UNIVERSITY OF EDUCATION, WINNEBA

DEVELOPMENT AND IMPLEMENTATION OF INDIVIDUALISED EDUCATION PROGRAMME FOR LEARNERS WITH INTELLECTUAL DISABILITIES IN BASIC SCHOOLS IN CENTRAL REGION, GHANA

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DECLARATION

Student's Declaration

I, Padmore Quansah, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature..

Date...

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.
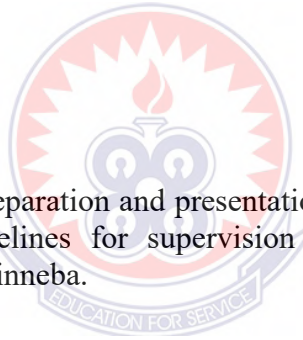
……………………………………..................... (Supervisor)

Signature: ....

Date: ....

DEDICATION

To Dr. Jeri LaVigne for her motivation and financial support.

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I am thankful to a number of persons, who in various ways, have made invaluable contribution to this study from its commencement to the conclusion. I am, firstly, grateful to my supervisor, for his useful guidance, counseling, motivation and suggestions all the way to bring this work out refined.

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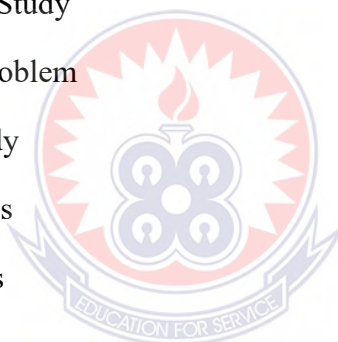
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ABSTRACT

The purpose of this study was to investigate the development and implementation of individualised education programme for learners with intellectual disabilities in basic schools in the Central Region of Ghana. An explanatory mixed method design was adopted using a sample of 30 special education teachers and 30 general education teachers from nine basic schools in the Central Region of Ghana. Purposive sampling technique was used to select nine schools, while convenience sampling technique was used to select the actual respondents for the study. Questionnaire and focus group interview guide were used to gather data for the study. Data from the questionnaire were analysed using percentages and frequencies whilst qualitative data was analysed using the thematic approach. The study revealed that some special education teachers could develop and implement Individualised Education Programme (IEP). However, some special educators and majority of the general education teachers could not develop and implement IEPs in the schools due to inadequate knowledge, competency, resources and contribution from other professionals. Also, teachers had challenges with collecting assessment data, IEP format, time and overcrowded classes that affected IEP implementation. For teachers to effectively implement IEPs, there is the need for pre- and in-service training on IEP, and human and material resources to be available.

CHAPTER ONE

INTRODUCTION

1.0   Background to the Study

One category of learners who need Individualised Education Programme (IEP) are learners with intellectual disabilities because they have significant limitations in adaptive functioning, at least in two of the following skills areas: communication, self-care, social/interpersonal skills, use of community resources, functional academics, work, leisure, health and safety; and imagination (Avoke et al., 1999; Gadagbui, 2017). This is supported by Garguilo (2015) who argued that, learners with intellectual disabilities are a heterogeneous group of individuals with unique capabilities and skills which can be enhanced through Individualised Education Programme. According to Beirne-Smith et al. (2006), as cited by Garguilo (2015), planning of curriculum for learners with intellectual disability need to be detailed, functional and individualised. Also, when designing an instruction for learners with intellectual disabilities, their present needs and future life goals need to be taken into account.

In the United States, the Individuals with Disability Education Act (IDEA), (2004) requires that certain components have to be included in every learner"s IEP. An ideal IEP for individuals with disabilities and other special needs, must include the following components: present levels of educational performance, measurable annual goals, specific short-term objectives, special education and related services, participation levels with other non-disabled children, plan for delivering services and modifications, measuring and reporting progress, as well as a degree of access to general curriculum, including the amount of time spent participating in general education (Gadagbui, 2017; Garguilo, 2015; IDEA, 2004; Oppong, 2003).

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In Kenya, Olewe-Nyunya (2018) conducted a study to evaluate the development and implementation of IEP by teachers of learners with intellectual disabilities in special schools and units in Kisumu and Nairobi counties. The findings indicated that majority of the 993 respondents said they involved multidisciplinary teams in developing an IEPs, but they encountered challenges with inadequate resources and materials, insufficient funds and time for IEP implementation. Other challenges established by this study included unwillingness of parents and, sometimes, teachers and inadequate support from headteachers and other stakeholders.

Agumba (2017) also conducted a study to examine the development and implementation of IEP for effective teaching of learners with cerebral palsy in two special primary schools in Kisumu area of Kenya. In this study, majority of the respondents declared that they encountered challenges, including pressure of time, overwhelming amount of work in teaching, and inadequate resources and materials for developing and implementing IEPs.

According to United Nations Education, Scientific and Cultural Organization (UNESCO, 2010), schools for learners with special educational needs and disabilities in Uganda had challenges in the use of IEP. This could be attributed to difficulties experienced by learners with cerebral palsy in learning academic and self-help skills. Also, Al-Hilawani et al. (2008) found that, implementation of IEPs in Kuwait was either not done appropriately or not implemented at all.   .

In South Africa, the use of IEP is mandatory for learners with intellectual disabilities and other special educational needs. Majority of special educators have successfully used IEPs in teaching learners with special educational needs and

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disabilities. Also teachers are of the view that they are able to develop effective IEPs for intervention purposes (Prinsloo, 2000).

In Ghana, IEP has not been a legal requirement for schools to implement. Nonetheless, Objective 3 of the the Inclusive Education Policy of Ghana, and one of its strategies to achieve the objective states that "more special educational needs teachers should be trained and deployed to all schools to support school heads and teachers to conduct basic screening, develop Individualised Educational Programmes (IEPs), and provide teacher and pupil support in schools" (MoE, 2015, pp.7-8). MoE (2015) authorised in the Standard 3 of the *Standards and Guidelines for Practice of Inclusive Education in Ghana* that there should be "District Inclusive Education Team (DIET) to organize case conferences and develop IEP for learners diagnosed with special educational needs" (p.16).

Also the Monitoring Checklist of the Inclusion of Students with SEN contains an item to examine if teachers develop an Individual Education Plan (IEP) for learners who qualify for an IEP (MoE, 2015, p. 34). Standard 4 of the *Standards and Guidelines for Practice of Inclusive Education in Ghana* also stated that "monitoring and periodic review of programmes and learners" progress should ensure school based assessment shall involve individualised education plans (IEP)" (MoE, 2015, p. 17).

Gadagbui (2017) pointed out that individual attention to each learner and IEP designed to meet the learning needs of each learner are some of the strategies to be used in supporting individuals with special educational needs. Ocloo (2011) also suggested that the role of special education teachers in Ghana should include planning and implementing IEPs for students with special educational needs, such as those with low vision. Oppong (2003) noted that, four major new roles would be expected of current and future teachers, in addition to their traditional duties, and these roles

include planning and implementing IEPs; using special materials and equipment; working closely with specialised personnel, and collaborating with parents and children with special needs. Oppong emphasised that one new and demanding role of teachers is the designing and implementation of IEPs. It is now mandatory and obligatory for modern teachers to plan and implement IEPs for each learner with special needs, at least once each year.

MoE (2015) suggested that parents, guardians and custodians shall be involved in all stages involving the screening and diagnosis of learners" needs (p.16). Furthermore, MoE noted in the inclusive education policy of Ghana that "... teachers and parents of pupils with special needs meet one on one to discuss the academic progress of the pupil" (p. 31). MoE (2015) again suggested in the inclusive education policy, standard three of standards and guidelines for practice of inclusive education in Ghana that "... every school should have adequate qualified related services staff such as guidance and counseling coordinator, social workers, speech therapists, resource teachers, assessment personnel, health workers, child protection workers, psychologists, and careers advisors" (p. ...).

However, according to Gadagbui (2017), many special education teachers in Ghana do not have enough professional skills to effectively develop IEPs for children with special educational needs and disabilities. Gadagbui (2017) therefore suggested that special education teachers must endeavour to know what an IEP includes and write IEPs for learners with special educational needs and disabilities.

Amoako (2015) conducted a study to explore the perceptions of 235 tutors in 13 Colleges of Education on how the Colleges of Education Curriculum prepares pre-service teachers to develop IEPs for learners with special educational needs and disabilities for effective inclusive education in Ghana. The study revealed that

140(63%) of the tutors disagreed with the statement that, the curriculum enables pre-service teachers to develop IEPs for children with special educational needs and disabilities.

Elder et al. (2018), and Timothy and Agbenyega (2018) noted that, many schools worldwide had adopted individualised education programming as one of the important educational strategies involved in the education of learners with special educational needs (SEN), that is used to determine effective educational practices and services, both in general education classrooms and special schools. Therefore, this study set out to investigate the views of teachers about the development and implementation of IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana.

1.1   Statement of the Problem

The development of IEP for pupils with intellectual disabilities is one the major issues for their education. However, very little is known about the IEP for learners with intellectual disabilities in Ghana.

Standard 3 of the *Guidelines for the Implementation of Inclusive Education* in the country empowers every Metropolitan, Municipal, and District in Ghana to constitute a team that shall have case conferences and develop IEPs for learners diagnosed with special educational needs (MoE, 2015). The Standard 4 of the same document also mandates periodic monitoring and review of programmes and learners" progress as well as school-based assessment that includes IEPs (MoE, 2015). In addition, MoE (2015) suggested in the Standard 3 of the same document that

> ... every school should have adequate qualified related services staff such as guidance and counselling coordinator, social workers, speech therapist, resource teachers, assessment personnel, health workers, child protection workers, psychologists, and careers advisors Parents, guardians and custodians shall be involved in all stages involving the

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screening, diagnosis of learners" needs and development of Individualised Education Programmes. (p. 16).

Even though, the standard 3 and 4 of the *Guidelines for the Implementation of Inclusive Education* support IEP development, it appears the development of IEP for learners with intellectual disabilities have not been considered or researched into adequately to enhance the knowledge and practice of teachers and other practitioners. In addition, it seems special and general education teachers knowledge affect or influence the implementation of IEP in the schools. It also seems that both special and education teachers experience some difficulties in implementing IEP for learners with Intellectual disabilities in the schools.

Furthermore, according to Gadagbui (2017), many teachers in Ghana did not have enough competencies to develop IEP for learners with special educational needs and disabilities. Gadagbui (2017) entreated teachers to learn what an IEP entails and develop IEPs for learners with special educational needs and disabilities.

As stated earlier in the background, Amoako (2015) reported that 63% of tutors of Colleges of Education claimed pre-service teachers did not have the requisite knowledge and competences in the development of IEPs. In that study one of Amoako"s objectives specifically sought to find out from tutors of Colleges of Education if the content of the current curricula enables pre-service teachers to develop and implement individualised education programme for learners with special educational needs in Ghana.

This study, however, set out to explore the development and implementation of Individualised Education Programme for learners with intellectual disabilities in Basic Schools in Central Region of Ghana.

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1.2   Purpose of the Study

The purpose of the study was to investigate the development and implementation of IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana.

1.3   Research Objectives

The specific objectives of the study were to:

1. Explore teachers" knowledge and competencies in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana.

2. Examine the contributions of professionals involved in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana.

3. Identify challenges teachers encounter in developing and implementing IEPs for learners with intellectual disabilities in basic school in the Central Region of Ghana.

4. Explore strategies to address the challenges of teachers in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana.

1.4   Research Questions

The study was guided by the following research questions:

1. How knowledgeable and competent are teachers in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana?

2. What contributions do professionals involved in developing IEP for learners with intellectual disabilities in basic schools in the Central Region of Ghana make?

3. What challenges do teachers encounter in implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana?

4. How do teachers address the challenges they encounter in implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana?

1.4.1 Hypotheses

H_1. Knowledge and competencies of teachers have significant impact on the development of IEP for learners with intellectual disabilities.

H_2. Knowledge and competencies of teachers have no significant effect on the development of IEP for learners with intellectual disabilities.

H_3. There is a significant difference between the knowledge and skills of special and general education teachers in developing and implementing IEPs.

H_4. There is no significant difference between the knowledge and skills of special and general education teachers in developing and implementing IEPs.

1.5   Significance of the Study

It is anticipated that the results of this study would reveal the extent of teachers" knowledge and competency in developing and implementing IEP for children with intellectual disabilities in basic schools in the Central Region of Ghana. This would serve as baseline data for the Central Regional Education Directorate and participating schools to organise in-service training for teachers, school administrators, and other stakeholders" on development and implementation of IEPs

for learners with intellectual disabilities in schools in the Central Region of Ghana. This will ensure that learners with intellectual disabilities receive an individualised education appropriate to their unique needs.

In addition, the findings of this study would help in identifying other professionals and their contributions in developing and implementing IEPs for children with intellectual disabilities in basic schools in the Central Region of Ghana. This will help teachers and parents to engage such professionals so they can get them involved in developing and implementing quality IEPs for learners with intellectual disabilities in basic schools the Central Region of Ghana.

Furthermore, it is envisaged that findings from the study would reveal challenges teachers encounter in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana. This would enable the teachers, head teachers and schools to find ways of addressing the perceived challenges of teachers in developing and implementing IEPs for children with intellectual disabilities in basic schools so that they can offer educationally meaningful IEPs.

Finally, the findings of the study would add to existing literature, in relation to development and implementation of IEPs for other or future researchers interested in similar studies.

1.6   Delimitations of the Study

The study was delimited to teachers who teach learners with intellectual disabilities in basic schools in the Central Region of Ghana. The study was also confined to IEPs for learners with intellectual disabilities in selected basic schools in the Central Region of Ghana.

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1.7   Limitations of the Study

One of the major challenges the researcher encountered during the study was outbreak of COVID-19 pandemic and the lockdown which restricted traveling in the country. However, this did not affect the results of the study because most of the participants were interviewed, and responded to the questionnaire through phone calls, WhatsApp, and email. Another problem the researcher faced was additional cost due to the phone calls, WhatsApp, and emails in collecting data for the study. However, this limitation did not affect the results of study.

1.8   Operational Definition of Terms

Individualised Education Programme/Plan (IEP): a plan to tailor teaching and learning to the unique needs each learner.

IEP Team: is a group of experts who supports the planning and implementation of individualised education programme.

1.9   Organisation of the Study

The study is presented in six chapters. Chapter One is the introduction which covers the background of the study, statement of the problem, purpose of the study, and research questions and hypotheses. Other aspects of the chapter are the significance, delimitations, operational definition of terms and organization of the study. Chapter Two deals with the review of related literature. It covers the theoretical framework, the conceptual framework and the review of the key themes raised in the research questions. Chapter Three focuses on the methodology and covers the research approach, design, the population, sample size, sampling procedures, instrumentation; validity and reliability, data collection procedures and data analysis. Chapter Four covers the results of the study. Chapter Five covers the discussion of the

findings. Finally, the summary of findings, conclusions, recommendations and suggestions for further research form the concluding chapter of the report.

CHAPTER TWO

LITERATURE REVIEW

2.0   Introduction

This chapter presents the literature review for the study. The following sub-headings are covered:

1. Theoretical framework

2. Conceptual Framework

3. Knowledge and competences of teachers in IEP development and implementation for learners with intellectual disabilities

4. Contribution of other professionals in developing and implementing IEPs for learners with intellectual disabilities

5. Challenges teachers encounter in developing and implementing IEPs for learners with intellectual disabilities

6. Strategies for addressing challenges in implementing IEPs for learners with intellectual disabilities

7. Summary of literature review

2.1   Theoretical Framework

The study was guided by Vygotsky''s theory of Zone of Proximal Development (ZPD) (1978). The theory provides the framework for development and implementation of IEP for effective teaching of learners with intellectual disabilities. In this theory, learning is a process through the ZPD, with the word „zone‟ regarded as the area in which a learner cannot perform alone and which he/she can do with the support of teachers (Pettigrew & Akhurst, 1999). In this case, the learner with intellectual disability will be moved from his/her present level of performance to a higher level with the assistance of the teacher using IEP to teach effectively. Rowland

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(2006) supported that teaching takes place most effectively when support is given at those particular points in the ZPD where the learner requires support and there is difference in what the learners have acquired and their level of performance in the process of learning. The person to set goal for effective teaching is the teacher by identifying the needs of the learner with intellectual disability established in the IEP. Thus, Vygotsky"s theory of ZPD requires that a learner"s present levels of educational performance, including his/her strengths and needs (the space between which the learner cannot perform alone), are identified by the IEP team or the teacher, who then must develop and implement an IEP with appropriate goals, objectives, special education services, related services and assistive devices. This is the basis for adopting this theory for the study.

2.2   Conceptual Framework

Figure 1

The diagrammatic representations of the conceptual framework for the study
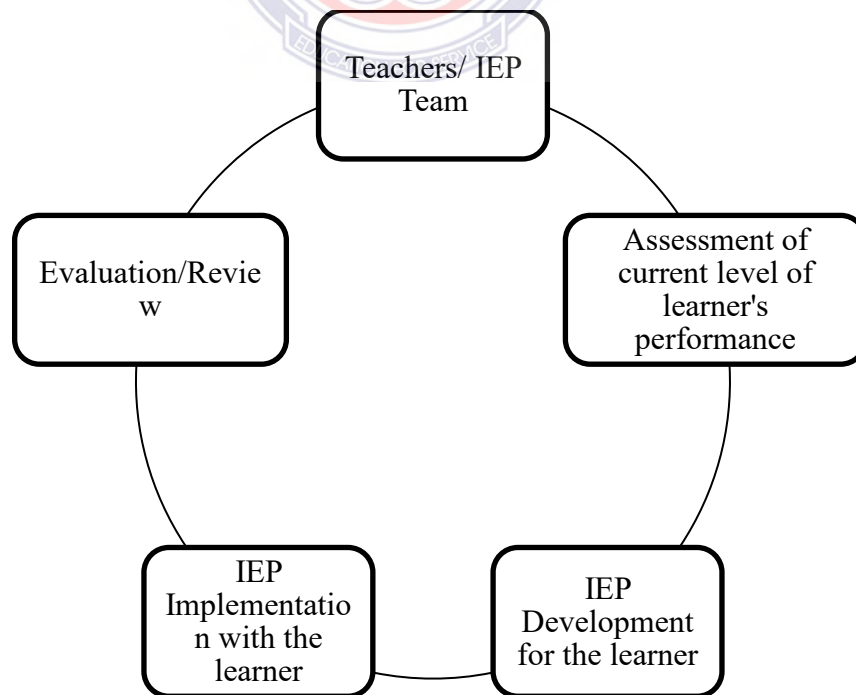
Source: Researcher"s conceptualisation (2020)

Within the framework displayed in Figure 1, IEP is a key issue in educating learners with intellectual disabilities. The IEP helps in identifying a learner‟s current level of performance (what the individual can do and cannot do), the IEP team or the teacher develop and implement an IEP with appropriate goals, objectives, special education services, related services and assistive devices.

In the literature, Polloway et al. (2013), noted in line with the Vygotsky (1978) theory of ZPD that teachers need to conduct assessment to gather the type of instructionally useful data to be able to develop appropriate goals and objectives and know where to begin instruction. The teacher or the IEP team would then be able to develop and implement educationally meaningful IEP that provides instruction for a learner with intellectual disability, have basis for evaluation and facilitate communication or contact among teachers, parents, learners and other professionals. These may affect pro-IEP behaviours (i.e., improved performance of the learner with intellectual disability). This is the basis for an IEP to be developed for every child with a disability.

2.3   Knowledge and Competencies of Teachers in IEP Development and Implementation for Learners with Intellectual Disabilities

One of the main problems encountered by teachers is their lack of understanding regarding IEPs. Lee-Tarver (2006) indicated that some studies have revealed that teachers generally have inadequate knowledge, competency, and difficulty in developing and implementing IEPs. In other words, many teachers who work with learners with special educational needs have inadequate knowledge related to the IEP process, and this can be a barrier when developing appropriate programme for learners. Some studies on IEP development that support this conclusion include Ilik and Sari (2017) and Avcioglu (2012). They reported that majority of teachers did

not have sufficient knowledge about the IEP development, implementation and evaluation. Nilsen (2017) also indicated that many teachers have insufficient knowledge about IEP, which supports assumptions the researcher has made regarding the current study..

Kartik et al. (2018) reviewed why teachers view IEP as being problematic, and to discuss ways to address those problems. The results show that IEP development was viewed by teachers as being problematic because teachers generally did not have much knowledge about IEP development and implementation.

Another study conducted in Kericho in Kenya by Fujo (2012), which supports the current study, points out that 71.62% of 109 teachers disagreed to all the 42 items put to them to ascertain whether the curriculum they went through in school had had any impact on their knowledge and competency to collaborate with other members of the IEP multi-disciplinary team.

Ilik and Sari (2017) conducted a study in the province of Konya, Turkey, and one of the critical problems is lack of teachers" knowledge about team collaboration during IEP development, implementation and evaluation. Their study also discovered that teachers, in their control group, had inadequate knowledge and competency in IEP development, implementation and evaluation. Besides they found that majority of the teachers did not qualify and know how to write appropriate IEP objectives (Ilik & Sari, 2017). This is supported by Rotter (2014), who concluded that there were conflicting information from international research on teachers" views about their capabilities to engage in the IEP process.

Santiago-Lugo (2018) reviewed a number of articles on teachers" knowledge and competency about the IEP process, and identified lack of IEP knowledge as one of the major challenges that teachers face. In several of the studies, Santiago-Lugo

found that teachers reported having limited knowledge about IEP development and what to do during IEP meetings. A teacher not having enough knowledge about IEP development, implementation and evaluation, would likely continue to create problems when developing learners" IEPs.

Santiago-Lugo also identified that teachers overwhelmingly acknowledged the importance of collaboration between other professionals during the IEP process; however, they had limited competency and strategies to achieve communication and collaboration. Another study that supported the finding of Santiago-Lugo"s findings was by Fujo (2012) in Kericho in Kenya. Fujo reported that 109 (71.62%) teachers disagreed that the curriculum they went through in college had equipped them with knowledge and competency to collaborate with the needed multi-disciplinary team.

Furthermore, a study in Ghana by Amoako (2015) which indicated that 140 (62.79%) tutors of Colleges of Education in Ghana hold the view that pre-service teachers have limited knowledge and competencies in developing and implementing Individualised Education Programme (IEP) for learners with special educational needs and disabilities.

According to Amoako, 127 (56.95%) tutors indicated that teachers did not know how to monitor and evaluate IEPs to make a decision. These findings suggest that those teachers were probably not taught how to develop and implement IEPs, and monitor and evaluate the progress made by the learners after they had received instruction. This implies that pre-service teachers have inadequate knowledge, competency and skills in developing, implementing, monitoring and evaluating IEP to make a decision for learners including those with intellectual disabilities.

Gadagbui (2017) emphasized that teachers have inadequate knowledge and skills in developing IEPs and she pointed out that teachers must endeavour to acquaint

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themselves and know how to develop IEPs for learners with special educational needs.

2.4 Contribution of Other Professionals Involved in Developing and Implementing IEPs for Learners with Intellectual Disabilities

2.4.1 IEP team members

According to Gargiulo (2015), IEPs are developed and implemented by specialists, and the IEP process serves as a vehicle for collaboration and cooperation between parents and professionals, whereby they jointly devise appropriate educational experiences. The need of the individual learner with special educational needs determines the exact composition and size of the team. Consequently, the composition and size of an IEP team will depend proportionally to the degree of the learner''s suspected or identified special needs or disability (Woods et al., 2013).

According to IDEA 2004, as cited by Garguilo (2015, the "IEP team" means a group of individuals composed of:

a. The parents of a child with a disability;

b. Not less than one regular education teacher of such child (if the child is, or may be, participating in the regular education environment);

c. Not less than one special education teacher, or where appropriate, not less than one special education provider of such child;

d. A representative of the local education agency (LEA) who is: qualified to provide, or supervise the provision of, specially designed instruction to meet the unique needs of children with disabilities; knowledgeable about the general education curriculum; and knowledgeable about the availability of resources of the LEA;

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e. An individual who can interpret the instructional implications of evaluation results, who may be a member of the team described above;

f. At the discretion of the parent or the agency, other individuals who have knowledge or special expertise regarding the child, including related services personnel as appropriate; and

g. Whenever appropriate, the child with a disability.

Gargiulo (2015) and Polloway et al. (2013) concluded that, IEPs are written by a team, and at minimum, participation must include a parent/guardian, the child‟s general and special education teacher; a representative from the school district; and an individual able to interpret the instructional implications of the evaluation. When appropriate, the student, as well as other professionals who possess pertinent data or whose expertise is required, may participate at the discretion of the parent or school.

Lee-Tarver (2006) also added that, the IEP team may include the regular education teacher, a special education teacher, administration (principal, school psychologist, or school counselor), a representative of the local education service, the parents, and if appropriate, the learner. In addition to these key players, other professionals (psychologist, speech-language pathologist, occupational therapist, physical therapist and others with specific areas of interest could possibly be involved depending on the child's needs (Causton & Tracy-Bronson, 2015; Lee-Tarver, 2006).

A study conducted in Kenya by Olewe-Nyunya (2018) revealed that different categories of professionals were engaged in developing and implementing IEP. The study revealed that, teachers had 77% (81) the level of involvement, head teachers were second in involvement with 38% (40), physiotherapist and occupational therapists were third with 23.8% (25) each of them, social workers had 9.5% (10) level of involvement while nurses and school psychologist each had 4.8% (5)

respectively. It can be seen though different professionals were involved in developing and implementing IEP, their level of involvement seems to be discouraging in that, each expert plays a vital role in the development and implementation of IEP for the learner with intellectual disability.

In addition, one or more qualified specialist teachers or personnel in the field of special needs education may provide itinerant or support services in the form of part-time instruction, treatment and or specific guidance and counselling to the learner (Oppong, 2003). Also, MoE (2015) suggested, in the inclusive education policy of Ghana, a team approach in assessment and development of the IEP for learners with special needs and disabilities. MoE (2015) suggests that every school should have adequate qualified related services staff such as guidance and counselling coordinator, social workers, and speech therapist, resource teachers, assessment personnel, health workers, child protection workers, psychologists, and careers advisors." Parents, guardians and custodians are also recommended to be included in the screening, diagnosis of learners" needs and individualised education programmes. (p. 16).

Gadagbui (2017) and Oppong (2003) explained that IEP is developed and implemented by the learners" classroom teacher in collaboration with a qualified special educator, learner"s parents, the learner (when possible), and other significant professionals at the discretion of the parents and/or school.

2.4.2 Contributions of other specialists involved in developing and implementing IEPs for learners with intellectual disabilities

Contributions of other professionals in the development, implementation and evaluation of IEP vary among schools, districts and states. Despite these variations, there are generally accepted roles and responsibilities that hold true from school to

school. This subsection reviews related literature on contribution of IEP team members to support the current study.

According to IDEA, each student identified by a multidisciplinary child study team as having a disability and in need of special education, must have an individualised programme of specially designed instruction that addresses the unique needs of the child (Gargiulo, 2015). Some team members conduct assessment, plan interventions and deliver services (Heward, 2003). In addition, the U.S. Department of Education (2007) pointed out that, individualised education programming creates opportunities for teachers, parents, school administrators, related services personnel, and learners (when appropriate) to collaborate to improve educational outcomes for learners with disabilities.

According to Causton and Tracy-Bronson (2015), the special education teacher contributes to the development of each learner‟s IEP. He or she works with other professionals to determine each leaner‟s current strengths and needs, goals, objectives, appropriate special education services (differentiate curricula and instruction and recommendation of adaptations). The special educator also helps in solving problems that arise in class, evaluate each learner‟s services and communicate learner progress to the IEP team. MoE (2015) proposes training and deploying of more special education teachers to all schools to support school heads and teachers to conduct basic screening, develop IEP, and provide teacher and pupil support in schools.

Causton and Tracy-Bronson (2015) suggested that the general educator is responsible for each learner‟s IEP by planning lessons, teaching those lessons, assessing each learner‟s skills, and communicating to the IEP team. General and special education teachers play important roles in IEP development, and they assist in

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constructing the present level of the performance regarding academic, sensory, social and behaviour management (Causton & Tracy-Bronson, 2015). Another important IEP team member is the head-teacher or a representative of the education directorate. This individual, according to Carter and Wilson (2011), can talk about the necessary school resources and materials. This person has the mandate to commit resources and materials and be able to ensure that whatever services are scheduled in the IEP will actually be delivered.

Avcioglu (2012) asserted that in Turkey, Guardian and Research Center are responsible for providing services to learners with disabilities and offer guidance and psychological consultation services to individuals and parents. They also do identification, placement, follow up, IEP development and integration practice. Samalot and Lieberman (2017), reported that physical educators have a lot to contribute to the IEP team, because they help children to develop socially, cognitively, and physically.

Columna et al. (2014) confirmed that parents play a vital role as part of the IEP team as they can provide valuable information during the IEP process and assist teachers and administrators in determining appropriate placement for their child. Gadagbui (2017) also supported this statement by confirming that parents are key members of the IEP team. For instance, they know their children well and can talk about their strengths and needs, as well as offer ideas for enhancing their children's education.

Furthermore, Mattie and Kozen (2007), Gargiulo (2015), and Polloway et al. (2013) noted that another key member of the IEP team is a person who can interpret what the learner's evaluation results mean in terms of designing appropriate instruction. The evaluation results are very useful in determining the learner's current

performance in school and other areas of need that the learner may have. This IEP team member must be able to talk about the instructional implications of the learner"s evaluation results, which will help the team plan appropriate instruction to address the learner"s needs.

Mattie and Kozen (2007) proposed that when developing an IEP, consideration should be given to the learner"s need for related services. Related service professionals are often included as IEP team members or participants. They provide special expertise about the learner"s needs and how their services can address these needs. Depending on the learner"s unique needs, some related service professionals that can be invited to the IEP meeting or help develop the IEP might include psychologists, or speech-language pathologists, occupational or physical therapists, and adaptive physical education providers.

2.5 Challenges Teachers Encounter in Developing and Implementing IEPs for Learners with Intellectual Disabilities

Studies that have been conducted on challenges in development and implementation of IEPs raise concern about the processes involved, especially, the implementation. According to Olewe-Nyunya (2018), IEP literature outlines specific understandings: (1) IEPs are common in special education provision across school systems internationally; (2) considerable difference exists in the actual individualization of IEPs due to a number of factors such as school culture, classroom setting, teachers" use of assessment data, and (3) collaboration in developing IEPs is varied with noticeable limitations in the involvement of parents, other professionals and learners (p. 41-42).

Smith (1990) described a number of the challenges in IEP development, including (a) inadequate teacher training in developing IEPs, (b) poorly planned team processes, (c) compliance with the paperwork requirements, and (d) excessive demands on teacher time.

2.5.1 Insufficient teachers' knowledge and skills

One of the key challenges encountered by teachers is their inadequate understanding of IEPs. Studies in Kenya by Olewe-Nyunya (2018) and Agumba (2017) reported that majority of teachers who participated in the two studies indicated they were not competent in IEP development and implementations. Avcioglu (2012), and Ilik and Sari (2017) supported this statement by stating that majority of teachers in the studies did not have sufficient knowledge about the IEP process. Also, Nilsen (2017) accounted that general education teachers had limited knowledge related to IEPs.

Nasir (2010), as cited by Bandu and Jelas (2012) contended that newly-recruited special and general educators possessed inadequate competency in developing IEPs. This statement is supported by Pawley and Tennant (2008), who asserted that there were teachers who were uninformed about the IEP development and implementation process.

The issue of inappropriate and inadequate training among teachers should be given utmost focus, as it could seriously impact the teaching and learning process. Whatever training teachers have, they still feel ill-equipped to ensure that they meet the needs of learners with IEPs in their classroom (Avcioglu, 2012). According to Yell et al. (2016), it is significant that IEP team members have competency in writing measurable annual goals. Developing measurable annual goals is often a challenging

and difficult task for IEP team members because; usually they have not been trained in strategies for writing such goals.

Many studies suggested that both the special and general educators involved in the development of IEP have challenges in communicating with parents because of reasons such as inadequate knowledge (Kale et al., 2016; Karasu, 2014).

Gadagbui (2017) noted that infrequent workshops and in-service training for teachers can serve as obstacles to development and implementation of IEPs. Newly-recruited general and special education teachers have insufficient competency in developing the IEP (Pawley & Tennant, 2008). Bandu and Jelas (2012), agreed the conclusion that teachers who participated in their study were uninformed about the process of IEP development and implementation.

2.5.2 Inadequate time for IEP development and implementation

Bandu and Jelas (2012), in their study in Malaysia, reported that teachers were plagued with time constraint in developing the IEP. Increased number of forms had to be completed and this created barriers for the teachers in implementing IEP, as they were committed to teaching, as well. Special education teachers need to effectively collect data before constructing the IEP. Various types of data are needed, such as learners" health record, academic survey form, and diagnostic test. Teachers usually needed more time to contact the other team members involved in the IEP development to collect the information needed (Bandu & Jelas, 2012). Furthermore, the collaborative aspect of IEP posed a major time challenge. Times for scheduling meetings for the IEP process always conflicted with personal schedules of individual participants. Always the special needs teacher would have to fit in other professionals" schedule which, in many cases, did not favor them. Teachers had to agree to odd times if the meeting had to be held (Kennedy & Steward, 2011). Tsuey-

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Ling and Mei (2009) who involved other professionals in their action research further asserted that lack of time for IEP development posed a great challenge to the study. This implies that, if during a research, other specialists could not find time to work together; it would be even more difficult when it is time for the actual implementation of the IEP. The challenges in collaboration could ultimately influence the time for IEP services for learners with intellectual disabilities.

2.5.3   Poor collaboration and contribution of other specialists

Nilsen (2017) studied how special education and general education teachers collaborate for IEP development and implementation. The results revealed that special education teachers often felt completely alone and did not have the full participation of other teachers. Special education teachers often had to force other teachers to be involved. Special education teachers therefore had to call for more cooperation in the development of the IEP. Yet, general education teachers felt that it was the responsibility of the special education teacher, and they felt the special education teachers were in control during the meeting. Both teachers saw the value of each other, they were unable to collaborate in the IEP process (Nilsen, 2017).

Teachers and parents have yet to successfully develop the IEP together. This was confirmed by Siraj (2000), as cited by Bandu and Jelas (2012), who argued that discussions involving IEP in Malaysian schools was less successful, as school teachers did not involve parents and council members as required in the guidebook for developing the IEP. According to Stroggilis and Xanthacou (2006), as cited by Bandu and Jelas (2012), IEPs are not depicted as collaboration tool because the team members involved might have different goals for the IEP.

Bandu and Jelas (2012) concluded that parents did not actively participate in the implementation of their children' IEPs. When asked regarding the role of parents

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in the implementation of IEP in school, 12 out of 15 teachers (80%) responses suggested the following: (i) Parents do not give their full cooperation, (ii) The administrators may not even know that IEP exists; (iii) The head teacher or assistant head teacher hardly attends any of the meetings, (iv) Usually it will be handled by the special education and assistant head teacher, (v) The administrators may be busy with administrative duties.

Williams-Diehm et al. (2014) opined that IEP‟s are developed to improve collaboration and communication among special education teachers, general education teachers, learners with special educational needs and their parents, administrators, and other related service providers. However, studies point out that teachers may not be communicating appropriately with other professionals before and during the IEP development. Ilik and Sari (2017) revealed that teachers did not communicate with other IEP team members, supportively. Ilik and Sari suggested that IEP team members must be given comprehensive information related to both the learner and family prior to IEP meeting in order to avert time consuming discussions and provide more achievable suggestions to learners‟ needs. Additionally, Ilik and Sari suggested that, in order to develop more quality IEP's for learners, it is important that IEP team members collaborate and support each member. It is reported that inadequate communication prior to IEP meeting impacts the decisions made at the meeting (Ruppar & Gaffney, 2011).

2.5.4 Class size

According to Gadagbui (2017), large class size of pupils complicate the challenge; therefore, individual attention becomes rare and special education teachers are few with transportation problems. The increase in enrolment in Ghana has led to overcrowding in both special and regular schools (Hayford, 2013). In Gadagbui‟s

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study, teachers reportedly taught classes with enrolment ranging from 35 to 85 pupils. The challenges imposed on teachers by large class size ranged from inability to make time for all the pupils, including pupils with special educational needs, to difficulty in marking class exercises, to bottlenecks faced with class control. Also, large class size adversely affects teachers" assessment of pupils" progress in the programme of study as well as the quality of their marking.

Consequently, teachers in schools with large class sizes are not able to provide quality individual attention to all learners including those with special educational needs. Large classes cause teachers to spend so much time on marking pupils" work that they tend to have very little time to prepare for teaching. By simple calculation, if a teacher has 35 pupils in his class and gives the pupils exercises in three different subjects, then, in a day he has 105 exercise books to mark. If the teacher uses a minimum of five minutes to mark a book, then he will spend 525 minutes or 8 hours 45 minutes marking 28 every day. That is most basic school teachers spend more than a third of a day marking of pupils" work, which is not helpful to inclusive education because teachers may not have the energy to attend to the needs of children with disabilities or special educational needs during school hours (Hayford, 2013).

2.5.5   Inadequate resources for IEP development and implementation

According to Gadagbui (2017), special education teachers are few and have problem with transportation issues which challenge the development and implementation of IEPs as well as individual attention. In a similar vein, a study in Kenya by KNCHR (2014) revealed that the implementation of IEP was a challenge due to inadequate teachers and other staff in the schools. Agumba (2017) reported that in Kenya, teachers find it difficult to educate learners with cerebral palsy adequately, in that IEPs or plans for learners with motor problems involve occupational therapist

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and physiotherapists who are sometimes not found in the schools. Schools and parents are sometimes required to hire them, and this has made IEPs implementation a challenge to teachers.

Lake and Billingsley (2000) also reported that, inadequate funding often does not encourage schools to provide services such as IEPs, fearing they may be expensive for the school or require too much of the staff. The desire of schools to prevent resources and families demanding the best possible services for their child can put schools and families into conflict. While schools endeavour to protect their resources, parents may perceive that the schools do not value the needs of their children. Parents fear that their ideas are not listened to and given serious consideration during IEP meetings (Mueller & Buckley, 2014). Parents feeling devalued can create significant barriers to collaboration during IEP meetings (Elser, 2017).

2.6 Strategies for Addressing Challenges in Implementing IEPs for Learners with Intellectual Disabilities

Several studies have been done to ascertain how to address the problems educators encounter when implementing IEPs for learners. The following sub-headings include literature on how to improve upon the implementation of IEPs.

2.6.1 Pre-service and in-service training of teachers

Collins et al. (2017) and Sayeski (2015) stated that preparing educators to work with the many facets involved in special needs education is a daunting task. Teachers are expected to be prepared for a variety of responsibilities including parent collaboration and involvement in the IEP process. The researchers found that teachers did not have enough competencies in developing and implementing IEPs (Lindey,

2014), therefore the teachers needed additional training to enable them to effectively get involved in the IEP development and implementation (Shriner & Destefano, 2003, as cited by Lindey, 2014).

To address the issue of writing measurable annual goals, teachers and other professionals need to be trained in how to directly develop a measurable goal. Yell et al. (2016) suggested that, (1) school officials and state departments of education should provide professional development activities on goal writing, (2) teachers need practice and feedback in goal writing to help hone their skills, and (3) school district personnel should evaluate goals written in IEPs for measurability.

Mitchel et al. (2010) suggested that all teachers need pre- and in-service training and support necessary for their engagement in developing and implementing IEPs. The training should include the teachers‟ role in IEPs, working with multi-disciplinary service providers, collaboration with parents, strategies for involving learners, and how to implement and monitor learner progress on IEP goals. It is evident from research that the level of professional development for teachers on IEPs is a significant factor in determining their perceptions of their knowledge and competency to engage in developing and implementing IEPs (Lindey, 2014). Gargiulo (2015) supported the recommendation that teachers need enough mentoring and feedback; open lines of communication; materials and other resources in developing IEPs.

Lee-Tarver (2006) also suggested adequate training opportunities, mentoring and support within the school for the teachers on the purpose, development and implementation of IEPs. This is endorsed by Bandu and Jelas (2012) who noted that teachers need to equip themselves with the appropriate knowledge and competencies in developing and implementing Individualised Education Programme.

In this regard, Peterson-Ahmad and Jones (2017) suggested mini-conferencing for the training of teachers to ensure increased participation of parents in IEP development.

Furthermore, Martin et al. (2004) said in-service and pre service training on IEP for teachers should be organised on a regular basis. These training assist teachers become enough familiar with IEP language and procedures so as to become more knowledgeable and competent for IEP implementation. Ilik and Sari (2017) in their study reported that teachers who participated in an in-service training programme on IEP development in an experimental group compared to teachers in the control group, felt highly skillful in IEP development. Ilik and Sari (2017) found that in-service training had been found to effectively equip teachers with the right information and skills to successfully participate in IEP development and implementation.

According Lesh (2020), coaching is significant to a teacher of learners with special educational needs, and suggests that newly-trained special education teachers should be mentored by seasoned special educators. The mentor should be someone who can coach the newly-trained special educator how to plan the IEP development and implementation. Lesh (2020) suggested that "each state, district, and school has its own IEP document features and procedures, such as those for collecting data on present levels of academic achievement and functional performance (PLAAFP) and so on" (p.8.). Therefore, it is relevant to have a "local knowledge" coach or a mentor to learn the ins and outs from and bounce ideas off of" (p.8.).

2.6.2   Enhancing multi-disciplinary involvement and contribution

Nilsen (2017) suggested that in order to develop quality IEP's for learners, a multidisciplinary team should be formed and all teachers working directly with learners should be included in the IEP meeting. This suggestion is supported by MoE (2015) that every district in Ghana should form District Inclusive Education Team

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comprising adequate qualified related service staff such as guidance and counseling coordinator, social worker, and speech therapist, health worker, psychologist, parents, guardians and custodians to screen, diagnose learners" needs and develop individualised education programmes for learners with special educational needs.

The fundamental avenue to ensure learners are accessing an appropriate education is the involvement of parents in their children"s IEP process (Gadagbui, 2017). Cavendish and Conner (2018) suggested the use of social media, such as Skype, to facilitate parents and other professionals" involvement when they have difficulties to attend IEP meetings, and by providing an interpreter that is considerably familiar with special education and IEP issues to explain IEP language or terminologies to parents. These strategies can make parents and other specialists feel more valuable, and can enhance their participation in IEP meetings (Cavendish & Connor, 2018). Columna et al. (2014) recommended that, in a situation where parents have difficulties attending IEP meetings, technology can be used to get parents or legal guardians involved in the IEP process and stay informed about their child"s decisions.

Elser (2017) proposed several suggestions to address the challenges to authentic parental participation in IEP development and implementation. These recommendations include (i) relationship building through frequent positive communication, and (ii) establishing a shared context for IEP meeting purpose and process that is communicated with parents. Schools should also strategise to educate parents regarding their rights and involvement in IEP meetings because, empowering parents will contribute to increased parental involvement in the IEP process.

According to Ilik and Sari (2017), school administration can also organise in-service training for parents that includes information related to the IEP meeting. This

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can help parents know their role during IEP meetings and understand components and terms related to the IEP. Training programme and written documents should be provided to families of learners with special education to facilitate more understanding of the IEP process. A suggestion in relation to parents" language barrier could be to have an interpreter that can help assist parents. This will help parents come out with their concerns and feel enough comfortable during the meeting. It is important for parents to be included and informed about decision making related to their child as this will help create a positive welcoming environment for parents and teacher to communicate effectively.

Regarding conflicts that sometimes arise between parents and schools in proposing the ideal approach to educating a learner with a special educational need or disability, procedural safeguards were suggested in IDEA. The safeguards include the following: (i) Prior written notice to parents of all procedures available, (ii) The right of the parents to examine the records of their child, (iii) Parental participation as full members of the IEP team, (iv) Secure and independent evaluation for their child, (v) The right to receive an impartial hearing and a judicial review if necessary. Santiago-Lugo (2018) pointed out that literature identifies lack of communication between educators and other IEP team members during the IEP process. Teachers acknowledge the importance of collaboration between other professionals during the IEP development process, but have inadequate knowledge and competency to achieve communication and collaboration. Martin et al. (2004), as cited by Santiago- Lugo (2018) concluded that it is significant for educators to communicate with IEP team members before and during the IEP development. Communicating appropriately among IEP team members can assist IEP development and implementation to be smoother and more effective.

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Lesh (2020) also pointed out that general education teachers have many schedules, so it is relevant to create good working relationships with them. Lesh recommended that, at the beginning of each school year, the special educator should meet with the regular school teachers, and notify them that they will be collecting from them current academic and behavioral data for the school year. Also, the special educator should give and discuss copies of data assessment form they will use to the regular teachers, and explain the procedures for gathering on the each child''s present level of academic achievement and functional performance (PLAAFP)a. Therefore, it is suggested that special educators make data collection easy for regular school teachers by creating a summary sheet for PLAAFPs assessment scores; copies of samples of work (Lesh, 2020).

2.6.3 Improving the IEP format

Rotter (2014) conducted a study on IEP use by general and special education teachers. When 426 teachers were given the opportunity to suggest how to improve IEP through an open-ended question, majority of the teachers recommended that IEPs should be simplified, specific and clear. The study indicated that teachers preferred an IEP with shorter content with specific and clear individualised information relevant to their classrooms and the learner''s needs.

Currently many schools use computer-generated IEPs, to improve computer generated IEPs and ensure goals are individualised Hedin and Despain (2018), Jung (2007); and More and Hart (2013) suggested the use of the condition-learner-behavior-criteria template, to ensure well-written, specific, measurable, achievable, realistic and timely (SMART) individualised goals.

2.6.4   Time for IEP implementation

In order to overcome the challenge of conflicting schedule, Diliberto and Brewer (2014) suggested that teachers involve parents and other professionals all along the IEP and progress-monitoring journey. Lesh (2020) also suggested that teachers create "prior written notice," the notice to be sent to parents and specialists to invite them to the child"s IEP meeting. The IEP meeting should be arranged with the parent"s and other professionals" schedule in mind. Lesh reported that one of the most innovative schools she has seen has created an after-work hours IEP meetings schedule.

Ilik and Sari (2017) also suggested IEP that team members be given comprehensive information concerning the learner and family prior to IEP meeting in order to avert time consuming and provide more achievable suggestions to learners needs. Friend and Bursuck (2009) noted that the use of technology in the classroom has benefited learners in special education and teachers as well. Computerized or electronic individualised education programming is one of the various technologies that teachers can utilise to enhance implementation of a learner's IEP. These programmes have many useful features, such as the following:

a. An online component that allows related service providers to access the IEP document at the same time.

b. Automatic demographic information of the learner, including the learner's name, date of the last IEP, and address.

c. A management system that allows teachers to view a list of upcoming IEP due dates with one click.

d. An electronic goal bank.

Computer Automation Systems (2012); Excent (2012), and Spectrum K12 School Solutions (2012), noted that the features of electronic IEPs facilitate access to documents for other professionals or IEP team members, allow teachers to maximize work time and generate reports of learner progress. The time-saving features of IEP electronic programmes facilitate the process of developing an IEP and provide a layer of support to ensure the development of learners' programme within the constraints of relevant laws. However, electronic systems often pose challenges as teachers may find the systems difficult to use.

2.6.5   Resources for IEP implementation

Provision of adequate resources is recommended by Gargiulo (2009) to ensure effective implementation of IEPs. Aguma (2017) conducted a study in Kenya in which majority teachers reported that they did not implement IEPs as a result of inadequate materials and resources. The teachers in the study suggested improvised materials, study partners, differentiation of time tables, resource rooms and assistive devices for learners as a way of enhancing implementation of individualised education programmes.

Also, Olewe-Nyunya (2018) recommended that teachers should be given maximum encouragement, motivation, good environment and support in order to enhance the development and implementation of IEPs in schools.

2.7   Summary of Literature Review

The extant literature has thrown more light on different views of special education teachers on IEP development. The literature has also chronicled the professionals involved in the development and implementation of IEPs for learners with special educational needs and disabilities in schools, and how that boosted their

performance in schools. These included learners with cerebral palsy and intellectual disabilities, among others. The literature has also highlighted the challenges special education teachers encounter in developing and implementing IEPs, including limited teachers" knowledge and skills, inadequate time, poor collaboration with other professionals, inadequate materials, large class sizes and inflexible curriculum. A vast chronicle of literature has also highlighted how perceived challenges of special education teachers in developing IEPs were addressed.

Although different aspects of IEP have been well documented in studies about IEP development for pupils with special educational needs and disabilities, less research has been conducted in which teachers" own views have been applied to examine the development and implementation of IEPs in basic schools in the Central Region of Ghana. Also, although professional collaboration reflects and influences the quality of the IEPs, there is a paucity of studies focused on this concept, and on how it influences IEP development and implementation in basic schools in the Central Region of Ghana.
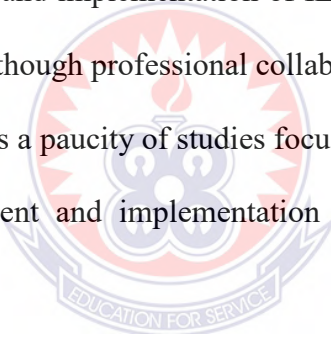
CHAPTER THREE

METHODOLOGY

3.0   Introduction

This chapter presents the methodology for the study. The areas covered are (a) the research setting, (b) the research paradigm, (c) research design, (d) population, (e) sample size, (f) sampling techniques, (g) instrumentation, (h) validity and reliability, (i) procedures for data collection, and (j) data analysis.

3.1   Research Setting

This study was conducted in basic schools practicing inclusive education, unit and special schools in the Central Region of Ghana. The Central Region is one of the sixteen administrative regions of Ghana and has 22 districts. The region has 1,207 primary schools, 856 junior secondary schools. This study was conducted in nine primary schools across six districts practicing inclusive, unit and special schools for learners with intellectual disabilities.

3.2   Research Approach

The mixed methods research design, which contained elements of both qualitative and quantitative approaches, was used. Mixed methods research design is when a researcher collects analyses and mixes both quantitative and qualitative data in a single study to understand a research problem (Creswell, 2005; Hayford, 2013). Graff (2016) argued that mixed method approach helps to determine how both qualitative and quantitative methods would answer one"s research questions. The core argument for mixed methods approach is that the combination of both forms of data provides a better understanding of a research problem than either quantitative or qualitative data by itself. However, Hayford (2013) pointed out that unlike the other

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research designs, mixed methods design creates some challenges to the researchers who adopts this method. One difficulty Hayford encountered in the use of quantitative and qualitative methods in the same study was the consequent contradictions in findings. Hayford suggested that, in order to deal with this problem, the researcher must spend a considerable time finding out the various processes that can be used in developing, using and analysing different sources of data.

The mixed methods study was used to examine the development and implementation of IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana. This was done by examining the perspectives of teachers through focus group interactions and questionnaires, respectively. The mixed method approach involved collecting data simultaneously to understand the research problems. The data collection also involved using questionnaire to generate numeric data as well as interviews to generate text information so that the final database represents both quantitative and qualitative information.

One of the reasons for collecting both quantitative and qualitative data was to gain a more complete understanding of the research problem; namely, the development and implementation of IEPs for learners with intellectual disabilities in schools. The triangulated data would show convergence, inconsistency, and complimentary results. This was intended to further help the researcher to compare the participants" responses to check if the respondents had similar or different answers to the research questions.

Creswell (2013) identified three different kinds of mixed methods studies, which include concurrent (convergent), explanatory sequential and exploratory sequential. Hayford (2013) emphasized that mixed method designs most commonly

used in educational research include the explanatory design, exploratory design, and triangulation design. This study adopted the explanatory mixed methods design.

The intent in using mixed method was to bring together the differing strengths and non-overlapping weaknesses of quantitative methods (large sample size, trends, generalization) with those of qualitative methods (small sample, details, in depth) (Patton, 1990). This design is used when the researcher wants to triangulate the methods by directly comparing and contrasting quantitative statistical results with qualitative findings for corroboration and validation purposes. Other purposes for this design include illustrating quantitative results with qualitative findings, synthesizing complementary quantitative and qualitative results to develop a more complete understanding of a phenomenon, and comparing multiple levels within a system.

3.3   Research Design

The explanatory mixed methods design was employed for this study. The explanatory mixed method design is a process of first, gathering quantitative data and, then collecting qualitative data to complement the quantitative results. According to Hayford (2013), this design is also called a „two-phase model", and Creswell (2005), as cited by Hayford, described it as the most popular form of mixed methods design in educational research

In this study, quantitative method comprised questionnaires to a sample of 60 basic school teachers across nine schools in the Central Region of Ghana. The questionnaire was followed by the collection of qualitative data involving the use focus group interviews with 5 general and 5 special educators selected from the cohort who responded to the questionnaire. The focus group interview provided rich data describing factors affecting the development and implementation of IEP and provided further expansion of the findings from the questionnaire. Hayford (2013)

emphasized that, explanatory design is one of the most common mixed method used in educational research. Also since very little research has been conducted into the problem; "Development and implementation of IEP for learners with intellectual disabilities in basic schools in the Central region of Ghana", the study was explanatory.

3.4   Population

A population is a group of elements or cases, whether individuals, objects, or events, that conform to specific criteria and to which a researcher intends to generalise the results of the research (Hayford, 2013). The population for the study consisted of all teachers in basic schools in the study site. For the purpose of this study, both special and general education teachers formed the accessible population n=152 teachers. Hassan (2020) opined that accessible population is a subset of the target population to which researchers can apply their conclusions. As a result, the sample for this study was drawn from the accessible population and they were drawn from nine basic schools in the Central Region of Ghana.

Table 1

Distribution of the Accessible Population

Participants	Number
Special education teachers	46
General education teachers	106
Total	**152**

Source: Field data, 2020

3.5   Sample

Hayford (2013) indicated that a sample is a group of participants who will be representative of the bigger population or will provide specific information needed to address the questions raised. The sample size for this study was conveniently selected from the accessible population. This comprised 60 teachers, who were subsequently grouped into two equal groups (30 special education teachers and 30 general education teachers) to participate in the study. Table 2 shows the breakdown of the sample size involved in the study.

Table 2

The Breakdown of the Sample

Participants	Male	Female	Number
Special education teachers	15	15	30
General education teachers	12	18	30
Total	**27**	33	60

Source: Field data, 2020

3.6   Sampling Technique

According to Hayford (2013), sampling technique is a process of selecting a part of the population to represent the entire population. A multiple sampling technique was used where the researcher employed a combination of purposive and convenience sampling techniques at different stages of the study. Purposive sampling was used to select all the nine schools in six districts; namely, Cape Coast, Effutu, Ajumako Enyan Essiam, Awutu Senya East, Agona, and Ekumfi, for the study. Purposive sampling technique is a nonprobability technique used when the researcher builds up a sample likely to satisfy certain specific needs (Cohen et al., 2007). Hayford (2013) noted that in purposive sampling, the researcher handpicks the cases

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to be included in the sample on the basis of his or her judgment of those cases that can provide the best information to address the purpose of the study. It is for the above reasons that purposive sampling technique was chosen to select the schools and teachers for the study. For purposive sampling, enquiries were made to pick schools with learners with intellectual disabilities. The teachers were also in a good position to tell their experiences as far as their participation in teaching learners with intellectual disabilities were concern.

In selecting the actual participants for the study, the researcher did so using convenient sampling technique. This technique was used resulting from the participants' willingness to be part of the study. This sampling method was considered as the most appropriate because it was difficult to convince teachers in the midst of the COVID-19 pandemic to respond to the questionnaires and the interview. Therefore, the researcher called the teachers to introduce himself and the purpose of the study to them, and encouraged them to voluntarily participate in the study. As stated by Hayford (2013), a convenience sampling is a group of subjects selected because of availability and it a process of including whoever, happens to be available at the time. Two common examples of convenience sampling are seeking volunteers or studying existing groups just because they are there (Gay et al. (2009), as cited by Hayford (2013). As supported by Creswell (2013), the population was too small and heterogeneous to select a representative sample. As a result, a convenience sampling technique was used to sample participants who were most conveniently available. The researcher, thus, determined the required sample size which truly represented the entire population in the study. This made the sample size free from error due to bias, and also provided adequate size for reliability. The researcher was mindful of the weakness of convenient sampling, however, this was the only type of sampling

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possible, and the primary purpose of the study was not to generalise the findings, but to better understand relationships that may exist (Gay et al., 2009, as cited by Hayford, 2013).

3.7 Instruments and Instrumentation

To collect data for the study, the following instruments were used: questionnaire and interview.

3.7.1 Questionnaire

A questionnaire was used to collect data from teachers for the study. The questionnaire was in a form of a Likert scale type built on a 5-point scales ranging from Disagree (D) = 1; Strongly Disagree (SD) = 2; Neutral (N) = 3; Agree (A) = 4; to Strongly Agree (SA) = 5 (Appendix B). The tentative objectives and research questions were used to formulate the purpose of the questionnaire (Hayford, 2013). The items in the questionnaires were designed to cover the key themes raised in the research questions. This type of data gathering was appropriate for the study because it was in line with the assertion of Robson (2003) who commended that a likert scale makes respondents enjoy responding to questions posed by the researcher since in many cases, respondents are just not ready to cooperate in a giving data.

Again, the Likert scale is very easy to analyze statistically (Jackson, 2009) and brings out the information needed on the research topic. However, it has a disadvantage of respondents not being allowed to express their own personal view.

The questionnaire was put into five sections. Section A focused on the demographics of the respondents while sections B, C, D, and E focused on each of the themes raised in the 4 research questions. In all, there were 44 items in the questionnaire.

3.7.2 Focus group interview guide

Focus group interactions were used in addition to the questionnaire to elicit data for the study from the teachers. According to Hayford (2013) focus group interview is an interaction within the groups based on the topics that are supplied by the researcher. The researcher conducted focus group interviews with five general and 5 special education teachers from the sample and lasted for one hour each, as suggested by Hayford. In the focus group, a semi-structured interview guide was used. The items were designed and reflected on the key issues raised in the research questions.

The focus groups were selected, phone calls and WhatsApp video conference were done to discuss and comment on aspects of the issue under investigation, development and implementation of IEP for learners with intellectual disabilities. Focus group interview enabled the participants to tell their own experiences (Hayford, 2013). Focus group interviews can, however, pose challenges to interviewer who lacks control over the interview discussion. As a result of this, mini focus groups of 5 teachers each were done in order to have a control over their interactions. Also, when focus group interviews are audio-taped, the transcriptions may have difficulty discriminating among the voices of individuals in the group. Taking notes becomes difficult because so much is occurring (Creswell, 2002). To avoid this, each teacher was allowed to identify him/herself before responding to a question. The focus group interactions also allowed for probing and clarification of issues, as well as offered the greatest scope and depth of investigation to examine the nature of the issues among the teachers in the schools.

3.8   Validity

In the first place, the supervisor of the study technically analysed the questionnaires and the interview guides before the researcher administered them. A combination of more than one data collection strategies were used, namely; questionnaires and focus group interviews to enhance the validity. The researcher recorded precisely, and detailed descriptions of the teachers. This was done by using note-takers and a phonerecorder to record the interviews with the participating teachers. To ensure trustworthiness of interviewees responses, the interview reponses were played to the interviewees to listen immediately after the interviews to ensure what were recorded were exactly interviewees" views. The transcribed interviews were also emailed and whatsap to the respondents again to check or corroborate if what were said were what had been transcribed. Both the questionnaire and the interview items, the content validity was adopted. With this, the items were designed and covered the key themes raised in the research questions..

3.9   Reliability

To ensure reliability of the items in the questionnaire and interview guide, the items were given selected M.Phil students to peer review. The comments and suggestions made were given for the study supervisor"s judgement. The corrections made were effected in the items. These were further given for pre-testing.

The original interview transcripts and audio records were kept to regularly check and refer to its content to ensure inferences drawn from this were consistent with the data collected.

The reliability of the questionnaire items was computed to be 0.7 and 0.8 respectively with the special and general education teachers. Zaiontz (2016) suggested that, the acceptable variables for alpha range from 0.70 to 0.95. Therefore, the

Cronbach‴s Alpha value was reliable and can be used for gathering the data. The interview which was also conducted on the result from the pre-test revealed that, some of the questions were not well-structured and asked, and therefore needed corrections.

3.9.1 Pre-testing

The questionnaire was pre-tested on 10 MPhil colleagues who were general education teachers before studying education of learners with intellectual disabilities who were in their final year in the Department of Special Education in the University of Education, Winneba. These students were chosen because they were trained in education of learners with intellectual disabilities. As suggested by Alumode (2011), the purpose of the pre-test was to detect ambiguities, deficiencies and weakness in the instrument for correction and modification so as to improve the internal consistency of the instrument.

The pre-testing revealed that some of the items in the Likert-type scales had the same meaning and understanding, therefore, the affected items were removed from the subscales. The pre-test also helped to modify the different subscales of the Likert-type scales for the study. For example, instead of "always, often, never, rarely and seldom", "Disagree, Strongly Disagree, Neutral, Agree, Strongly Agree" were used.

The data on the subscales were entered into Statistical Product and Service Solutions (SPSS) version 21.0 to compute Cronbach‴s Alpha co-efficient in order to determine the internal consistency of sub-scales (Pallant, 2005). The result from the Cronbach‴s Alpha co-efficient of the main sub-scales was between 0.70 and, 0.80 alpha. The reliability co-Efficients of the 14 sub-scales was reliable. This is because scales with Cronbach‴s alpha co-efficient of 0.70 or more is considered to be reliable, according to Pallant (2005).

3.10   Procedure for Data Collection

Access

Creswell (2002) suggested that it is paramount to respect the site where a study takes place. This respect is shown by getting permission before entering the schools. Informed consent was therefore obtained from the authorities of the school prior to the commencement of the study. This was facilitated by an introductory letter obtained from the Department of Special Education, UEW. Phone calls were done to book appointments with school authorities and teachers. The appointments were made such that it was possible to meet all teachers that were involved in the study on WhatsApp or phone calls at separate times, because schools were not in session due the Covid19 pandemic. The researcher emailed the letter (Appendix A) to the heads of the schools detailing the purpose of the study. In addition to the letter, the researcher explained the purpose, and explained that the findings of the study were purely an academic work. The researcher indicated why their schools were chosen. They were duly informed that their participation was voluntary and were free to even withdraw from the study anytime they wish so. Besides, they were not to write their own names on the questionnaire as a way of ensuring ethical issues.

Prior to the interview sessions, verbal consents were obtained from all the teachers from each school on phone. The interview was conducted using an interview guide (Appendix C) through phone calls or video conference due to the covid19 pandemic. The main procedure for conducting the interviews was through the use of phone calls , phone recorder and note taker, and each interview lasted between 30 to 45 minutes with the focused groups. Avoke (2005), citing Fettermen (1998), reported that recording interviewees can inhibit some individuals from speaking freely during interviews and in the same way some individuals may fear reprisals because their

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voices would be identified on tape. With this, the teachers were assured the necessary confidentiality throughout and permissions were sought to use a recorder. The questionnaire was email to the teachers in their respective locations due to the covid19 epidemic. They were collected by the researcher after 3 days of issuing them through email and whatsap.

3.11   Data Analysis

3.11.1 Analysis of quantitative data

With the help of the Statistical Package for Social Sciences version 21.0 (IBM SPSS, 21.0), descriptive statistics were calculated to obtain the frequency and percentages for each item-by-item analysis which was used to simplify the data. Also, the independent samples t-test was used to test the hypothesis for statistical significance.. For the purpose of the data analysis and discussions, the responses at the extremities such as "Agree" and "Strongly Agree" on the Likert-scale were combined as one and those for "Disagree" and "Strongly Disagree" were also combined as one. This was done to simplify the data for easier analysis and discussion.

3.11.2 Analysis of interview data

Analysis of the interview data was guided by key themes that emerged from the data. The process started with transcribing all interviews and highlighting words, sentences, and thoughts that served as units for more detailed coding. This agrees with conclusions by Hayford (2013), citing Lewis (2000), that transcription of interviews provides a total record of the discussions and assists analysis of data. All data were analysed using constant-comparative method. This refers to examination and re-examination of the data to unearth the fundamental themes (Hayford, 2013). The thematic contents were formulated based on the research questions and the data gathered were grouped together and analysed under each thematic content, and then

discussed with the findings of other related studies. In addition, suggestions from the research supervisor were used to refine the themes. Participants" verbatim responses were also indicated, where necessary.

3.12   Ethical Considerations

Ethical matters are very important in research and therefore have to be a concern to the researcher. The teachers who took part in this study were personally informed about the purpose and the procedure involved in gathering the data for the study by the researcher before the study was conducted. The participants were not forced to take part in the study, but rather it was done on a voluntary basis. The participants were assured of confidentiality of any information they would give. The researcher also assured the participants that information they gave was going to be treated confidentially; and they were also told that they could withdraw from the study anytime they wanted. Again permission was sought from the participants to phone record the interviews.

To also ensure ethical considerations, all the respondents were made to understand that no participants" names were going to be used or written on the questionnaire and for the sake of anonymity; letters of the alphabet and numbers were used instead. The names of the schools were also not written to protect participants" identities. The participants were finally promised that they could have access to the findings of the study if they wish.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.0   Introduction

This chapter presents the results and discussion of findings. The analysis is presented in three sections: Section one presents the demographic data of respondents. Section two covers the teachers" responses to the data via a questionnaire while the third analyses the transcriptions of data generated from the interview conducted with the teachers. The analysis reflected on the themes that emerged from the data collected.

4.1 Section One: Demographic Data of Respondents (Teachers)

Table 3

Gender of the respondents

Gender	Teachers	Frequency	Percentage (%)
Males	Sped	15	25
	Regular	12	20
Females	Sped	15	25
	Regular	18	30
Total		**60**	**100**

Source: Field Data, 2020.

Results in Table 3 illustrate the gender distribution of the respondents. The results indicate that majority of the respondents were females 33 (55%) while males were few 27 (45%). This means that the female teachers dominated in the study.

Table 4

Age Distribution of Respondents

Age (in years)	Teachers	Frequency	Percentages
25-30	Sped	19	31.6
	Regular	4	6.7
31-35	Sped	2	3.3
	Regular	3	5.0
36-40	Sped	6	10
	Regular	19	31.6
41 and above	Sped	3	5.0
	Regular	4	6.7
Total		**60**	**100**

Source: Field Data, 2020.

Table 4 indicate that 38.3% of the respondents were within the age ranges of 25-30 years, 8.3% of the respondents were within the age range of 31-35 years, 41.6% of the respondents were within the range of 36-40 years, and 11.7% of the respondents were 41 years old and above. This means that majority of the respondents were within the ranges of 36-40 and could use their experiences in age to share their views on the development and implementation of IEP for learners with intellectual disabilities.

Table 5

Qualifications of Respondents

Qualification	Teachers	Frequency	Percentage (%)
SSSCE/WASSCE	Sped	0	0
	Regular	0	0
Cert "A"	Sped	0	0
	Regular	1	1.6
Diploma	Sped	2	3.3
	Regular	6	10
B.Ed.	Sped	24	40
	Regular	23	38.3
Masters	Sped	4	6.6
	Regular	0	0
Total		**60**	**100**

Source: Field Data, 2020.

Table 5 indicates that (78.3%) of the respondents had degrees (master''s and bachelor''s), whilst respondents with the least qualification were Certificate "A" holders (1.6%). This means that most of the respondents could have been that critical enough to share their views on the development and implementation of IEP for learners with intellectual disabilities.

Table 6

Teaching Experience of Respondents

Years of Teaching	Teachers	Frequency	Percentage (%)
0-5	Sped	5	8.3
	Regular	5	8.3
6-10	Sped	12	20
	Regular	4	6.6
11-15	Sped	12	20
	Regular	17	28.3
16 and above	Sped	1	1.6
	Regular	4	6.6
Total		**60**	**100**

Source: Field Data, 2020.

Table 6 shows that majority of the respondents had been teaching between 11-15 years (48.3%). Whiles 26.6% of the respondents had been teaching between 6-10 years, 16.6% had been teaching between 0-5, 7.2 % had been teaching between 16 years and above. This means that the respondents were experienced enough to have narrated their experience of IEP development and implementation.

4.2   Analyses of Quantitative Data

This section shows analyses of the data that were generated from the questionnaire administered to teachers. The data were analysed based on the research questions and hypotheses raised. In the analysis of the questionnaire data, the two extremities of the responses were combined, such as Agree (A) and Strongly Agree (SA) as one idea, and Disagree (D) and Strongly Disagree (SD) as one, for the purposes of discussions. The results of the frequency distributions of opinions expressed by respondents to each set of items for each research question were used for the data analysis.
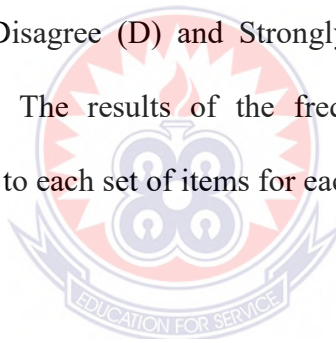
4.2.1   Research Question 1: How Knowledgeable and Competent Are Teachers in Developing and Implementing IEPs for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana?

To answer this research question, questionnaire items 1 to 10 were used. Table 4.5 shows the responses from teachers to items 1 to 10 on the knowledge and competency of teachers in developing and implementing IEPs for learners with intellectual disabilities.

Table 7

Knowledge and Competency in Developing and Implementing IEPs

Statement	Teachers	D N(%)	N N(%)	A N(%)	M(SD)	*p* value[a]
You (as a teacher) can assess learners with Intellectual disabilities and use the data for developing IEP for them	Sped	5(16.7)	0(0)	25(83.3)	2.67(.758)	.000
	Regular	30(100.0)	0(0)	0(0)	1.00(.000)	.000
You have knowledge and skills in organising IEP meeting involving parents and other professionals	Sped	7(23.3)	5(16.7)	18(60)	2.37(.856)	.000
	Regular	28(93.3)	2 (6.7)	0(0)	1.07(.254)	.000
Pre-service training adequately equips teachers with knowledge in IEP development and implementation for learners with intellectual disabilities	Sped	10(33.3)	3(10)	17(56.7)	2.23(.935)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
In-service training workshops on IEP development and implementation for learners with intellectual disabilities have been organised for teachers in your region	Sped	8(26.7)	1(3.3)	21(70)	2.43(.898)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
You have requisite knowledge and skills in developing and implementing IEPs for learners with intellectual disabilities	Sped	4(13.3)	1(3.3)	25(83.3)	2.70(.702)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
You have knowledge and skills in writing IEP annual measurable goals and objectives for learners with intellectual disabilities	Sped	7(23.3)	1(3.3)	22(73.3)	2.50(.861)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
You can develop Individualised Education Programme (IEP) for learners with intellectual disabilities	Sped	4(13.3)	1(3.3)	25(83)	2.70(.702)	.000
	Regular	23(76.7)	7(23.3)	0(0)	1.23(.430)	.000
You are able to implement IEP for learners with intellectual disabilities	Sped	8(26.7)	1(3.3)	21(70.3)	2.43(.898)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
You know how to monitor and evaluate Individualized Education Plan (IEP) and use data to make a decision.	Sped	7(23.3)	0(0)	23(76.7)	2.53(.860)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
You can state the needed transition services including interagency responsibilities in the IEP	Sped	6(20)	0(0)	24(80)	2.60(.814)	.000
	Regular	27(90)	0(0)	0(0)	1.10(.305)	.000
Average					1.78(.464)	

Note. Field data, 2020. N = 60, Means (M) were calculated from a scale of 1 = Disagree (D), 2 = Neutral (N), 3 = Agree (A).

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Table 7 indicated that 5(16.7%) of special education teachers and 30(100%) of regular education teachers disagreed with the statement that, if as teachers, they could assess learners with intellectual disabilities and use the data to develop IEP for their students, while 25(83.3%) of special education teachers and none of the general education teachers agreed with the statement. From the findings, it is apparent that majority (Mean =1.00, SD = 000) of the regular education teachers and minority (Mean=2.67, SD=758) of special education teachers disagreed that they could assess learners with intellectual disabilities and use the data to develop IEPs for them. This will therefore affect the effective implementation of inclusive education in Ghana because learners with intellectual disabilities have diverse learning needs and therefore a common curriculum cannot be used for all children in a class. Hence, teachers need to be trained on how to assess learners with intellectual disabilities and use the data to develop individualised education programmes that will cater for the unique needs of every child in the classroom.

Considering the statement that teachers had knowledge and skills in organising IEP meetings involving parents and other professionals, 18(60%) of special education teachers and none of general education teacher agreed, while 7(23.3%) of special education teachers and 28(93.3%) of general education teachers disagreed with the statement. This means that many general education teachers may not be able to bring other professionals on board to develop a comprehensive IEP for learners with intellectual disabilities in the classroom since they did not have adequate knowledge and competency to collaborate with other professionals, and even the professional whose services will be needed at a particular point in time.

Also from the Table 7, 17(56.7%) of the special education teachers, and none of the general education teachers agreed with the statement that the pre-service

training they received adequately equipped them with knowledge in IEP development and implementation for learners with intellectual disabilities, while 10(33.3%) of special educators and 30(100%) of general educators disagreed with the statement. This might mean that the pre-service training in teacher preparation colleges does not adequately equip teachers with the knowledge on how to develop and implement IEP for learners with intellectual disabilities. Also, findings from Table 7 indicates that 21(70%) of special educators and none of the general educators agreed with the statement that, in-service training workshops on IEP development and implementation for learners with intellectual disabilities had been organised for teachers in their region, while 8(26.7%) of special educators and 30(100%) of general educators disagreed with the statement. Again findings from Table 7 shows that 25(83.3%) of special educators and none of the general educators agreed with the statement that, teachers had requisite knowledge and skills in developing and implementing IEPs for learners with intellectual disabilities, while 4(13.3%) of special educators and 30(100%) of general educators disagreed with the statement. This implies that teachers would not be able to develop and implement appropriate IEPs in the classroom.

Additionally, Table 7 indicates that 22(73.3%) of special educators and none of the general educators agreed with the statement, teachers had knowledge and skills in writing IEP annual measurable goals and objectives for learners with intellectual disabilities, while 7(23.3%) and 30 (100%) of special and general educators, respectively, disagreed with the statement.

The Table 7 further indicated that 25(83%) special educators and none of the general educators agreed with the statement that, teachers could develop IEPs for learners with intellectual disabilities, while 4(13.3%) and 23(76.7%) of special and

general educators respectively disagreed with the statement, 1(3.3%) of special educators and 7(23.3%) of general educators were neutral on the statement. Table 4.5 revealed that 21(70.3%) of special educators and none of general educators agreed with the statement that teachers were able to implement IEP for learners with intellectual disabilities, while 8(26.7%) of special educators and 30(100%) of general educators disagreed with the statement, 1(3.3%) of general educators was neutral on the statement. This would therefore affect the effective education of learners with intellectual disabilities in those basic schools in the Central Region of Ghana because children with intellectual disabilities have diverse learning needs and therefore a common curriculum cannot be used for all children in the class, this is a highly contested, the best practice is to offer all children same curriculum with requisite accommodations, adaptations and modifications.

Again, Table 7 revealed that 23(76.7%) of special educators and none general educators agreed with the statement that, teachers knew how to monitor and evaluate IEPs and use data to make a decision, while 7(23.3%) and 30(100%) of special and general educators, respectively, disagreed with the statement.

These findings show that manority of special education and majority of general education teachers were not competent to monitor and evaluate the progress made by the learner after they have been provided with an IEP.

Table 7 also revealed that 24(80%) of the special educators and none of the general educators who participated in this study agreed with the statement that, they could state the needed transition services, including interagency responsibilities in the IEP, while 6(20%) of special educators and 27(90%) of general educators disagreed with the statement. The findings show that minority of special and majority of general education teachers were not competent to state the needed transition services. There is

a need for teachers to state the needed transition services on the IEP. As suggested by Gargiulo (2015), beginning at age 16, there should be a statement of needed transition services identifying measurable post school goals (training, education, employment, and, if appropriate, independent living skills), including a statement of interagency linkages and or responsibilities.

4.2.2 Research Question 2: What Are Contributions of Professionals Involved in Developing and Implementing IEP for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana?

To answer this research question, teachers" responses to questionnaire items 1-10 were used. Table 8 shows teachers" responses to items 1 to 10 on other professionals and their contribution in development and implementation of IEPs.

Table 8

Professionals Involved in Developing and Implementing IEPS

Statement	Teachers	D N(%)	N N(%)	A N(%)	M(SD)	*p* value[a]
Other professionals are involved in assessing and gathering data for developing IEP for learners with Intellectual disabilities	Sped	7(23.3)	0(0)	23(76.7)	2.53(.860)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
Other professionals are involved in developing IEP for learners with Intellectual disabilities	Sped	11(36.7)	0(0)	19(63.3)	2.27(.980)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000
Other professionals support in implementing IEP for learners with Intellectual disabilities	Sped	6(20)	3(10)	21(70)	2.50(.820)	.000
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.000

Table 8 continued:

Statement	Teachers	D N(%)	N N(%)	A N(%)	M(SD)	p value[a]
Other professionals are involved in monitoring IEP for learners with Intellectual disabilities	Sped	12(40)	3(10)	15(50)	2.10(.960)	.000
	Regular	29(96.7)	1(3.3)	0(0)	1.03(.183)	.000
Other professionals are involved in evaluating IEP for learners with Intellectual disabilities	Sped	11(36.7)	1(3.3)	18(60)	2.23(.971)	.000
	Regular	28(93.3)	2(6.7)	0(0)	1.07(.254)	.000
Learners with intellectual disabilities are involved in developing their IEPs	Sped	14(46.7)	2(6.7)	14(46.7)	2.00(.983)	.000
	Regular	29(96.7)	0(0)	1(3.3)	1.07(.365)	.000
Parents are involved in developing and implementing IEP for learners with Intellectual disabilities	Sped	9(30)	0(0)	21(70)	2.40(.932)	.000
	Regular	28(93.3)	0(0)	2(6.7)	1.13(.507)	.000
Other regular school teachers support in developing and implementing IEP for learners with Intellectual disabilities	Sped	4(13.3)	2(6.7)	24(80)	2.67(.711)	.013
	Regular	17(56.7)	1(3.3)	12(40)	1.83(.986)	.013
The district Sped coordinator or an official from the Ghana Education Service is involved in developing IEP for learners with intellectual disabilities	Sped	10(33.3)	1(3.3)	19(63.3)	2.30(.952)	.000
	Regular	20(66.7)	0(0)	10(33.3)	1.67(.959)	.000
Other professionals are involved in reviewing and writing progress report on the learner"s IEP	Sped	8(26.7)	1(3.3)	21(70)	2.43(.898)	.171
	Regular	30(100)	0(0)	0(0)	1.00(.000)	.171
Average					1.76(.616)	

N = 60, Source: Field Data, 2020. Means (M) were calculated from a scale of 1 = Disagree
(D), 2 = Neutral (N), 3 = Agree (A).

From the findings summarized in Table 8, 23(76.7%) of the participating special educators and none of the general education respondents agreed that other professionals were involved in assessing and gathering data for developing IEP for learners with intellectual disabilities. However, 7(23.3%) of the special educators and 30(100%) of the general education teachers disagreed with the statement. This implies that teachers were not aware that they had to involve other professionals in assessment and data collection for the development of IEPs for learners with intellectual disabilities in their classrooms. The work of educating individuals with intellectual disabilities in a classroom is not an easy task that one person can perform effectively. The Inclusive Education Policy of Ghana recommends that every district should form a team comprising guidance and counselling coordinator, social workers, speech therapist, resource teachers, assessment personnel, health workers, child protection workers, psychologists, parents/guardians and careers advisors should be involved in screening, diagnosis of learners" needs and Individualised Education Programming for learners diagnosed with special educational needs (MoE, 2015).

It also came to light that, 19(63.3%) special educators and none of the general educators agreed with the statement that, other professionals were involved in developing IEP for learners with intellectual disabilities, while 11(36.7%) of special educators and 30(100%) of general educators disagreed with the statement. Table 6 also shows that, 21(70%) of special education teachers and none general education teachers agreed with the statement that, other professionals support in implementing IEP for learners with Intellectual disabilities, however, 6(20%) special educators and 30(100%) general educators disagreed with the statement. This indicates that majority of the respondents do not involve other professionals in the development and implementation of IEPs for learners with intellectual disabilities. This implies that

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teachers are not competent to involve other professionals in development and implementation of IEPs for learners with intellectual disabilities in their various schools. Polloway et al. (2013) opine that each special educator must operate as part of a team in many aspects of his or her role, including planning individual programmes. Teachers must work with many others to operationalise the required aspects of all initiatives or changes in effect within the instructional programme.

With regard to the statement as to whether, other professionals are involved in monitoring IEP for learners with Intellectual disabilities, 15(50%) of special educators and none of general educators agreed while 3(10%) of special educators and 1(3.3%) of general educators were neutral, however, 12(40%) of special educators and 29(96.7%) of general educators disagreed with the statement. Similarly, 18(60%) of special educators and none of general educators agreed with the statement that, other professionals are involved in evaluating IEP for learners with Intellectual disabilities, while 1(3.3%) of special educators and 2(6.7%) of general educators were neutral, however, 11(36.7%) of special educators and 28(93.3%) of general educators disagreed with the statement. It seems teachers do not involve other experts in monitoring and evaluation of individual programmes for learners with intellectual disabilities; however, teachers should include competent persons to monitor and evaluate IEPs. This is supported by Polloway et al. (2013) who assert that IEP team must include a person who can interpret the evaluation results and other knowledgeable individuals whom the parents or school may choose to invite.

The findings again revealed that 14(46.7%) of special education teachers and 1(3.3%) general education teachers agreed with the statement that, learners with intellectual disabilities are involved in developing their IEPs, 2(6.7%) of special education teachers and none general education teachers were neutral while 14(46.7%)

of special education teachers and 29(96.7%) general education teachers disagreed with the statement. Besides, the findings from this study indicate that 21(70%) of special education teachers and 2(6.7%) general education teachers agreed with the statement that parents are involved in developing and implementing IEP for learners with Intellectual disabilities, while 9(30%) of special education teachers and 28(93.3%) general education teachers disagreed. Parents and learners with intellectual disabilities should be involved in developing his or her IEP when appropriate (Gadagbui, 2017; Polloway et al., 2013; Oppong, 2003).

In addition, the findings showed that 24(80%) of special education teachers and 12(40%) general education teachers reported that other special and general educators support in developing and implementing IEP for learners with intellectual disabilities, 2(6.7%) and 1(3.3%) of special and general educators respectively had neutral view on the statement, while 4(13.3%)

Seventeen (56.7%) of special and general educators respectively disagreed. The district Sped coordinator or an official from the Ghana Education Service is involved in developing IEP for learners with intellectual disabilities

Table 8 also reveals that 19(63.3%) of special education teachers and 10(33.3%) of general education teachers agreed that the district Sped coordinator or an official from the Ghana Education Service is involved in developing individual programmes for learners with intellectual disabilities, 1(3.3%) of special and none of general education teachers were neutral, while 10(33.3%) of special education and 20(66.7%) of general education teachers disagreed with the statement. This implies that some special and general education teachers do not involve the district special education coordinator or an official from the Ghana Education Service in developing individual programmes for learners with intellectual disabilities. However, Garguilo

(2015) and Polloway et al. (2013) suggested that a representative from school district or local education agency representative thus a person with authority to commit necessary resources must participate in the IEP development, implementation, monitoring and evaluation. The researcher is of the view that the district education directorate representative should get involve the IEP development in the various schools.

From the findings, it can also be seen that 21(70%) of special education teachers and none of general education teachers agreed with the statement that, other professionals are involved in reviewing and writing progress report on the learner"s IEP, 1(3.3%) of special education teachers and none of general education teachers were neutral, while 8(26.7%) of special education teachers and 30(100%) of general education teachers disagreed to the statement. Polloway et. al. (2013) support that there should be a plan for general and special education teachers to meet regularly to discuss individual learner progress, while Gargiulo (2015) opined that other professionals who are able to interpret the instructional implications of the evaluation as well as others who possess key information may participate at the discretion of the school or parent. This means that general and special education teachers should endeavour to include other professionals in reviewing and reporting on the learner"s IEP.

4.2.3 Research Question 3: What Challenges Do Teachers Encounter in Implementing IEPs for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana?

To answer this research question, teachers" responses to questionnaire items 1-12 were used. Table 9 shows the views of teachers to items 1 to 12 on challenges teachers encounter in implementing IEPs for learners with intellectual disabilities in basic schools:

Table 9

Challenges Teachers Encounter in Developing and Implementing IEPS

Statements	Teachers	D f(%)	N f(%)	A f(%)	M(SD)	p value[a]
You (as a teacher) do not have adequate knowledge in IEP development and implementation of IEP for learners with Intellectual disabilities	Sped Regular	7(23.3) 12(40)	0(0) 0(0)	23(76.) 18(60)	2.53(.860) 2.20(.997)	.016 .016
You have difficulty with time for IEP development and implementation for learners with Intellectual disabilities	Sped Regular	1(3.3) 9(30)	2(6.7) 0(0)	27(90) 21(70)	2.87(.434) 2.40(.932)	.694 .694
Inadequate related services, supplementary aids and services challenges the IEP development and implementation for learners with ID	Sped Regular	4(13.3) 3(10)	0(0) 0(0)	26(86.7) 27(90)	2.73(.691) 2.80(.610)	.286 .286
You have a challenge in gathering assessment data for IEP development and evaluation for learners with Intellectual disabilities	Sped Regular	6(20) 3(10)	0(0) 0(0)	24(80) 27(90)	2.60(.814) 2.80(.610)	.019 .019
You have challenge in writing the IEP goals and objectives for learners with Intellectual disabilities	Sped Regular	10(33.3) 3(10)	1(3.3) 0(0)	19(63.3) 27(90)	2.30(.952) 2.80(.610)	.029 .029

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Table 9 continued:

Statements	Teachers	D f(%)	N f(%)	A f(%)	M(SD)	*p* value[a]
You have difficulty in collaborating and involving other professionals in developing and implementing IEP for learners with Intellectual disabilities	Sped Regular	6(20) 1(3.3)	1(3.3) 0(0)	23(76.7) 29(96.7)	2.57(.817) 2.93(.365)	.061 .061
Number of pupils that are eligible for IEP/class size is also a barrier to developing and implementing IEP for learners with intellectual disabilities	Sped Regular	7(23.3) 3(10)	3(10) 0(0)	20(66.7) 27(90)	2.43(.858) 2.80(.610)	1.000 1.000
Lack of GES approved IEP format hinder the development of IEP for learners with intellectual disabilities	Sped Regular	4(13.3) 3(10)	0(0) 2(6.7)	26(86.7) 25(83.3)	2.73(.691) 2.73(.640)	.456 .456
Inadequate knowledge and support from other professionals hinder the development of IEP for learners with intellectual disabilities	Sped Regular	5.(16.7) 3(10)	0(0) 0(0)	25(83.3) 27(90)	2.67(.758) 2.80(.610)	.193 .193
Inadequate parents" knowledge and support impede the development of IEP for learners with intellectual disabilities	Sped Regular	6(20) 2(6.7)	0(0) 1(3.3)	24(80) 27(90)	2.60(.814) 2.83(.531)	.532 .532
Inadequate teaching and learning materials influence the implementation of IEP for learners with intellectual disabilities	Sped Regular	4(13.3) 2(6.7)	0(0) 1(3.3)	26(86.7) 27(90)	2.73(.691) 2.83(.531)	.889 .889
Lack of incentive does not motivate you as teacher in developing and implementing IEP	Sped Regular	8(26.7) 10(33.3)	5(16.7) 0(0)	17(56.7) 20(66.7)	2.30(.877) 2.33(.959)	.694 .694
Average					2.64(.719)	

N = 60, Source: Field Data, 2020. Means (M) were calculated from a scale of 1 = Disagree (D), 2 = Neutral (N), 3 = Agree (A)

The data presented in Table 9 shows teachers" views on challenges they encounter in developing and implementing IEPs for learners with intellectual disabilities. Also, 23(76%) of special education teachers reported they do not have adequate knowledge in IEP development and implementation of IEP for learners with Intellectual disabilities (Mean=2.53 and SD =.860) and 18(60%) of general education teacher also agreed to the statement (Mean= 2.20, SD = .997), while 7(23.3%) of special educators and 12 (40%) of general educators disagreed with the statement.

The findings show that 27(90%) of special education teachers and 21(70%) of general education teachers indicated that, they have difficulty with time for IEP development and implementation for learners with Intellectual disabilities, 2(6.7%) and none were neutral respectively, while 1(3.3%) and 9(30%) of special and general education teachers respectively disagreed with the statement. A similar study by Olewe-Nyunya (2018) revealed that majority of teachers who participated in the study reported they have challenge with time for IEP development and implementation for learners with Intellectual disabilities for learners with Intellectual disabilities in Kisumu and Nairobi Counties, Kenya. Generally, teachers and other professionals involved in IEP have to create time for the programme if it has to bear fruits in schools.

Table 9 indicated again that 26(86.7%) of special education teachers and 27(90%) of general education teachers agreed to the statement that, inadequate related services, supplementary aids and services challenges the IEP development and implementation for learners with ID, while 4(13.3%) of special education teachers and 3(10%) of general education teachers disagreed to the statement.

The respondents expressed divergent views on whether teachers had challenges gathering assessment data for IEP development and evaluation for learners with intellectual disabilities. Twenty-four (80%) of the special education teachers and

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27(90%) of the general education teachers agreed with the statement, while 6(20%) of the special education teachers and 3(10%) of the general education teachers, respectively, disagreed. Moreover, on the question of whether teachers have challenge in writing the IEP goals and objectives for learners with Intellectual disabilities, 19(63.3%) of special education and 27(90%) of general education teachers agreed, while 10(33.3%) and 3(10%) respectively disagreed and only 1(3.3%) remained neutral.

Difficulty in collaborating and involving other professionals in developing and implementing IEP for learners with Intellectual disabilities was another challenge teacher indicated. 23(76.7%) of special education teachers and 29(96.7%) of general education teachers asserted that they challenge collaborating and involving other professionals, while 6(20%) of special education teachers and of general education teachers 1(3.3%) disagreed to the statement and only 1(3.3%) of special educators remained undecided. A study in Kenya by Olewe-Nyunya (2018) majority of the teachers reported they have a challenge cooperating with other professionals. Similarly, a study conducted in Suez in Egypt concluded that teachers rated themselves as very poor regarding how to collaborate with other professionals (Sen-nefer, 2013). However, Fish (2011), CASA (2013) and Heward (2003) state that collaboration among stakeholders is key for effective IEP in schools.

In addition, Table 9 shows that 20(66.7%) of special education teachers and 27(90%) of general education teachers agreed that the number of pupils that are eligible for IEP or class size is also a barrier to developing and implementing IEP for learners with intellectual disabilities. However, 7(23.3%) and 3(10%) disagreed respectively while 3(10%) of special education teachers remained neutral. Majority of the respondents indicated that class size is a challenge; this is supported by Avoke, Hayford and Ocloo (1999), who noted that, the sharp increase in enrolment has led to

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overcrowding in both special and regular schools in Ghana. Similarly, Hayford (2013) reported teachers taught classes with enrolments ranging from 35 to 85 pupils. Hayford again reported that challenges imposed on teachers by large class size ranged from inability to make time for all the learners and assessment of learners" progress in the programme of study.

Ocran (2011), as cited in Hayford (2013), reported that out of 104 teachers surveyed in basic schools in the Central Region of Ghana, 79% of them taught classes with enrolments that ranged between 36-66 learners while 21% taught classes with enrolment below 35 pupils. Consequently, teachers in these schools may not be able to provide IEPs to all learners including those with intellectual disabilities.

With regard to the statement as to whether, lack of Ghana Education Service (GES) approved IEP format hinders the development of IEP for learners with intellectual disabilities, 26(86.7%) of special education teachers and 25(83.3%) of general education teachers agreed while 4(13.3%) and 3(10%) disagreed respectively and 2(6.7%) of regular school teachers remained undecided.

Majority of the teachers, including 25(83.3%) of special education teachers and 27(90%) of general education teachers, agreed that inadequate knowledge and support from other professionals hinder the development of IEP for learners with intellectual disabilities, while 5(16.7%) and 3(10%) respectively disagreed. Similarly, 24(80%) of special education teachers and 27(90%), been majority of the respondents assert that inadequate parents" knowledge and support impede the development of IEP for learners with intellectual disabilities, 6(20%) and 2(6.7%) disagreed respectively while 1(3.3%) of general educators remained neutral. The finding shows that parents and other specialists do not have enough knowledge to participate in the IEP development and implementation.

Furthermore, findings from Table 7 shows that 26(86.7%) of special education and 27(90%) of general education teachers agreed that inadequate teaching and learning materials influence the implementation of IEP for learners with intellectual disabilities, 4(13.3%) and 2(6.7%) disagreed respectively while 1(3.3%) of general education teachers remained neutral.

On the argument that inadequate teaching and learning materials challenge the implementation of IEP, Olewe-Nyunya (2018) reported that majority of teachers surveyed in Kenya indicated lack of teaching and learning resources impede the implementation of IEP for learners with intellectual disabilities. Gadagbui (2017) cited teaching and learning materials (TLMs) as a challenge to teachers and entreated teachers to endeavour to make some TLMs.

The statement that lack of incentive does not motivate teachers in developing and implementing IEP had diversified views, 17(56.7%) special education teachers and 20(66.7%) general education teachers agreed, 8(26.7%) and 10(33.3%) disagreed respectively while 5(16.7%) of special education teachers remained neutral on the statement.

4.2.4   Research Question 4: How Do Teachers Address the Challenges They Encounter in Implementing IEPs for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana?

Teachers" responses to questionnaire items 1 to 12 were used to answer how teachers address the challenges they encounter in implementing IEPs for learners with intellectual disabilities. Table 10 shows the views of teachers to items 1-12 on how to address the challenges they encounter in implementing IEPs for learners with intellectual disabilities in the schools:

Table 10

Strategies to Address Challenges of Teachers in Developing and Implementing IEPs

Statement	Teachers	D f(%)	N f(%)	A f(%)	M(SD)	*p* value[a]
Pre-service teacher preparation should involve IEP development and implementation	Sped	4(13.3)	0(0)	26(86.7)	2.73(.691)	.723
	Regular	3(10)	0(0)	27(90)	2.80(.610)	.723
There should be In-service training workshops, seminars and conferences on IEP development and implementation for teachers	Sped	5(16.7)	0(0)	25(83.3)	2.67.758	.542
	Regular	4(13.3)	0(0)	26(86.7)	2.73(.651)	.542
There should be in-service training workshops, seminars and conferences for parents and other professionals involved in IEP development and implementation	Sped	3(10)	3(10)	24(80)	2.70(.651)	.296
	Regular	3(10)	0(0)	27(90)	2.80(.610)	.296
Teachers or schools should have expert special education mentors to coach teachers in developing and implementing IEP for learners for intellectual disabilities	Sped	2(6.7)	7(23.3)	21(70)	2.63(.615)	.850
	Regular	3(10)	0(0)	27(90)	2.80(.610)	.850
Teachers should be given incentive to develop and implement IEP for learners for intellectual disabilities	Sped	2(6.7)	5(16.7)	23(76.7)	2.70(.596)	.542
	Regular	5(16.7)	0(0)	25(83.3)	2.67(.758)	.542
GES should develop a common format for IEP development	Sped	3(10)	3(10)	24(80)	2.70(.651)	.235
	Regular	3(10)	0(0)	27(90)	2.80(.610)	.235
There should be adequate supplementary aids, teaching and learning materials for IEP implementation	Sped	5(16.7)	0(0)	25(83.3)	2.67(.758)	.035
	Regular	2(6.7)	0(0)	28(93.3)	2.87(.507)	.035
Class sizes should be reduced for effective IEP implementation	Sped	5(16.7)	5(16.7)	20(66.7)	2.50(.777)	.855
	Regular	2(6.7)	0(0)	28(93.3)	2.87(.507)	.855
Schedule and hold an after-work hours IEP meetings	Sped	2(6.7)	10(33.3)	18(60)	2.53(.629)	.375
	Regular	5(16.7)	3(10)	22(73.3)	2.57(.774)	.375
There should be a fund for gathering assessment data for IEP development	Sped	3(10)	2(6.7)	25(83.3)	2.73(.640)	.420
	Regular	2(6.7)	0(0)	28(93.3)	2.87(.507)	.420
There should be adequate related services and interagency linkages in developing and implementing IEPs for learners with ID	Sped	3(10)	4(13.3)	23(76.7)	2.67(.661)	.848
	Regular	3(10)	0(0)	27(90)	2.80(.610)	.848
There should be effective supervision by the Ghana Education Directorate.	Sped	4(13.3)	0(0)	26(86.7)	2.73(.691)	.235
	Regular	3(10)	3(10)	24(80)	2.70(.651)	.235
Average					2.72(.647)	

N = 60, Source: Field Data, 2020. Means were calculated from a scale of 1 = Disagree (D), 2 = Neutral (N), 3 = Agree (A).

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Table 10 shows the teachers" responses to questionnaire items 1 to 12 on how to address the challenges teachers face in implementing IEPs. The findings from Table 10 indicated that, 26(86.7%) of special education teachers and 27(90%) of general education teachers agreed with the statement that, pre-service teacher preparation should involve IEP development and implementation, however, 4(13.3%) and 3(10%) of the teachers disagreed respectively. This finding indicates that majority of both special and general education teachers agreed that pre-service teacher training should include how to develop and implement individualised education programmes for learners with intellectual disabilities. It also came to light that 25(83.3%) of special education teachers and 26(86.7%) general education teachers agreed that there should be in-service training workshops, seminars and conferences on IEP development and implementation for teachers, however 5(16.7%) and 4(13.3%) respectively disagreed. This is collaborated by Hayford (2013) who stated that colleges of education and two universities in Ghana provide a course titled, introduction to special education to teacher trainees reading.

Hayford (2013) argued that the content of courses offered by the two universities differ slightly; however, like the colleges of education, introductory courses do not inform teachers enough about how to manage the needs of learners with disabilities or special educational needs including those with intellectual disabilities. To enhance teachers" knowledge in the management of learners with SEN, the Ministry of Education has mandated four public universities including the University of Education, Winneba, to run a bachelor of education in curriculum to train teachers to explicitly address and develop cross-cutting issues such as inclusion and equity, Special Educational Needs (SEN) (Ministry of Education (MoE, 2018). Gadagbui (2017) supported that teachers need to know how to develop and implement

IEPs for learners with special educational needs. Ilik, and Sari (2017) also supported that providing professional development and training on IEP process can make teachers more competent in their roles when developing IEPs. Teachers who have attended in-service training feel more knowledgeable and competent. In-service training has been found to effectively teach the necessary information and skills that teacher needs (Ilik & Sari, 2017).

Also, Table 10 shows that 24(80%) special education teachers and 27(90%) of general education teachers agreed with the statement that, there should be in-service training workshops, seminars and conferences for parents and other professionals involved in IEP development and implementation. This means that parents and other stakeholders who need to be involved in the IEP process should be taught how to develop IEPs and their roles in the process. This implies that if parents and other professionals are able to acquire the knowledge they require during workshops and seminars many of them will be able to work effectively with teachers in developing and implementing IEPs for learners with intellectual disabilities.

From the findings, it can be seen that 21(70%) of the special and 27(90%) of the general education teachers agreed that, teachers or schools should have expert special education mentors to coach teachers in developing and implementing IEP for learners for intellectual disabilities, 7(23.3%) of special education teachers remained neutral, however, 2(6.7%) and 3(10%) respectively disagreed to the statement. This indicates that majority of special educators (M=2.63, SD = .615) and general educators (M = 2.80, SD =.610) support the statement, which means both special and regular school teachers need skilled special educators to mentor them on how to develop and implement IEPs in the basic schools. Lesh (2020) supported this by suggesting that an early-career special educator or new teacher to a school should find

a seasoned, respected special education teacher to be his or her mentor. This mentor should be able to show the teacher how to navigate the IEP process in the teacher"s school or district. Citing Australian research in support of this role; for example, Shaddock et al. (2007) found out that schools in which an experienced special educator managed learning support across the school achieved good outcomes for students with a disability.

Regarding the statement that teachers should be given incentive to develop and implement IEP for learners for intellectual disabilities, 23(76.7%) of special education teachers and 25(83.3%) of general education teachers agreed to the statement, 5(16.7%) of special education teachers remained neutral, while 2(6.7%) of special education teachers and 5(16.7%) of general education teachers disagreed. This indicates that majority of special education teachers (M= 2.70, SD =.596) and general education teachers (M= 2.67, SD= .758) propose for incentives for teachers for the development and implementation of IEPs.

Concerning the statement, that the Ghana Education Service (GES) should develop a common format for IEP development, 24(80%) of special education teachers and 27(90%) of general education teachers agreed to the statement, 3(10%) of special educators were neutral, while 3(10%) and 3(10%) disagreed respectively. The respondents suggested that the Ghana Education Service (GES) should develop a common format for writing IEP as they have a common format for general lesson note preparation in the schools.

In addition, Table 10 shows that 25(83.3%) of special education and 28(93.3%) of general education teachers agreed with the statement that, there should be adequate supplementary aids, teaching and learning materials for IEP implementation while 5(16.7%) and 2(6.7%) respectively disagreed. A study on the

management of special education resources in Ibadan, revealed that special education resources are not adequate and evenly distributed in schools (Rehfeldt et al., 2012). Beirne-Smith et al. (2006) support this finding by stating that policy makers must identify the IEP goals and allocate the necessary resources including human, money and materials for the development and implementation of IEPs. Also, Dabkowski (2006) asserted that some goals may require resources in terms of clerical support or supplies.

Also, 20(66.7%) of special education teachers and 28(93.3%) of regular school teachers indicated that class sizes should be reduced for effective IEP implementation, 5(16.7%) of special education teachers remained undecided while 5(16.7%) and 2(6.7%) respectively disagreed with the statement. Masino and Niño-Zarazúa (2016) noted that teacher and pupil interaction in school settings across developing countries is low because of large class sizes, and inadequate resources and services. However, Gyimah et al. (2009) argued that compared to students without disabilities or with other special needs, teachers are sceptical towards children with intellectual disabilities and interact less with them. This is often attributed to the challenging behaviours these learners exhibit and the extra instructional skills required to teach them (Gyimah et al., 2009).

Table 10 demonstrated that majority of teachers in the study 18(60%) of special education teachers and 22(73.3%) of general education teachers agreed to the statement that IEP meetings should be scheduled and held after-work hours, 10(33.3%) and 3(10%) remained undecided respectively, while 2(6.7%) and 5(16.7%) respectively disagreed to the statement. Lesh (2020) supported the suggestion that an IEP meeting should be held after-working hours. She also asserted that the meeting should be scheduled so that parents do not have to take time off work.

Results of this study revealed that 25(83.3%) of special education teachers and 28(93.3%) general education teachers agreed to the statement that, there should be a fund for gathering assessment data for IEP development, 3(10%) and 2(6.7%) respectively disagreed while 2(6.7%) of special education teachers remained neutral.

Moreover, Table 4.8 revealed that majority of the respondents 23(76.7%) of special educators and 27(90%) general educators agreed that there should be adequate related services and interagency linkages in developing and implementing IEPs for learners with ID, 3(10%) and 3(10%) respectively disagreed while 4(13.3) of special educators remained neutral. Nilsen (2017) opined that general education teachers argued that the IEP is the responsibility of the special educator, special educators also came out with their concern about feeling alone and requesting more collaboration during the IEP process. Besides, in order to develop more quality IEPs for learners, a multidisciplinary team should be formed and all teachers working directly with the learners should be involved in the IEP meeting.

This study has revealed, majority of the respondents 26(86.7%) of special education teachers and 24(80%) general education teachers agreed that there should be effective supervision by the Ghana Education Directorate, however, 4(13.3%) and 3(10%) respectively disagreed while 3(10%) of general education teachers remained neutral.

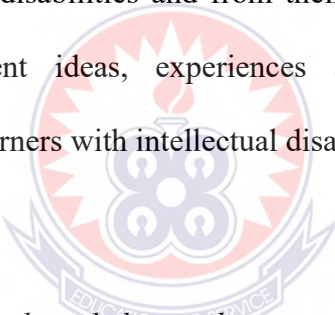## 4.3   Analyses of qualitative data

This section analyses data that emerged from the interview conducted with the teachers. The data has been analysed under themes that emerged from the data collected, and presented under each of the main variables of the research questions:

4.3.1 **Knowledge and competency of teachers in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana**

One theme emerged from the analysis of this variable, this is the extent to which both special and regular education teachers are knowledgeable and skilful in the development and implementation of individualised education plans for learners with intellectual disabilities in basic schools in the Central Region of Ghana. The interviewees who were 5 special and 5 general education teachers were interviewed at different times. Each teacher was given the opportunity to describe the extent to which he or she is skillful in planning and using individualised education plans for learners with intellectual disabilities and from their responses it was noted that the teachers have insufficient ideas, experiences and skills in developing and implementing IEPs for learners with intellectual disabilities. For example,

Teacher A commented:

> *I have inadequate knowledge and competency in the development, implementation, monitoring and evaluation of IEP because I did not get practical skills at college* (A verbatim expression by a special education teacher).

Teacher B added:

> *I did not get specific training on IEP at the university so I depend on the internet when I want to prepare IEP for the pupils with intellectual disabilities and I do this because I do have enough knowledge and skills* (A verbatim expression by a special education teacher).

Teacher C also added:

> *My pre-service training on IEP was not enough* (A verbatim expression by another special education teacher).

Teacher D remarked:

> *When I was at college I did not learn anything about how to make IEP so I do not have the skills and competency to make one* (A verbatim expression by a general education teacher).

Teacher B said:

> *Though I read introduction to special education at University, I did not learn how to make individual education programme for a pupil with intellectual disability and other students* (A verbatim expression by another general education teacher).

Teacher C also said:

> *I have not received any training at college or since I started teaching on IEP, so I am not knowledgeable and competent to make this IEP* (A verbatim expression by another general education teacher).

It clear that both special and general education teachers have inadequate knowledge and skills in developing and implementing IEPs for learners with intellectual disabilities as depicted by the comments from the teachers. These revelations are consistent with Gadagbui (2017), who noted that teachers do not have enough skills in preparing IEP and entreated teachers to endeavour to know how to make IEPs.

4.3.2 Contributions of Professionals Involved in Developing IEP for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana

From the analysis of the data, it revealed the extent to which other professionals are involved and contributed in developing IEP for learners with intellectual disabilities in basic schools in the Central Region of Ghana. These themes included specialists involved in developing and implementing IEPs and contributions of these professionals.

4.3.2a Specialists involved in developing IEP for learners with intellectual

disabilities

In terms of other specialists involvement in developing IEPs, both special and general education teachers interviewed mentioned some professionals that they work with them. For instance, a special education teacher A commented this way:

> *I work with the regular school teachers, the school counselor counsels, the parents, doctor and psychologist* (A verbatim expression by one of the special education teachers).

Teacher B added:

> *I sometimes work with a clinical psychologist and mental health nurse, social worker, regular school teacher and counselor, physical education teacher, and parents of the child to plan for the child* (A verbatim expression by another special education teacher).

Teacher C also commented:

> *I work with a doctor and social welfare officer* (A verbatim expression by another special education teacher).

Teacher D also commented:

> *I sometimes work behavior techniques, occupational therapist, and optometrist to plan for an individual child with intellectual disabilities* (A verbatim expression by another special education teacher).

Teacher E said:

> *I work with our school's special education and counseling teachers, physical education teacher and sometimes nurses or doctors* (A verbatim response from one of the general education teachers).

Teacher F commented:

> *I consult the resource teacher who did special education, the school counselor, physical education teacher, parents and my head teachers on how to involve and teach this child.* (A verbatim expression by another general education teacher).

Teacher G also added:

> *I work with special education teachers and the school counselor as well as sometimes the parents.* (A verbatim expression by another general education teacher).

It was evident from the analysis that both special and general education teachers involve some specialists in the education of the learners with intellectual disabilities. These professionals include social workers, counselors, parents, health workers and physical educators.

4.3.2b Contributions of other specialists involved in developing IEP for learners with intellectual disabilities

Another sub-theme that emerged from the analysis was the contribution of other professionals in developing and implementing individualised education plans (IEPs) for Learners with Intellectual Disabilities. It was revealed by both special and general education teachers interviewed that other specialists sometimes contribute to the individualised education programming for learners with intellectual disabilities in the schools depending on the needs of the learners.

Teacher A stressed:

> *The regular school teachers do give me information about the academic and behavior of pupils with intellectual disabilities; the school counselor counsels the parents, doctor and psychologist give medical data and suggest interventions* (A verbatim expression by a special education teacher).

Teacher B said:

> *I work with a doctor who helps with medical assessment and intervention as well as social welfare officer who ensures that the right of the child is not violated in the school* (A verbatim expression by a special education teacher).

Teacher C also added:

> *I sometimes refer pupils with intellectual disabilities to a clinical psychologist and mental health nurse to assess the intellectual ability, the needs of the child and for their recommendations. The social worker sometimes obtains money from the district assembly common fund to supply learning materials to the child* (A verbatim expression by a special education teacher).

Teacher D added:

> *A resource teacher who did special education, school counselor, physical education teacher, parents and my head teachers help in assessment, planning teaching, counseling and motor skills for a child in my class with intellectual disabilities.* (A verbatim expression by a general education teacher).

Teacher E further commented:

> *The special education teachers in my school help in assessing and making a teaching plan for the pupils with intellectual disabilities and other children. The school counselor also helps in counseling the parents and other pupils. Sometimes the parents also do visit* (A verbatim expression by a general education teacher).

Teacher F also stated:

> *The school's special educator, counselor, physical education teacher and parents help refer the child to nurses or doctors for assessment and their suggested intervention. The special education teacher calls the parent of the child with intellectual disability and we do individual plan and activities for the child* (A verbatim statement by a general education teacher).

It was evident from the analysis that both special and general education teachers involve other related service providers in individualised education programming for learners with intellectual disabilities in their schools. These specialists supported in assessing, recommending interventions, making teaching plans, and counseling for the pupils. Others also helped in getting fund for education of the learners and protecting their rights in the schools.

4.3.3 Challenges teachers encounter in implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana

The interaction with the teachers in the focus groups revealed varied problems they face in the implementation of IEPs. In describing their experiences regarding the challenges they face, five themes emerged from the analysis of this variable. The teachers indicated that they encountered the following challenges during individualised education programming:

Teacher A stated:

> *There are varied challenges in that when you are teaching a mixed large class with pupils with intellectual disabilities you have to make sure you make the activities suit everyone, in terms of the content, time, skills and the materials you will use and many others* (A verbatim expression by a special education teacher).

Teacher D also said:

> *Sometimes when you want to make individualised plan for the learners with intellectual disabilities due to poor knowledge and skills, inadequate time, large class size and insufficient materials for adapting some of the activities for the intellectually disabled we end up focusing on only the normal students, which pose a challenge to pupils with intellectual disabilities because they are mostly ignored* (A verbatim expression by a general education teacher).

From the comment of Teacher A and D, it was vivid that teachers faced many challenges including poor knowledge and skills, inadequate time, large class size, and insufficient materials to plan and adapt some of the activities to suit students with intellectual disabilities. This leaves the teachers with no other option than to concentrate on only the normal learners.

Poor knowledge and competency

During the interview poor knowledge and skills of teachers in individualised education programming for learners with intellectual disabilities emerged as a sub-theme.

Teacher A commented:

> *Knowledge of other professionals is not adequate for IEP process, even some special education teachers and in particular regular teachers* (A verbatim expression by a special education teacher).

Teacher B stated:

> *I feel reluctant to write IEP due to inadequate knowledge and skills and other colleagues cannot help me as they are also not well vexed in developing IEPs* (A verbatim expression by a special education teacher).

Teacher C also added:

> *Teachers who think of doing IEP lack knowledge* (A verbatim expression by a special education teacher).

Teacher D stated:

> *I can write general lesson note, but I cannot write IEP because I do not have the knowledge and skills to do so* (A verbatim expression by a general education teacher).

Teacher E commented:

> *I am not able to write good IEP objectives because of inadequate skills and assessment data* (A verbatim expression by a general education teacher).

From the analysis of the perspectives of teachers, it is conspicuous that both special and general education teachers have inadequate knowledge and skills in IEP development and implementation. Other element such as knowledge of other professionals and parents was actually a hindrance to IEP implementation.

Inadequate time and large class size

During the interview inadequate time and large class size emerged as a sub-theme.

Teacher A stated:

> *Time is a challenge, because as special educator I need more time to gather assessment data about each child by myself, from parents and others such as doctors. And you have to do assessment, draw the IEP*

and implement it for every pupil with intellectual disability is big problem (A verbatim expression by a special education teacher).

Teacher B added:

Large class size is a challenge because even developing IEP for one child requires enough time (A verbatim expression by a special education teacher).

Teacher C also commented:

Time is a problem because the school is inclusive; you need to care for both pupils with and without intellectual disabilities with a class of at least 50 (A verbatim expression by a special education teacher).

Teacher D reported:

I have 80 learners, so it is hard to prepare IEP for learners with intellectual disabilities in my class. Also the suggested timetable of the school has no time for IEP and this affects the teacher's time (A verbatim expression by a general education teacher).

Teacher E said:

There are 90 pupils in my class. I cannot have enough time to make individualised plan for the child with intellectual disability and others in my class (A verbatim expression by a general education teacher).

Teacher F also stated:

The number of children in the class I teach is 53: I do not have time for the student with intellectual disability and other special children, I am handling all the subjects and I have to set exercises and mark everything ...is time consuming (A verbatim expression by a general education teacher).

It could be seen from the comments of the teachers that a myriad of reasons could be associated to the implementation of IEPs for learners with intellectual disabilities in the schools. Class size and time derail the IEP process hence its implementation becomes a challenge. It is also revealed that the number of subjects per a regular teacher also hinder the development and implementation of IEP for learners with intellectual disabilities in an inclusive class.

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Inadequate resources for IEP development and implementation

With regard to lack of resources as a challenge to teachers when developing and

implementing IEPs,

Teacher A stated:

> *A resource like funding is challenge because funds are needed to bring or send the pupil to other professionals and schools and parents do not have funds allocated for such purpose* (A verbatim statement by a special education teacher).

Teacher B also said:

> *Lack of resources such as funding and materials for assessment, available test batteries or materials are so foreign to use* (A verbatim statement by a special education teacher).

Teacher C also stated:

> *Funding for getting resources like assistive devices, paying for consultation fee or services of other professionals. Materials like assessment tools are foreign and even if they are available teachers are not trained to be able to use them* (A verbatim statement by a special education teacher).

Teacher D commented:

> *You cannot assess the child in class only; you need other professionals and some parents are not able to pay for the services of such specialists* (A verbatim statement by a general education teacher).

Teacher E also commented:

> *Lack of teaching and learning materials make it difficult to plan individualised teaching plan for pupils with intellectual disability and special children in my class* (A verbatim expression by another general education teacher).

Teacher F said:

> *The school and parents do not have money or fund for getting the necessary experts and materials to do individual teaching programme for students with intellectual disabilities and others in the school* (A verbatim expression by another general education teacher).

Teacher G also added:

> *I think my school cannot help pupils who are intellectually disabled and other special children because we do not have experts like special teacher and counselor and teaching materials to run individualised teaching programme for them* (A verbatim expression by another general education teacher).

It is clear that there was mixed opinions concerning resources for IEP implementation. The analysis of the viewpoints of the teachers revealed three challenges: funding, teaching and learning materials; and human resources.

Difficulty in gathering assessment data

Regarding the issue of assessment data as a challenge faced by teachers, Teacher A said:

> *It is difficult to make comprehensive assessment on the child with intellectual disability to make his or her IEP, because I do not have knowledge and experts to help me do so* (A verbatim expression by a general education teacher)

Teacher B added:

> *I did not learn how to assess pupils with intellectual disabilities at college, so I cannot make assessment to make individualised teaching programme for such pupils in my class* (A verbatim statement by general education teacher).

Teacher C also added:

> *I know assessment should be done by a team in order to get a good data to make appropriate decision or IEP for the learner, but I do not have funds for transportation and pay for other professionals who cannot provide their assessment service for free* (A verbatim statement by a special education teacher).

Teacher D stated:

> *Sometimes when you refer a child with intellectual disability to the National Assessment Center or other places, it takes long time to get results and their recommendations which delay making IEP for the learner* (A verbatim expression by another special education teacher).

It is clear that there existed some levels of challenges in doing assessment to get data for IEP development and implementation in the schools as depicted by the

comments from the teachers. The challenges in gathering assessment data revealed by

the teachers include inadequate knowledge, experts and funding.

Inadequate team involvement and contribution

Another sub-theme that emerged from the interview was inadequate team

involvement and contribution as one of the challenges face when implementing

individualised education activities. For example, Teacher A said:

> *Getting other professionals to help do individualised educations programme is a problem because of lack of knowledge and linkages in working with teachers* (A verbatim expression by a special education teacher).

Teacher B added:

> *Because of the introduction of the inclusive education, we have few children with intellectual disabilities, but our school does not have enough special educators, counselors and lack other professionals like psychologist so it is difficult to do individualized education plan* (A verbatim expression by a general education teacher).

Teacher C said:

> *There is a conflicting schedule with other professionals as they have busy schedules so it is hard to get them to contribute to the designing of IEP for pupils with intellectual disabilities* (A verbatim expression by a general education teacher).

Teacher D also added:

> *Availability and location of other professionals affect their involvement and contribution to the development of IEP. Most of the few professionals are located in the cities particularly in Accra* (A verbatim expression by a special education teacher).

Teacher E commented:

> *Some professionals and parents are unwilling to collaborate in the process towards individualized education programme due to poor knowledge* (A verbatim expression by a special education teacher).

Teacher F also added:

> *Other professionals' involvement and contribution is a challenge because you will not get all of them. Also time conflict and inability to pay for consultation fee or transportation to bring or go to professionals for their assessment and recommendations for IEP* are problems we face in our school (A verbatim response from a special education teacher).

It was evident from the comments from the teachers that, involvement and contribution of other professionals and parents in the implementation of the IEP are affected by mixed factors. These factors include availability and location of other professionals, consultation fees, inadequate knowledge, conflicting schedule and poor interagency collaboration.

4.3.4 Addressing the Challenges Teachers Encounter in Implementing IEPs for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana

The analysis of the interview data revealed strategies to improve upon development and implementation of IEPs for learners with intellectual disabilities and have been analysed below.

Pre and In-service training for teachers

One of the strategies suggested to address the problems teachers face in implementing IEPs is pre or in-service training. For example, Teacher A stated:

> *I suggest strongly that the pre service training curriculum at the universities and colleges of education should include both theory and practice of IEP planning. Teachers already on the field should be given in-service training and practical on IEP development and implementation* (A verbatim expression by a special education teacher).

Teacher B also commented:

> *Other professionals and parents should be trained and motivated for IEP development and implementation* (A verbatim expression by another special education teachers).

Teacher C added:

> *Teacher training institutions should include knowledge on IEP development, implementation and evaluation. Seminars and in-service training on IEP should be given to all in-service teachers* (A verbatim expression by a special education teacher).

Teacher D stated:

> *Pre-service curriculum should involve IEP and student teachers should be given opportunity to do IEP practical. Regular training workshops on IEP should be organised for teachers in the schools, intensive monitoring and supervision of samples of learners' IEPs* (A verbatim statement by a general education teacher).

Teacher E also stated:

> *I suggest pre service training at the colleges or universities should ensure teachers are trained practically how to plan individualised education programme for pupils with intellectual disabilities and other special children. Workshops and seminars on IEP should be organised for in-service teachers* (A verbatim expression by a general education teacher).

Teacher F added:

> *To ensure teachers do the IEP, there should be workshops for teachers and professionals that teachers can work with to make the IEP* (A general education teacher).

Key strategies such as pre-service and in-service training such as seminars, workshops and practicals on development and implementation of IEP which emerged from the comments, could be used to improve upon teachers" skills for individualised education programmes in the schools. It was suggested that parents and other professionals should also be trained on IEP development and implementation to improve upon their contribution in the IEP implementation. It also came to light that, there should be intensive supervision, monitoring and motivation of teachers.

Administration support for IEP development

Another strategy suggested by teachers was support from the school administration ,Teacher A suggested:

> *Head teachers should organise IEP meetings, form IEP committees and give them logistics like laptops, printers for IEP development, implementation and evaluation* (A verbatim expression by a general education teacher).

Teacher B added:

> *School administrators should be given INSET and funding for IEP* (A verbatim expression by a special education teacher).

Teacher C stated:

> *Ghana Education Service should employ psychologists, speech therapists, counselors, and occupational therapists for schools or the district that can help schools to make IEPs for learners* (A verbatim statement by a special education teacher).

It could be noted from the above comments that, teachers had different thought about administrative support for individualised education programmes implementation. One teacher stated that head teachers should organise IEP meetings, form IEP committees and give them logistics for IEP development, implementation and evaluation. Another teacher suggested that school officials should be trained and provided with funding for IEPs while another teacher also commented that Ghana Education Service should recruit specialists such as psychologists, speech therapists, counselors, and occupational therapists for the schools or the district education directorate to help schools to develop and implement IEPs for learners.

Class size and time for IEP development

On the issue of class size and time for programming IEPs teachers narrated their suggestions:

Teacher A remarked this way:

> *Special school class size should be reduced, special and unit schools for pupils with intellectual disabilities should not be mixed with pupils*

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with other conditions (A verbatim expression by a special education teacher).

Teacher B noted:

> *There should be teaching assistants or increase number of teachers per class to help address class size and time issue, this can help in IEP development and implementation if teacher get teaching assistants* (A verbatim statement by a special education teacher).

In the view of teacher C, this is what is expressed:

> *Teachers should be given enough time for IEP development* (A verbatim expression by a general education teacher).

Teacher D also added:

> *One way to tackle the class size problem is resource room for schools* (A verbatim expression by another general education teacher).

From the above comments, it was clear that teachers wish their class size is reduced and teaching assistants are provided to assist them in the development and implementation of individualised education programmes for learners with intellectual disabilities. One teacher also stated that to address the challenge imposed on the development and implementation of individualised education programmes for learners with intellectual disabilities, resource rooms should be set up in the schools.

Resources for IEP development and implementation

Concerning the resources that could help teachers in implementing individualised education activities, two major sub themes emerged. These included the material resources and the human resources. For instance,

Teacher A stated:

> *GES should come out with an IEP format like the lesson note and it should be Ghanaian friendly. There should be a special fund for collecting data, teaching and learning materials and transportation for IEP development, implementation and evaluation* (A verbatim expression by a special education Teacher).

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Teacher B said:

> *Government should provide funding, materials and other professionals for IEP development, implementation and evaluation* (A verbatim expression by another special education teacher).

Teacher C added:

> *Design locally assessment batteries and adapt IEPs to Ghanaian context* (A verbatim expression by a special education teacher).

Teacher D commented:

> *Government should give funding for gathering data and bringing professionals together to develop IEPs* (A verbatim expression by a general education teacher).

Teacher E stated:

> *I think human resource is key. Schools or GES should identify specialists to serve as IEP mentors and coaches. These specialists should visit schools to do hands on IEP activities with teachers* (A verbatim expression general education teacher).

It can be deduced from the above statements that, teachers need resources such as funding, teaching and learning materials, locally designed assessment batteries, other specialists and a common IEP format to enable them develop and implement individualised education programmes for learners with intellectual disabilities in their schools.

Gathering assessment data

Regarding how to enhance assessment of learners with intellectual disabilities in order to have a good baseline data for individualised education programming below are the comments made by the teachers:

Teacher A reported:

> *Assessment should include all multi-disciplinary team and parents to get comprehensive data about the child for individualised education programme. GES should form at least one team involving other*

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professionals needed to help pupils with disabilities and inclusive education (A statement by a special education teacher).

Teacher B said:

Format and test batteries for gathering information should be given to teachers and schools. And teachers should be trained on how to use assessment batteries as well as government should fund assessment and related services (A verbatim statement by a special education teacher).

Teacher C stated:

Funding for transportation and paying for professional fee for assessment as well as teachers should agree on time with other professionals (A verbatim statement by a general education teacher).

Teacher D also added:

We need human resources such as sped teachers, parents, psychologist, head teacher, regular teacher, occupational therapists, language and speech therapist. Parents should be involved because they are key stakeholders that give information need for the individualised education of the child. (A verbatim expression by a general education teacher).

Comments from the teachers revealed that they need support in terms of other specialists, parents, assessment tools, training, funding, format and related services to facilitate gathering of data about learners with intellectual disabilities for development and implementation of individualised education programmes.

Format for IEP development

On the IEP format for teachers to use in developing individualised education plans,

Teacher A acknowledged:

GES should develop a standard IEP document for the schools to guide teachers in IEP planning, implementation, monitoring and review (A verbal statement by a special education teacher).

Teacher B noted:

> *Format is very necessary. If we get a common format for IEP it will save teachers time and motivate them plan, implement, monitor and evaluate it* (A verbal statement by a special education teacher).

Teacher C said:

> *GES should come out with a common format for IEP planning, implementation, monitoring and evaluation as teachers have a common lesson plan notes in the schools. The format should be simple* (A verbal statement general education teacher).

Teacher D opined:

> *There should be IEP development format as lesson note for teachers* (A verbatim expression by a general education teacher).

From the above comments made by the teachers, it became clear that, teachers need a common and simple or a standard IEP format to guide them to develop, implement, monitor and review IEPs for learners with intellectual disabilities in the schools.
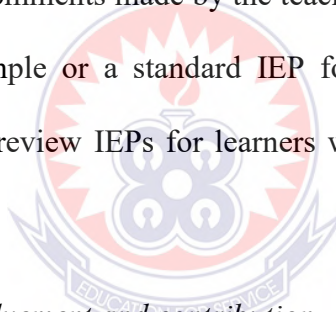
Team collaboration, involvement and contribution

On the issue of collaboration, inclusion and support of other specialists in the designing and implementation of individual education activities teachers responses revealed the following:

Teacher A stated:

> *The ministry of education and the special education division should ensure there is District Inclusive Education Team for assessment and IEP as suggested in the Inclusive education policy of Ghana as well as organise INSET for other professionals and provide funding for IEPs* (A verbal statement by a special education teacher).

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Teacher B added:

> *GES should employ special education teachers, counselors, speech therapists, and occupational therapists, psychologists within the schools or the district* (A special education teacher).

Teacher C opined:

> *Letter of collaboration to other professionals, form a committee and involving them in school meetings. Advertise on social media. GES should be having seminars on IEP and invite representatives of other professionals* (A general education teacher).

Teacher D also suggested:

> *Educate other professionals and parents and involve them for effective IEPs and achieving goals. Form IEP team in the district or schools* (A response from a general education teacher).

It is clear from the views of the teachers that, some factors such as formation of IEP team, training of other professionals on IEP and their role, employing other specialists in the schools or district education directorate, funding, advertising on social media or extending letters of collaboration to other professionals and related services could enhance collaboration among the IEP team.

4.4   Analyses of Research Hypotheses

The study posed a hypothesis which stated that, knowledge and competency of teachers has significant impact on the development of IEP for learners with intellectual disabilities. In this study, hypotheses were raised to predict whether knowledge and competency of teachers have significant influence on the development and implementation of IEP for learners with intellectual disabilities. As a result, an independent sample *t*-test was conducted to determine the influence of the independent variable on the dependent.

Based on the significance value of $p = .000$ ($p < .05$), with all the 10 items, the difference was statistically significant and can be stated, therefore, that teachers"

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knowledge and competency had statistically significant influence on the development and implementation of IEP for learners with intellectual disabilities. This result also implies that there is no significant difference in the knowledge and competency of both special and general education teachers in development and implementation of IEP for learners with intellectual disabilities in the school. The null hypotheses were rejected.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0   Introduction

This chapter presents the discussions of findings. The discussions highlighted the major findings on the research questions raised.

5.1   Research Question 1: How Knowledgeable and Competent Are Teachers in Developing and Implementing IEPs for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana?

The analysis of the qualitative data revealed how knowledgeable and competent teachers are in the development and implementation of individualised education programme in the schools. The findings of this study revealed that majority of special education teachers had knowledge and competency more than general education teachers regarding individualised education programming for learners with intellectual disabilities in the schools. This revelation is supported by Diegelmann and Test (2018); Papay, Unger, Williams-Diehm, and Mitchell, (2015); Shogren, Wehmeyer, Palmer, Rifenbark, and Little (2015) who argued that teachers had various levels of knowledge and experience when developing and implementing IEPs, and Debbag (2017) asserted that other teachers noted that they were unable to implement IEPs in specific periods of time required where learners with special educational needs were educated in resource rooms.

It was evident from the analysis of the comments of the general education teachers that, majority of regular teachers have inadequate knowledge and competency in the development, implementation, monitoring and evaluation of individualised education programmes for learners with intellectual disabilities which Gadagbui (2017) mentioned as some of the reason why teachers do not prepare

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individualised education programme in Ghana and entreated teachers to endeavour to know how to make IEPs. These revelations are consistent with Olewe-Nyunya (2018) who reported that majority of teachers in Nairobi counties of Kenya did not have competency in preparing and implementing individualised education programmes (IEPs).

Similarly, from the views of the teachers, it was noted that there some difference in the knowledge and competency of special and general education teachers in the development and implementation of individualised education programme for learners with intellectual disabilities. It was seen that majority of special education teachers (83.3%) viewed themselves as knowledgeable and competent while all the general education teachers (100%) and some special education teachers (13.3%) perceived themselves as not knowledgeable and competent in the development and implementation of individualised education programme. This confirms what the teachers stated that they have inadequate knowledge and competency because their pre-service and in-service training had not provided them with enough knowledge and competency in IEP development and implementation.

Again, from the analysis of the teachers" responses, it was clear that some special education teachers (16.7%) and all the general education teachers (100%) cannot assess learners with intellectual disabilities and use the data for developing individualised education programme for them, while majority of the special education teachers (83.3%) hold the view that they can assess learners with intellectual disabilities and use the data for developing individualised education programme for them.

Also, it was evident from the comments and responses of the teachers that majority of the special education teachers (60%) had knowledge and competency in organising IEP meeting with parents and other professionals, while some special education teachers (23.3%) and majority of the general education teachers (93.3%) did not have the knowledge and competency to involve other professionals and parents IEP meetings. Studies indicate parents may not be considered part of the IEP team. For example, in some instances parents are being excluded and provided insufficient information resulting in parents not attending IEP meetings (Avcioglu, 2012). Parents maintained a passive role during the IEP meeting (Cavendish and Connor, 2018).

Another aspect that was looked at regarding teachers" knowledge and competency in IEP development and implementation was their pre-service and in-service training whether it equips teachers with knowledge in IEP development and implementation for learners with intellectual disabilities. From the analysis, it was noted that special education teachers (56.7%, 70%) reported that their pre-service and in-service training empowered them with knowledge and competency for IEP development and implementation for learners with intellectual disabilities. However, some special education teachers (33.3%, 26.7%) and all general education teachers (100%) respectively asserted that their pre-service and in-service training did not make them knowledgeable and competent for IEP development and implementation for learners with intellectual disabilities.

Furthermore, concerning teachers knowledge and competency in developing and implementing IEP, majority of special educators (73.3%) felt they are knowledgeable and skillful in writing IEP annual measurable goals and objectives for learners with intellectual disabilities, however some special education teachers
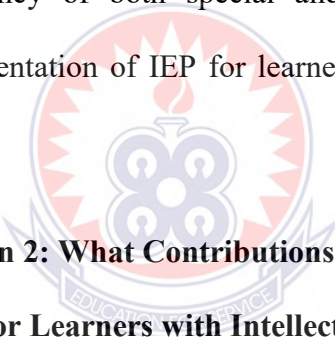
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(23.3%) and all the general education teachers (100%) declared they cannot write annual goals and objectives for individualised education programme for learners with intellectual disabilities. The findings further revealed that majority of special educators (83%) affirmed that they can develop Individualised Education Programme (IEP) for learners with intellectual disabilities, nevertheless some special education teachers (13.3%) and majority of general education teachers (76.7%) said they cannot develop and implement IEP for learners with intellectual disabilities. Besides the findings brought to light that majority of special education teachers (70.3%) opined that they were able to implement IEP for learners with intellectual disabilities, but some special education teachers (26.7%) and all general education teachers (100%) submitted that could not implement IEP for learners with intellectual disabilities.

The findings again revealed majority of special education teachers (76.7%) reported they know how to monitor and evaluate individualized education plan and use data to make a decision on learners with intellectual disabilities, but some special education teachers (23.3%) and all the general education teachers (100%) indicated that they cannot monitor and evaluate individualized education programme and use the data to make a decision on learners with intellectual disabilities. Majority special education teachers (80%) who participated in this study indicated that could state the needed transition services including interagency responsibilities in the IEP, however some special education teachers (20%) and general education teachers (90%) noted that they could not write transition services and interagency responsibilities on the IEP.

In sum, it can be deduced that majority of teachers could not develop, implement, monitor and evaluate IEPs for learners with intellectual disabilities in the basic schools. The findings of this study is consistent with the perception of majority

of tutors in colleges of education in Ghana that their curriculum did not equip pre-service teachers with the knowledge in designing individualised education programme for persons with special educational needs and disabilities (Amoako, 2015). It is also in line with an assertion made by Gadagbui (2017) that teachers have limited skills in IEP development and implementation. All the items on the knowledge and competency of teachers in the development and implementation of IEP were observed to have statistically significant difference of $p < .001$. The difference was statistically significant and implies that teachers" knowledge and competency had significant influence on the development and implementation of IEP for learners with intellectual disabilities. This result also implies that there is no significant difference in the knowledge and competency of both special and general education teachers in development and implementation of IEP for learners with intellectual disabilities in the school.

5.2   Research Question 2: What Contributions Do Professionals Involved in Developing IEP for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana Make?

The analysis of data from the focus group interactions, revealed some of the professionals that teachers involve in the development and implementation of individualised education programme and their contribution. These professionals include school counselor, behavior technician, occupational therapist, doctor and psychologist, social welfare officer, mental health nurse, regular school teachers, physical education teacher, special education resource teachers and parent. The teachers indicated these professionals supported the development of IEP through assessment, suggested interventions and counseling for pupils with intellectual disabilities. The U.S. Department of Education (2007) holds the view that,

individualised education programming create opportunities for teachers, parents, school administrators, related services personnel, and learners (when appropriate) to collaborate to improve educational outcomes for learners with disabilities.

The findings of this study further revealed that special education teachers (76.7%) said that other professionals are involved in assessing and gathering data for development of IEP for learners with Intellectual disabilities; however, some special education teachers (23.3%) and all the general education teachers (100%) noted that other specialists are not involved in assessment and data collection for IEP development. It also came to light that, majority of special education teachers (63.3%) include other specialists developing IEP for learners with Intellectual disabilities, but still some special education teachers (36.7%) and general education teachers (100%) stated that other specialists were not involved in the development of IEPs. Also majority of special education teachers (70%) asserted that other specialists assist in the implementation of IEP for learners with Intellectual disabilities, however, some special education teachers (20%) and all the general education teachers (100%) could not get the support of the professionals to implement IEP for pupils with intellectual disabilities.

It was noted again from the findings (50%, 60%) that special education teachers involved other professionals in monitoring and evaluating respectively IEP for learners with Intellectual disabilities, nevertheless other special education teachers (40%, 36.7%) and majority of general education teachers (96.7%, 93.3%) protested that other specialists were not included in monitoring and evaluating respectively IEP for learners with Intellectual disabilities. In terms of learners with intellectual disabilities involvement in developing their IEPs, special and general education teachers (46.7%, 3.3%) pointed out that they included pupils with intellectual

disabilities in IEP development. But special education teachers (46.7%) and general education teachers (96.7%) protested that pupils were not involved in their IEP development. Majority of special education teachers (70%, 6.7%) said they involve parents in the individualised education of learners with intellectual disabilities; however special education teachers (30%) and general education teachers (93.3%) admit that they do not involve parents in the planning and implementation of IEP.

In addition, the findings revealed that special education teachers (80%) and general education teachers (40%) explained that other special and general educators support the development and implementation of IEP for learners with intellectual disabilities, but special and general educators (13.3%, 56.7%) respectively state that do not support in the individualised education programme. As mentioned earlier special education teachers (63.3%) and general education teachers (33.3%) admit that district special education coordinator or an official from the Ghana Education Service is involved in developing individual programmes for learners with intellectual disabilities. On the contrary some special education teachers (33.3%) and general education teachers (66.7%) reported that they do not involve the district special education coordinator or an official from the Ghana Education Service in developing individual programmes for learners with intellectual disabilities.

From the findings, it can also be seen that special education teachers (70%) indicated they involved other specialists in reviewing and writing progress report on the learner's IEP, however some special education teachers (26.7%) and general education teachers (100%) pointed out that other professionals are not included in reviewing and writing progress report on the learner's IEP.

In sum, the results showed that majority of special education teachers to some extent involve other specialists in the development and implementation of

individualised education programme for learners with intellectual disabilities, however some special education teachers and majority of general education teachers do not include other professionals in the individualised education programme for pupils with intellectual disabilities in the schools.

5.3 Research Question 3: What Challenges Do Teachers Encounter in Implementing IEPs for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana?

The findings from the teachers" responses revealed various challenges teachers faced when implementing individualised education programme for pupils with intellectual disabilities in the schools. For instance, both special and general education teachers (76%, 60%) reported inadequate knowledge and competency as a challenge to IEP implementation for learners with Intellectual disabilities. This is in line with Gadagbui (2017) who stated that teachers lack skills for development of individualised education plans. Majority of special education teachers (83.3%) viewed themselves as knowledgeable and competent while all the general education teachers (100%) and some special education teachers (13.3%) perceived themselves as not knowledgeable and competent in the development and implementation of individualised education programme.

Lack of time was another element that was considered under the challenges teachers faced in the development and implementation of individualised education programme. This is consistent with a similar findings by Olewe-Nyunya (2018), which reported that majority of teachers who participated in that study faced challenge with time for IEP development and implementation for learners with Intellectual disabilities in Kisumu and Nairobi Counties, Kenya.

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Similarly, from the findings, majority (86.7%) of special education teachers and (90%) of general education teachers confirmed that inadequate related services, supplementary aids and services were challenges they faced in the IEP development and implementation for learners with intellectual disabilities in the schools.

The findings again revealed that teachers faced a lot of challenges when it came to assessment. The teachers commented that they have problem with knowledge, other specialists and funds in gathering assessment data for the planning of individualised education programme for learners with intellectual disabilities. According to majority of the teachers, (80%) of special education and (90%) of general education teachers confirmed they have challenge in collecting assessment data for individualised education programme.

Moreover, (63.3%) of special education and (90%) of general education teachers noted that they had problem writing annual goals and objectives for individualised education programme. This finding could be as result of their challenge with collecting assessment data on the learners.

Apart from the above challenges that have been discussed already, inadequate collaboration with other specialists also emerged as one of the challenges teachers face in developing and implementing individualised education programme for learners with intellectual disabilities, it was revealed from the findings that, teachers (76.7%) of special education teachers and (96.7%) of general education teachers had challenge collaborating and involving other professionals in implementing IEPs. This is consistent with a study in Kenya which reported that majority of teachers had challenges working with other professionals (Olewe-Nyunya, 2018). Similarly, teachers in Suez in Egypt rated themselves as poorer in how to collaborate with other professionals (Sen-nefer, 2013). However, Fish (2011), CASA (2013) and Heward

(2003) stated that collaboration among stakeholders is key for effective IEP in schools.

Additionally, challenges imposed on the teachers by the number of learners or class size ranged from inability to make time for the learners, to difficulty in assessing, developing and implementing individualised education programme for the learners with intellectual disabilities. Majority of the special education teachers (66.7%) and general education teachers (90%) noted that the number of pupils that are eligible for IEP or class size is also a barrier to developing and implementing IEP for learners with intellectual disabilities. This is supported by Avoke et al.(1999), Hayford (2013), and Ocran (2011), who noted that the sharp increase in enrolment has led to overcrowding in both special and regular schools in Ghana.

Further, format for developing individualised education programme was also lacking which prevented teachers from planning IEPs for the learners with ID. This posed a big challenge to students with intellectual disabilities because the teachers mostly ended up planning for only students without disabilities. A higher number of special education teachers (86.7%) and general education teachers (83.3%) indicated lack of Ghana Education Service (GES) approved IEP format hinder the development of IEP for learners with intellectual disabilities in the schools.

Majority of the teachers, (83.3% & 90%) reported that inadequate knowledge and support from other specialists hinder the development of IEP for learners with intellectual disabilities. Similarly, (80% & 90%) teachers reported that inadequate parents‟ knowledge and support impede the development of IEP for learners with intellectual disabilities. The finding shows that parents and other stakeholders‟ knowledge and support is insufficient for IEP development and implementation.

Again, majority of the teachers (86.7% & 90%) asserted that inadequate teaching and learning materials negatively effect the implementation of IEP for learners with intellectual disabilities in the schools. The teachers commented that resources such as funding, assessment tools, teaching and learning materials for implementing IEP were also limited which prevented teachers from implementing individualised education programme. A study conducted by Olewe-Nyunya (2018) revealed similar findings which stated that lack of teaching and learning resources prevented teachers from implementing IEP for learners with intellectual disabilities. Gadagbui (2017) also supported that teachers have problem with teaching and learning materials (TLMs) in the schools.

Further, most of the teachers (56.7% &66.7%) agreed that lack of incentive does not motivate teachers in developing and implementing IEP.

5.4   Research Question 4: How Do Teachers Address the Challenges They Encounter in Implementing IEPs for Learners with Intellectual Disabilities in Basic Schools in the Central Region of Ghana?

The findings of this study on how to address the challenges teachers encounter in implementing IEPs for Learners with Intellectual Disabilities revealed, pre-service training, in-service training (seminars and workshops) and opportunity for hands on practice of IEP with learners with intellectual disabilities as some of the strategies that could be used to address problems teachers face in development and implementation of IEP for pupils with intellectual disabilities in the schools. The teachers" comments revealed strategies such as the use of intensive monitoring and supervision of samples of learners" IEPs to enhance implementation of IEPs. Majority (86.7%) of special education teachers and (90%) of general education teachers agreed that, pre-service teacher preparation involve IEP development and implementation.   This finding

indicates that majority (83.3%) of special education teachers and (86.7%) general education teachers noted that in-service training workshops, seminars and conferences on IEP development and implementation could be organised for teachers. This suggestion is supported by Ilik and Sari (2017) who stated that training on IEP process can make teachers more competent in their roles when developing IEPs. In-service training has been found to effectively givethe necessary information and skills that teacher needs. Further, most of the teachers (80% & 90%) suggested that, there should be in-service training workshops, seminars and conferences for parents and related service providers involved in IEP development and implementation.

From the findings from the qualitative data, teachers said schools or GES should identify IEP specialists and schedule them to visit schools to mentor/coach teachers in the development and implementation of individualised education programmes. It can also be seen from the quantitative data that special education teachers (70%) and general education teachers (90%) indicated that, teachers or schools need expert special education mentors to coach teachers in developing and implementing IEP for learners for intellectual disabilities. This means both special and regular school teachers need specialists skilled in IEP development and implementation to coach teachers designing, implementing, monitoring and evaluation of IEPs in the basic schools. This suggestion is confirmed by Lesh (2020) who noted that an early-career special educator or new teacher need a seasoned, respected special education teacher to coach the teacher in how to navigate the IEP process in the school or district. The teachers further stated that, teachers could be given incentive for implementing individualised education programme in the schools. Majority of the teachers (76.7% & 83.3%) proposed incentives for teachers for the

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development and implementation of individualised education programmes in the schools.

It was again noted from the quantitative data that majority of the teachers (80% & 90%) respectively suggested that the Ghana Education Service (GES) should design a simple, common and standard format for preparation of IEPs in schools. The teachers also added that, teachers needed adequate supplementary aids, teaching and learning materials for IEP implementation. To support this finding, policy makers should allocate the necessary resources including human, funding and materials for the development and implementation of IEPs (Beirne-Smith, Patton & Kim, 2006 & Dabkowski, 2006).

It was also revealed from the findings that, majority (66.7% & 93.3%) of the teachers proposed a reduction in class sizes for effective IEP implementation in the schools. Ocran (2011) conducted a study in basic schools in Central Region of Ghana and reported that only 21% of the teachers in that study handled classes with enrollment below 35 learners. The findings confirm Ministry of Education"s observation that there are variations in enrollments and many schools have not attained the national target of 35:1 learner-teacher ratio. This study reveals that class sizes need to be reduced for effective implementation of individualised programmes in the schools supported by Ocran (2011) and Hayford (2013).

According to the findings, majority of teachers (60% & 73.3%) supported that IEP meetings should be scheduled and held after-working hours. Lesh (2020) supported that the suggestion that an IEP meeting should be scheduled so that parents do not have to take time off work.

Most of the teachers (83.3% & 93.3%) noted that availability of funding for gathering assessment data for IEP development could enhance implementation of

individualised education programme in the schools. Moreover, (76.7% & 90%) of the teachers agreed that related services and interagency linkages should be available to enhance IEP implementation for learners with intellectual disabilities in schools. Regular school teachers argued that the IEP is the responsibility of the special educator; while specialist teachers also argued that they feel alone and needed other specialists during the IEP process (Nilsen, 2017). Further analysis of the data revealed that, majority of the teachers (86.7% &80%) accepted that Ghana Education Directorate need to carry out intensive monitoring and supervision for effective implementation of individualised education programme for learners with intellectual disabilities in the schools.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0   Introduction

The purpose of the study was to investigate the development and implementation of Individualised Education Programme for learners with intellectual disabilities in Basic Schools in Central Region of Ghana. The study specifically sought to:

1. Explore teachers about their skills in and knowledge of developing and implementing IEPs for learners with intellectual disabilities in Basic Schools in Central Region of Ghana.

2. Examine the contributions of professionals involved in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana.

3. Discuss challenges teachers encounter in developing and implementing IEPs for learners with intellectual disabilities in basic school in the Central Region of Ghana.

4. Discuss strategies to address the challenges of teachers in developing and implementing IEPs for learners with intellectual disabilities in basic schools in the Central Region of Ghana.

Four research questions and two alternate hypotheses were deduced from the objectives to guide the data collection process.. The mixed approach, using explanatory design was used to investigate the development and implementation of individualised education programme for learners with intellectual disabilities in Basic schools in the Central Region of Ghana. Sixty teachers were contacted for the study using focused group interviews and questionnaires. Data from the interviews were

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analysed using themes that emerged from the interviewees" responses whereas data from the questionnaires were analysed via the help of Statistical Product and Service Solutions (SPSS) version 21.0, to generate the percentages on frequent count and determine the means, standard deviations.

6.1 Summary of Major Findings

The major findings are summarised according to the sub-themes that emerged from the research questions:

6.1.1 Knowledge and competency of teachers in the development and implementation of IEP

The result revealed that, some special education teachers implemented IEPs for learners with intellectual disabilities in their schools. The findings also revealed that minority of the special educators and all the general education teachers could not implement individualised education programme in their schools due to lack of knowledge and competency. It was noted again that majority of the general education teachers did not have the knowledge and competency for the IEP processes such as assessment of learners, organisation of IEP meeting, writing measurable annual goals and objectives; monitoring and evaluation as well as transition planning.

It was finally revealed that, pre-service and in-service training did not equip teachers with the knowledge and competency in designing Individualised Education Programme (IEP) for learners with special educational needs and disabilities including learners with intellectual disabilities.

6.1.2 Contributions of other professionals in developing IEP

The result revealed that, some specialists participated in the individualised education programme in the schools. These specialists included special and general

education teachers, social workers, counselors, parents, psychologists, health workers and physical educators. Further, the findings revealed the contributions made to the individualised education programme. Each specialist makes assessment and gives suggested interventions or recommendations for the development of the individualised education programme for the learner. Other professionals provided counseling and funding in support of the implementation of the IEP.

6.1.3 Challenges teachers encounter in implementing IEPs

The findings revealed the challenges teachers faced in implementing individualised education programme. For instance, it was revealed from the teachers" comments that they faced a major challenge with knowledge and competency when it comes to IEP development. Other problem teachers face when it comes to individualised education programming is knowledge of other professionals and parents.

The findings again showed that large class size was another challenge teachers faced during IEP implementation. It was revealed that limited time hinder the implementation of the individualised education programme. It is noted that large class size and limited time derail the IEP process hence its implementation becomes a challenge.

Again, the findings of the study revealed that inadequate resource was one of the challenges the teachers faced during individualised education programmes. It was noted that lack of funding for assessing the learners was one of the reasons why the teachers were not able to implement individualised education programme. Also, it was noted that, funding was a problem because parents and schools do not have fund allocated for consulting other specialists, and supporting the teachers in the IEP

implementation. It was again noted that lack of materials for implementing IEP was one of the reasons why the teachers were not able to develop IEPs for learners.

The final challenge that emerged during the study was inadequate specialists to contribute to the IEP implementation. According to the findings though there were many professionals, few of them had been contributing to the IEP implementation. Also, it was noted that, location of other professionals, parents, consultation fee and knowledge of other specialists hinder the implementation of the individualised education programme in the schools.

6.1.4   Addressing the challenges teachers encounter in implementing IEPs

The researcher was interested in the suggestions of teachers on how development and implementation of individualised education programming can be improved in the schools. Therefore, respondents" suggestions were sought and the responses were analysed by categorising all the suggestions from the teachers into themes. The various suggestions were discussed under the following themes:

Pre-service training programme for teachers

Among the suggestions made by teachers to improve on pre-service teacher preparation for effective individualised education programming include regular In-service Training Programme for tutors in colleges on IEP to help them enhance their knowledge and competency in individualised education programming. For example, some teachers also suggested that tutors who manage students on methods of teaching should be trained regularly on special education related issues like IEP so that they can prepare the would-be teacher to know how to implement IEP in the classroom.

Again, Majority of the teachers suggested that there should be an opportunity for pre-service teachers to have IEP practical experience with pupils with intellectual

disabilities in the schools. They were of the view that theory is different from practice and therefore when the theories are taught in the classroom to the pre-service teachers, they need to also be given the opportunity to practise whatever has been taught in the classroom so that they can better understand the concept. It was suggested therefore, that pre-service teachers should be made to embark on field trips to some of the basic schools and special schools to have a practical feel of some of the children with intellectual disabilities and special educational needs and also observe how teachers use IEP in the classrooms.

Additionally, some teachers suggested that to achieve quality teacher preparation for individualised education programming, there is the need for the colleges to ensure that Special Education course offered by would be teachers at the College of Education in Ghana should be taught by specialists in Special Education so that they can give practical examples when teaching it to the trainees. Majority of the interviewees suggested that the 2 credit hour semester course offered by pre-service teachers in special education for two hours should be increased. This would enable teacher trainees to be equipped with knowledge and competency to handle learners with intellectual disabilities and other special educational needs. For example, 5 teachers suggested that the content of special education as a course must IEP for prepare pre-service teachers to have adequate knowledge on IEP development and practices so that they can teach to meet the diverse needs of learners with intellectual disabilities in the classroom.

In-service Training Programmme for teachers

Other suggestions made by teachers" in basic schools in Central Region of Ghana to improve on and address challenges teachers face in individualised education programming for learners with intellectual disabilities include regular In-service

Training Programme for teachers on individualised education programming to help them update their knowledge and skills in IEP process. For example, a teacher suggested that specialists in the field of IEP should be made to organise refresher programmes for all teachers on IEP as a form of in-service training within the schools on a regular basis. This implies that teachers were of the view that, there should be regular workshops on individualised education programming for teachers in basic schools so that they will be abreast with the current issues and practices in IEP. This will serve as a platform for the teachers to upgrade their professional skills and also learn the basic principles of IEP so that they can inculcate IEP practices in their teaching for effective education of pupils with intellectual disabilities and other special educational needs in the schools.

Resource for IEP implementation

On the issue of the resources available for implementing individualised education programme in the schools, the teachers mentioned resources which could be categorized into two; human and material resources.

For the human resources, a greater number of the teachers (70% & 90%) agreed respectively that teachers or schools should be assigned special education mentors who are very knowledgeable and competent in individualised education programming to coach teachers in developing and implementing IEP for learners for intellectual disabilities. Again, majority of the teachers mentioned that due to the large class sizes and learners eligible for IEP, teachers per class should be increased and assigned teaching assistants. It was also proposed by one of the teachers that Ghana Education Service should employ other specialists such as counselors, psychologists, speech therapists, occupational therapists into the schools.

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Other resources that were suggested to improve on implementation of individualised education programme in the schools included funding, teaching and learning materials, and IEP format. Many of the teachers (83.3% & 93.3%) agreed respectively that funding should be available for gathering assessment data for development and implementation of individualised programme for learners with intellectual disabilities. Some teachers mentioned that availability of funding could help them pay for other related services and bring other professionals on board to assist in the implantation of IEP in the schools. Majority of the teachers (83.3% & 93.3%) also respectively agreed that there should be sufficient supplementary aids, teaching and learning materials for IEP implementation. Some teachers mentioned that teachers should be given laptops, papers, pens, crayons, card boards, files, cameras, phones and IEP timetable for IEP implementation. The teachers were also of the view that to improve on individualised programming for learners with intellectual disabilities, the Ghana Education Service should design a simple, common, and standard format for developing IEP for the schools, (80% & 90%) of the teachers respectively agreed to this suggestion. One teacher suggested that Ghana Education Service should also engage in intensive monitoring and supervision of samples of IEPs for learners in the schools, this suggestion was supported by majority of the teachers (86.7% & 80%).

Teacher motivation

Majority of the respondents (76.7% & 83.3%) respectively agreed that, teachers should be given incentive to motivate them develop and implement IEP for learners for intellectual disabilities in the schools.

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Time for IEP implementation

Some teachers also suggested that there should be a timetable for IEP and it should suit the schools" suggested timetable and activities. Many of the teachers (60% & 73.3%) respectively agreed that meetings with parents and other specialists should be scheduled and held after work-hours, so that they do not take time out of their working hours. Instead of many teachers and schools developing handwritten IEPs, they can adapt computer-generated IEPs as an alternative way to save time and money (Huefner, 2000; More & Hart, 2013). Computerised or electronic IEPs are an alternative of the many technologies that teachers and schools can use to facilitate delivery of learners" specialised programme.

Class size

Forty-eight respondents also suggested that class size should be reduced to enhance the implementation of IEP while others mentioned that one way to address the challenge imposed on teachers by large class size is setting up resource room in the schools. Other teachers suggested that number of teachers in a class must be increased and assigned teaching assistants.

Team involvement and contribution for IEP implementation

Furthermore, some respondents were of the view that there should be a regular education for administrators, parents and other professionals in our various institutions to improve on team collaboration and contribution towards the implementation of individualised education programme. It was also revealed from the findings that, majority (80% & 90%) of the teachers respectively responded positively that, there should be in-service training workshops, seminars and conferences on IEP practices for parents and other professionals involved in IEP development and implementation.

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Additionally, some teachers suggested that to improve on the implementation of IEP, there is the need for adequate related services and interagency linkages. It was discovered from the findings that, majority (76.7% & 90%) of the teachers respectively agreed that, there should be related services and interagency networking for implementation of IEP for learners with intellectual disabilities in the schools. One teacher mentioned that, letter of collaboration should be sent to related service providers and involve them in school meetings. Another teacher also proposed that, schools or teachers should advertise on social media for specialists who can assist in designing IEPs. Moreover, school administrators should form a committee involving other recommended IEP team members, organise IEP meetings and support the IEP team with logistics for the implementation of IEPs in the schools.

From the foregoing discussion, it is clear that much needs to be done to equip basic school teachers for the implementation of IEP in the schools. The findings from teachers" views on how to improve IEP implementation revealed that colleges" programme and school administrators play significant role in providing teachers with the training and knowledge needed to make certain that our present and future educators are of the highest possible quality as far as individualised education programming is concerned. Without a critical consideration of all the suggestions made by the respondents, many teachers may not implement IEP for learners with intellectual disabilities and other special educational needs in the schools.

6.2   Conclusions

The study concluded that some special education teachers could develop and implement IEP. However, some special educators and majority of general education teachers could not develop and implement IEPs in the schools due to lack of knowledge, competency, resources and contribution from other professionals.

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Also teachers had challenges with collecting assessment data, IEP format, time and overcrowded classes so they could not implement IEP in the schools.

The result also revealed that for teachers to effectively implement individualised education programme, there is the need for pre and in-service training on IEP, both human (other professionals, parents, IEP coaches/ coordinators) and material resources (a standard IEP format, teaching learning materials, funding) to be available.

6.3   Recommendations

Based on the findings, the following recommendations are made:

1. General and special education teachers in basic schools in Central Region, parents and other professionals should be trained and assisted by Ghana Education Service and schools to develop the capacity to develop and implement IEPs. Colleges of education and universities in-charge of training teachers should include IEP in their curriculum for pre-service teachers.

2. Special and genral education teachers in basic schools in Central Region should create a cordial relationship with related service providers and involve them in school meetings and other activities. Ghana Education Services or schools should organise workshops or seminars for other professionals to enhance their knowledge and role in the individualised education programming for learners in the schools. The government should provide funding for consultation of other professionals, assessment and IEP in the schools.

3. The schools or Ghana Education Service should provide special and general education teachers in basic schools in Central Region with in-service training, skilled IEP coaches or coordinators, funding, materials and employ or

collaborate with other professionals to enhance the development and implementation of IEP in the schools. Head teachers of general, unit and inclusive schools should assign at least two teachers in a class in order to encourage teachers in individualised education programming in the schools.

4. Pre-service and in-service training on IEP processes should be given a critical consideration by schools, Ghana Education Service and teacher training institutions. Also Ghana Education Service should provide basic school teachers in Central Region with resources such as funding, teaching and learning materials; format for IEP designing, IEP coaches or coordinators and specialists to enhance IEP implementation.

5. Special and regular education teachers in basic schools in Central Region should collaborate and endeavour to learn how to develop and implement IEPs by consulting colleagues or lecturers skilled in IEP processes.

6.4   Suggestions for Future Research

Several limitations must be considered for this study. One issue is related to generalization of the findings. Results of this study might not be generalised for children with any other type or severe of disability condition. Participants included only basic school teachers teaching learners with intellectual disabilities in Basic schools in the Central region of Ghana. Additional research is necessary to establish if similar findings could occur for teachers of other types of learners with disabilities or special educational needs who are in basic schools in Ghana**.**

In addition, there is concern for further research to find out the role of Ministry of Education in policy decision regarding the development and implementation of individualised education programme in schools in Ghana.

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Further, a research is needed to establish the extent tutors in colleges of education‟s knowledge and competency in training prospective teachers in the development and implementation of IEPs. Also a research is necessary to find out other professionals and parents knowledge and experience of individualised education programme for learners with special educational needs.

6.5   Contribution to Knowledge

This present study would contribute to knowledge on IEP in Ghana. This is because very little research in Ghana was available to the researcher on development and implementation of individualised education programme for learners with intellectual disabilities. This study provides an in-depth insight into the development and implementation of IEP for learners with intellectual disabilities in Basic Schools in the Central Region of Ghana.

Secondly, the study highlighted the various specialists and their contribution to IEP implementation in the schools which help the teachers to widen knowledge about other professionals that they can work with in the IEP process. Further, the study contributed to knowledge by revealing the various challenges teachers faced during individualised education programming and ways they can be addressed. Again, the study also depicted that different strategies could be used to enhance teachers‟ knowledge and competency in the development and implementation of individualised education programme.

Finally, this study offers support to already existing research findings on the development and implementation of individualised education programme, and goes a step further to provide information specifically on IEP for learners with intellectual disabilities in Ghana.

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APPENDIX B

Questionnaire for Teachers

I am an MPhil student in the Department of Special Education, University of Education, Winneba. I am conducting a research titled **Development and Implementation of IEP for Learners with Intellectual Disabilities in Basic Schools in Central Region of Ghana.** The study is being conducted for academic purposes and as such, any information given will be treated with the highest confidentiality it deserves. The anonymity of every respondent is assured. Please answer the questions as frankly as possible. The following is a list of statements that may be used to express the view of **Development and Implementation of IEP for Learners with Intellectual Disabilities**. Read each statement carefully and respond by ticking [√] the answer that most accurately represents your thinking. You are required to either indicate „1 = Disagree, 2 = Strongly Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree‟ with each statement. Thank you.

SECTION A

Demographic Data of Respondents

Indicate the following by ticking in the space provided

Gender of the Respondents

Male (   )   female (   )

Age :

25-30 (   )   31-35 (   )   36-40 (   )   41 and above (   )

Highest Academic/Professional Qualifications

SSSCE   (   )   Cert. A (   )   Diploma (   )   B.ED (   ) Masters‟ Degree (   ) others, please   state ……………………………………………………………………………………… ……………

How long have you been teaching?

0-5 (   )   6-10 (   )   11-15 (   )   16+ (   )

SECTION B

KNOWLEDGE IN DEVELOPING AND IMPLEMENTING IEPS FOR LEARNERS WITH INTELLECTUAL DISABILITIES

To what extent do you agree with the following statements in relation to special education teachers" knowledge in developing and implementing IEPs for learners with intellectual disabilities? (Key: 1 = Disagree, 2 = Strongly Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree")

Statement	1	2	3	4	5
1. You (as a teacher) can assess learners with Intellectual disabilities and use the data for developing IEP for them					
2. You have knowledge and skills in organising IEP meeting involving parents and other professionals					
3. Pre-service training adequately equips teachers with knowledge in IEP development and implementation for learners with intellectual disabilities					
4. In-service training workshops on IEP development and implementation for learners with intellectual disabilities have been organised for teachers in your region					
5. You have requisite knowledge and skills in developing and implementing IEPs for learners with intellectual disabilities					
6. You have knowledge and skills in writing IEP annual measurable goals and objectives for learners with intellectual disabilities					
7. You can develop Individualised Education Programme (IEP) for learners with intellectual disabilities					
8. You are able to implement IEP for learners with intellectual disabilities					
9. You know how to monitor and evaluate Individualized Education Plan (IEP) and use data to make a decision.					
10. You can state the needed transition services including interagency responsibilities in the IEP					

Please, indicate below any other thing you want to share about your knowledge and skills in developing and implementing IEPs for learners with intellectual disabilities.

_____
_____
_____
_____
_____

SECTION C

CONTRIBUTIONS OF PROFESSIONALS INVOLVED IN DEVELOPING AND IMPLEMENTING IEPS FOR CHILDREN WITH INTELLECTUAL DISABILITIES.

To what extent do you agree with the following statements in relation to contributions of professionals involved in developing and implementing IEPs for learners with intellectual disabilities? (Key: 1 = Disagree, 2 = Strongly Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statement	1	2	3	4	5
1. Other professionals are involved in assessing and gathering data for developing IEP for learners with Intellectual disabilities					
2. Other professionals are involved in developing IEP for learners with Intellectual disabilities					
3. Other professionals support in implementing IEP for learners with Intellectual disabilities					
4. Other professionals are involved in monitoring IEP for learners with Intellectual disabilities					
5. Other professionals are involved in evaluating IEP for learners with Intellectual disabilities					
6. Learners with intellectual disabilities are involved in developing their IEPs					
7. Parents are involved in developing and implementing IEP for learners with Intellectual disabilities					
8. Other regular school teachers support in developing and					

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implementing IEP for learners with Intellectual disabilities					
9. The district Sped coordinator or an official from the Ghana Education Service is involved in developing IEP for learners with intellectual disabilities					
10. Other professionals are involved in reviewing and writing progress report on the learner"s IEP					

Please, indicate below other professionals that you involve and their contribution in developing and implementing IEPs for learners with intellectual disabilities.

_____

_____

_____

_____

_____

SECTION D

CHALLENGES SPECIAL EDUCATION TEACHERS ENCOUNTER IN DEVELOPING AND IMPLEMENTING IEPS FOR LEARNERS WITH INTELLECTUAL DISABILITIES

To what extent do you agree with the following statements in relation to challenges teachers encounter in developing and implementing IEPs for learners with intellectual disabilities (ID)? (Key: 1 = Disagree, 2 = Strongly Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statements	1	2	3	4	5
1. You (as a teacher) do not have adequate knowledge in IEP development and implementation of IEP for learners with Intellectual disabilities					
2. You have difficulty with time for IEP development and implementation for learners with Intellectual disabilities					
3. Inadequate related services, supplementary aids and services challenges the IEP development and implementation for learners with ID					

4. You have a challenge in gathering assessment data for IEP development and evaluation for learners with Intellectual disabilities					
5. You have challenge in writing the IEP goals and objectives for learners with Intellectual disabilities					
6. You have difficulty in collaborating and involving other professionals in developing and implementing IEP for learners with Intellectual disabilities					
7. Number of pupils that are eligible for IEP/class size is also a barrier to developing and implementing IEP for learners with intellectual disabilities					
8. Lack of GES approved IEP format hinder the development of IEP for learners with intellectual disabilities					
9. Inadequate knowledge and support from other professionals hinder the development of IEP for learners with intellectual disabilities					
10. Inadequate parents" knowledge and support impede the development of IEP for learners with intellectual disabilities					
11. Inadequate teaching and learning materials influence the implementation of IEP for learners with intellectual disabilities					
12. Lack of incentive does not motivate you as teacher in developing and implementing IEP					

Please, indicate below any other challenge you face in developing and implementing IEPs for learners with intellectual disabilities.

_____
_____
_____
_____

SECTION E

STRATEGIES TO ADDRESS THE CHALLENGES OF TEACHERS IN DEVELOPING AND IMPLEMENTING IEPS FOR LEARNERS WITH INTELLECTUAL DISABILITIES.

To what extent do you agree with the following statements in relation to strategies to address the challenges of teachers in developing and implementing IEPs for learners

with intellectual disabilities? (Key: 1 = Disagree, 2 = Strongly Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statement	1	2	3	4	5
1. Pre-service teacher preparation should involve IEP development and implementation					
2. There should be In-service training workshops, seminars and conferences on IEP development and implementation for teachers					
3. There should be in-service training workshops, seminars and conferences for parents and other professionals involved in IEP development and implementation					
4. Teachers or schools should have expert special education mentors to coach teachers in developing and implementing IEP for learners for intellectual disabilities					
5. Teachers should be given incentive to develop and implement IEP for learners for intellectual disabilities					
6. GES should develop a common format for IEP development					
7. There should be adequate supplementary aids, teaching and learning materials for IEP implementation					
8. Class sizes should be reduced for effective IEP implementation					
9. Schedule and hold an after-work hours IEP meetings					
10. There should be a fund for gathering assessment data for IEP development					
11. There should be adequate related services and interagency linkages in developing and implementing IEPs for learners with ID					
12. There should be effective supervision by the Ghana Education Directorate.					

Please, indicate below any suggestion to help address the challenges in developing and implementing IEPs for learners with intellectual disabilities

_____
_____
_____
_____
_____

APPENDIX C

Interview Guide for Interviewees

Knowledge in developing and implementing IEPs

Do you have anything to share about your knowledge and skills in IEP development and implementation?

Professionals involved in developing and implementing IEPs

a. Which other professionals do you involve in developing and implementing IEPs for learners with intellectual disabilities?

b. What contributions do other professionals give in developing and implementing IEPs for learners with intellectual disabilities?

Challenges in developing and implementing IEPs

What are the challenges you face in developing IEPs in the school?

Prompts:

a. administration support for IEP development

b. Time for IEP development

c. Resources for IEP development

d. Gathering assessment data

e. Writing the IEP goals and objectives

f. Knowledge and Skills for IEP development

g. Team collaboration and involvement

h. Number of pupils that are eligible for IEP/class size

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Strategies for addressing the challenges in IEP development

In your view, what should be done differently to address these challenges? Describe it.

Prompts:

a. How can pre-service teacher preparation be improved for effective IEP development?

b. How can in-service teachers" professional development be improved for addressing these challenges?

c. Administration support for IEP development

d. Time for IEP development

e. Resources for IEP development

f. Gathering assessment data

g. Format for IEP development

i. Team collaboration and involvement

j. Knowledge and Skills for IEP development

h. Class size