were cleaned then coded using IBM Statistical Package for Social Sciences (SPSS, 2017) version 25. Descriptive statistics of frequencies, means, standard deviations and percentages were used to present data in tables and graphs. Also, inferential statistics of Independent t-test was used to ascertain the level of significance of student-teachers' intentions, pedagogical knowledge and practical experiences in the two institutions. Alpha level was set at $p \leq 0.05$ for two-tailed analysis. Hierarchical multiple regression was used to determine which variable predicts intention as well as the variables that predict the adequacy of the preparatory programme for inclusion.

For the qualitative data, the researcher transcribed the recorded FDG verbatim using manual coding. The researcher first carried out coding and analysis of the textual data manually. Preliminary notes were made. The manual coding and analysis helped the researcher to get experience of the qualitative data analysis process. Table 3.3 presents a summary of the data analysis test used for each study objective and corresponding research instrument.

Table 3.3: Research Objectives, Data Collection Instruments and the Statistical Test(s)

Research Objective	Instrument	Statistical Test
1. Determine the pedagogical knowledge on inclusion of SWDs in practical PE lessons among P.E student-teachers in two universities (UEW and UCC) in Ghana.	Questionnaire	Independent sample t-test
a. Determine student-teachers' instructional skill competences on inclusion of SWDs in practical PE lessons in the two universities (UEW and UCC).	Questionnaire	Mean, SD, percent,
b. Determine student-teachers' knowledge level on adaptation of PE practical lessons for inclusive teaching.	Questionnaire FGD	Mean, SD, percent Thematic, based on objective
2. Determine the training methods and approaches used for preparing student-teachers for inclusive PE teaching in the two universities (UEW and UCC) in Ghana.	FGD	Thematic, based on objective
3. Describe student-teachers' hands-on experiences in inclusive practical PE lessons during their university preparation programme in Ghana.	Questionnaire FGD	Mean, SD, Independent sample t-test Thematic, based on objective
4. Determine the differences in the PE student-teachers' intention of including SWDs in practical PE lessons in the two universities (UEW and UCC) in Ghana.	Questionnaire FGD	Independent Sample T-test, Thematic, based on objective
a. Determine whether behavioural beliefs and perceived behavioural control beliefs predict the intention of student-teachers to include SWDs in practical PE lessons in Ghana	Questionnaire	Hierarchical Multiple regression
5. Establish the concerns of PE student-teachers and practical course lecturers about the adequacy of the preparation programme for inclusive practical lessons in the two universities in Ghana.	FGD Open-ended item (Lecturers)	Thematic analysis

3.10 Logistical and Ethical Consideration

Prior to data collection, authorization to proceed to fieldwork was obtained from Kenyatta University Graduate School (Appendix A&B). Ethical clearance was sought from the Institutional Review Board of UCC for data collection (Appendix C). Permission was also sought from the Departmental Heads of both institutions before proceeding for data collection (Appendix D&E). Informed consent was sought from the participants in the study (Appendix F&G). Participants were informed that participation in this study was voluntary and assured of confidentiality in the handling of information that they provided for the study. Due to the nature of information collected, participants, especially the student-teachers were assured that the information given was for research purposes only and would not be used against them in any form. Participants were also informed that they could terminate participation at any point or for any reason without fear of reprisal.

CHAPTER FOUR: RESULTS

4.0 Introduction

This study aimed at assessing the adequacy of university student-teachers preparation programmes towards achieving the inclusion of SWDs in practical PE lessons in Ghana. This chapter presents the results of the study based on the research objectives. The study targeted 100% of the eligible participants, however, questionnaires were administered to 161 (93.6%) student-teachers who were present on the scheduled date for data collection and consented to take part in the study, instead of the 172 total sample size of level 300 student-teachers. All questionnaires administered to the 161 student-teachers and the 15 lecturers were retrieved, hence, the response rate was 100%. Out of the 161 student-teachers, 152 (94.4%) met the inclusion criteria. All analyses on the student-teachers' responses were done based on the total of 152 questionnaires.

4.1 Demographic Characteristics of Study Participants

This study looked at both the student-teachers and practical course lecturers' demographic characteristics. The result showed that participants from UEW represented the majority of the student-teachers captured for this study. The result showed that 127 of the student-teachers were from UEW while 25 were from UCC. Table 4.1 also showed that out of the 152 participants, 128(84.2%) were males while 24(15.8%) were females. Gender disproportion has been highly skewed in favour of males. This was because most student-teachers who enrolled in these Ghanaian universities for the PE programmes have males as the majority. Table 4.1 also showed that the study involved 15 practical course lecturers, with 7 coming from UCC and 8 from UEW. It further indicated that 13(86.7%) of the lecturers were male while 2(13.3%) were females. This shows that male practical course

lecturers formed the majority of the study participants for the lecturers. This corresponds to that of the student-teachers where the males dominated. Lecturers with PhD formed the majority 8(53.3%) followed by those with MPhil 6 (40%) and BEd 1(6.7%).

Table 4.1: Demographic Characteristics of the Study Participants

Student-Teachers	**Institutions**				**Total**
	UCC N=25		**UEW N=127**		
Gender	F	%	F	%	
Male	18	72	110	86.6	128 (84.2 %)
Female	7	28	17	13.4	24 (15.8 %)
Lecturers	**Institutions**				**Total**
	UCC N=7		**UEW N=8**		
Gender	F	%	F	%	
Male	6	85.7	7	87.5	13 (86.7 %)
Female	1	14.3	1	12.5	2 (13.3 %)
Qualification					
PhD	6	85.7	2	25	8 (53.3 %)
Masters	1	14.3	5	62.5	6 (40 %)
BEd	-		1	12.5	1 (6.7)
Lecturing Experience					
1-4years	1	14.3	1	12.5	2 (13.3 %)
5-10years	4	57.1	3	37.5	7 (46.7 %)
11-15years	1	14.3	2	25	3 (20 %)
16yrs and above	1	14.3	2	25	3 (20 %)

Abbreviations: N–Total Number, UCC–University of Cape Coast, UEW–University of Educ., Winneba

With regards to the practical course lecturers teaching experience in the university, it was found that a majority 7(46.7%) of the lecturers have been teaching various practical courses between the time frame of 5 to 10 years. Three (20%) said 11 – 15 years, 3(20%) also indicated over 16 years while those with the least teaching experience stated 1 – 4 years, representing 2(13.3%). This showed that majority of the study participants were male.

Also, the results revealed that majority of the lecturers had been teaching various practical courses for the past 5–10yrs in the universities.

4.2 Essential Courses for Inclusion in the University Preparation Programme

The study sought to find out courses related to disability studies that formed part of the university student-teacher preparation programme. The participants were asked to identify the courses that formed part of their preparation programme that relates to disability studies. The results from Figure 4.1 showed that all the student-teachers from UCC 25(100%) reported not taking a course focused on Adapted PE but indicated that they took a general course in special needs education. However, all the PE student-teachers from UEW 127(100%) reported taking a course in both Special Education and APE during their preparation programme in the university. This means that the programme content differs in each institution, though they have a common core mandate of training PE teachers for all levels of education in Ghana.

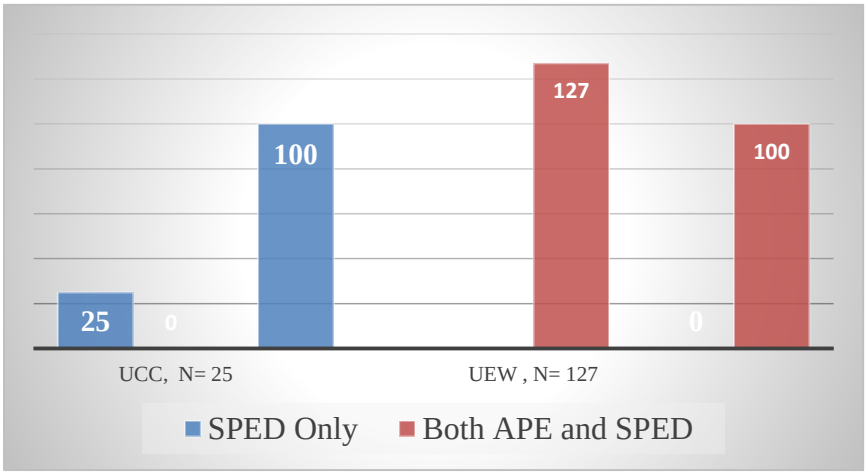

Figure 4.1: Courses Studied Relating to Disability in the University PE Programme

4.3 Understanding the Meaning of Disability and Inclusion by Student-Teachers

The researcher was interested in finding out if student-teachers were familiar with the term disability and inclusion. Participants from both institutions were asked whether they understood the meaning of disability and if they could visualise the inclusion process. The results from Table 4. 2 revealed that the majority (91.4%) of the study participants from both institutions indicated that they understood the definition of disability and could visualise the kind of students classified as disabled. This implied that the majority of the participants perceived that they understood the term disability and can visualise its meaning. A majority of the participants (144, 94.7%) also indicated that they understood inclusion and can visualise its meaning. Three (2.0%) were uncertain while 5 (3.3%) reported that they could not visualise the meaning of inclusion.

Table 4.2: Understanding of the Meaning of Disability and Inclusion by Student-Teachers

Understanding the Meaning of Disability		
Responses	**Frequency**	**Percentage**
Definitely No	10	6.6
Uncertain	3	2.0
Yes	139	91.4
Total	**152**	**100**
Understanding the Meaning of Inclusion		
Responses	**Frequency**	**Percentage**
No	5	3.3
Uncertain	3	2.0
Yes	144	94.7
Total	**152**	**100**

4.3.1 Understanding of the Meaning of Inclusion and Inclusive PE by Lecturers

The study further inquired the practical course lecturers' knowledge about inclusion and inclusive PE and if they could visualise the inclusion process. From Table 4.3, a high percentage of 80.0 were recorded for lecturers' inclusion education knowledge and

inclusive PE knowledge 12(80%). Three (20.0%) of the lecturers, however, responded that they had quite little knowledge about inclusion and inclusive PE. This depicts that majority of the lecturers had adept knowledge about inclusion and inclusive PE. With this perceived knowledge about inclusion by the lecturers, expectations of incorporating inclusivity in practical PE can be visualised to be easy.

Table 4.3: Practical Course Lecturers Responses on Inclusive Knowledge

Items	Frequency /Percentage		
	Number	Quite Little	Quite Much
1. How much do you know about inclusive education?	15	3 (20.0%)	12 (80.0%)
2. How much do you know about inclusive PE?	15	3 (20.0%)	12 (80.0%)

4.4 Pedagogical Knowledge and Skills for Inclusive PE Teaching

To investigate P.E student-teachers' pedagogical knowledge about including SWDs in their practical lessons, the first objective sought to determine the pedagogical knowledge on inclusion of SWDs in practical PE lessons among P.E student-teachers in two universities (UEW and UCC) in Ghana. With this objective, the researcher was interested in finding out if student-teachers had gained the needed pedagogical knowledge in terms of instructional and adaptation skills to be able to successfully include SWDs in their regular practical PE lessons in an inclusive setting.

4.4.1 Student-Teachers' Instructional Skills Knowledge for Inclusive Practical PE

Results from all the items in Table 4.4 indicated that the student-teachers felt they had gained instructional skills knowledge to effectively include SWDs in their practical PE lessons. This was proven by the fact that all items recorded above-average means of 3.0.

The results indicated that the university preparation programme in relation to instructional skills for the inclusion of SWDs in practical lessons were perceived to be adequate in terms of task selection (M=3.77, SD =1.03), pairing of students to practice skill taught (M=3.67, SD =1.04), setting of boundaries for practical lessons (M=4.09, SD=1.00), setting instructional objectives to cater for diverse students (M=4.26, SD=.91), pace for lesson delivery (M=4.07, SD=.99) and given instructional cues (M =3.80, SD =1.12). This implied that student-teachers from both institutions believed to have gained adequate instructional skills for inclusive practical PE teaching.

Table 4.4: Student-Teachers' Responses on Instructional Skills Knowledge for Inclusive PE

Items	N	Mean	SD
1. I know how to select task/skill that SWDs can perform with their able-bodied colleagues.	152	3.7763	1.03704
2. I know how to pair students without disabilities with SWDs to learn/practice a skill effectively.	152	3.6711	1.04708
3. I know how to constantly supervise students with and without disabilities while they practice a skill.	152	3.7368	1.13194
4. I know how to set boundaries and demarcate the practical classroom to enhance easy movement and participation for students with and without disabilities in an inclusive practical lesson.	152	4.0987	1.00831
5. I know how to incorporate how students with different disabilities learn into my everyday lesson preparation.	152	3.2697	1.01623
6. I know how to adequately demonstrate/describe skills to students with varying disabilities in an inclusive PE practical setting.	152	3.8158	1.05743
7. I know how to practically assess students with and without disabilities in an inclusive practical PE lesson.	152	3.8487	1.13791
8. I have learnt that I have to give adequate time for all students to practice what they have learnt	152	4.4408	.84362
9. I have learnt to set instructional objectives to cater for students with and without disabilities in an inclusive practical lesson.	152	4.2697	.91326
10. I have learnt to present skills in parts to allow students with and without disabilities to learn efficiently.	152	3.9408	1.05626
11. I have learnt to vary the pace of lesson delivery to help students with and without disabilities learn skills.	152	4.0724	.99070
12. I know how to analyse skills when SWDs are practising in an inclusive practical lesson for immediate feedback.	152	3.2237	.97109
13. I know how to give instructional cues to students with and without disabilities in an inclusive PE practical lesson.	152	3.8026	1.12785

Abbreviations: N – Number of Participants, SD – Standard deviation

4.4.1.1 Alternative Instructional Strategies and Adaptations for Teaching in an Inclusive Setting given to Student-teachers by Lecturers

Lecturers were asked whether they gave student-teachers alternative instructional strategies and adaptations for inclusive PE teaching. From figure 4.3, an average of 8 (53.3%) of the lecturers responded that they did not often give student-teachers alternative instructional strategies and adaptation skills for inclusive practical PE. Six (40%) said they often gave alternative instructional strategies while 1 (6.7%) reported giving alternative instructional strategies and adaptation skills for inclusion very often.

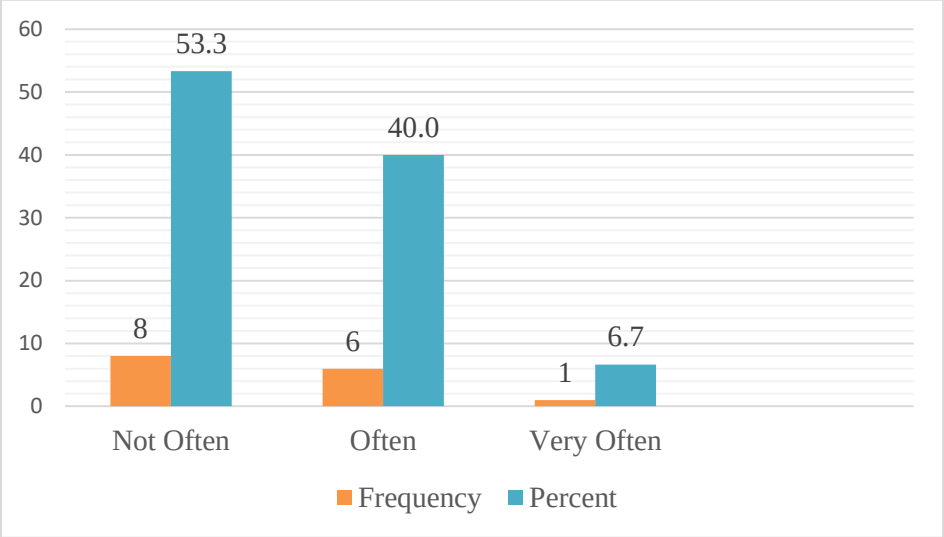

Figure 4.2: How often Lecturers give Student-teachers Alternative Instructional Strategies for Teaching in an Inclusive Setting

4.4.2 Adaptation Skill and Knowledge of Student-Teachers for Inclusive PE

Objective one (b) of the research was aimed at determining student-teachers' knowledge level on adaptation of PE practical lessons for inclusive teaching. The question "What are PE student-teachers' knowledge level on adaptation for inclusive practical PE lessons?" was posed. The result from Table 4.5 indicated that all six items addressing participants' adaptation skills knowledge during their preparatory programme recorded a mean over 3.7.

This implied that all the study participants felt they had adequate knowledge in adaptation for teaching in an inclusive setting and thus can modify equipment (M= 4.02, SD = .89), modify tasks (M= 3.74, SD= .99), and make accommodations (M= 3.90, SD = .98) in their practical lessons to successfully include SWDs.

Table 4.5: Student-Teachers' Responses on Adaptation Knowledge for Inclusive PE

Items	N	Mean	SD
1. I understand the term adaptation and know what it entails so far as the teaching of inclusive practical PE is concerned.	152	4.34	.781
2. I know how to modify equipment to suit students with varying disabilities in an inclusive practical PE lesson.	152	4.02	.898
3. I know how to accommodate students with varying disabilities in my practical PE lesson.	152	3.90	.985
4. I know how to modify a skill/task without changing its major focus in an inclusive practical PE lesson.	152	3.74	.993
5. I know how to adapt instructional skills for varying disabilities in an inclusive practical PE lesson.	152	3.84	.906
6. I know how to modify a task when assessing SWDs in an inclusive practical PE lesson.	152	3.95	.908

Abbreviation: N – Total Number of Participants, SD – Standard Deviation

On the contrary, though the majority of the students from UCC and UEW said they had acquired adaptation skills and knowledge. However, a further result obtained from an open-ended question which had asked them to indicate in writing some adaptation skills they knew based on their preparation programme in the university showed a majority of the participants responding negatively. The results from Table 4.6 revealed that majority 16(64%) of the student-teachers from UCC responded 'None', indicating that they had not learnt any adaptation skills for SWDs in the course of their preparation programme. Four

participants' (16%) made mention of measurement of performance to be individual based, 2(8.0%) indicated equipment modification while 1(4%) indicated rules modification, enough time to practice and small grouping for teaching, respectively, as the adaptation skills they have learnt. Due to the large proportion of student-teachers 16(64%) reporting not to have learnt any adaptation skills for inclusion of SWDs, it suggests that most of the student-teachers from UCC had not acquired adequate adaptation skills to be able to successfully include SWDs in their inclusive practical PE lessons.

Student-teachers from UEW on their part indicated equipment modification 20(15.7%), adequate time for practice 12(9.4%), breaking down complex skills 2(1.6%), equipment improvisation 11(8.7%), peer teaching 11(8.7%), task modification 10(7.9%), as well as varying and given clear instructions 5(4.0%) as some of the adaptation skills they learnt. However, quite a huge number of the UEW participants 40 (31.4%) also indicated "None" as their response to adaptation skill they have learnt during their preparation programme. Although UEW seems to have a larger proportion of participants reporting to have adaptation skills knowledge than those in UCC, however, there is still an implication of inadequacy in adaptation skills knowledge due to the 31.4% of student-teachers reporting of not having skills.

Table 4.6: Student-Teachers' Responses on Adaptation Skills Learnt during the University Preparatory Programme for Inclusive Practical PE Lessons

UCC Responses	Frequency	Percent
None	16	64.0
Equipment Modification	2	8.0
Rules Modification	1	4.0
Give them enough time for skill learning	1	4.0
Small grouping for teaching task	1	4.0
Measurement of performance must be individual based	4	16.0
Total	**25**	**100.0**
UEW Responses	**Frequency**	**Percent**
None	40	31.4
Adequate time for practice	12	9.4
Breaking down complex skills and task	2	1.6
Varying and giving clear instruction	5	4.0
Constructive positive feedback	2	1.6
Equipment improvisation	11	8.7
Equipment modification	20	15.7
Modification of rules	10	7.9
Modification of task	10	7.9
Peer teaching	11	8.7
Safe environment	4	3.1
Total	**127**	**100.0**

4.4.2.1 FGD Findings on Adaptation Knowledge to Include SWDs in PE Practical Lessons

To fully understand student-teachers' pedagogical knowledge, a further FGD was conducted to augment the results obtained from the quantitative phase of the study. Participants from UCC were asked questions on their knowledge about the adaptation of equipment and general adaptation to include SWDs in their PE practical lessons. Many of the participants indicated consensually that they were not taught about this in the PE programme. Nevertheless, they stated that, they could transfer knowledge from other fields

such as the special needs course, improvise as well as provide support services for SWDs.

Views expressed by some of the participants were as quoted below:

One male participant revealed that:

> *Even though we have not been specifically taught how to adapt the equipment for individuals who have a disability, I think with the knowledge we have any time we are asked to prepare lesson notes, we are asked to consider individual differences so with this knowledge or idea, I think I will try and structure the equipment in such a way that the SWD will also fit in the class. I will put the equipment in a way that he/she with disability and cannot go according to the normal procedure of the lesson will also have his/her choice of equipment. So, if, let's say, he/she is amputated where he/she can't walk and maybe he/she is in a wheelchair, I will try everything possible, that with the wheelchair, he/she will be able to do something with it to be able to be part or to feel part of the class (FGD Participant UCC, 2019).*

Another male participant said:

> *I also think if there is the need of improvising something or some of the equipment to suit their state of disability, that should be done. Then also, if you give the student with disability a different activity that will suit his state too, I think that one will do (FGD participant UCC, 2019).*

Another male participant said:

> *Since we have knowledge about the presence of SWDs in our class I'll have to emmm prepare ahead for them before I even go to the class. Assuming emmm I have a student with one of the legs not there and I am going to teach high jump or gymnastics, students are going to clear a certain bar or height. With the pre knowledge of that student in mind I would do my possible best to get a beat board to just help the student go through the activities successfully as alongside the students without disabilities (FGD Participant UCC, 2019).*

A female participant reported that:

> *Yes, during the lesson I will let those who are not disabled be in between them so that they will guide them. Then also, I will look for a specific exercise or activity for those with disabilities. Even though we've not been taught specifically, but I can go online, do more research and then maybe get specific activities for those people so that they will all be involved in the class (FGD Participant UCC, 2019).*

However, participants from UEW had knowledge in adaptation skills to include SWDs in their PE practical lessons. Participants indicated some adaptation strategies such as

appropriately adapting equipment for the right age, diverse disabilities, modifying rules, making equipment user friendly and improvising where necessary.

One male participant said:

> *My knowledge about adaptation so far is to look at the individuals with disabilities and see the equipment that will suit them in terms of practical preparation. Even though it might not be the right equipment for the lesson, but if it will suit the SWDs, then, I have to bring it on board to help them have a successful practical lesson. So, in that sense, an equipment might not be the right one for the class but I have to adapt it to suit the disability (FGD Participant UEW, 2019).*

Another male participant said:

> *I think this one is about making the equipment friendly in terms of reducing how complex it is so that the SWDs can use it to their level, making it user friendly (FGD Participant, UEW 2019).*

Another male participant also indicated that:

> *Sometimes and most often, it's quite difficult to modify equipment, so I believe more in modifying the rules of the game but not necessarily the equipment (FGD Participant UEW, 2019).*

A male participant responded that:

> *Let's say that am teaching basketball where we have a standardised ball size and here is a case I have a person with a disability whose fingers are not stable to hold a big ball. I can adapt a handball so such a student can practise the skill I are teaching in basketball (FGD Participant UEW, 2019).*

A female participant said:

> *I will say adaptation of equipment depends on the degree of disability so maybe, we may make adjustment in the equipment to suit the level or the degree of the disability so he/she can enjoy the class as well (FGD Participant, UEW 2019).*

Although some of the student-teachers indicated that they had not been specifically taught how to carry out adaptation, there were, however, positive indication from their comments that they would adapt equipment, instruction and factor in general adaptation in their future practical PE lessons to include SWDs.

4.4.2.2 Lecturers Views on Student-Teachers' Preparedness to Adapt Instructional Skills for Inclusive Practical PE

Opinions were quite divided when lecturers were asked to rate the preparedness of student-teachers to adapt instructional skills to include SWDs in PE practical lessons based on the preparation programme in the university. From Table 4.7, quite a high number of the lecturers, 7 (46.7%) indicated that they believed student-teachers were not well prepared based on the university preparation programme. Meanwhile, a closer number of 6 (40%) were also of the view that student-teachers were somewhat prepared to adapt instructional skills and strategies for effective inclusion of SWDs in practical PE lessons. Two (13.3%) of the lecturers were not certain. This implied that lecturers saw a pitfall in the preparation programme and as such, perceived that student-teachers had not been trained well enough to adapt instructional skills. This might be due to their inability to give student-teachers' alternative instructional skills for inclusive practical PE teaching.

Table 4.7: Lecturers' Responses on Student-Teachers' Preparedness to Adapt Instructional Skills for Inclusive Practical PE

Responses	Frequency	Percent
Not Well Prepared	7	46.7
Uncertain	2	13.3
Somewhat Prepared	6	40.0
Total	15	100.0

4.4.2.3 Lecturers' Views on Student-Teachers' Preparedness to Adapt Equipment for Inclusive Practical PE Teaching

Lecturers were further asked to rate the preparedness of student-teachers to adapt equipment for skill teaching in their practical course area in an inclusive setting. From

Table 4.8, six (40.0%) of the lecturers were of the view that student-teachers were not well prepared to adapt equipment for inclusive practical PE teaching. Two (13.3%) were uncertain, while 5 (33.3%) responded somehow prepared. However, 2 (13.3) were of the view that student-teachers were very well prepared to adapt equipment to suit SWDs in inclusive practical PE. This implied that lecturers perceived inability in student-teachers' to adapt equipment for inclusive PE teaching.

Table 4.8: Lecturers' Responses on Student-Teachers' Preparedness to Adapt Equipment for Inclusive Practical PE

Responses	Frequency	Percent
Not Well Prepared	6	40.0
Uncertain	2	13.3
Somewhat Prepared	5	33.3
Very Well Prepared	2	13.3
Total	15	100.0

4.4.2.4 T-test Results of Student-Teachers' Pedagogical Knowledge Acquired during the Preparatory Programme for Inclusive Practical PE between the Two Universities

The study further sought to determine the mean difference in P.E student-teachers' pedagogical knowledge about including SWDs in their practical PE lessons in the two universities (UEW and UCC). An independent sample t-test assuming unequal variance was conducted to establish the mean difference in pedagogical knowledge acquisition for including SWDs between PE student-teachers from the two universities. The result from Table 4.9 indicated that t (-6.010) at df (30) $p<0.05$, with Hedges g of 1.53 was significant. The null hypothesis which stated that there is no significant difference between the pedagogical skill knowledge of student-teachers from the two universities was rejected. This implied that much difference exists in the pedagogical knowledge and skills acquired by the student-teachers from the two universities.

Table 4.9: T-test Results Showing Differences between Student-Teachers' Pedagogical Knowledge for Inclusive Practical PE in the Two Universities

Institution	N	Mean	SD	t-test	Df	p-value
UCC	25	60.68	12.30			
UEW	127	76.36	6.57	-6.010	30.274	.000*

Abbreviation: t – t-test value, df – degree of freedom. SD – Standard deviation, Significant** p<0.05: df = 30

4.5 Training Methods and Approaches used in the Preparation Programme for Inclusion

The objective two of this study sought for student-teachers views on the training methods and approaches used in their preparation programme for inclusive PE teaching through FGD. During the FGDs, participants were asked to identify and share their opinions about the training methods and approaches they have experienced throughout their preparation programme for inclusive practical PE in the two universities (UEW and UCC). Aside demonstration and peer teaching approaches mentioned by one participant, opinions expressed by most of the participants were about the methods being too theoretical (lecture approach), absence of SWDs during practical lessons and lack of exposure during on-campus teaching practice (OCTP).

Views from some of the participants from UEW were that: "For the training methods I will say it is mostly of demonstrations and peer teaching but not related to inclusion" (A female FGD Participant, UEW 2019). A male participant reported that "For the approach, I will say it's both theory and practical with most lecturers using the lecture approach". A female participant was of a different opinion that: "I beg to differ in relation to how we were taken through the practical by our lecturers. I will say there is no mention of SWDs, so for that

aspect of inclusion, it was only one-sided which is student without disabilities". A male participant also said: "I will also say it's both theory and practical, only that the practical aspect wasn't in an inclusive setting". Another female participant indicated that: "Yeah, it's more theory than practical".

A male participant was of the view that:

> *You see, our lecturers don't make mention of SWDs during our practical lessons and also we have not been given the chance to do on- campus teaching practice with those who are in the department of special education. So, I will say, the approach and methods are too theoretical. (FGD Participant, UEW 2019).*

Opinions from UCC participants were not different from that of the UEW participants on the training methods used in their preparation programme. One male participant said "For that one, I will say it's more theoretical and needs to be practical" Another male participant also reported that "I agree with my brother; it's more theoretical, and no practicals". Another male participant was of the view that "For pedagogy, we had only one course in level 200 and it doesn't involve SWDs".

One male participant suggested that:

> *I think one or two students were having problem with injuries though injuries are not the same as disabilities. Those people were not involved with the exercises we were doing. So, I think it will be better if the lecturers have used different approaches for us to see how they could have been included instead of asking them to sit down and observe the lesson (FGD Participant, UCC 2019).*

4.6 Student-Teachers' Hands-on Experience in Inclusive Practical PE Teaching

Research objective three sought to establish how the training programme in the universities equips student-teachers' with hands-on experience for inclusive practical PE lessons. Two approaches were used to collect data from the student-teachers. First, a questionnaire with a-5-point Likert scale items was used, which was later followed up with a focus group

discussion. Responses indicated that, the majority of the student-teachers disagreed with all the items under practical experience with SWDs in an inclusive setting. From Table 4.10, all the items recorded a mean below 2.88 (out of the average mean of 3.0). Student-teachers had not had the opportunity to observe an inclusive PE lesson (M=2.64, SD = 1.26) neither had they got the opportunity to interact with an inclusive class setting (M=2.76, SD=1.24). This suggests that the preparatory programme in the University had not exposed student-teachers to hands-on experiences in inclusion and in an inclusive setting. This implied that although student-teachers are being trained, there is paucity in their inclusive exposure in practical PE.

Table 4.10: Student-Teachers' Responses on PE Practical Experiences with SWDs in an Inclusive Setting

Items	N	Mean	SD
1. I have had the opportunity to observe students with and without disabilities in PE practical lessons in an inclusive setting during my preparation programme.	152	2.64	1.26
2. I have had an opportunity to interact with students with and without disabilities in an inclusive PE practical lesson during my preparation programme.	152	2.76	1.24
3. I have had the opportunity to pair students without disabilities with SWDs to learn/practice a skill effectively.	152	2.73	1.25
4. I have had the opportunity to supervise students with and without disabilities while they practice a skill in an inclusive practical PE lesson.	152	2.69	1.27
5. I have had the opportunity to adequately demonstrate/describe skills to students with varying disabilities in an inclusive PE practical setting.	152	2.55	1.16
6. I have had the opportunity to practically assess students with and without disabilities in an inclusive practical PE lesson.	152	2.67	1.30
7. I have had the opportunity to practice how to present skills in parts to allow students with and without disabilities to learn efficiently.	152	2.66	1.16
8. I have had the opportunity to practice how to vary the pace of lesson delivery to help students with and without disabilities learn skills.	152	2.63	1.16

Abbreviation: N – Total Number of Participants, SD – Standard Deviation

A further inferential statistics was conducted to find out if there is a significant difference between the hands-on experiences of the student-teachers in the two universities based on their preparation programmes. An independent sample t-test assuming unequal variance was used to test the null hypothesis which stated that there is no significant difference

between the hands-on experiences of student-teachers in the two universities. Table 4.11 shows that there was a significant difference between the hands-on experiences of the student-teachers in the two universities. The result indicated that UEW student-teachers (M= 22.36, SD= 6.57) had more hands-on experiences than their colleagues from UCC (M = 16.28, SD= 6.97) did. From Table 4.11, t (-4.020) at df (32.9), p< .005 was significant with Hedges' g of 0.90. The null hypothesis was, therefore, rejected.

Table 4.11: T-test Results Showing Differences between Student-Teachers' Hands-On Experiences for Inclusive Practical PE in the Two Universities

Institution	N	Mean	SD	T	Df	p-value
UCC	25	16.28	6.97			
UEW	127	22.36	6.57	-4.020	32.921	.000*

Abbreviation: t – t-test value, df – degree of freedom. SD – Standard deviation, Significant* p<0.05 df =32.9

4.6.1 FGD Results for Student-Teachers' Hands-on Experience in Inclusive Practical PE

To describe and also to get in-depth information about student-teachers' hands-on experiences in inclusive practical PE lessons during their university preparation programme, a focus group discussion was conducted. Student-teachers from UEW seemed to have visited segregated schools and reported that they had observed SWDs in their practical lessons but did not have the opportunity to teach them as they would have wished for personal experience. Some views shared by some of the student-teachers were as follows:

One male participant said:

> *When we went to visit classified people at disabilities centres and then took part in their PA programmes, it gave us a prior knowledge about*

how they conduct their PE lessons. So, that is why I am saying I have hands-on exposure in terms of practicals (FGD Participant, UEW 2019).

Contrary one female student was of the view that:

Well, there is the saying that we learn more by doing so since I have not experienced and also not had the exposure, I will say I don't have any hands-on experience (FGD Participant, UEW 2019)

One male participant also reported that:

We all know that theory is different from practice. I have gotten the theoretical knowledge but for practical experience, I will say a big No" (FGD Participant, UEW 2019).

All participants from UCC responded in the negative when asked if they had any hands-on experience. Some went on to further suggest that they needed such hands-on experiences since they had not had any practical exposure. Their views are cited as follows:

One male participant from UCC said that:

Ok, you know for the practical aspect of every activity we do, we have some kind of posture that we have to assume. Even with the abled students at times lecturers find it difficult to get some of us who are not well coordinated to perform the exact skill that we are supposed to do. Then here is a case I have an SWD in my class which I have not had an experience and have not been taught how to even teach them once emmm to perform a physical activity. It will be very difficult to be frank unless of cost we go through some extra training.

Another male participant from UCC reported that:

I have no exposure; I need to start reading about disability and how to involve them in our practical lessons. And also, most effectively, we should look at Europe and the outside world; most of their activities go with equipment and you have to know how to use that equipment and how to improvise them. I have to start looking at ways to involve them. Let's say if am going to teach volleyball, how do I improvise to suit someone who is able to use the hand but cannot walk. How will I involve such a person in my volleyball class? I have to start reading to have basic knowledge about handling such individuals (FGD Participant, UCC 2019).

Another male participant said:

There is more we need to do; more we need to know and more we need to learn. So, what will be the best for us is to go out there and read more about SWDs, how to handle them and involve them in activities and also

> *how to involve them with people without disabilities so that in all, everybody will benefit (FGD Participant, UCC 2019).*

Another participant suggested that:

> *I think we should start writing proposals and articles on those issues to push an agenda if they can as well include us or include the inclusive schools to our programme. With this, we can have part of our off-campus teaching practice in inclusive and special schools. Even if it's just for a week or two, at least we will learn something so that if we go out there, we will be fully-baked. Now we are half-baked; we are just waiting for issues to come up (FGD Male Participant, UCC 2019).*

A female participant said:

> *I also think that we need to learn more, and also find out how we can handle SWDs when we meet them in the schools. I can actually see we have a lot to do in terms of practicals in inclusive schools. From today, I will learn more and also visit some of their schools to know how to handle these people (FGD Participant, UCC 2019).*

Those comments from student-teachers indicated that the preparation programme in the two departments failed to expose them to inclusive practical PE environments.

4.7 Student-Teachers' Intentions for Inclusion in Practical PE Lessons

Research objective four sought PE student-teachers' intentions towards the inclusion of SWDs in their practical lessons in an inclusive setting, using four items on a-5-point Likert scale. The results clearly revealed that the participants had the intention of including SWDs in their regular PE practical lessons in an inclusive setting. From Table 4.12, the highest mean (4.29) was recorded for item four where student-teachers expressed their intention of developing practical lesson plans to facilitate inclusion. This was keenly followed by indicating their determination to include SWDs (M=4.26, SD= 1.37), and intention to try including SWDs (M=4.17, SD=1.46), respectively.

Table 4.12: Intentions of PE Student-Teachers to Include SWDs in Practical PE Lessons in an Inclusive Setting

Items	N	Mean	SD
1. I intend to include SWDs in my PE practical class.	152	4.14	1.50
2. I will try to include SWDs in my PE practical class.	152	4.17	1.46
3. I am determined to include SWDs in my PE practical class.	152	4.26	1.37
4. I will develop my practical lesson plans to facilitate inclusion of SWDs in my PE practical class.	152	4.29	1.36

Abbreviation: N – Total Number of Participants, SD – Standard Deviation

The study further used an independent sample t-test assuming unequal variance to establish the significant mean difference between the student-teachers' intentions of including SWDs in practical PE lessons in the two universities. The results from Table 4.13 indicated that UEW student-teachers (M= 17.57, SD = 4.28) had higher intentions to include SWDs in their practical lessons than student-teachers from UCC (M= 13.36, SD = 5. 97) did. Table 4.13 shows that t (-3.363), at df (29), p<.005 with Hedges' g of 0.92 was significant, the null hypothesis was, therefore, rejected. The researcher concludes that student-teachers from the two institutions had different opinions and intentions when it comes to inclusion of SWDs in practical PE in an inclusive setting.

Table 4.13: T-test Results of Student-Teachers' Intentions to Include SWDs in Practical PE Lessons from the Two Universities.

Institution	N	Mean	SD	t-test	Df	p-value
UCC	25	13.36	5.97			
UEW	127	17.57	4.28	-3.363	29.05	.002*

Abbreviation: t – t-test value, df – degree of freedom. SD – Standard deviation Significant** p<0.05, df =29

4.7.1 Student-Teachers' Belief Outcome for Inclusion of SWDs in Practical PE Lessons

Further questions were asked to establish participants' views on the outcomes of their behavioural beliefs on inclusion of SWDs in their practical lessons. A-5-point Likert scale type with seven items was used. The results from Table 4.14 revealed that, most of the student-teachers hold a strong belief that inclusion of SWDs in practical PE lessons would encourage SWDs to learn skills from others (M=4.46, SD=1.13), interact with students without disabilities (M=4.44, SD=1.16) and had a positive effect on their personality development (M= 4.38, SD= 1.25). Conversely, the student-teachers also expressed their preparedness and intentions to include SWDs. They held the view that inclusion of SWDs would not make their lesson planning and preparation difficult (M=2.63, SD=1.70). They also perceived that SWDs would not slow down their lessons (M=2.25, SD=1.57). They also believed that inclusion in practical lessons would not make skill teaching difficult (M=2.42, SD=1.59). This implied that the perception of student-teachers that SWDs in their inclusive practical lessons would not have negative influence on their lessons would inform their attitude for inclusion in practical PE.

Table 4.14: Student-Teachers' Behavioural Belief Outcome for Inclusion

Items	N	Mean	SD
1. Including SWDs in my PE class will help students without disabilities to learn to interact with SWDs.	152	4.44	1.16
2. Including SWDs in my practical PE class will make skill teaching more difficult.	152	2.42	1.59
3. Including SWDs in my PE class will encourage students to learn to help others learn skills taught.	152	4.46	1.13
4. Including SWDs in my practical PE class will make lesson planning and preparation much more difficult.	152	2.63	1.70
5. Inclusion will have a positive effect on the development of personalities of SWDs.	152	4.38	1.25
6. SWDs will slow down instruction and progress in my PE class.	152	2.25	1.57
7. Including SWDs in my practical PE class will teach students cooperation.	152	4.43	1.18

Abbreviation: N – Total Number of Participants, SD – Standard Deviation

4.7.2 Student-Teachers' Perceived Behavioural Control Belief Outcome for Inclusion

From Table 4.15, student-teachers perceived that students without disabilities would understand and show the willingness to cooperate with SWDs in their inclusive practical lessons (M=4.28, SD=1.25). They also perceived that, students without disability had appropriate information about SWDs (M=3.42, SD=1.67). They also believed that the school heads would support them to include SWDs in their practical lessons (M=3.80, SD=1.55). However, low means were recorded when student-teachers were asked about the appropriateness of their training programme for inclusion (M= 2.06, SD= 1.45) and also on their perception that schools had appropriate equipment and facilities for the successful inclusion of SWDs in their practical lessons (M= 2.46, SD= 1.71). This implied that although the participants were willing to include SWDs in practical lessons, this might

be hindered by their perceived lack of appropriate training and the fear of not getting support from heads of institutions in terms of equipment and facilities.

Table 4.15: Student-Teachers' Perceived Behavioural Control Belief Outcome for Inclusion

Items	N	Mean	SD
1. I have appropriate training to successfully include SWDs in my PE class.	152	2.06	1.45
2. I think that schools have appropriate equipment and facilities for including SWDs in my practical PE class.	152	2.46	1.71
3. I think that most students are appropriately informed about SWDs.	152	3.42	1.67
4. I think that students without disabilities would show understanding and willingness to cooperate with SWDs.	152	4.28	1.25
5. I think the heads in most schools would support my inclusion of SWDs in practical PE classes.	152	3.80	1.55

Abbreviation: N – Total Number of Participants, SD – Standard Deviation

According to the theory of Planned Behaviour by Ajzen (1991), intentions are predicted by one's behavioural beliefs, normative beliefs and perceived behavioural control beliefs. In this study, the researcher sought to establish whether behavioural beliefs and perceived behavioural control beliefs predict the intention of student-teachers to include SWDs in their regular practical PE lessons in an inclusive setting using Hierarchical Multiple regression. In the first step, behavioural beliefs summative index was entered as a predictor of intention and found to be a significant predictor explaining 5.0% of the variance in intention. In step two, adding perceived behavioural control summative index increased the variance explained for intention by 14.0%, with behavioural beliefs decreasing and accounting for 3.1% variance in intention. The combination of variables significantly

predicted intention F(2, 149) = 15.386, p< .001. Both behavioural beliefs t(2, 149) = 2.360, p< 0.02 and perceived behavioural control beliefs, t(2, 149) = 4.097. p< .000 contributed to the prediction. The R squared value was .171, indicating that 17.1% of the variance for intention was explained by the model. The beta weights presented in Table 4.16 suggests that perceived behavioural control beliefs contributed .320 (R^2 change of 14.0%) more to predicting intention than behavioural beliefs, which contributed .184 (R^2 change of 3.1%) to the model. Both predictors were found to be significant.

Table 4.16: Hierarchical Multiple Regression Analysis Summary for Behavioural Beliefs and Perceived Behavioural Control Beliefs Predicting Intention (N=152)

Variables	**B**	**SEB**	**B**	**ΔR^2**
Step One				
Behavioural Belief	.007	.002	.279	5.0
Step Two				
Behavioural Beliefs	.005	.002	.184	3.1
Perceived Control Beliefs	.011	.003	.320	14.0
Constant	9.489	1.502		

NB: R^2=.171, F (2,149) = 15.386, p<.0.05 **p<.001
B – Unstandardized beta coefficient, SEB – Standardized error of mean, β – beta coefficient, ΔR^2 – Adjusted, R – square change

4.7.3 FGD Findings for Student-Teachers' Intentions to Include SWDs in Practical PE Lessons

Participants were asked to share their views on how the preparation programme had shaped their intentions for inclusive PE practical teaching. Generally, participants from UEW gave a positive response concerning the inclusion of SWDs in their practical lessons than the participants from UCC did. Participants from UCC revealed that it would be a bit

challenging due to the fact that they had not received training on how to teach SWDs as an aspect of their departmental component of their preparation programme. Some opinions expressed by student-teachers from the two institutions were:

A male participant said:

> *It will be a bit difficult based on what we are getting here. We are not being taught how to teach people with disabilities when it comes to PE. So, for me, it will be a bit difficult to include them" (FGD Participant UCC, 2019).*

A female participant from UCC also revealed that:

> *I also think it will be difficult in the sense that, we have not been specifically taught about teaching SWDs in practical PE (FGD Participant UCC, 2019)*

She went on to say:

> *I will say, to be frank, it didn't even occur to me that there are people out there that I am going to meet because I thought they have separate schools. For inclusion, to be frank, I wouldn't know what I will do when I come across them (FGD Participant, UCC 2019).*

However, participants from UEW said it was possible to include SWDs in their lessons by reducing tasks, modifying teaching approaches, and giving SWDs enough time to complete tasks at their own pace. Some views expressed were:

A male participant said:

> *I can include them by reducing tasks to their level. That is, you look at the disability that the person is having and make the task appropriate for him or her (FGD Participant UEW 2019).*

Another male participant revealed that:

> *Also, you can include them by modifying the methodology, and the equipment to suit both the disabled and the able students. That is how I will do it in my class (FGD Participant UEW, 2019).*

Another male participant said "By giving them enough time to practice. That is, they practice at their own pace."

Other participants from UEW indicated how their intentions and perceptions about the inclusion of SWDs had changed based on the preparatory programme they had gone

through in the university. Others reported that they would not hesitate to include them if the equipment got well modified. They expressed some views such as:

One male participant said:

> *I also think the training programme has helped me gain insight into issues concerning how to handle SWDs and modify my teaching sessions to suit different categories of disabilities during practical lessons. So, I will definitely include them in my practical lessons (FGD Participant, UEW, 2019).*

Another male participant reported that:

> *For me, initially I thought of them as not able to participate in practical lessons and any physical activity. But based on the lessons we have had and looking at the trips we took, it will be best to introduce PE to them and I will not hesitate to include them when I happen to have one in my class (FGD Participant, UEW, 2019).*

One female participant said:

> *I have always thought that once someone is having some kind of special needs issue, the person is already stressed up so they shouldn't be involved in doing any kind of stressful activity. But as I came to do this programme, I have realised they also need physical activity in order to be healthy like we the so-called able-bodied so I will include them (FGD Participant, UEW, 2019).*

A male participant expressed that:

> *I have always thought that SWDs cannot do PE practicals and at best, they can only do some few activities. But with the knowledge gained so far, I think if the equipment are well modified, they can also as well take part in any practical PE lesson and I will try my best to include them (FGD Participant, UEW, 2019).*

Those comments indicated that student-teachers held favourable intentions, and there was a sense of predisposition to inclusion of SWDs in their future practical PE lessons.

4.7.4 Student-Teachers' Level of Competence to Include SWDs in Practical PE Lessons

Student-teachers were asked to rate their level of competence to include SWDs based on the preparatory programme in the university. From Table 4.17, 11(44%) out of the 25

participants from UCC reported not being competent at all to teach practical PE in an inclusive setting. Nine (36%) reported being somewhat competent while 5 (20%) said they felt competent enough to include SWDs in their practical lessons. Approximately, nine (7.1%) out of the 127 of UEW student-teachers reported not being competent at all to teach practical PE to SWDs in an inclusive setting, 70(55.1%) reported being somewhat competent, and 48(37.8%) reported being very competent. This indicated that the majority of the participants from UCC reported not being competent while majority of student-teachers from UEW felt somewhat competent to include SWDs in their practical PE lessons.

Table 4.17: Perceived Competence of Student-Teachers to Include SWDs in PE Practical Lessons

	Institutions				**Total**
	UCC N=25		**UEW N=127**		
Perceived Competence	F	Percent	F	Percent	
Very Competent	5	20	48	37.8	53 (34.8 %)
Somewhat	9	36	70	55.1	79 (52.0 %)
Not at all	11	44	9	7.1	20 (13.2 %)

Abbreviations: N – number of participants, F – frequency

4.7.5 Lecturers' Responses on the Preparedness of Student-Teachers to Effectively Include SWDs in their Practical Courses

Lecturers were asked whether they thought student-teachers were adequately prepared in their practical course to be able to effectively include SWDs in practical lessons. Though lecturers indicated that they sensitize and gave student-teachers alternative instructional strategies and adaptation skills for the inclusion of SWDs, however, their responses on the

preparedness of student-teachers to practically include SWDs in their practical course area were negative. From Figure 4.3, five (33.3%) of the lecturers said 'Yes' while 10(66.7%) responded that student-teachers were not prepared to handle their practical course in an inclusive setting.

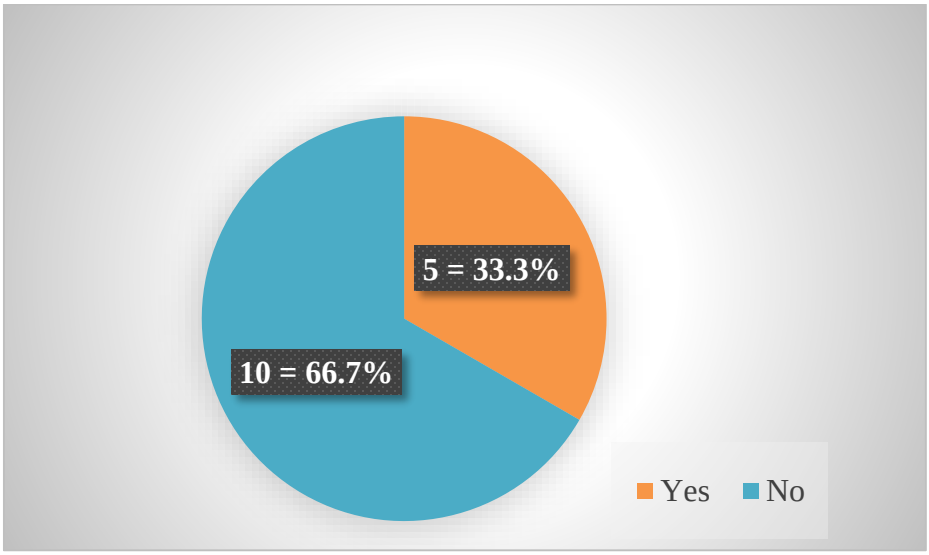

Figure 4.3: Lecturers' Responses on the Preparedness of Student-Teachers to Effectively Include SWDs in their Practical Courses

4.7.6 Adequacy of the Preparation Programme from Practical Course Lecturers' Perspectives

The study sought the views of university practical course lecturers on the adequacy of the preparation programme for student-teachers towards achieving inclusive practical PE. Figure 4.4 depicts that most of the lecturers, 11(73.3%) believed the training they gave was inadequate for student-teachers to be able to successfully include SWDs in their practical PE lessons. Similarly, 2 (13.3%) perceived the programme to be very inadequate while 2 (13.3%) also shared the view that the programme was adequate. This implied that the preparation programme in the university must be looked into. This would help to improve

the programme where there is a key component for inclusion missing for it to be adequate for inclusive practical PE teaching.

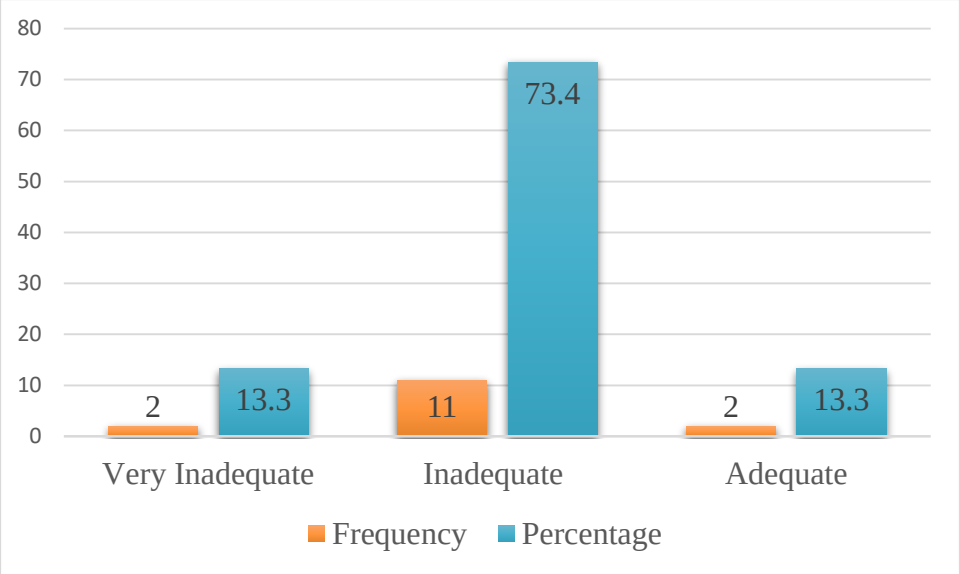

Figure 4.4: Lecturers' Views on the Adequacy of the Preparatory Programme in the University for Inclusive Practical PE

4.8 Concerns about the Preparation Programme in the University for Inclusive Practical PE Teaching

Student-teachers' concerns about the preparation programmes for inclusive practical PE lessons in the universities were sought using FGD. Lecturers' concerns were also sought using an open-ended question where they indicated their concerns by writing. Themes identified for both student-teachers and practical course lecturers were quite similar. The results for student-teachers were presented first, followed by that of the lecturers.

4.8.1 Student-Teachers' Concerns about the Preparation Programme for Inclusion

Student-teachers' concerns were grouped under the themes: personal (personal competence), equipment, task mastery, exposure, management and extended concerns.

4.8.1.1 Personal Concerns

Personal concerns looked at student-teachers' own adequacy and perceived survival in the teaching environment. With respect to personal concern, emerging themes such as perceived competence as well as available support were all put under this theme. Some student-teachers expressed concern about their pedagogy being silent on SWDs and about their developmental readiness in terms of human relationship. Some views expressed were:

One male participant said:

> *Yeah, I do have concerns because I learnt even if you have SWDs in your class and you are preparing lesson notes for practicals for that class, you know, we have formation and other stuff, so your formation and coaching points will have to address those students in your class. But then in our pedagogy, all we did was students without disabilities so we may face one or two challenges including SWDs in our practical lessons. (FGD Participant, UCC)*

Another male participant from UEW was of the view that:

> *My primary concern is that most often, we don't consider the level of activity of the SWDs prior to teaching a particular skill or class thus making it difficult. For example, if you take football, my concern is how many of us are going out there to have some kind of needs assessment to say ooh I can include them. Are the supports needed to include them available? Also, how many of them have played football before and even if they are disabled, how long are they supposed to take before they can learn a particular skill? I am talking of the human relation aspect; I may not be patient enough with some of these disabled people so that is my major concern. (FGD Participant, UEW, 2019).*

4.8.1.2 Equipment Concerns

Concerns about availability of special equipment and how modification could be done to an existing equipment to accommodate SWDs was put under this theme. One student from UEW raised a concern about equipment and all the participants nodded their heads in agreement to his submission. He said:

> *For me I think one of the primary issues that are worrying us, has to do with equipment. You see, for them you have to modify their equipment and then you need certain equipment too to perform certain activities. So, are the schools ready to provide these equipment so that we can use*

> *them to either teach the skill or for them to train with it, to be able to include them in my practical lesson? Moreover, we have not seen or used some of these equipment before, so, I think it's going to be difficult. (FGD Male Participant UEW, 2019).*

Another student from UCC said "To be frank, I have not seen any of these special equipment before or it usage so I wonder how I will use them effectively in an inclusive lesson". Deduction from the comments from the student-teachers' showed that access and opportunity to interact with special equipment during the preparation programme in the university was difficult.

4.8.1.3 Task Mastery Concerns

Concern referring to the student-teachers' mastery stage and the perceived frustrations to be encountered in their teaching was put under this theme. Student-teachers identified sign language to be a major concern if they were to find themselves in a class with a person with hearing impairment (HI). Some participants from UEW suggested that the basic sign language should be part of the APE while others were of the opinion that it should be a course on its own. Participants expressed concerns such as:

One male participant said:

> *My concern has to do with having a PE practical lesson where you have HI, so in explaining the drills you have to use sign language and so it will become difficult. I therefore suggest that we should be taught sign language as a departmental course. Also, the sign language can be part of the APE course in the department. (FGD Male Participant, UEW 2019).*

One male participant from UEW suggested that "the sign language should be included in our special education course". Another male participant from UEW with different opinion suggested that "The sign language should be a course on its own and not be made part of the APE course" (FGD Participant, UEW 2019).

4.8.1.4 Experience/Exposure Concerns

Participants' exposure and practical experiences during the preparation programme in the university were put under this theme. Student-teachers from UEW said that they had not had any practical experience where they were at the centre of instruction. One student reported that:

> *My concern is that we do more theory than practical in APE. As for inclusion practical, we have not observed one but where they are in their segregated schools, we have observed their lessons. On our trip to the schools, we played with them and because we are being trained as teachers, we know how to accommodate them, but in reality, I don't know how an abled SHS students will accept them in my practical class and that is my concern now. I wish in one of our trips, we visited any of the inclusive schools just to observe their lessons. (FGD Female Participant UEW, 2019).*

One male participant from UCC also shared the view that:

> *The only concern I have is like you rightly said, how to handle special individuals in the class, because the here pedagogy is more theoretical. The practical aspect is teaching ourselves, which we all already know and they assume we know so we should be able to exhibit to their expectations. But when there is an issue of an individual with special abilities in place, how do we handle that? So, pedagogy here as we are taught does not handle that aspect and it's a big issue (FGD Participant, UCC 2019).*

Another male participant from UCC said:

> *With special education for instance, the lecturers only talk about the theory aspect but with us being physical educationist and part of our lessons being practical, they haven't created an opportunity for us to have an experience with SWDs or even simulate activity for us to have a first-hand experience teaching SWDs. So, it will be difficult to adjust to a situation like that and until we come across students with such conditions and practice with them we wouldn't be very much able to select activities for them to perform. I see this to be a major concern.*

Although all the participants indicated they got training in an academic context, their comments showed that they did not had specific training in the professional context. The participants' worries were, in part, influenced by the lack of practical exposure, showing some reluctance in including the SWDs in their future practical PE lessons.

4.8.1.5 Management Concerns

Management concerns looked at courses in the university's preparation programme. One concern raised for the department and management by the students of UCC had to do with lack of APE as part of their preparation programme in the University. Students were asked if they would recommend that APE should be included in their preparation programme and they responded in the affirmative. Most of the participants from UCC acknowledged that the inclusion of APE as a course into their teacher preparation programme was important. Some participants suggested that APE should be integrated into other courses for about thirty minutes and student-teachers should be taught how they could adjust when they had SWDs in their classes. Some participants provided suggestions that they should be taught how to handle SWDs. Some student-teachers expressed the following concerns during the FGD:

A female participant was of the view that:

> *My concern is with pedagogy. With the pedagogy, it is based on what we've been taught from level 100 and how we gonna teach such courses. But I think, if it is meant to help us prepare our lesson plan to include SWDs, then it should be included in our pedagogy and it should start from level 100 (Female participant FGD, UCC, 2019).*

She went on to say that:

> *Well, there should be some credit hours allocated to it (APE) because that will help. Of late, we see buildings being restructured to suit all kinds of people in the society so since we are going to meet SWDs in the schools, I think there should be credit hours allocated to the APE so that at least we will also learn how to handle people with disabilities (FGD Participant, UCC, 2019).*

A male participant also said:

> *The course should also be added to the PE students' courses, maybe a semester where we will be taught how to handle SWDs whenever we come across them in practical class, because disability is not lack of ability. If you are disabled that does not mean you don't have the*

abilities. So, I think if that APE is encouraged or enrolled in university courses, it will really help. (FGD Participant, UCC, 2019).

A male participant from UCC said:

I think most of the courses we are doing at the undergrad are the introduction to whatever we want to do at the Masters level. Since most of the courses are introduction at the undergrad level, I think if the APE will also be introduced as a course for the undergraduate programme, it will help to improve practical inclusive teaching. (FGD participant, UCC 2019).

Another male participant from UCC also said:

As from the beginning level 100, I think if we are made aware or we are taught about APE or it is included in the courses that we do, it will prepare us to know that this and that is what we need to do to include SWDs in practicals (FGD Participant, UCC 2019).

A female participant reported that:

Just as he said it should be right from level 100 that we should be made aware. I also heard that very soon, our department will be a school of which we will come and do specific courses so if that area APE is made a specific course people will just come and do right from level 100, it will also create awareness on that (FGD Participant, UCC 2019).

Another male participant said:

Most of the programmes they are doing at the Masters level, that is what we do at the undergrad so as you are moving it is preparing you to know what you want to do. But here is the case, as an undergrad, we don't know there is a course like APE so if it is included at undergrad, it would have been good and will help us (FGD Participant, UCC 2019).

Another student-teacher said:

Ok, since we will be going out to teach, and we don't know when we will come across them, I think it will be very necessary if that course (APE) is included in here because it will prepare us and make us know the type of activities we will use when we meet those people. (FGD Male Participant, UCC 2019).

Another student who expressed a different view said:

I was thinking not necessarily of creating hours for APE. We can just integrate it into what we are already learning so that in any practical lesson, they will just spend about thirty minutes and teach us how we can adjust when we have such a student in our class. So, a student may

simulate that situation and we see how best we can help the student go through it (FGD Male Participant UCC, 2019).

One male participant said:

The concept of inclusiveness comes in a little bit too late so I think the moment we arrive here; we should have that foreknowledge about it. It has to be a little bit earlier and this will help us ask our practical lecturers to teach us how to include them in our lessons for a particular practical but not to wait to learn SPED and APE before we get to know of it because it's like we did those courses in isolation. (FGD Participant, UEW, 2019).

Another female participant reported that:

Mine also has to do with the preparation of the to-be teachers here in the university. Mostly, when we are doing the practical, because all of us are able, they don't take into consideration those who are disabled out there so the teaching of the APE alone for us to go and use it, I think is not enough. For example, in soccer how do you teach passing to a person using crutches and if a person is sitting in a wheelchair, how will you teach him/her to throw? I think they should include all practical courses as well so that we can have enough experience. (FGD Female participant, UEW 2019).

Another male participant said:

I also think some courses concerning special education should be added to our programme aside APE and the general SPED course we take in Education as well. That will ensure inclusion (FGD Participant, UEW, 2019).

A Female participant from UEW shared the views that the APE course should be split into phases. Other participants agreed with her and went on to make some suggestions.

One male participant went on to suggest that:

I agree with her suggestion for the split. I suggest that the APE should be split into three, one in level 100, 200 and 300. One should be solely practical. With this I am referring to all things relating to teaching SWDs in physical education practicals. (FGD Participant, UEW 2019).

Another male UEW participant also said that "You see, in coaching we have Skills and Tactics up to level 300 so I also suggest APE should imitate Skill and Tactics in that form".

Another male participant from UEW was of the view that "Looking at how APE is more

of theory, I suggest if we can add the practical aspect in addition, it will be good and make us competent" Another male participant from UEW was also of a different view that "I will suggest collaboration from SPED during practical PE lessons especially where we have hearing impaired".

One female participant with differing opinion said:

> *I also think that once we are advocating that there should be inclusion, we as PE department shouldn't always say that PE is solely for the able person and neglect the disabled ones so we don't bring them and also don't admit them in the department. If we know that there is someone like this outside in the schools, we can learn from them once we are in class with them. (FGD Participant, UEW, 2019).*

4.8.1.6 Extended Concerns

Student-teachers' perceived disability awareness and information concerning the teaching of SWDs during their preparation programme were put under this theme. Participants expressed a concern of lack of information about SWDs in relation to practical PE. Some excerpts from views shared were:

A male participant said:

> *Right from our basic schools, students should be made to know the importance of including persons with disabilities in our practical PE lessons because people go round giving a talk on the impact of PE on the performance of students academically and the physical activity as well. We should be sensitized much on how best we can include SWDs in our practical lessons and we should be made to know that this course, APE, is an available course at the Masters level as well (FGD Participant, UCC 2019).*

Another male participant was of the view that:

> *Ok in terms of assessing the lesson delivered, you'll realise that most curricula design includes ways by which you are to assess the lesson. Since we are advocating for inclusion, the curriculum should make way for us to have the autonomy to decide how to assess some of these disabled people when we come in contact with them so that SWDs will not be left out. (FGD Participant, UEW 2019).*

It can be deduced from the comments of the participants that a well-structured APE could equip them with knowledge, skills and exposure for inclusive practical PE teaching.

4.8.2 Concerns about the Preparation Programme in the University from Practical Course Lecturers' Perspectives

In addition, practical course lecturers also expressed some concerns in relation to the preparation programme in the university towards the inclusion of SWDs in practical lessons, which were not different from that of the student-teachers. The following themes emerged: lack of equipment, programme/course, instructional strategy, exposure and external concerns.

4.8.2.1 Equipment Concerns

With regards to equipment, one male lecturer from UEW made mention of the lack of modified equipment in the university for teaching. Another male lecturer from UEW (with 13 years of experience teaching practical courses in the university) reported the lack of appropriate equipment and facilities for SWDs in inclusive classes. Other views expressed were: A male lecturer from UCC shared the opinion that "Adequate or special equipment to be used for inclusive education should be made available to be used side by side the regular equipment". A male lecturer (with 5yrs experience of teaching practical courses in the university) from UEW also said "There should be the availability of equipment and facilities to aid the teaching of SWDs".

4.8.2.2 Course/Programme Concerns

With this theme, a male lecturer from UCC reported that "Inclusive education is quite technical. There should be a course in the university structure to adequately prepare student-teachers to be able to handle SWDs". Another lecturer (with 16 years' experience of teaching practical courses) from UCC said "It is high time our PE department set up an emphasis area of study in inclusive PE or department of inclusive PE respectively" Also,

A male lecturer with 7 years teaching experience from UCC expressed the concern that "The current programme does not prepare student-teachers' to become inclusive teachers in the near future". A male lecturer with 23 years' experience from UEW suggested that "There must be a special programme mounted to prepare all PE student-teachers on how to handle SWDs in practical lessons in the PE Department before leaving the university aside the Adapted PE course".

4.8.2.3 Exposure/Experience Concerns

A male lecturer from UEW said "APE courses should be a practical base to enable student-teachers to acquire hands-on experience on how to include SWDs". He further advocates that inclusion should be implemented in all other practical courses. A female lecturer from UEW also said "I think there should be a practical aspect of the semester course they do in APE to help students put into practice what they learn in the theory". A male lecturer (with 13 years experience of teaching practical courses) from UEW also reported that "There should be practical preparation of student-teachers for the inclusion of SWDs in their practical lessons".

Another lecturer expressed the view that:

> *Students take only one course in adapted physical education and only one-time exposure to PE in a segregated setting which in a real sense would not give them enough grounding to effectively equip them to teach in inclusive setting (A male Lecturer from UEW with 23 years experience).*

Another male lecturer with 5 years teaching experience from UEW also reported that "PE student-teachers should have first-hand experience teaching SWDs".

4.8.2.4 Instructional Strategies/Skills Concerns

With this theme, a male lecturer from UEW with 5 years teaching experience said "The teaching methods in the department should emphasize on more inclusive teaching strategies through demonstrations and videos". One male lecturer with 5 years teaching experience from UEW also said "PE student-teachers should be encouraged to do well and learn the teaching strategies to teach SWDs in practical lessons".

4.8.2.5 Environmental/External Concerns

A female lecturer from UCC with 6 years teaching experience reported that "Students are taught how to adapt in PE classes but when they get to the field, the environment is not conducive for inclusive classes".

4.8.3 Student-teachers Views on what the Current Preparation Programme Lacks

Student-teachers were further asked if there were an aspect of their preparatory programme that they saw as a key requirement for a successful inclusive practical lesson but which they thought was lacking. Views expressed by the participant were mostly about not having exposure, and that the current preparatory programme content was geared towards students without disabilities. Some of the student-teachers expressed their views as:

A male participant said:

> *What I think is lacking is exposure. Lecturers should expose us to the methodology of teaching SWDs together with us in our practical PE lessons. For example, how to include physically challenged students in an inclusive setting so that we can abreast ourselves with some foreknowledge to work effectively within the inclusive setting. (FGD Participant, UEW, 2019).*

Another male participant reported that:

> *Mine is on the content and context for PE practicals. It is mostly focused on the abled-people so if we are advocating for inclusion, then it should also add a little bit on the SWDs so that the content is not going to be*

looked at as if we don't have pedagogy in PE to suit the SWDs. Rather, our training here should give us the processes to handle the SWDs so that when it comes to inclusion, we can do our best to modify because not everyone is good at modification and adaptation. (FGD Participant, UEW 2019).

Another male participant was of the opinion that:

I want to add up to the content aspect. I think our lecturers should also be trained or sensitized in terms of how to deal with the inclusion aspect in regular PE practical lessons. For instance, we don't have to wait till we learn adapted PE as a course but rather, when teaching all the practical courses, they should tell us what we are supposed to do in case we find ourselves in an inclusive class, so that when they are teaching, they will also be adding up. This way, by the time we take the APE course, we will have the knowledge already and just be applying it. (FGD Participant, UEW 2019).

A female participant was of the view that:

Also, during on-campus teaching or during peer teaching, I think we should get people from SPED department to be part of our teaching here on campus so that we can have that first-hand experience of dealing with them in an inclusive setting. This way, it's not like we are now going to the field to meet such situations because we have already had such experience here so we go out there and apply what we've learnt depending on the situation. I think this will prepare us well to be effective inclusive PE teachers. (FGD Participant UEW 2019).

CHAPTER FIVE: DISCUSSION

5.1 Courses Studied in the PE Preparation Programme in the University

According to Hutzler et al. (2019), teachers in various countries worldwide have been confronted with the placement of SWDs in general classes. Based on this, teacher education programmes need to embrace courses that will help equip pre-service teachers to be able to include SWDs in their inclusive class settings. In teacher education, courses in the field of disability are considered fundamental. These can have positive effect on PSTs perceived competence to work with SWDs in inclusive settings (Florian, 2012). In view of this, all student-teachers from UEW reported having taken a course in both APE and SPED while those from UCC indicated taking a course in only SPED. A course in APE focuses on current concepts, trends, methods, and instructional strategies and adaptations in APE, inclusion, and students' abilities to assess, plan and implement a PE unit/lesson designed to meet the unique needs of SWDs. Meanwhile, a course in SPED covers knowledge regarding identification of SWDs, the nature of different disabilities, their causes and characteristics.

There was inconsistency found between the two preparatory programmes in the two universities. Student-teachers from UEW have an extra course in APE as part of their preparation programme. This implies that they will have acquired more knowledge than those from UCC when it comes to content knowledge in adapted PE. The addition of APE will, therefore, help equip the student-teachers with further pedagogy in PE for SWDs. This would emphasise the application of remedial procedures for SWDs in practical PE. The finding of the current study agrees with what Swanson and Cocchiarella (2013) reported. The authors interviewed teachers to identify aspects of university coursework that

contribute to their ability to implement inclusion and found that there was a lack of consistency across the teacher preparation programme within the universities.

5.2 Visualising the Meaning of Disability, Inclusion and Inclusive Physical Education

Flintoff and Fitzgerald (2012) attest that, the beliefs and understanding of student-teachers' and educators' with respect to inclusion are the determinants for quality delivery of inclusion programmes in PE for SWDs. This study sought to investigate this by asking the student-teachers whether they can visualise the meaning of disability, inclusion and inclusive PE. The finding from this study indicated that the majority (91.4%) of the student-teachers understood disability as well as inclusion (94.6%) and can visualise the meanings of both concepts. This finding is in contrast with that of Sharma et al. (2013) who reviewed teacher education programmes in Asian Pacific institutions, and found that, the preparation programmes did not cover information on disability and inclusive education.

Similarly, in the current study, lecturers reported adequate knowledge in inclusive education and inclusive PE with a high means. Lecturers also admitted that they can visualise the inclusion process. Studies have shown educators' beliefs and understanding of inclusion as one predictive factor for quality delivery of inclusion programmes in PE (Flintoff & Fitzgerald, 2012). Notwithstanding, understanding and visualising disability and inclusion will breed good intentions and the development of positive attitudes about inclusion in student-teachers. Thus, ensuring the implementation and achievement of Education for All goals. Hence, understanding of the concepts of disability and inclusion has to permeate through all the course content of PE student-teachers in the university preparation programmes.

5.3 Pedagogical Knowledge and Skills for Inclusive PE Teaching

Research has identified pedagogical skills as the main skills that student-teachers need for self-efficacy and on-going development in PE. It also equips them to reflect on their ability to attain the desired professional standards for teaching (McNeil et al., 2017). Pedagogical skill knowledge entails content and skills in instructional strategies, methods and approaches and adaptation skills.

5.3.1 PE Student-Teachers' Instructional Skills Knowledge for Inclusive Practical PE Teaching

According to Persaud (2018), instructional strategies encompass any type of learning technique a teacher uses to help students learn or gain a better understanding of a course material. That is, instructional strategies include all the approaches and methodologies that a teacher uses to fully engage all learners actively in the teaching and learning process. Teachers are able to make the learning experience more practical with an interplay of fun games and activities which encourage students to take more of an active role in their general education. Persaud (2018) reiterated that educators who use varying instructional strategies give learners the capability to make meaningful connections between concepts learned and real-life situations.

It can be established from the findings of the present study that the majority of the student-teachers were of the perception that, they had received adequate instructional skills and, on that basis, perceived that they could successfully include SWDs in their practical PE lessons. Student-teachers indicated that they have learnt how to give adequate time for SWDs to practice skills learnt. The lowest mean was recorded for the item on the

knowledge of how to analyse skill and provide immediate feedback when SWDs are participating in practical lessons.

Student-teachers indicated that they could pair and group learners with and without disabilities to learn a skill. In such a context, the student without disability provide assistance to the SWD in inclusive practical PE. In tandem with the present finding, peer teaching was found by Garrote et al. (2017) to facilitate student learning in an inclusive setting. In the same vein, inclusive pedagogy expects teachers to utilize diverse grouping strategies to support the learning of all students (Pantic & Florian, 2015). The current finding contrasts with previous research, which rather supported teachers' need to be competent in instructional techniques in order to meet the demands of individual learners in regular classes (Qi & Ha, 2012). This suggests that, increasing awareness of instructional strategies for inclusion in all aspects of the training programme is vital to the sensitisation of the student-teachers for inclusive PE teaching.

Practical course lecturers are perceived to frequently sensitise their students on teaching similar skills in an inclusive setting. However, they reported of not often (53.3%) giving student-teachers alternative instructional strategies for teaching similar practical skills in an inclusive PE setting where applicable. Research has shown that PSTs attitudinal formation (Clarke et al., 2012) and inclusive pedagogical skills and principle development (Ashman, 2010) are critically impacted by the pedagogical approaches adopted by teacher educators. The lecturers further reported that they feel student-teachers are not well prepared to adapt instructional strategies in an inclusive setting for practical PE. These findings, therefore, are indicative of the fact that, the university student-teachers preparation programmes are seen as quite adequate by student-teachers. On the other hand,

the lecturers consider the preparatory programme to be virtually inadequate in terms of equipping the student-teachers with the necessary instructional skills for inclusive practical PE teaching. Hence, the Departments are expected to provide student-teachers with instructional skills relevant for inclusive practical PE teaching. Effective instructional strategies should, therefore, be structured by teachers to meet all unique learning styles and the appropriate developmental needs of all learners (Meador, 2020). The implication is that, practical course lecturers in the two Departments should equip student-teachers with a well-rounded arsenal of effective instructional strategies applicable in inclusive PE practical settings. This is essential to maximise the effectiveness of the student-teachers in seeking to increase learning opportunities for all manner of student.

5.3.2 Adaptation Skill/Knowledge among PE Student-Teachers for Inclusive Practical PE Teaching

Collier (2011) holds that when deciding on the most appropriate curricular approach and activities to meet the student's learning goals, it might become apparent that adaptations and modifications of activities are necessary. This is especially the case if SWDs are to participate successfully. The current study assessed the adaptation skills knowledge of student-teachers for inclusive practical teaching based on their preparation programme in the universities. Findings from the present study revealed that the student-teachers evaluated their adaptation knowledge and skills level favourably in their responses to relevant items on the subject-matter. A majority of the student-teachers indicated that they understand adaptation and also can modify equipment, tasks and make accommodation to include SWDs in their practical lessons.

This present study finding is similar to that of Majoko **(**2019) who, in his study, indicated that all participants reported adapting their teaching methods, strategies, techniques, and assessments to include SWDs in PE in mainstream classes. On the contrary, there were differing opinions when student-teachers were asked to indicate some of the adaptation skills they knew for inclusive practical PE teaching. The majority 16(64%) of the student-teachers from UCC were not able to state any adaptation skill while 9(36%) identified adaptation skills such as measurement of performance to be individual-based and equipment modification. As a corollary to the current finding, Wang et al. (2015) revealed that only two teachers out of five reported having knowledge about adaptation and modification of instruction and equipment for SWDs.

Forty (31.4%) student-teachers from UEW were also not able to state any adaptation skill whilst 87 (68.6%) made mention of some adaptation skills such as modification of equipment, adequate time for practice, equipment improvisation, rule modification and task modification. These were the most profound recurring adaptation skills mentioned by the majority of the student-teachers. In support of this present finding, Ko and Boswell (2013) strongly believe that physical educators should know how to design modifications to accommodate individual learners. This can be achieved by educators diversifying their lessons and widening their learning outcomes to make lesson goals attainable by all learners.

This present finding is however, in contrast to that of Fiorini and Manzini (2015) study. The authors found PE teachers have difficulties in adapting teaching methods and strategies. They also recorded that, there was a greater predominance of individual activities with SWDs in relation to the collective ones. Further studies should, therefore,

look at the practicality of student-teachers' adaptation skill knowledge since there can be mismatch between knowing something and having the ability to implement it practically. Also, the current findings run parallel with the OECD (2019) report, in which a majority of the countries surveyed showed adaptation of assessments and pedagogies within PE for curriculum transformation as a major challenge. In disagreement with what the student-teachers reported on their adaptation knowledge and skills, findings from the current study indicate that practical course lecturers from the two universities shared the view that the preparation programme had not prepare student-teachers well enough to adapt equipment to include SWDs in practical PE. This clearly suggests that, there is the need to prompt practical course lecturers to incorporate and also implement adaptation strategies, where necessary, into their teaching. This will, in effect, expose student-teachers to such adaptations, which will be applicable in their real-world inclusive PE teaching.

A further FGD involving UCC student-teachers point to a contrary view that they have not been exposed to pedagogical skills and knowledge purposely for handling SWDs. The student-teachers went further to categorically state that, ‘‘It will be difficult to include SWDs in their lessons since they lack the pedagogical skills to do so’’. In line with this present finding, several studies have also highlighted the phenomenon of PE student-teachers lagging in knowledge about teaching SWDs and the consequent lack of self-efficacy in enacting inclusive pedagogy (Hodge & Elliott, 2013; Pedersen et al., 2014). In effect, this means that, to ensure effective teaching and learning and to improve the competence of PE teachers, opportunities should be provided for student-teachers to engage in best practices for inclusive pedagogy during their preparation programme.

However, a significant difference was found between the pedagogical knowledge of the student-teachers from the two universities in this present study. The null hypothesis was, therefore, rejected. This difference can be attributed to instructional skills, adaptation skills and variation in methodology experience of the student-teachers during their preparatory programme in the university. This suggests that the two Departments should collaborate and consolidate their programme content to reflect the demands of MoE policy documents for inclusive teacher education. This will be responsive to the core mandate of these two universities to train PE teachers for all levels of education in Ghana.

Practical course lecturers were of the opinion that, student-teachers were not well equipped in their preparation programme to adapt equipment and adapt instructional skills to effectively include SWDs in practical lessons. Thus, the lack of adequate professional education, in terms of pedagogy both in undergraduate courses and continuing education, is seen as a serious obstacle to the school inclusion process (Hodge et al., 2017; Greguol et al., 2018). This suggests that teacher education programmes have to take into account the composite of the undergraduate preparatory programmes in the university to make it viable for inclusive teaching. The reason is that the implementation of education for sustainable development will depend on competent and committed teachers who are pedagogically well equipped with inclusive ideas and concepts to operationalise it. The indicators for effective inclusion, therefore, depend on the inclusive pedagogical knowledge and abilities teachers have acquired in order to be active change agents in the inclusive settings.

5.4 Training Methods and Approaches used in the Teacher Preparation Programme for Inclusive Teaching

Research has shown that the content of the initial teacher education curricular as well as pedagogical methodologies and approaches adopted by teacher educators are both crucial to teacher preparation for inclusive education (Jorgensen et al., 2011). Basically, methodologies and approaches entail the step-by-step process of delivering a lesson. This essentially informs student-teachers about the different available ways to organise equipment and materials available and overall practical lessons.

From this present study, student-teachers indicated that the approaches used for their entire preparation programme was too theoretical, and more of lecture approach, thereby creating a gap between theory and practice. One female student-teacher expressed the view that their practical course lecturers mostly used lecture approach but never made mention of SWDs. A male student from UEW said that they underwent some practicals but that it was not in an inclusive setting. One male student from UCC was of the view that they experienced pedagogy once in level 200 but there was no mention of SWDs. This suggests that differentiation methodology and approaches need to be employed by lecturers in the preparation programme, in a bid to equipping student-teachers with the practical procedural approach to inclusive PE teaching.

The present study finding tallies with Anapiosyan et al, (2014) who reported that 90% of teachers lacked teaching methodologies that would effectively include SWDs in class activities. This shortcoming often leads to either poor quality inclusion or even exclusion (Tichá et al., 2018). The present finding also aligns with that of a previous research by Qi and Ha (2012), which had it that teachers need competence in teaching techniques to meet

the needs of individual children in regular classrooms. Similarly, Nketsia et al. (2016) found that pedagogical approaches employed by teacher educators in teaching the various courses in the Colleges of Education were largely teacher-centred approaches, such as lectures.

However, a study by Di Gennaro et al. (2014) established that teacher education courses should align teaching methods equally with inclusive values and support the way teachers deal with complex features in the context of the 21st-century education for inclusion. Moreover, courses that address issues related to Special Education or Adapted Physical Education can help improve the competence and skills perceived by teachers to address methodological and instructional situations that may arise in the process of teaching in an inclusive practical PE setting (Taliaferro et al., 2015).

5.5 Student-Teachers' Hands-on Experiences in Inclusive Practical PE during the Preparation Programme in the University

An innovative trend in teacher education programmes that prepare teachers to teach in inclusive settings has been identified as an infusion of inclusive knowledge and practice into all content areas and subjects of the initial teacher-education curriculum (Nash & Norwich, 2010). Block et al. (2013), stressed the need to evaluate practical experiences of pre-service PE teachers. Also, researchers have highlighted the grandness of a hands-on approach when discovering how to teach SWDs, as it permits students to employ theoretical knowledge in an authentic field-based experience (Di Nardo et al., 2014; Pederson et al., 2014).

Research has shown that student-teachers in PE may not experience interaction with SWDs or teach these students until they have begun teaching within schools (Travers et al., 2010). These assertions align with the findings of the current study whereby all items under hands-on experiences recorded low means (i.e. below 3.0). Though all items recorded low means, a significant difference was found to exist between the student-teachers from the two institutions. Perhaps a reason for this significant difference might be due to programme differentiation.

The FDG results on student-teachers' practical experience for the inclusion of SWDs in practical PE revealed that student-teachers from UEW had the opportunity to observe PE lessons of SWDs in their segregated environment once during their (student-teachers) APE course. Participants from UCC said they have neither had any practical experience with SWDs nor thought of SWDs being part of their PE class one day. This is a clear evidence that the two universities in Ghana need to restructure their courses to make room for inclusive practical experiences in an inclusive setting for student-teachers before they move to the real world. In the application of experiential learning theory, contextual learning approaches like experiential learning (Kolb, 2015), and situated learning were found to help educators to nurture integrated learners who are as sensitive to context as they are to abstract concepts.

In agreement with this present finding, Sprecht et al. (2015) revealed that positive attitudes and self-efficacy of teachers towards inclusive education is promoted by the restructuring of their school-based experience. This enable teachers to have direct and systematic interaction with SWDs and teaching in an inclusive setting. Also, a study by Gaintza and

Castro (2020) suggested that the type of activity proposed and the working methodology in PE sessions can be crucial in creating suitable experiences for student-teachers.

The FGD results also showed the student-teachers expressing the opinion that there should be an opportunity for them to have practical experience with SWDs. They were of the view that theory is different from practice, therefore when the theories are taught in the classroom to them, they should also be given the opportunity to practice what has been taught in a real-world situation. With this, they can better understand the concept and also better put the theoretical concept into meaningful practice.

Furthermore, they expressed that having practical exposure will help them to get the opportunity to observe how teachers use specific teaching techniques and strategies in inclusive settings. In support of this current finding, Haegele et al. (2018), analysed 90 Brazilian PE teachers and certified that participants' attitudes were considerably impacted by their experiences during the lessons. This implies that though students have a positive intention to include SWDs, a further practical experience will build their confidence and attitude to carry out inclusive practical lessons successfully, all things being equal.

A result similar to the finding of the present study was presented by Conderman et al. (2013) when examining the learning experiences of PSTs in special education teacher education and general teacher education programmes. In both cases, the researchers found that PSTs who experienced in-depth coursework and relevant practical experiences working with SWDs felt well prepared to provide an inclusive learning environment than those PSTs who did not receive the same experiences. This shows that in order to bridge the gap between theory and practice in relation to inclusive teaching experiences, university

practical courses and preparatory programmes should merge theory and practice so that student-teachers will be fully equipped to man 21st century inclusive practical PE classes for successful inclusion.

A similar finding to the current study is that of Sharma (2018) who stated that, although theoretical concepts about disabilities and inclusion were taught in some universities, none had any practical component focused on the practice of inclusion. In support of this present study finding, Swanson and Cocchiarella (2013) found a disconnection between the knowledge of inclusion as presented through the university coursework and the students' real-world field-experience.

More optimistically, Allen and Wright (2014) studied the integration of theory and practices in pre-service teacher education practicum placements and reported that participants overwhelmingly backed the concept of linking university coursework to the practicum. This, they reported, serve as a mode of bridging the gap between, the university and the school, as well as theory and practice. This assertion from Allen and Wright (2014) correlates with most of the views shared by student-teachers during the FGD in this current study. Against this backdrop, it can be said that student-teachers need teaching practice in general classes that include learners with diverse disabilities in PE. Teachers and lecturers who are qualified and experienced in inclusive PE should mentor them in such teaching practice so that they can be equipped with both the relevant theory and practice (Majoko, 2019).

To fuse in hands-on experiences in the preparation programme, other student-teachers in the FGD suggested that they should have simulations of situations where a person with

disability is present in a practical lesson. They also proposed to have a practical session with SWDs during OCTP. These suggestions are in agreement with the observations of Block et al. (2017) who reviewed and summarized a number of teacher preparation processes, and made similar recommendations as: providing simulations of disability conditions while attempting to perform various PAs, infusing disability-related contents across core curriculum studies as well as participating in on-campus and off-campus practicum sessions. What this suggests is that for inclusive PE to be effective and up to expectations, it behooves on the lecturers in the two departments to factor in simulations during practical sessions, practical experiences as part of the OCTP course, and also factor in practical experience in inclusive settings.

5.6 Student-Teachers' Intentions and its Outcome on Inclusion in Practical PE

Di Nardo et al. (2014) established that pre-service PE teachers who received additional APE courses had higher positive intentions and attitudes towards teaching SWDs than those who did not. Findings from the current study showed that the majority of the participants have the intention to include SWDs in their practical PE lessons. Most (83.6%) of the participants indicated that they were ready to develop their practical lesson plans to include SWDs. This was revealed in both the results of the questionnaire items and FGD, where the student-teachers expressed their willingness to include SWDs in their practical lessons. Although student-teachers' from UEW expressed much significant interest in including SWDs in their practical lessons, this might have been due to exposure from an APE course in their preparatory programme. However, this could differ based on the methodological approach experienced and the mindset of the student-teachers.

The current finding is in line with that of Rust and Sinelnikov (2010) who found that modules in APE develop student-teachers' intentions towards teaching SWDs. The authors further went on to say that a well-structured coursework and experience play an essential part in breeding favourable attitudes and intentions of PE student-teachers towards working with SWDs in their practical lessons. Research has also shown that studying a module about inclusive education or a professional development course positively influences the beliefs and intentions of PSTs towards inclusive education (Kraska & Boyle, 2014).

More so, Obrunsnikova (2008) also discovered that the intentions and beliefs of physical educators become more positive as the quality of knowledge and experience in handling SWDs improve. Similarly, research has identified professional and academic training towards inclusion and the teacher's volume and type of experience with SWDs at school as among several factors that influence attitude and intentions while engaging in the inclusion of SWDs in PE (Hutzler et al., 2019). This implies that a basic introductory course in APE as part of the preparation programme will expose student-teachers to basic knowledge in inclusion and consequently influence their intention to include SWDs in their practical PE lessons. Contrary to this current finding, Hwang and Evans (2011), found that of the 29 South Korean teachers they analysed, most of them (55.2%) were reluctant to include SWDs in general education, although slightly more than half (58.6%) of the participants believed in the benefits of inclusion.

5.6.1 Outcome of Inclusion from Student-Teachers' Perspectives

The result of the present study indicated that student-teachers perceive the outcome of inclusion to be crucial if only their perceived control beliefs of appropriate training and availability of special equipment and facilities are met in the inclusive schools more than

their behavioural beliefs. This current finding concurs to that of Hwang and Evans (2011), who found that 75.8% of their sampled teachers perceived a lack of school support and adequate resources as obstacles for the inclusion of SWDs. This denotes that, when student-teachers presume to have acquired adequate training as well as perceive that they will have support in the form of equipment and facilities from inclusive schools, they are ready to include SWDs in their practical lessons.

Hierarchical regression results in this current study showed perceived behavioural control beliefs contributing more (.320) to predicting intention than behavioural beliefs with R^2 change of 14.0%. The current finding agrees with what Fournidou et al. (2011) found using stepwise multiple regression. Their results showed that attitudes toward behaviour and perceived behavioural control subscales explained 0.547 of variability of the variance of intention. The researchers conclude that perceived behavioural control had the strongest relationship on intention to include SWDs in general PE. Also, in support of the current finding, perceived behaviour control among other TPB components were identified to determine the intention of PE teachers to teach SWDs in their inclusive teaching practise (Wang et al., 2015).

This present finding implies that the combination of attitudes towards a behaviour, and behavioural control forms a behavioural intention, which can be defined as an indication of a student-teachers preparedness to accomplish a given behaviour (in this case, the inclusion of SWDs in practical PE lessons). University preparation programmes should, therefore, foster the intention of the student-teachers for inclusive practical PE teaching. This suggests that the PE content covered in teacher preparation programmes should be

relevant and adequate to impact student-teachers' intentions. This, if ensured, is likely to trigger higher inclusion of SWDs in practical PE lessons.

5.6.2 Student-Teachers' Level of Competence to include SWDs

Lidor and Hutzler (2019) stated that inclusion training should develop a sense of perception of control and competence with regard to pursuing an activity toward a phenomenon. The finding from this study indicated that slightly above half of the student-teachers felt somewhat competent to include SWDs in their inclusive practical lessons. In agreement with this present finding, the European Agency for Development in Special Needs Education (2012) indicated a growing and continuous concern as student-teachers feel unprepared to teach in inclusive settings. This is similar to what student-teachers in this current study reported. Thus, some said they were somewhat prepared whereas others said they were not prepared to handle SWDs in an inclusive setting.

Also, in support of this current finding, the Youth Sport Trust (YST) in 2014 undertook a survey and noted that whilst some PE teachers were making PE and sports inclusive for all young people, there was still a significant proportion that did not have the confidence, skills and knowledge to include SWDs in lessons. Another study reported that PE teachers share the normative goal of inclusion but perceive it as impossible to achieve due to a lack of competence and a lack of resources for PE students (Hege et al., 2019). This suggests that, student-teachers' competence and self-efficacy need to be built through the preparatory programme for effective practical PE lesson delivery in an inclusive setting.

5.7 Summary of Adequacy of the Preparatory Programme for Inclusive PE Teaching by Practical Course Lecturers

The 2013 Teaching and Learning International Survey (OECD, 2014b) identified three crucial components of content, pedagogy and practice to be considered for evaluating effective inclusion teaching programmes. Practical course lecturers viewed the general preparation programme in the University for inclusive PE practical teaching as inadequate. They expressed the concern that the current programme does not train PE teachers enough in terms of pedagogy and exposure to be able to enact practical PE in an inclusive setting. The implication of these study findings is that, for the university preparation programme in PE to be adequate and effective, beginning teachers need a solid understanding of subject-matter content, pedagogical skills and hands-on experience. These three components, when put in place, will build student-teachers general attitude and competences for inclusion in practical PE teaching.

This implication reflects some consistent findings of research on factors affecting teacher quality. These factors are notably that teachers must have good content knowledge in the disciplines they teach, have a generic knowledge of effective pedagogies and more specifically, have sound pedagogical content knowledge (Jensen et al., 2016). This suggests that lectures view pedagogy and practical experiences as important for student-teachers professional growth and development. Therefore, much attention should be given to this aspect of the preparatory programme in the two departments in the universities and other universities who may mount PE programmes in the future. Consistently, research has shown that both content and pedagogical knowledge, and experience can improve teachers' development and teaching performance (Darling-Hammond, 2018).

5.8 Concerns about the Preparation Programme in the University for Inclusive PE

The teaching career is mediated by several factors that influence development. Among these factors, teachers' concerns stand out, which have to do with actions, behaviours and feelings related to the teaching programme and practice (Vieiral et al., 2018). In order to address and satisfy student-teachers' academic, social and emotional needs, it is imperative to give teacher trainees the opportunity to discuss their concerns in relation to their preparation programme for better programme restructuring as well as to help alleviate their worries before they enter the real teaching world (Cocca et al., 2017).

The current study identified pertinent concerns raised by both the student-teachers and the university practical course lecturers. Student-teachers expressed fear of not being able to function well in inclusive settings since they have not seen some of the special equipment and resources for inclusion. Practical course lecturers also expressed similar concerns that there is the need to make available special equipment to aid their inclusive teaching of student-teachers in the university. In line with this present finding, Fiorini and Manzini (2014) revealed in their study on public school PE teachers that, the lack of instructional resources and the unsuitable spaces for lessons constituted difficulties for the process of inclusion. Other student-teachers expressed the concern that they have not been exposed to instructional skills and strategies purposively for inclusion. One lecturer also shared the view that teaching methods should lay emphasis on more inclusive teaching strategies.

A majority of the student-teachers of UCC in the FGD expressed the concern that their preparation programme in the university was inadequate and advocated for the inclusion of the APE course as part of their preparation programme. Those from UEW also expressed the concern that their practical exposure during their preparation programme was

inadequate. The current finding agrees with that of Klein and Hollingshead (2015) who found teachers identifying lack of adequate teacher preparation as a major factor that affects the success of inclusion. Practical course lecturers agreed with the student-teachers' concerns and shared their views that APE should be practical-based. They also advocated for inclusion in all practical courses in the preparatory programme in the universities. Lecturers from UCC expressed the view that APE should be an emphasis area to help adequately prepare student-teachers to handle SWDs in practical lessons. This means that, to alleviate student-teachers concerns, the courses carried out in the PE preparatory programme in these universities must be critically looked at to include other courses that will well equipped student-teachers to fully function in inclusive settings.

Also, the findings of the current study revealed that student-teachers from UCC were not previously aware of the existence of the APE course until the time of data collection for this study. No wonder, these student-teachers became very appreciative for the awareness gained during the interaction. The finding of the current study aligns with that of Barber (2016) who stated that a one-day intervention may or may not have a long-lasting impact on how a new teacher develops his/her lessons, but at least opens the door to changing minds and lives.

One student-teacher said he may not be patient enough to handle SWDs in his practical class based on the training he has received in the university. This is similar to concerns frequently voiced by most student-teachers, which relate to lack of time to plan and instruct in inclusive settings for effective inclusion to occur (Forlin & Chambers, 2011). Student-teachers expressed concern about lack of practical exposure as part of their preparation programme. In line with this current finding, Fitzgerald (2012) reported that PE teachers

are being trained, however, opportunities on how to deliver PE to students regardless of their disabilities at initial teacher development was found to be limited, ineffective or in some instances not offered at all. It should, therefore, concern teacher education programmes considering high-achieving teachers to recognise access to a high-quality practical experience as very important in the preparation of effective inclusive teachers (Behrstock-Sherrat et al., 2014). This suggests that the departments in the two universities should also be concerned and restructure their current programmes to include inclusive practical components.

One male student-teacher expressed the concern that the general curriculum is too rigid and needs to make room for SWDs. In line with the present finding, Tant and Watelain (2016) suggested that inclusive PE is shaped by professional preparation, collaboration and curriculum that can easily be adapted to PA participation for SWDs. Considering these concerns raised by the student-teachers, it is clear that understanding student-teachers' concerns is essential if we aim to plan appropriate inclusive training and developmental programmes for PE teachers (Cocca et al., 2017).

CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary of the Findings

This study aimed at assessing the adequacy of university student-teachers preparation programmes towards achieving the inclusion of SWDs in practical PE lessons in Ghana. The findings for this study are summarised as follows:

6.1.1 Understanding the Meaning of Disability and Inclusion

The findings established that inclusion and disability are terms that are well understood by both student-teachers and practical course lecturers. Student-teachers indicated they can visualise the meanings of the respective terms as well as the inclusion process. Practical course lecturers stated that they have much knowledge with regards to inclusion and the inclusive PE process.

6.1.2 Pedagogical Knowledge and Skills for Inclusive Practical PE Teaching

Student-teachers from both institutions expressed perceived adequacy in instructional skills and adaptation skills knowledge for the inclusion of SWDs in inclusive practical PE lessons. However, the majority of the student-teachers from UCC and UEW could not identify any adaptation skills learnt. A significant difference was found to exist between student-teachers' pedagogical knowledge from the two universities.

Findings indicated that lecturers do not give student-teachers any alternative instructional strategies and adaptation skills for inclusive practical PE during their preparation programme in the university. Lecturers perceive student-teachers to be not well prepared to adapt equipment for inclusive PE based on the training they think student-teachers have received in the universities. Lecturers also reported that student-teachers' generally are not well prepared to effectively include SWDs in the various practical courses they teach in

the university due to failure on their side to equip student-teachers well for inclusive PE teaching. It was found that the University PE preparation programme in the area of pedagogy for practical lessons focused much on able-bodies, has no mention of SWDs and has not been specific about teaching in an inclusive setting.

6.1.3 Training Methods and Approaches used in the Teacher Preparation Programme for Inclusive Teaching

Methods and approaches used by university practical course lecturers for the training of student-teachers for the inclusion of SWDs in practical PE were found to be more theoretical. Findings indicated that practical course lecturers did not mention SWDs to student-teachers during PE practical lessons. Based on this finding, it was not surprising that student-teachers from UCC were not aware of the possibility of meeting SWDs in their practical PE lessons in the future. This study also revealed that most methodology experienced by some of the student-teachers were in segregated schools which did not give them the real-world experience of teaching in an inclusive setting. Findings from this current study established that student OCTP does not incorporate inclusive methodologies and, thus, pedagogy experience in the university preparation programme does not involve SWDs.

6.1.4 Student-Teachers' Hands-on Experience in Inclusive Practical PE during the Preparation Programme in the University

Student-teachers' hands-on teaching experience in inclusive practical PE was found not to be adequate. Nevertheless, a significant difference was found to exist between the practical experience of student-teachers from UCC and UEW, even though they both indicated that their practical exposure was inadequate. The study revealed that UEW student-teachers'

exposure to practical PE for SWDs was in segregated schools and not in inclusive settings. Student-teachers were of the view that practical experience in segregated schools was not enough for their hands-on experiences for inclusion in practical PE. Practical course lecturers also reported that, a visit to segregated schools does not give student-teachers enough grounding to effectively teach in an inclusive setting. It was also found that student-teachers were prepared to go an extra mile by visiting inclusive schools to learn how to handle SWDs in practical PE lessons. With this, student-teachers advocated that inclusive schools should be added to their practicum schools so that they can have exposure, in order to be fully baked.

6.1.5 Student-Teachers' Intentions and its Outcome for Inclusion in Practical PE

The findings indicated that student-teachers from both universities have intentions to include SWDs in their practical PE by preparing their lesson plan to facilitate inclusion. However, they entertained fear due to perceived lack of appropriate training and fear of support in terms of lacking equipment and facilities in an inclusive setting. It was also revealed that student-teachers believed inclusion would not slow down their practical lessons or make skill teaching difficult.

The study also revealed that significant differences existed in the intentions of student-teachers from the two universities to include SWDs in their practical lessons. However, perceived control belief was found to predict more of the intentions of student-teachers to include SWDs in practical PE lessons than behavioural belief did. This suggests that, if the significant effects of teachers' beliefs in their capabilities are taken seriously during initial preparation programme, it could provoke significant changes in the way teachers are prepared and supported in their early years in the profession.

6.1.6 Concerns about the Preparation Programme in the University for Inclusive PE

This study found that pedagogical knowledge throughout the preparation programme excluded SWDs in both institutions and student-teachers expressed it as a major concern. Student-teachers expressed worry about equipment because they have not seen or used some of this special equipment in the course of their training programme. Hence, they perceived that handling modification in future could be difficult. Lecturers also believed that adequate special equipment should be factored in when preparing student-teachers for inclusive PE teaching. The study also found that lack of adapted equipment in the university hindered university lecturers from effectively exposing student-teachers to inclusive PE pedagogy.

Students-teachers showed lack of confidence to teach hearing-impaired students in future considering the fact that, the preparation programme did not expose them to basic sign language for effective communication when HI are present in their practical lessons. Concerns about how in reality, abled-bodied senior high school students will accommodate and accept SWDs in their practical lessons were also expressed by student-teachers since they have not experienced or observed a lesson in an inclusive setting. It was found that the university preparation programme does not factor in how to prepare a practical lesson plan to include SWDs. With this, student-teachers proposed that training in how to prepare a practical lesson plan to include SWD should start from level 100 and should be emphasised in their pedagogy unit throughout their programme.

APE was found not to be a course in the PE student-teachers preparation programme in UCC. This was raised as a concern when the student-teachers got to know of APE as a course. Practical course lecturers from the institution emphatically expressed that the

current programme does not prepare student-teachers for inclusive practical PE teaching and advocated for the need of a course in APE and other special needs related courses in their PE programme. This, they believe would adequately prepare student-teachers to be able to handle SWDs due to the technical nature of disability and PE.

As part of the finding for this study, student-teachers advocated for the introduction of all practical courses that can grant them exposure to inclusive instructional teaching methods and strategies into their preparation programme. Further findings from practical course lecturers recommended that teaching methods should emphasise inclusive teaching strategies. They also urged that APE be practically based so that student-teachers can put into practice what they have learnt in theory.

6.2 Conclusions of the Study

Coursework in both APE and SPED tends to expose student-teachers to inclusive teaching than does coursework solely in SPED. In this case, coursework in both APE and SPED, reshape the intention of student-teachers for positive inclusion. Unfortunately, APE was found not to be part of the UCC programme. The study therefore concludes that when student-teachers perceive adequacy in their general preparation programme for inclusion in terms of content, pedagogy and exposure, they have intention of including SWDs in practical PE lessons.

Student-teachers see possible challenges for inclusion in practical PE because of the lack of inclusive pedagogical knowledge and exposure during their preparation programme in the university. The study draws the inference that the preparation programmes in the two universities do not give student-teachers adequate inclusive pedagogy and practical

exposure and, therefore, should be restructured to meet the demands of inclusion in Ghanaian schools.

The study also concludes that university practical course lecturers do not give student-teachers alternative instructional skills for inclusion. Inclusion practices were not part of the student-teachers' preparation programme in the universities. Also, the lack of adapted equipment in the universities hinder lecturers from effectively exposing student-teachers' to inclusive PE pedagogy.

The university preparation programmes do not have a practical component for inclusion in PE. Practical experience tends to build confidence and competence in student-teachers to be able to teach SWDs in an inclusive practical PE lesson. A blend of theory and practical experience as well as varied methodology would help student-teachers to bridge the gap between theory and practice for inclusion in PE.

In conclusion, opinions were polarised for pedagogical skills in the PE preparation programme in the university while hands-on experience was perceived to be inadequate. Concerns such as pedagogy, practical exposure and the addition of disability related courses needs to be addressed to help improve the programme in the universities for quality development of the 21st century PE teachers for inclusive practical PE teaching. Thus, the more student-teachers possess the skills and abilities, feel adequately equipped pedagogically with quality exposure through their preparation programme and have their concerns on their preparation programme addressed, the more competent they will be. This way, they will believe in their skills and have good intentions to implement inclusion in practical PE lessons in inclusive settings in Ghana.

6.3 Implications of the Study

The findings of the study present the following implications:

1. Policies that advocate for inclusion in teacher preparation programmes need to be interpreted and implemented consistently. Thus, policies need to clarify what inclusive teacher preparation truly looks like.
2. Teacher education in the universities for PE needs to provide increased experiences for student-teachers to observe successful inclusive PE lessons and have an opportunity to teach and implement inclusive pedagogy in PE.

6.4 Recommendations for Practice, Policy and Further Studies

6.4.1 Recommendations for Practice

Based on the findings of the study, the following recommendations were made for practice:

1. The university coursework in APE and SPED should be modelled in line with inclusion to help student-teachers to frequently reflect on their beliefs and intentions of teaching SWDs in practical PE lessons.
2. Furthermore, inclusivity should be considered by the two universities when restructuring their current programme to meet the demands of SDG 4. Thus, the two departments should design and align the preparation programmes and curriculum to improve knowledge related to inclusive practical PE and its practices.
3. University programme gaps between theory and practice should be bridged by giving student-teachers' hands-on experiences in inclusive practical PE during their preparatory programme in the university.

4. The Department of HPER and HPERS in the two Universities should align their preparation curricular with Ghana's inclusive policies to be able to train PE teachers who will be able to man inclusive practical classes.
5. Practical course lecturers and Special Education lecturers who teach PE student-teachers SPED should highlight the importance of instructional skills, task analysis, adaptation skills and assessment appropriate for practical courses in PE for inclusive teaching where applicable. Also, practical course lecturers should endeavour to give student-teachers a practicalised alternative instructional method and strategies for inclusive practical PE teaching.
6. To make the inclusion experience more viable to student-teachers, inclusive experiences should be incorporated into student-teachers' on-campus teaching practice.

6.4.2 Recommendations for Policy

The study made the following recommendations for policy based on the findings:

1. UCC should introduce the course APE as part of their preparation programme.
2. UEW should re-examine the curriculum content of student-teachers' APE course and incorporate the practicum aspect into it.
3. MoE should ensure that inclusion of APE is embedded in the policy documents of all institutions that train PE teachers. This will ensure uniformity in curriculum content and eliminate the contradictions that exist between inclusive policies and the PE teacher education curriculum in the universities.
4. Quality assurance units of the two universities should ensure that the content of the Departmental programmes reflects the demands of MoE policy for inclusion. This

will cause the departments and other tertiary institutions that train PE teachers to have effective content area in their programme that gives student-teachers enough exposure to inclusion in the programme/subject specific area.

5. Policy should be put in place by the universities and other teacher education institutions where PE is a specialised area. This policy should seek to foster collaboration between the Departments and inclusive schools in order to grant student-teachers the opportunity to experience practicum in practical PE.
6. MoE should ensure that Inclusive PE should be a compulsory course in the Colleges of Education as they have recently (2019) introduced specialisation areas in PE into their programmes.
7. To move beyond PE teachers merely providing access to PE practicals by SWDs, an additional step needs to be taken in pedagogy and the general preparatory programme. Thus, there should be provision of special equipment and facilities by stakeholders and institutions to the teacher training institutions and departments across the country.
8. Quality Assurance departments in the universities should carry out a periodic review of policy and programmes as well as monitoring and evaluating programmes in relation to inclusion curriculum and policy changes. This will ensure that departmental programmes are not isolate but rather conform to the current demands of global inclusive educational policies.

6.4.3 Recommendations for Further Studies

The study made the following recommendations for further studies:

1. The practicality of student-teachers' adaptation skill knowledge should be investigated further since there can be a mismatch between knowledge and implementation. Further study should therefore use other designs to look at student-teachers' adaptation skills and instructional differentiation in inclusive practical PE setting.
2. Further studies should compare student-teachers' perceived pedagogical knowledge and actual pedagogical knowledge for inclusive practical PE teaching.
3. Further studies should compare pre and post-internship student-teachers views on adequacy of the preparation programme in the university towards inclusion PE.
4. Further studies should compare teacher training verses practice in the field of inclusion in PE.
5. Further studies should audit the course content and delivery in the PE programme in the universities in Ghana.

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APPENDIX A: RESEARCH APPROVAL LETTER FROM KENYATTA UNIVERSITY GRADUATE SCHOOL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 9th May, 2019

TO: Ms. Regina A. Darko
C/o Department of Physical Educ. & Exercise Sci.
KENYATTA UNIVERSITY

REF: H87F/39120/17

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge the receipt of your revised Research Proposal entitled "Adequacy of University Student-Techer Preparation Programmes towards Achieving Inclusion of Learners with Disabilities in Practical Physical Education Lessons in Ghana" as per recommendations raised by the Graduate School Board of 18th April, 2019.

You may now proceed with your Data collection, subject to clearance with the Registrar, University of Cape Coast and University of Education, Ghana.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking Forms per semester. The form has been developed to replace the progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you.

REUBEN MURIUKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Registrar (Academic) Att; Mr. Likam
Chairman, Department of Physical Educ. & Exercise Sci.

Supervisor

1. Dr. Jane Mwangi
   C/o Department of Physical Educ. & Exercise Sci.
   KENYATTA UNIVERSITY
2. Dr. Lucy Joy Wachira
   C/o Department of Physical Educ. & Exercise Sci.
   KENYATTA UNIVERSITY

APPENDIX B: RESEARCH AUTHORIZATION LETTER FROM KENYATTA UNIVERSITY GRADUATE SCHOOL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: H87F/39120/17 Date: 9th May, 2019

The Registrar,
University of Educaion,
P.O. Box 25 Winneba
Central Region,
Ghana,

Cc;
The Registrar
University of cape Coast
PMB
Cape Coast
Central Region
Ghana

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MS.REGINA A. DARKO - REG. NO. H87F/39120/17

I write to introduce Ms. Darko who is a Postgraduate Student of this University. She is registered for a Ph.D. degree programme in the Department of Physical Education & Exercise Science in the School of Public Health & Applied Human Sciences.

Ms. Darko intends to conduct research for Ph.D. thesis entitled, "Adequacy of University Student-Techer Preparation Programmes towards Achieving Inclusion of Learners with Disabilities in Practical Physical Education Lessons in Ghana"

Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

APPENDIX C: ETHICAL CLEARANCE LETTER

UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309/ 0244207814
E-MAIL: irb@ucc.edu.gh
C/O Directorate of Research, Innovation and Consultancy

OUR REF: UCC/IRB/A/2016/518
YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

5TH JULY, 2019

Ms. Regina Akuffo Darko
Department of Physical Education, Exercise and Sport Science
Kenyata University
P.O.Box 43844
Nairobi

Dear Ms. Darko,

ETHICAL CLEARANCE – ID: (UCCIRB/EXT/2019/16)

The University of Cape Coast Institutional Review Board (UCCIRB) has granted **Provisional Approval** for the implementation of your research protocol titled *Adequacy of the University students-teachers preparation programmes towards achieving inclusion of learners with disabilities in practical Physical Education lessons in Ghana.* **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: 5/7/19

APPENDIX D: PERMISSION LETTER FROM HPER-UCC

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION
DEPARTMENT OF HEALTH, PHYSICAL EDUCATION & RECREATION

TELEPHONE: +233 - (0)206610931 / (0)543021384 / (0)268392819

TELEX: 2552, UCC, GH.

Our Ref: **HPER/SM/13/285**

EMAIL: **hper@ucc.edu.gh**

Cables & Telegrams:
UNIVERSITY, CAPE COAST

12th July, 2019

Chairman
Department of Physical Education,
Exercise and Sports Science
Kenyatta University
P. O. Box 43844
Nairobi, Kenya

Dear Sir,

RE: LETTER OF INTRODUCTION:
MS. REGINA AKUFFO DARKO (REG. NO.: H87F/39120/2017)

Your internal memo KU/PEES/GS/21/Vol.1 of 28th March, 2019 on the above subject is referred.

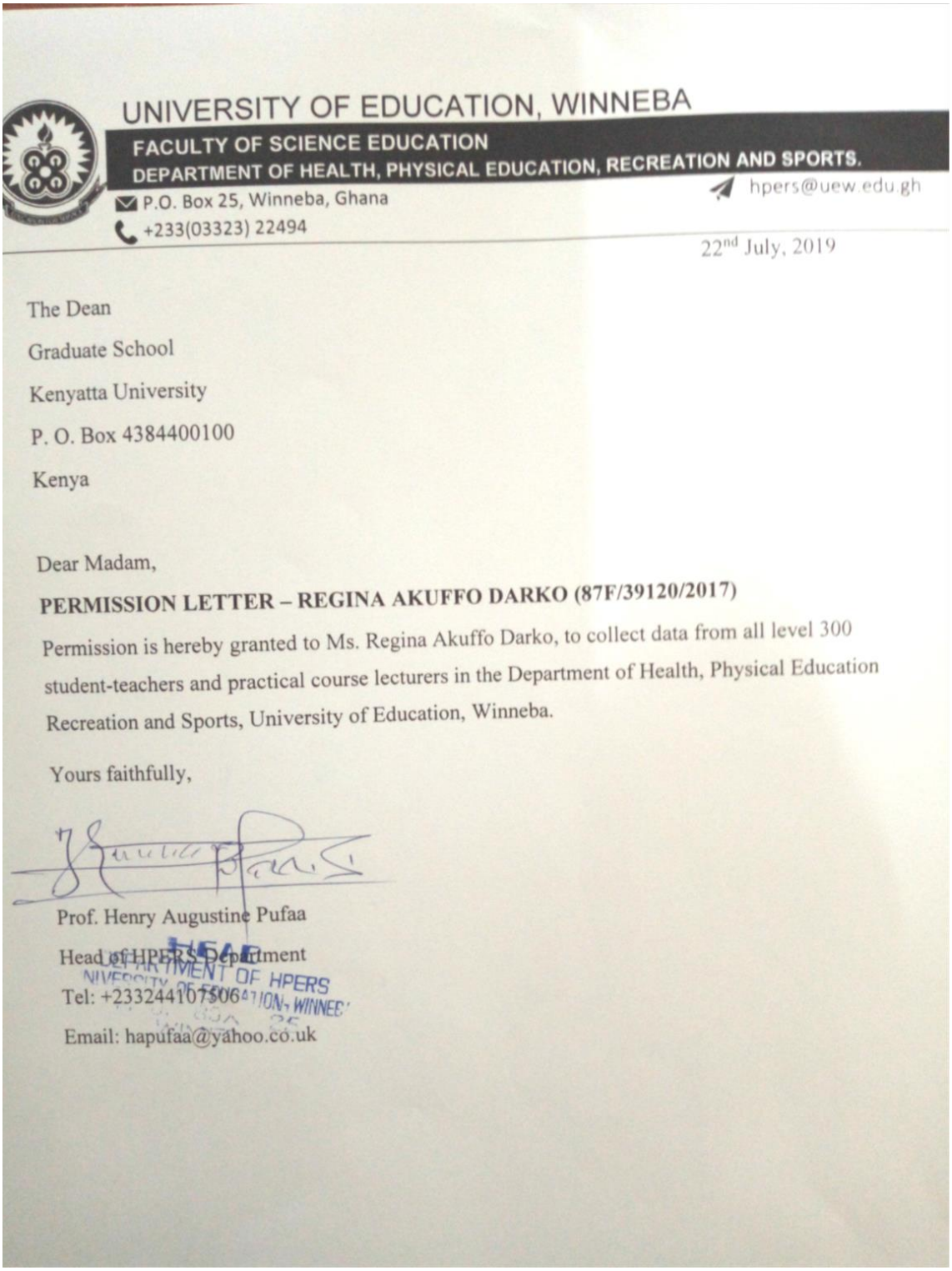
The Department of Health, Physical Education and Recreation of the University of Cape Coast, Ghana wish to inform you that permission is granted for Ms. Regiana Akuffo Darko of your university to collect the data from our level 300 students.

Yours faithfully,

Daniel Apaak (PhD)
(HEAD OF DEPARTMENT)
Tel: +233-20-8587866
Email: daniel.apaak@ucc.edu.gh

HEAD
DEPT. OF HEALTH, PHYSICAL EDUCATION
& RECREATION COLLEGE OF EDUCATION
STUDIES
UNIVERSITY OF CAPE COAST
CAPE COAST - GHANA

APPENDIX E: PERMISSION LETTER FROM HPERS-UEW



UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF SCIENCE EDUCATION
DEPARTMENT OF HEALTH, PHYSICAL EDUCATION, RECREATION AND SPORTS.
P.O. Box 25, Winneba, Ghana
+233(03323) 22494
hpers@uew.edu.gh

22nd July, 2019

The Dean
Graduate School
Kenyatta University
P. O. Box 4384400100
Kenya

Dear Madam,

PERMISSION LETTER – REGINA AKUFFO DARKO (87F/39120/2017)

Permission is hereby granted to Ms. Regina Akuffo Darko, to collect data from all level 300 student-teachers and practical course lecturers in the Department of Health, Physical Education Recreation and Sports, University of Education, Winneba.

Yours faithfully,

Prof. Henry Augustine Pufaa
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HEAD
DEPARTMENT OF HPERS
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APPENDIX F: RESEARCH PARTICIPANTS INFORMATION AND CONSENT FORM (STUDENT-TEACHERS)

Title: Adequacy of University Student-Teacher Preparation Programme towards Achieving Inclusion of Learners with Disabilities in Practical Physical Education Lessons in Ghana.

Principal Investigator: Regina Akuffo Darko

Address: Kenyatta University, P.O Box 43844-00100 Nairobi**,** Kenya

General Information about the Research

I will be determining the adequacy of universities student-teacher preparation programme towards achieving inclusive practical physical education lesson in Ghana.

This study will require you to answer a questionnaire which will take at most 30 minutes for you to complete and only 15 may be involved in focus group discussion for about 45-70 minutes three weeks after.

Procedure

I invite you to take part in this research project. If you accept you will be required to: fill out a survey which will be provided by the researcher and her assistants and collected after completion. You may also be selected three weeks after to take part in a discussion with 4 other persons with similar experiences. This discussion will be moderated by the researcher. You are being invited to take part in this study because I feel that your experience throughout your university training programme so far can contribute much to this study. You will be required to complete 5-point Likert Scale type and open-ended items in a questionnaire. If you do not wish to answer any of the questions included in the survey, you may skip them and move to the next question. Clarifications will be done

before you answer them. The lead researcher and research assistants will be available for further clarification as you complete the questionnaire. You may be invited to take part in a focus group discussion. During the focus group discussion, however we do not wish you to tell us your personal experiences but give us your opinion on the questions that we will pose to the group based on your personal experience throughout your training programme in the university. If you do not wish to answer any of the questions or take part in any part of the discussion, you may say so and keep quiet. The discussion may take place in MPhil Classroom – UCC and MPhil Classroom – UEW respectively and no one else but myself and my two assistants will be present during this discussion. The entire conversation will be audio recorded but no one will be identified by name on the tape. Additionally, the tape will be discarded after 2 years. The information recorded will be considered confidential and no one else except the researcher and her assistants will have access to the tapes.

Possible Risk and Discomforts: There are no risks involved by completing the questionnaire and participating in a focus group discussion.

Possible Benefits: This study may benefit your department in course or programme restructuring as well as add to literature for future endeavours.

Confidentiality: All information that will be gathered in this study will be kept confidential. Confidentiality is one of the reasons why you are not required to write your name on the questionnaire. All information and data collected will be used strictly for research and publication of results thereafter.

Compensation: You will not be given any monetary remuneration or gifts for being part of this study.

Voluntary Participation and Right to Leave the Research

Your participation is entirely voluntary and you are free to withdraw at any time without reprisal.

Contacts for Additional Information: For further inquiries kindly contact the researcher (0244029694/0270029694) or Dr. Jane Mwangi (+254 721354297), or Dr. Lucy Joy Wachira (+254723842543).

Your Right as a Participant

This research has been reviewed and approved by the Institutional 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 8.00am and 4.30pm through the phone lines 0558093143/0508878309/0244207814 or email address: irb@ucc.edu.gh

Statement of Consent and Signature

I have read the foregoing information and fully understand what it entails. I understand that at any point during the study, I can be free to opt out.

I consent to voluntarily participate in this study.

Signature…… Date……..

APPENDIX G: RESEARCH PARTICIPANTS INFORMATION AND CONSENT FORM (LECTURERS)

Title: Adequacy of University Student-Teacher Preparation Programme towards Achieving Inclusion of Learners with Disabilities in Practical Physical Education Lessons in Ghana.

Principal Investigator: Regina Akuffo Darko

Address: Kenyatta University, P.O Box 43844-00100 Nairobi**,** Kenya

General Information about the Research

I will be determining the adequacy of universities student-teacher preparation programme towards achieving inclusive practical physical education lesson in Ghana.

This study will require you to answer a questionnaire which will take at most 30 minutes for you to complete. The items seek your views about the preparation programme for practical inclusion in the university. It will also collect information about how you train your student-teachers' for inclusive practical lessons, how you rate the general preparation programme in the university and your concerns about the total preparation programme in the university for inclusion in practical PE.

Procedure

To find answers to some of these questions, I invite you to take part in this research project. If you accept you will be required to: fill out a survey which will be provided by the researcher and will be collected after completion. You are being invited to take part in this study because I feel that your experience as a practical course lecturer can contribute much to this study. You will be required to complete 5-point Likert Scale type and open –ended items in a questionnaire. If you do not wish to answer any of the questions included in the

survey, you may skip them and move to the next question. Clarifications will be done before you answer them. The information you will give will be considered confidential and no one else except the researcher will have access to the survey.

Possible Risk and Discomforts: There are no risks involved by completing the questionnaire.

Possible Benefits: This study may benefit your department in course or programme restructuring as well as add to literature for future endeavours.

Confidentiality: All information that would be gathered in this study will be kept confidential. Confidentiality is one of the reasons why you are not required to write your name on the questionnaire. All information and data collected will be used strictly for research and publication of results thereafter.

Compensation: You will not be given any monetary remuneration or gifts for being part of this study.

Voluntary Participation and Right to Leave the Research

Your participation is entirely voluntary and you are free to withdraw at any time without reprisal.

Contacts for Additional Information: For further inquiries kindly contact the researcher (0244029694/0270029694) or Dr. Jane Mwangi (+254 721354297), or Dr. Lucy Joy Wachira (+254723842543).

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and 4.30pm through the phone lines 0558093143/0508878309/0244207814 or email address: irb@ucc.edu.gh

Statement of Consent and Signature

I have read the foregoing information and fully understand what it entails. I understand that at any point during the study, I can be free to opt out.

I consent to voluntarily participate in this study.

Signature…… Date……..

APPENDIX H: ATIPDPE QUESTIONNAIRE FOR STUDENT-TEACHERS –

MODIFIED VERSION

PURPOSE OF SURVEY

When you finish your studies and get your job teaching PE, you will need to make many decisions. It is possible that you will have students with disabilities (SWDs) in your practical PE classes. Sometimes you will have a choice, and sometimes you will not have a choice to include or not to include them.

Whether you have a choice or not, now is the time to begin thinking about your feeling and perception about who should be in a general PE practical class and how you should or should not include students who are different from the average able-bodied PE student.

GENERAL INSTRUCTIONS FOR ANSWERING THE QUESTIONNAIRE

You may change your mind later but please respond to the following items based on how you believe or feel today as you think of yourself as a FIRST-YEAR TEACHER in an inclusive classroom.

All the items in this section are rating scale with 5 points. Always check the point that best describes your opinions, beliefs or intent.

Eg. If you fully and completely understand these instructions, put an ***X*** on the Definitely Yes as shown below:

I understand these instructions

Definitely Yes: _x_:__:__:__:__: Definitely No

If you totally and completely do not understand these instructions, put an ***X*** at the far end of the box on the Definitely No as shown below

I understand these instructions

Definitely Yes: __:__:__:__:_x_: Definitely No

NB: ALL RESPONSES WILL BE KEPT CONFIDENTIAL

At this moment, please indicate how well you understand these instructions. Place an ***X*** above the blank that best describes your level of understanding:

I understand these instructions

Definitely Yes: __:__:__:__:__: Definitely No

PART I: Below is a definition of students who may be in your PE practical class in addition to able-bodied average motor skill students.

Students with various disabilities: students identified as having any of the following disabilities (cerebral palsy, amputation, visual impairment, spina bifida, hearing impaired) students might be capable of walking without supplementary/assistive devices or might be using canes, walkers, or wheelchairs.

I understand this definition and I can visualize this kind of students

Definitely Yes: __:__:__:__:_ _: Definitely No

The following are some definitions of inclusion

After reading these definitions, use the 5-point rating scale to indicate how well you understand these definitions and can visualize the inclusion process.

Inclusion is placing different kinds of learners' together in general practical physical education lesson. Inclusion is the belief that learners should be educated together in one classroom rather than separate classrooms.

Inclusion requires the general PE Teacher to make the necessary changes in curriculum, pedagogy and didactics to ensure that all learners achieve their PE goals and feel happy, safe, comfortable and successful in practical PE setting.

I understand the definition, and I can visualize the inclusion process

Definitely Yes: __:__:__:__:_ _: Definitely No

PART II: Now you are ready to make responses to items about your beliefs and intentions

The practice of inclusion in PE is controversial. Some experts believe in it and some experts do not. What do you believe? What will you do?

Now respond to each item with your beliefs and intentions today in relationship to the way you visualize yourself teaching PE during your first year of teaching. Think carefully about which part of the 5-point scale that best describes your belief or intent.

Items	SA	A	U	D	SD
1. I intend to include students with disabilities in my physical education practical class.					
2. I will try to include students with disabilities in my physical education practical class.					
3. I am determined to include students with disabilities in my physical education practical class.					
4. I will develop my practical lesson plans to facilitate inclusion of students with disabilities in my physical education practical class.					

The following statements are related to outcomes of inclusion of students with disabilities in PE. You are asked to evaluate the likelihood of these outcomes

Items	SA	A	U	D	SD
1. Including students with disabilities in my PE class will help students without disabilities to learn to interact with students with disabilities.					
2. Including students with disabilities in my practical PE class will make skill teaching more difficult.					
3. Including students with disabilities in my PE class will encourage students to learn to help others learn skills taught.					
4. Including students with disabilities in my practical PE class will make lesson planning and preparation much more difficult.					
5. Inclusion will have a positive effect on the development of personalities of students with disabilities (eg. Self-esteem, feeling of belonging etc).					
6. Students with disabilities will slow down instruction and progress in my PE class.					
7. Including students with disabilities in my practical PE class will teach students cooperation.					

The following statements are related to factors and circumstances that might make inclusion of students with disabilities more difficult or easier. You are to evaluate these factors and circumstances.

ITEMS	SA	A	U	D	SD
1. I have appropriate training to successfully include students with disabilities in my PE class.					
2. I think that schools have appropriate equipment and facilities for including students with disabilities in my practical PE class.					
3. I think that most students are appropriately informed about students with disabilities.					
4. I think that students without disabilities would show understanding and willingness to cooperate with students with disabilities.					
5. I think the heads in most schools would support my including of students with disabilities in inclusion in practical PE.					

PART III PEDAGOGICAL KNOWLEDGE

The items in this section are intended to assess your **Instructional Skills** for inclusive Physical Education. Kindly tick **(√)** one option that best suits you as indicated in the box. (SA-Strongly Agree, A-Agree, U-Uncertain, D-Disagree, SD-Strongly Disagree).

ITEMS	SA	A	U	D	SD
1. I know how to select task/skill that SWDs can perform together with their able-bodied colleagues.					
2. I know how to pair students without disabilities with SWDs to learn/practice a skill effectively.					
3. I know how to constantly supervise students with and without disabilities while they practice a skill.					
4. I know how to set boundaries and demarcate the practical classroom to enhance easy movement and participation for students with and without disabilities in an inclusive practical lesson.					
5. I know how to incorporate how students with different disabilities learn into my everyday lesson preparation.					
6. I know how to adequately demonstrate/describe skills to students with varying disabilities in an inclusive PE practical setting.					
7. I know how to practically assess students with and without disabilities in an inclusive practical PE lesson.					
8. I have learnt that I have to give adequate time for all students to practice what they have learnt.					
9. I have learnt to set instructional objectives to cater for students with and without disabilities in an inclusive practical lesson.					
10. I have learnt to present skills in parts to allow students with and without disabilities to learn efficiently.					
11. I have learnt to vary the pace of lesson delivery to help students with and without disabilities learn skills.					
12. I know how to analyse skill when SWDs are practicing in an inclusive practical lesson for immediate feedback.					
13. I know how to give instructional cues to students with and without disabilities in an inclusive PE practical lesson.					

The following items seek your views on your knowledge in **ADAPTATION SKILLS** you learnt from your preparatory programme and practical lessons that will enable you make effective adaptations for SWDs in your practical PE lessons in an inclusive setting. Kindly tick (√) one option that best suits you as indicated in the box. (SA-Strongly Agree, A-Agree, U-Uncertain, D-Disagree, SD-Strongly Disagree)

ITEMS	SA	A	U	D	SD
1. I understand the term adaptation and know what it entails so far as the teaching of inclusive practical PE is concerned.					
2. I know how to modify equipment to suit students with varying disabilities in an inclusive practical PE lesson.					
3. I know how to accommodate students with varying disabilities in my practical PE lesson.					
4. I know how to modify a skill without changing its major focus in an inclusive practical PE lesson.					
5. I know how to adapt instructional skills for varying disabilities in an inclusive practical PE lesson.					
6. I know how to modify a task when assessing SWDs in an inclusive practical PE lesson.					

7. Indicate some of the inclusive adaptation skills that you have learnt from your preparatory programme that will enable you to make effective modification and accommodations for SWDs in practical PE lessons in an inclusive setting

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PART IV

The following items seek your views on your **PRACTICAL EXPERIENCES** for teaching students with disabilities in an inclusive setting during your 3yrs university preparation programme. Kindly tick **(✓)** one option that best suits you as indicated in the box. (SA-Strongly Agree, A-Agree, U-Uncertain, D-Disagree, SD-Strongly Disagree)

ITEMS	SA	A	U	D	SD
1. I have had the opportunity to observe students with and without disabilities PE practical lessons in an inclusive setting during my preparation programme.					
2. I have had an opportunity to interact with students with and without disabilities in an inclusive PE practical lesson during my preparation programme.					
3. I have had the opportunity to pair students without disabilities with SWDs to learn/practice a skill effectively.					

4. I have had the opportunity to supervise students with and without disabilities while they practice a skill in an inclusive practical PE lesson.					
5. I have had the opportunity to adequately demonstrate/ describe skills to students with varying disabilities in an inclusive PE practical setting.					
6. I have had the opportunity to practically assess students with and without disabilities in an inclusive practical PE lesson.					
7. I have had the opportunity to practice how to present skill in parts to allow students with and without disabilities to learn efficiently.					
8. I have had the opportunity to practice how to vary the pace of lesson delivery to help students with and without disabilities learn skills.					

PART V

Kindly answer few more questions about yourself and your studies

1. Gender Male Female
2. Have you taken any of the following courses?
   A. Special Education B. Adapted Physical Education
   C. both D. None (circle one)
3. Have you taken any refresher course or attended workshop for special needs education? Yes No
4. How competent would you feel teaching practical PE to students with disabilities in an inclusive setting? (Circle one)
   A. Not at all B. Somewhat C. Very competent
5. Please feel free to share anything you want to contribute to this study that I failed to ask in the items above.
   ……
   ……

Kindly go back and double check that you have answered every item. Thank you very much for your help, and best wishes in your future career as a PE teacher.

APPENDIX I: PRACTICAL COURSE LECTURERS QUESTIONNAIRE

1. Gender …….
2. Age ……
3. Current qualification…….……
4. Number of years teaching in the current department ……

The following items seek your understanding for inclusive PE and how often you give student-teachers adaptive strategies for inclusion of SWD in practical PE lessons during their preparatory programme in the university. Kindly tick (√) one option that best suits you

Items	Very much	Quite much	Neutral	Quite Little	Not at all
1. How much do you know about inclusive education?					
2. How much do you know about inclusive physical education?					
Items	**Very Often**	**Often**	**Neutral**	**Not Often**	**Not at all**
3. How often do you incorporate adaptive strategies into your practical lessons?					
5. How often do you give your student-teachers alternative instructional strategies and adaptations they can use when teaching in an inclusive setting?					

6. Do you think student-teachers are adequately prepared in your practical course for them to effectively integrate students with disabilities? Yes No

The following items seek your views on student-teachers' preparedness for inclusion and adequacy of the preparatory programme towards inclusion of SWD in PE practical lessons. Kindly tick (√) one option that best suits you

Items	Very Well Prepared	Somewhat Well Prepared	Uncertain	Not Well Prepared	Not Prepared At all
7. What do you think about the current preparedness of student-teachers to teach in					

an inclusive practical PE class?					
8. How well prepared do you think student-teachers are to adapt equipment for a skill in your practical course in an inclusive setting?					
9. How well prepared do you think student-teachers are to adapt instructional skills to meet the demands of SWDs in an inclusive practical class.					
Item	**Very Adequate**	**Adequate**	**Inadequate**	**Very Inadequate**	**Extremely Inadequate**
10. How will you rate the adequacy of the preparation programme at the university for student-teachers in meeting the demands of 21st century inclusive practical class?					

11. What concerns do you have as far as the preparation of PE student-teachers in the university to include SWDs in their practical lessons is concern?

    ……

    ……

    ……

12. Please feel free to share anything you want to contribute to this study that I failed to ask in the items above.

    ……

Thank you very much

APPENDIX J: SEMI-STRUCTURED FOCUS GROUP DISCUSSION GUIDE

1. In your opinion, how has the preparatory programme at the university helped shape your intention about teaching practical PE in an inclusive setting?
2. What do you know about adaptation of equipment for including students with disabilities in your PE practical class?
3. Describe your practicum experiences in the SPED/APE coursework during which you had opportunity to interact with students with and without disabilities in any practical setting.
4. Explain your concerns regarding your pedagogical knowledge and skills as well as the general preparation programme for inclusive practical PE lessons in the University.
5. What are the training methods and approaches used by your practical course lecturers for inclusive PE teaching?
6. What pedagogical knowledge and other aspects do you think is lacking in your preparatory programme, but you see it as a key requirement for successful inclusive practical PE teaching?
7. As a potential 21st century PE teacher, how ready and prepared are you to handle an inclusive practical P.E class?

APPENDIX K: MAP SHOWING STUDY AREA