

**UNIVERSITY OF EDUCATION, WINNEBA**

**AN INVESTIGATION INTO VOCATIONAL TRAINING  
PROGRAMMES FOR PERSONS WITH INTELLECTUAL DISABILITIES IN  
GHANA: A CASE STUDY AT THE DZORWULU SPECIAL SCHOOL.**



**A DISSERTATION IN THE DEPARTMENT OF SPECIAL EDUCATION,  
FACULTY OF EDUCATIONAL STUDIES, SUBMITTED TO THE SCHOOL  
OF GRADUATE STUDIES, UNIVERSITY OF EDUCATION, WINNEBA, IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD  
OF MASTER OF EDUCATION (SPECIAL EDUCATION) DEGREE.**

**FEBRUARY, 2018**

## DECLARATION

### Student's Declaration

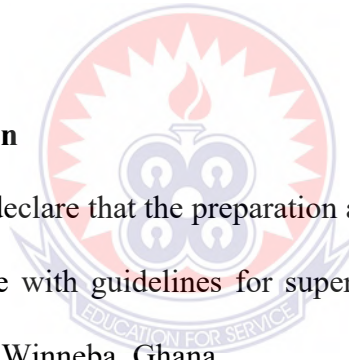
I, Mawulorm Afelete declare that this thesis which has been completed solely in fulfilment of masters of education, with the exception of quotations and references contained in published works which have all been identified and acknowledged, is entirely my own original work, and it has not been submitted,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

Signature.....

Date.....

### Supervisor's Declaration

I, Daniel Dogbe hereby declare that the preparation and presentation of this thesis was supervised in accordance with guidelines for supervision of thesis as laid down by University of Education, Winneba, Ghana.



Name of Supervisor: Dr Daniel Dogbe

Signature.....

Date.....

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The entire work is first of all dedicated to God the Father, God the Son, and God the Holy Spirit who saw me through and brought me this far. To Him alone be the Glory, Amen.



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## ABSTRACT

The purpose of this research was to investigate the vocational training programmes for persons with intellectual disabilities at the Dzorwulu Special School. A total sample of seven (7) respondents were selected with the purposive sampling strategy. Basically, the interview guide was the research instrument used in the study. The study found that there are different kinds of vocational training programmes for persons with intellectual disabilities in the Dzorwulu Special School. Some of the vocational training programmes run at the school include agriculture (poultry and gardening), ironing, doormat weaving, bead making, key holder designing as well as hairdressing and the garment making. Also, it came up that there is enough stock of material resources available for use at the school. It was however established that the materials and equipment available are not those that are supported by technology hence the need to acquire sufficient equipment for Information and Communication Technology and audio-visual aids for more successful training programmes at the school. Furthermore, the study found that there is good teacher-related service collaboration. However, that was just on capacity and in-service training for the teachers. There is therefore the need to establish team work involving related service personnel from different disciplines such as speech-language pathologist, occupational therapist, vocational therapist, and physical in training the students. Finally, the study brought to light that the main challenge facing the Dzorwulu Special School for the intellectually disabled was funding. Attempts made to get extra funding from well-wishers and philanthropist have mostly come out unsuccessful. The study recommended that the government must ensure that enough funds is made available for the programmes. Also, the Headmaster and other stakeholders must engage in other fundraising activities to raise enough funds for the programmes.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Theoretical knowledge and practical skills are the engines of economic growth and social development of any country. Globally, most countries have realized that investing in a strong and an effective vocational sector is crucial in every knowledge-based society as well as in developing countries. A joint message from United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Labour Organization (ILO) for revised recommendation for the 21<sup>st</sup> Century Technical and Vocational Education and Training (TVET) states that: “given the immense scientific, technological and socio-economic development, either in progress or envisaged, characterizing the present era, particularly globalization and the revolution in information and communication technology, technical and vocational education should be a vital aspect of the educational process in all countries” (UNESCO, 2001, p.9).

Vocational education programmes are offered in special schools for students with intellectual disabilities to prepare the students for adulthood and independent living. The programmes enable students to gain significant skills which in turn promote their quality of life, self-worth, respect and dignity. The programmes also instill a sense of empowerment, independence, and personal satisfaction to enable the students to participate actively and effectively in the different areas in the society.

Specifically, vocational programmes consist of a well-coordinated set of outcome-oriented activities that include independent living. The aim of vocational training for individuals with intellectual disabilities in special schools in Ghana is to prepare them to acquire skills necessary to lead independent lives in future. These

programmes are also to equip individuals with disabilities with skills in vocations for employment. Vocational training is therefore considered an essential tool for integrating individuals with intellectual disabilities in society by making them productive members. Besides, special schools provide appropriate training which prepares individuals with intellectual disabilities for the job market.

In Ghana, special schools for persons with disabilities are established primarily to provide functional academics and vocational skills to this group of individuals to help them contribute to national development by living independent lives after school (Novignon, 2014). The reason is, since these schools provide vocational skills training for individuals with intellectual disabilities, these individuals should be able to apply knowledge acquired from the programmes in any job setting for which they are trained. However, Amedzake (2011) posits that mostly, vocational programmes are not linked to jobs that students would want to enter in future. Yet, for individuals with intellectual disabilities to live independently, and to contribute more productively in their communities, they must be taught skills-based curriculum which is aligned to their individual needs and for the job market.

Based on the International Labour Organization's (ILO) ideals and principles, various vocational training programmes are expected to be designed for individuals with disabilities to enable them meet the requirements of life after school (Munkholm & Fisher, 2008 cited in Amedzake, 2011). These training programmes should also prepare individuals with intellectual disabilities to be trained in vocational skills where possible under the same principles, measures, methods and conditions as their non-disabled colleagues as far as their medical and educational conditions allow them.

Development of vocational training programmes for students with intellectual disabilities in the United States for instance has identified a number of programmes

practices which are associated with successful vocational training for students with intellectual disabilities (Sitlington, Clark, Kolstoe, 2000 cited in Akinyosoye et al, 2017). These programmes include, person-centered transition planning and assessment, community-referenced curriculum and instruction, individualized vocational programme (IVP), job placement prior to leaving school, and the importance of family involvement in educating individuals with intellectual disabilities (Sitlington, Clark, Kolstoe, 2000 cited in Akinyosoye et al, 2017). Unfortunately, the field of vocational education and training in Ghana seems not to portray this picture hence the need for this investigation into the vocational programmes for persons with intellectual disability at Dzorwulu Special School.

## **1.2 Statement of the problem**

Vocational training programmes are to be designed to train individuals with intellectual disabilities to live independently, and to contribute more productively to the society. They must be taught skills-based curriculum which is aligned to their individual needs and for the job market. To achieve this objectives, vocational training programmes centres must have adequate funding, well trained teachers, good instructional aids and materials, related services personnel, specific space and equipment needs etc. However, it appears the graduates are not getting the required employment as expected. This is particularly glaring due to the number of graduates who still roam the streets of the cities of Ghana especially Accra (Gyamfi, Mprah, Edusei, Dogbe, & Owusu 2015).

The high number of jobless vocational training programmes graduates make one thinks that these individuals did not acquire the requisite skills that would help them acquire jobs. This could be as a result of inadequate funding, lack of skilled

vocational teachers, inadequate specific space and equipment, lack of related services personnel, lack of teaching aids and materials among others making vocational training programmes ineffective hence the challenges being faced by the graduates. It is against this background that the researcher seeks to investigate whether the vocational training programmes provided at Dzorwulu Special School for students with Intellectual Disabilities enable them to acquire the necessary skills for independent living and the job markets.

### **1.3 Purpose of the study**

The purpose of the study was to investigate the vocational training programmes at the Dzorwulu Special School for Persons with Intellectual Disabilities.

### **1.4 Objectives of the study**

The objectives of the study were to:

1. Find the nature and model of vocational training programmes being offered at the Dzorwulu Special School for Persons with Intellectual Disabilities
2. Identify the material resources available for supporting vocational programmes at the Dzorwulu Special School for Persons with Intellectual Disabilities
3. Ascertain the level of collaboration between the teachers and related service providers at the Dzorwulu Special School for Persons with Intellectual Disabilities
4. Determine the challenges that teachers encounter at the Dzorwulu Special School for Persons with Intellectual Disabilities with regard to providing vocational training for students.

## **1.5 Research questions**

The following research questions were formulated as a guide to the study;

1. What is the nature of vocational training programmes being offered at the Dzorwulu Special School for Persons with Intellectual Disabilities?
2. What material resources are available for supporting vocational programmes at the Dzorwulu Special School for Persons with Intellectual Disabilities?
3. To what extent do the related service providers and teachers at the Dzorwulu Special School for Persons with Intellectual Disabilities collaborate to provide vocational training to the students?
4. What challenges are encountered by the teachers at the Dzorwulu Special School during the provision of vocational training for Persons with Intellectual Disabilities?

## **1.6 Significance of the study**

The results of the study will reveal and inform the Ghana Education Service (GES) about the state of vocational training programmes at the Dzorwulu Special School for Persons with Intellectual Disabilities. In this regard, the findings would prompt policy decisions and cause the necessary adjustments on the curriculum of the vocational programmes to be made. The findings would also inform the government about the state of resources available for teaching students with intellectual disabilities at the Dzorwulu Special School which would prompt the government to realize the need to restock the various training workshops of the school.

## **1.7 Delimitation of the study**

This study was delimited to the type of programmes being offered, resources and facilities available, collaboration between teachers and the other related service

providers as well as the challenges that the teachers and vocational trainers encounter at the Dzorwulu special school for persons with intellectual disabilities during vocational training. Another delimitation was that there are many schools for students with intellectual disabilities all over Ghana, yet, the researcher delimited the study to only the Dzorwulu Special School for Persons with Intellectual Disabilities since this is one of the pioneer schools for these students in the country and also the researcher stays closer to the premises of the school which would facilitate the process of data collection.

### **1.8 Limitations to the study**

The researcher adopted the descriptive survey design using only interview as the methods of data collection. The rationale was to generate data that could be easily manipulated and described. However, the finding cannot be representative of all special schools for individuals with intellectual disabilities in Ghana considering the population and the sample size for the study. The use of only interview did not also allow for in-depth investigation of the problem.

This study has been presented in five chapters. The first chapter covered the introduction which consists of the background to the study, the statement of the problem and purpose of the study. Others includes the scope, and limitations of the study, as well as definition of terms. Chapter two covered the review of related literature. It searched information from primary and secondary sources such as newspapers, encyclopedia, journals, books and internet blogs related to the research topic while the third chapter examined the methodology used in gathering data.



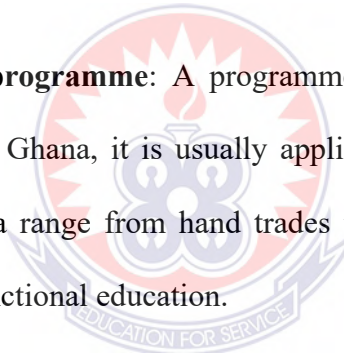
Chapter four examined and analyzed the data collected. Chapter five discussed and summarised the results of the study. References and appendixes came after chapter five.

### 1.9 Definition of terms

The definition of terms would be operational and referenced. The following terminologies would be defined:

- **Intellectual disabilities:** It is a disabling condition characterized by significant limitations both in intellectual functioning (reasoning, learning, problem solving) and in adaptive behavior, which covers a range of everyday social and practical skills. This disability originates before the age of 18.

- **Vocational programme:** A programme used to prepare students for a certain trade or craft. In Ghana, it is usually applied to such fields as welding and automotive service and a range from hand trades to retail to tourism management. Vocational training is functional education.



## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1 Overview

The chapter represents the literature reviewed for the study. The following strands were covered:

- Theoretical framework (the human capital theory)
- The nature and model of vocational training programmes for persons with intellectual disabilities.
- Level of collaboration between the teachers and related service personnel
- Resources available for the development of vocational training programmes for the persons with intellectual disabilities.
- Challenges faced by leaders of the vocational educational programmes.

#### 2.2 Theoretical framework

Theories are formulated to explain, predict, and / or understand phenomena and, in many cases to challenge and extend existing knowledge within the limits of critical bounding assumptions (Swanson, 2013). Swanson explains further that a theoretical framework is the structure that can hold or support a theory of a study. The researcher used the human capital theory in her study of the vocational training programme of Dzorwulu special school for the persons with intellectual disabilities in the Greater Accra Region of Ghana.

The human capital was popularized by Becker (1964), an economist from the University of Chicago, and Jacob Mincer that refers to the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to

perform labour so as to produce economic value (Crook, Todd, Combs, Woehr & Ketchen, 2011): The subject is closely associated with the study of human resources management as found in the practice of business administration and macroeconomics.

According to Frithjof (2014), the human capital theory is a modern extension of Adam Smith's explanation of wage differentials by the so-called net (dis)advantages between different employments. The costs of learning the job are a very important component of net advantage and have led economists such as Gary Becker and Jacob Mincer to claim that, other things being equal, personal incomes vary according to the amount of investment in human capital; that is, the education and training undertaken by individuals or groups of workers. A further expectation is that widespread investment in human capital creates in the labour-force the skill-base indispensable for economic growth. The survival of the human-capital reservoir was said, for example, to explain the rapid reconstruction achieved by the defeated powers of the Second World War.

Human capital arises out of any activity able to raise individual worker productivity. In practice full-time education is, too readily, taken as the principal example. For vocational workers, investment in human capital involves both direct costs, and costs in foregone earnings. Vocational workers making the investment decisions compare the attractiveness of alternative future income and consumption streams, some of which offer enhanced future income, in exchange for higher present training costs and deferred consumption. Returns on societal investment in human capital may in principle be calculated in an analogous way (Crook et al., 2011).

Even in economics, critics of human-capital theory point to the difficulty of measuring key concepts, including future income and the central idea of human

capital itself. Not all investments in education guarantee an advance in productivity as judged by employers or the market. In particular, there is the problem of measuring both worker productivity and the future income attached to career openings, except in near-tautological fashion by reference to actual earnings differences which the theory purports to explain. Empirical studies have suggested that, though some of the observed variation in earnings is likely to be due to skills learned, the proportion of unexplained variance is still high, and must be an attribute of the imperfect structure and functioning of the labour-market, rather than of the productivities of the individuals constituting the labour supply (Frithjof, 2014).

Human-capital theory has attracted much criticism from sociologists of education and training. In the Marxist renaissance of the 1960s, it was attacked for legitimating so-called bourgeois individualism, especially in the United States where the theory originated and flourished. It was also accused of blaming individuals for the defects of the system, making pseudo-capitalists out of workers, and fudging the real conflict of interest between the two. However, Crook et al., (2011) contend that even discounting these essentially political criticisms, human-capital theory can be regarded as a species of rational-exchange theory and open to a standard critique, by sociologists, of individualist explanations of economic phenomena.

The human capital theory is particular very essential as far as this study is concerned. It is worth finding out the economic relevance and potency of our vocational training programmes including what is going on in the Dzorwulu Special School for the intellectually disabled.

The above research studies reviewed on vocational education and training programme for people with intellectual disabilities revealed that in each country, the stake holders are trying hard to enhance the role of vocational training in the

successful rehabilitation of PWDs. Jobs are being specified, curriculums are being designed and methodologies are being finalized so that the VET for PWDs may be ensured and they should be made beneficial/productive citizens of their communities. ICT/computer based learning is emphasized in this regard and PWDs are ensured to work independently so that they may feel high being honourable citizens of their countries

### **2.3 The nature and model of vocational training programmes for persons with intellectual disabilities.**

Vocational training is the preparation for jobs that call for extensive practical experience and training. Disability-suitable and market oriented vocational training, job related training, job placement or self-employment opportunity and reasonable accommodation in work place are very much successful package in the world which has really supported to enhance the economic life of persons with disabilities (PWDs) in many places (Razzak, 2015). According to the author, providing vocational training to PWDs is a bit different and complicated than other people since their functional limitations and essential supports needed vary according to disability category and level of severity. The model and approaches of vocational training also varies as per the country, culture, need and resource; however there are some very regular practices, approaches or models of training.

The mainstream model of vocational training is one of the many commonly used models that the special educator can think of. In this model, the programme is run to provide training for any interested or needy people. These training centres provide very quality training for intellectually disabled trainees for the relevant job or business (Prasai, 2010). To ensure proper integration of the trainees, the physical

infrastructures, rules and regulations, systems, curriculum and evaluation processes of such training centres are made disability friendly. The resource persons (trainers) are also fully oriented about disability issues and capacities of PWDs. This model is very demanding and effective hence most PWDs want to be trained through such types of model (Prasai, 2010). Vocational training is based on the need of local market and they are supported technically and financially to start the self-employment or get relevant job in the local labour market.

Another model that needs mentioning is the Community-Based-Rehabilitation (CBR) model of vocational training. The CBR programme suggested the best strategies for the overall development, rehabilitation and empowerment of PWDs in the world (Razzak, 2015). This author stated that economic empowerment is one of the key components of CBR because it enhances economic participation of PWDs by mobilizing the local resources and taking advantage of the cooperation of the members of their own communities.

The apprenticeship model cannot be left out of this review. This is a way to gain skill in a particular craft or handicraft by working with experienced and skilled persons in his/her workshop or workplace. It is general knowledge that learning with experienced people in crafts and trades is a very longstanding and widespread means of developing skills (Atchoarena & Delluc, 2002). Through Ghana Regional Appropriate Technology Industrial Services (GRATIS), Ghana has started a training programme to assist the Junior Secondary School (JSS) leavers with some apprenticeship experience to be engaged in self-employment (Atchoarena & Delluc, 2002). This model is considered very good and cost effective to engage in informal economy because of flexible conditions and qualifications and less cost to start training. It is also useful for people with disabilities who face many barriers in

accessing formal sectors and centre based training. The flexibility of apprenticeships in combining work and learning, their affordability and self-financing, their connection with future employment, and their generally lower entry standards make them attractive as source of skills to disadvantaged youth (Adams, 2008).

Another type of vocational training model is peer training. According to Prasai (2010), peer training is a process where successful business people teach their skills to others. In this model the trainers and trainees are from same background, in the same living condition or the same disability category in the case of persons with disabilities (PWDs). In peer training the relationship between trainers and trainees is very close like friendship. They both have a very good spirit of teaching and learning. The trainee also feels a kind of deep ownership in the training. The author posits that in Cambodia such model is very effective to enhance the economic status of PWDs.

Prasai (2010) has also commended the group training model of vocational training. According to him, this is a model where a person learns skills within the group of people having same training needs. This model is known to be effective for saving time and resources. Here, one can find many groups having same interest and involved in same job. The case study of Cambodia is replicable in our context. Some PWDs having same training needs formed a group and started to learn Khmer music (which is old but popular music in Cambodia). After a time interval they were able to perform the music and started their performance for tourists and at wedding. They earned US\$ 700 per month Prasai (2010).

Additionally, the sheltered workshop model is another prudent method of vocational training for persons with intellectual disabilities. This is a traditional model where PWDs are kept in specially designed structures and provided different types of

vocational training. The trainees are given work in the same shelter and paid for their work. The goods produced are also marketed by the shelter. This type of model is highly expensive and cannot cover the wider population of PWDs. This model is not so popular in developing and underdeveloped countries (Razzak, 2015).

In the view of Parmenter (2008), there are several models of vocational training programmes for individuals with intellectual disabilities. Some of these models are similar to what is practiced in other disability categories, while others are peculiar to persons who are intellectually disabled. For instance, Parmenter (2008) pointed out that under a medical model of service delivery, people with intellectual disabilities who were assessed or deemed to be unsuitable for employment were catered for in “activity therapy centre” programmes, where one of the goals was to prepare them for employment options. Typically, only a very small number “graduated” to sheltered employment. According to Parmenter (2008), in practice, these centres in the past became the life-long option for people assessed as not being suitable for employment.

In the views of Murphy and Rogan, 1985; and Parmenter (2008) cited by Dehuri and Mukund (2016), sheltered workshops, initially established by parent groups, were essentially segregated vocational training facilities established for people considered unable or unlikely to obtain or retain a job in the open labour market. The authors posit that majority of those employed have tended to have intellectual disabilities. The workshops engaged in remunerative work to cover some of their costs. Workers are often paid a training allowance in addition to any welfare payments they might be entitled to, and very minimal or no wages - sometimes in the form of a bonus if production targets are met. They again claim that in many countries, these facilities are described as rehabilitation and training facilities, but very few workers ever



graduate to the general employment market, even when financial incentives are offered.

The International Labour Organization (ILO) Vocational Rehabilitation (Disabled) Recommendation (No. 99), adopted in 1955, was the first international instrument regarding national legislation and practice concerning vocational guidance, vocational training and placement of disabled persons; and guiding practice for almost 30 years (Parmenter 2011). While recommending vocational training, equality of opportunity and no discrimination in pay for equal work, the recommendation saw the establishment of sheltered workshops as one method of widening employment opportunities for workers with disabilities. This option was also cited by the United Nations (UN) Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993); the Council of Europe Social Charter (1961); the Council of Europe Action Plan to promote the rights and full participation of people with disabilities in society in the period 2006 to 2015; as well as the ILO Recommendation concerning Vocational Rehabilitation and Employment of Disabled Persons, 1983 (No. 168) that provides guidance on the implementation of ILO Convention No. 159. It is not envisaged, however, in the United Nations Convention on the Right of People with Disabilities (UN CRPD) (Parmenter 2011).

Given the results of research studies, in combination with the realization that real job in the community gives people a strong sense of identity, it came to be recognized that segregated settings send a message to people with disabilities, and to the population at large, that they are different from the rest of society, and that alternatives were needed to allow them to have the same conditions of life as everyone else (Nirje, 1985 cited in Dehuri & Mukund, 2016). This gave rise to a debate about sheltered workshops that continue to the present. Some of the arguments

in favour are avoidance of perceived physical risks in the outside world (Migliore et al, 2008); that sheltered workshops provide greater opportunities for the development of friendships than outside jobs (Weikle, 2008); the high complexity of jobs in outside employment being beyond the skills range and psychological capacity of people with intellectual disabilities (McConkey & Mezza 2001); and that sheltered employment tends to provide surety of employment across the person's life span without affecting disability benefits. Sheltered workshops are also seen to provide an option for people who fail to secure or maintain employment in the open labour market (Dehuri & Mukund, 2016) after vocational training programmes.

Despite all these, it is widely recognized that there is the need for transformation. In recent years, for example, high-income countries, such as Australia, have re-badged sheltered workshops as "Australian Disability Enterprises" where a much greater emphasis has been placed on good business practices and productivity. Wages and working conditions for the disabled employees have improved, in some cases as a result of trade union support. In New Zealand, legislation has ensured workers receive the minimum wage unless an exemption is granted in individual cases, based on assessed productivity rates. In Australia, wages are linked to assessed productivity of the individual employee, compared to the normal industrial award (Hedger, 2012 cited in Dehuri & Mukund, 2016)).

However, Parmenter (2011) stated that despite the advances, there is evidence that workers in sheltered workshops do not enjoy the same standards of protection available to workers in the open labour market. A survey of 5,000 workers in sheltered workshops in 24 states in the US revealed that people with disabilities in sheltered workshops earned US\$101 per month based on an average of 74 work hours (NCI, 2008). In contrast, Kregel and Dean (2002) showed that annual earnings for

persons in integrated employment settings was at least twice that earned by people in sheltered workshops.

The rate of successful transition of people with disabilities from sheltered workshops to the open labour market is minimal, ranging from under one per cent to about five per cent (US Government Accountability Office, 2001). However, Cimera (2011) found that two matched cohorts of employees - one in which employees had previously worked in sheltered workshops and the other in which they had not had prior sheltered workshop placement - were equally likely to be employed in the open labour market. The author observed that there was a difference in the rates of pay with the non-sheltered workshop cohort earning significantly more than those from the sheltered workshops.

It is evidently clear that every efforts is being made to put the sheltered models in better conditions to improve the well-being of all persons with disabilities. For instance in the US, a network of 23 state developmental disabilities agencies have developed policies under the umbrella of Employment First which has led states and providers to adopt service delivery strategies for persons with disabilities, including those with the most significant disabilities, that embrace the principle of integrated competitive employment (Kiernan, 2011). This initiative is strongly supported by self-advocates (Walker, 2011).

Besides, there are increasing signs that many sheltered workshops are transitioning to community employment options. For instance, in Australia, Greenacres, a large employment agency for people with intellectual and other disabilities, conducts an open employment programme in parallel with its sheltered workshop. It has a policy of actively seeking to move its employees into the

competitive employment labour market. Also, in the US, Rogan and Rinne (2011) have described the processes followed by ten organizations that have shifted their service delivery from sheltered to community employment.

In summary, sheltered workshops continue to provide an employment option in many countries around the world, although the need for improved conditions and opening of other opportunities is widely recognized. It will be interesting to see how those countries that have ratified the CRPD reconcile their on-going support of sheltered employment with its underlying principles (Parmenter, 2011). It is also important to point out that the review of the above models implies that each model has its specialties. For example mainstream model considers each and every one to participate, community based model emphasized overall development of the PWDs, the apprenticeship is good for skill acquisition, peer training focus the good relations between trainer and trainee, group training model attends to the people with similar training needs and sheltered model is considered highly expensive/not popular in developing countries (Razzak, 2015).

#### **2.4 Level of collaboration between teachers and related service personnel**

Collaboration in the vocational training programmes is one important area that cannot be overemphasized. The child's needs determine the type and amount of support necessary and personnel involved. In order to provide the most appropriate and least restrictive environment possible for students with intellectual disabilities, all teachers and related service providers must be "on the same page" (Blask, 2011). According to Friend and Cook as cited in Blask (2011), collaboration can be defined as "co-equal professionals" voluntarily co-planning to achieve common goals" while Kritiskos and Bimaum (2003) explain that "collaborative teaming unites general

education and special education in a process, which offers ongoing opportunities for the team members to share their skills, knowledge, and methods to facilitate learning”.

On the other hand, The Individuals with Disabilities Educational Improvement Act (IDEA) of 2004 defines “related services” as transportation and such developmental, corrective, and other supportive services as are required to assist a child with a disability to benefit from special education, and includes speech-language pathology and audiology services, interpreting services, psychological services, physical and occupational therapy, recreation, including therapeutic recreation, early identification and assessment of disabilities in children, counselling services, including rehabilitation counselling, orientation and mobility services, and medical services for diagnostic or evaluation purposes. Related services also include school health services and school nurse services, social work services in schools, and parent counselling and training (Hardman, Egan, & Drew, 2017).

Giangreco, Prelock, Reid, Dennis & Edelman (1999) pointed out that related services providers such as speech-language pathologists, school psychologists, physical therapists, and occupational therapists serve vital roles in supporting the education of many students with intellectual disabilities in vocational education environments. The authors further posit that it is important to note that much of the knowledge and many of the skills that related services personnel possess are not exclusive or unique to any particular discipline and may or may not be possessed by all those of a particular profession.

This is one reason why it is important to consider the potentially overlapping roles that special teachers and other specialists, family members, and related services personnel share. In vocational education models, team members must communicate

with each other to identify the potential interrelationships among their disciplines and to avoid unnecessary gaps, overlaps, and contradictions among their recommendations and activities. This will ensure that individually determined student supports are provided in ways that:

- effectively achieve specified outcomes,
- use resources in a responsible manner,
- are status enhancing or status neutral for the student, and
- are “only as special as necessary” (Giangreco, 1996 cited in Giangreco et al, 1999).

However, there has been confusion about what related services there are and how they should be provided. Making the distinction between what is educationally necessary and what is medically or otherwise necessary has been and continues to be one of the most contentious issues pertaining to school-based related services as far as vocational training programmes for persons with intellectual disability are concerned (Giangreco et al, 1999). The study pointed out that “although there are numerous examples of related services providers offering excellent support services to students with intellectual disabilities, related services have been provided since the mid-1970s in ways that too often:

- do not match the IDEA definition of related services;
- do not abide by court rulings pertaining to related services (e.g. Board of Education of the Hendrick Hudson Central School District v. Rowley, 1982; Irving Independent School District v. Tatro, 1984);
- do not coincide with exemplary practices for educating students with disabilities (Meyer & Eichinger, 1994); and

- do not adequately support students with disabilities in general education classes”.

Giangreco, Prelock, Reid, Dennis and Edelman (1999) further lamented on the following historical interferences that undermine the effectiveness of the provision of related services to students, families and school personnel:

- Families and school personnel interact with related-services personnel as “experts” rather than collaborative team members.
- Families and general teachers have insufficient involvement in related-services decision making.
- Groups of individuals serving the same student do not always function as a team.
- Typically, no process is used to assist in making related-services decisions.
- Autocratic decisions about support services are made by related-services providers in isolation without consideration of the interrelationships among the services provided by team members.
- Each discipline develops separate goals based on discipline-specific assessments.
- Related-services planning, implementation, and evaluation often are unrelated to the educational programmes.
- Pull-out approaches that do not match the intended educational functions of related services are used.
- Students are placed in special education schools or classes so they can receive related services rather than being provided services that support them in general education programmes and placements that are less restrictive.

- Group members often defer to one another rather than risk the potential conflicts associated with openly addressing support services decisions),
- However, after observations, interactions, and research with related services providers, Giangreco et al (1999) came out with several standard roles that cut across disciplinary boundaries and also reinforces the need to examine critical approaches to service delivery by support service personnel. According to the authors recognition of these roles will help overcome the problems that undermine the effective collaboration between teachers and related service personnel. The standards are but not limited to the following:
  - Establishment of a shared framework to share common set of beliefs, values, or assumptions about education, children, families, and professionals that they negotiate through active participation and contribution.
  - Establishment of common goals and avoid the “Expert trap”. This brings parents, teachers, special educators, related services specialist to form a collaborative team to agree and disagree towards a common goal for the good of the intellectual disable students.
  - Having parents and teachers become better consumers. This implies that parents are the only adults likely to be involved with a student throughout the student’s school career while teachers are typically the professional staff who spend the most time with a student in school.
  - Ensuring the educational relevance and necessity of support services. This makes professional literature complete with criteria for making related services decisions for students with disabilities.
  - Working in the context of the general education programme and environment. This encourages specialists function as collaborative members, helps teachers



and parents work on the child's education goals rather than impose separate therapy goals, provides assistance at times and in ways that considers the operation of the classroom in order to avoid disruption, and uses approaches that are not overly technical or specialized, or that the student may avoid being unnecessarily stigmatized.

- Engaging in a variety of functions which includes developing adaptations, equipment, or both to allow for active participation or to prevent negative outcomes; transferring information and skills to others; serving as a resource, support, or both to the family; and applying discipline-specific methods or techniques to promote active participation, to prevent negative outcomes, or both.
- Evaluating the impact of related services. In this evaluating process, some of the questions asked include “has the service provided access to or allowed for participation in the educational programme”?; has the service facilitated improvement in identified learning outcomes that would probably not occur in the absence of the service?”; and does the student experience positive changes in his or her life as a result of the service?”

As it has already indicated educating persons with intellectual disabilities requires collaboration and teamwork among many people – several professionals and parents in particular. Indeed, there are few areas of education that call upon so much collaboration and teamwork. This is particularly true in inclusive and special education where, ideally, general classroom teachers may work with various combinations of specialist teachers; special needs advisers; educational psychologists; therapists and other specialists; community agencies such as welfare services, policy and advocacy groups; paraprofessionals; technology consultants; and, of course,

parents (Rainforth & England, 1997 cited in Mitchell, 2010). According to experts in collaborative teaming, an effective collaborative teaming process involves regular, positive face-to-face interactions, a structure for addressing the issues, performance and monitoring, and clear individual accountability for agreed-upon responsibilities (Thousand & Villa, 1992; West & Idol, 1990 cited in Hunt, Soto, Maier, & Doering, 2003).

For collaboration and teamwork to work effectively among professionals there are several issues and areas of concern that are important to address. One of such factors is time. Time must be purposefully set aside and be made available to teachers so that they can productively work together. Time was found to be a major factor in studies. According to Hunt, Doering, Hirose-Hatae, Maier, and Goetz (2001) regularly scheduled meetings allowed for reflection, collaboration, brainstorming, and also time to listen to one another. Hunt, Soto, Maier, & Doering, 2003) also argued that a positive outcome for regularly scheduled time meetings allows teachers to reflect together on an ongoing basis, as well as providing the opportunity to seek the input of the child's parent(s). Taking the time to schedule meetings provides the opportunity to focus efforts on students who require intensive and comprehensive plans (Hunt et al., 2003). If there is less commitment to working with peers on problem-solving with collaboration, there will be less need to find time to participate in such an activity.

Communication is another major element that must be considered for productive collaboration. Correspondence among teachers is an important component to all aspects of collaboration but most importantly to communication (Blask, 2011). The author posited that without correspondence there will be a great discomfort felt among members which will negatively affect participation. To overcome such

obstacles teachers must be willing to work together and have a positive attitude. Having an open mind about change and working as a team will create a better environment for all to work in (Kritikos & Birnbaum, 2003). Smith and Leonard (2005) put forward that if all members are seen as equal within the team, there will be less opportunity for dysfunction and unresolved conflicts. The authors continued to argue that this will foster the feeling of support among team members to better cooperate and make decisions. This good collaborative teaming is only developed through good communication (Hunt et'al., 2003).

Sharing of expertise is another area worth discussing. At the centre of all good, collaboration must be sharing of knowledge to enhance one another's ability to support a student's learning in all areas of the school environment (Blask 2011). More specifically, the author indicated that all members, through the collaborative process, are able to gain knowledge and possess an influential element that will better assist students in the vocational education classroom. To create successful special education practices there must be successful circulation of information and knowledge between team members: teachers and others must work together in sharing plans, planning together, and sharing multiple resources (Kritikos & Birnbaum, 2003). The sharing of unique experience, expertise and perspective produce diverse ideas which enhance creativity of all members through these interactions (Hunt, 2001). Hunt (2001) further argues that teachers wanted to learn from each other and have the opportunity to pick the brains of people who are outside their realm of expertise through their collaborative experiences.

Professional development is another essential component for collaboration with special education classrooms. When working with students with disabilities in vocational programmes, all faculty members working with the child must understand

the child's specific needs. This takes a set of defined skills that are well developed. The child's needs determine the amount of supports necessary and personnel involved (Blask, 2011). Blask (2011) indicated that for some students, the team may include a one-on-one aide, related service providers, such as a physical therapist, speech/language therapist, occupational therapist, or even a teacher of the child with intellectual disabilities. One of the many ways to obtain the necessary skills set is through education and professional development. In a study by Idol (2006), teachers and support providers have expressed that they felt the professional development would help them to better contribute in their collaborative team and better support student needs. Idol (2006) also argues that by participating in professional development teachers would use sound disciplinary practices such as instructional and curricular modifications more effectively regardless of whether the student is a student with a disability or a student who is at risk for school failure.

By giving teachers the support they need they will feel more comfortable and more willing to participate in training of students with intellectual disabilities at vocational schools. More knowledge through professional development would also increase problem solving skills, allow teachers to better reflect upon their practices, better theorize on accommodations and solutions, and over all create more effective collaboration (Weiner, 2003). There are always new programmes or improved methods. It is important for teachers to stay with or ahead of their profession and always learn new ways that they can teach to better support these intellectual students.

Administration is a key factor when it comes to effective collaboration between teachers and related services providers to meet the needs of Persons with Intellectual Disabilities (PWIDs) at vocational schools. The leadership style is one of the most important factors to facilitating collaboration among faculty members.

Principals are supposed to have positive attitudes towards students with disabilities. Another portion of a principal's job is to ensure time for teachers to collaborate (Carter et al., 2009). Smith and Leonard (2005) argue that principals play a key role in helping to foster positive attitudes among their staff. However, without administrative involvement there is no external motivation for teachers to work through their differences and ultimately work together. Instead teachers will not work through their differences and end up working independently (Carter et al., 2009). Therefore, principals must foster commitment by providing opportunities for ongoing staff development and always support in the vocational training programmes for individuals with intellectual disabilities (Smith & Leonard, 2005).

For a good and effective motivation among teachers and related services providers, it is incumbent upon the school organizational leadership to set an expectation for collaboration and to explicitly create opportunities, incentives, rewards, and training for such collaboration (Nevin et al., 1990 cited in Hunt et al., 2003). Methods for promoting collaborative teams within schools have been identified and include flexibility in teaching assignments, formation of teaching teams, and job redefinition (Miles & Darling-Hammond, 1998; Nevin et al., 1990 in Hunt et al., 2003). The authors argue that for members to review the practicality and applicability of suggested supports to any student, they must be afforded flexibility by the authorities of the school. The authors again states that responding to the educational needs of students at risk and those with disabilities requires schools to unify and reallocate resources which is the job of the principal (Hunt, Soto, Maier, & Doering, 2003).

Furthermore, one of the important feature of the collaborative process was the critical role played by parents in the development and implementation of the

plans of support. It is therefore necessary to provide opportunities for parents to be involved in the collaborative process. Parents usually have insights to their child's likes, dislikes, and behaviours outside of the school setting. This information could be helpful to improving a student's learning within the classroom. Parents also play a critical role in the development and implementation of an academic or behavioural support plan (Hunt et al, 2003). While working in many classrooms with students having disabilities it is important to have the support and involvement from the parents. Without their help the child is not receiving consistent reinforcement and follow-through supports at home and this inconsistency could break down the process for a child to progress (Hunt et al, 2001). Having parents involved is also beneficial to the parents as well because it broadens their perspectives on their child's curriculum, collaboration with teaching professionals, and special educational practices (Hunt et al, 2001).

To have an effective level of collaboration between teachers and related services providers, all the team members should know and understand its importance, the principles to uphold, and the attitude and character to put up in their collaborative teamwork. According to Mitchell (2010), collaboration benefits all in that, it has potential to create synergy – where 'the whole is greater than the sum of the parts'; it has the potential to provide opportunities for the participants to learn new ways of addressing barriers to learning; and it increases the coordination of services for PWIDs.

Besides, Mitchell (2008) indicated that to realise the potential of collaboration, participants have to learn the skills of working as team members for at least part of their work. Mitchell (2008) again pointed out that for the team to have a successful collaborative arrangements, the following principles must be in place:

- Defining the respective roles and who is accountable for what, but accepting of joint responsibility for the decisions and their outcomes.
- Adopting a problem-solving approach – with a sense that all those in the collaborative arrangement share ownership of the problem and its solution.
- Establishing an atmosphere of trust and mutual respect for each other's expertise.
- Being willing to learn from others.
- Aiming for consensus decision-making.
- Asking for and giving immediate and objective feedback to others in a non-threatening and non-judgemental manner.
- Giving credit to others for their ideas and accomplishments.
- Developing procedures for resolving conflicts and managing these processes skilfully.
- Arranging periodic meetings to review progress in the collaborative arrangements.

Other qualities that make collaborative teamwork successful include time for establishing individual positive relationships with students; good listening skills; and working with pupils in class, in a one-on-one, and across contexts including lunchtimes/playgrounds. The rest are qualities of fairness, patience and tolerance; understanding of students' difficulties; and access to a range of support strategies (Groom & Rose, 2003 cited in Mitchell, 2010)

In general, IDEA (2004) requires that a child be assessed in all areas related to his or her suspected disability. This evaluation must be sufficiently comprehensive so as to identify all of the child's special education and related services needs, whether or not those needs are commonly linked to the disability category in which he or she

has been classified. This according to IDEA (2004) will help children with disabilities benefit from special education by providing extra help and support in needed areas, such as speaking or moving (Centre for Parent Information and Resources, 2017).

To achieve the objective of related services provided to students with intellectual disabilities, Mitchell (2010) posited that the authorities of the educational sector are to establish and increase special education and related services faculty. Institutions of higher education should recruit and train more fully qualified professors of special education to address the shortage of special education and related services doctorate holders who are qualified to teach the nation's future educators and prepare them to achieve better results for diverse learners (Asabere-Ameyaw, 2015, Avoke, 2008). In addition, the Department of Education, in collaboration with other government agencies, should conduct research to identify the critical factors in personnel preparation that improve student learning and achievement in schools. While recent research has begun to determine critical factors in instruction, more high-quality research is needed on instructional variables that improve achievement by students of disabilities (Mitchell, 2010).

## **2.5 Resources available for the development of vocational training programmes for persons with intellectual disabilities.**

In reviewing literature on the resources available for the development of vocational training programmes for the persons with intellectual disabilities, the following sub-topics were reviewed: qualities of vocational training teachers for the intellectually disabled, and material resources for effective vocational training programmes.



### **2.5.1 Qualities of vocational training teachers for persons with intellectual disabilities**

Any investigation into vocational education and training for students with intellectual disabilities will critically look at the quality of teaching and all related training activities. The quality of teachers and trainers also depend on training of special education teachers. In Ghana, training of teachers for special education started with the establishment of Deaf Education Specialist Training School in 1965 and by 1985, a department for mental retardation (intellectual disability) was added (Avoke, 2008). Avoke pointed out that as at 2006, the Department of Special Education at the University of Education, Winneba was running a Masters programme in special education by sandwich option, Mphil in special education and PhD programme in special education. According to Avoke (2008) today, the department has turned out a large member of teachers, many of whom are all teaching in special schools in the country such as Dzorwulu Special School.

Apart from increasing research and quality training of special education teachers, pedagogical skills have more positive impact on students with disabilities when teachers employ the most effective methods and strategies in skill training. Teachers must identify academic, social and vocational areas of persons with intellectual disability which needed to be developed. According to Nabwana (2014) the aim is to achieve skill mastery. Avoke (2008) pointed out that the methodology employed in special education are not set apart from what prevails within the regular classrooms. If anything, there is added advantage of adopting special educational principles and these help teachers and parents to see beyond what it takes to be a regular classroom teacher. This is seen in the light of the general objective of vocational education and training (VET) programmes for persons with intellectual

disabilities (PWIDs), which is to motivate them to complete a programme of training that can qualify them for employment and at the same time, accommodate the needs of the labour market. To achieve this Kirk, Gallagher and Anastasiow (2003) pointed out that emphasis should be on instructional experiences which encourage the individual to retain the skill. These training programmes are therefore organized by employing teachers and trainers to give the students a taste of further education and active participation in society by developing student's personal and social skills like instilling a spirit of independence and cooperation, and stimulating their awareness about innovation, environment and internationalization (Dess & Pickens, 1999).

According to the Ministry of Education (2013), about 2 percent of the entire population of school going age in Ghana has some form of disability. More than 25 percent out of school children aged between 6 and 14 has at least a form of known disability. That means the disability status of the majority were not known at the time. This implies they are not being given the chance to become independent individuals and to support their communities through special education programmes. Meanwhile, Ghana's Education Strategic Plan (2010-2030) stipulates that, the Ministry of Education shall—provide education for those with physical and mental impairments, orphans, and those who are slow or fast learners, by including them, wherever possible, within the mainstream formal system or, only when considered necessary, within special units or schools (Ministry of Education, 2013). To achieve this goal and other international goals in these regards, it requires urgent and sustained attention. In particular, attention needs to be paid to preparing teachers to become capable, providing worthwhile vocational education and technical training to persons with intellectual disabilities International Bureau of Education of United Nations Educational, Scientific and Cultural Organization (IBE-UNESCO, 2008).

In local and international terms, there is the need for very experienced and motivated teachers to ensure effective and efficient vocational education and training for PWIDs. Such teachers according to Nolet and McLaughlin (2000) with the right strategies can help ensure that every child or adult including PWIDs learn to their full potential and well-equipped to be active citizens and support the development of their society and country. The strategies for teachers and the best modes of delivery in the vocational training programmes cannot be overemphasized because they are very important aspect of the resources needed for effective vocational training. According to Goldstein and McGinnis (2007), the new skills needed by VET teachers and trainers require new strategies for teacher and trainer training. In a rapidly changing world it is inconceivable that initial training can equip teachers and trainers for careers which may last 40 years: training to teach is a lifelong enterprise. In the new setting, theory has to be more tightly integrated with practice than in the past. Above all, teachers and trainers have to feel they are taking part in the training process. The author pointed out that often, the push to adopt (and teach) new teaching practices has come not from teachers themselves but from new legislation or management. It is essential, therefore, that teachers develop a sense of 'ownership', working to make the new techniques their own (Nabwana, 2014).

According to the Meador (2013), there are too many discouraging factors associated with teaching that is difficult enough on a teacher who absolutely loves what he does, much less on one who does not have the drive, passion, or enthusiasm for it. Some of these factors include poor attitude of students towards vocational training programmes. These affect their competency levels-thus, their inability to understand the relevance and the usefulness of the training. With this, Vlachos (2008) postulates that the cognitive aspect of the individual with intellectual disabilities' life

has adversely been affected by their continuous experiences of failure. They later expect failure in whatever they do and tend not to set meaningful goals for the fear of failure. They often do not trust their own abilities and rely on others (external sources) to solve their problems. To this, United Nations Children's Fund (UNICEF) of 2000 point out that good teachers and trainers are not skilled only in instructional methods, but also in evaluation and assessment practices that allow them to gauge individual student learning and adapt activities according to student needs.

This process should include both performance assessment and assessment of factual knowledge. Observations in Guinea and India found that teachers are poorly trained in evaluation techniques, and the reality is far from the continuous evaluation procedures recommended by official programmes (Carron & Chau, 1996, cited in Hayford, 2013). Indeed, many teachers and educational systems continue to rely almost exclusively on traditional paper-and-pencil tests of factual knowledge that tend to promote rote memorization rather than higher order thinking skills (Colby, 2000).

Students with disabilities have a variety of styles for learning new skills. Some learn best by doing (kinesthetic), others by seeing (visual), or by hearing (auditory). There is no right or wrong learning style. In the classroom it is essential that the teacher does not prefer one style over another when choosing methods to teach especially PWIDs. The more different styles the teacher uses the better pupils learn to use other styles too. According to Canadian Hearing Society (2001), what works for one student, will not work for every student. Teachers have to be willing to be creative and adaptive in their lessons, thinking outside the box on a continual basis. If a teacher tries to teach every concept in the same manner, there will be students who miss out on key factors because they are not wired to learn that way. Therefore successful students have flexible and integrated styles. Kirk, Gallagher &

Anastasiow (2003) outline several types of instructional strategies commonly used in conducting individual or group remedial teaching such as; -Diagnostic-Prescriptive Teaching, Individualized Educational Programme, Behaviour modification, Direct Instruction Approach, Unit Teaching/Center of Interest, Multi-sensory Approach and Cognitive Training among others. It would therefore be helpful if the teacher spends some time to reflect on the various learning styles that the pupil employs when he/she is teaching.

Another important quality of vocational education and training teachers need to possess is to be proactive rather than reactive (Malkowski, 2001). As difficult as this quality may seem for teachers of students with intellectual disabilities to possess, with proper planning and organization one can ultimately make the job less difficult. Though both proactive and adaptive are most effective qualities of a trainer, these cannot rule out surprises. Kenopic (1996) however, contends that being proactive can cut down on these surprises significantly, thereby making effective and better teachers for the intellectually disabled. Similarly, according to Malkowski (2001), an effective teacher for the intellectually disabled understands the content that he teaches and knows how to explain that content in a manner that their students understand. There are teachers for the intellectually disabled who are truly experts on the content, but struggle to effectively explain it to their students. The highly effective teacher both understands the content and explains it on level. Kenopic (1996) adds that this can be a difficult skill to accomplish, but there are teachers who are able to maximize their effectiveness as teachers.

Mutua and Dimitrov (2001) have also put forward that there has been a growing feeling that, teacher education training courses are not effective in turning out efficient teachers, especially in teaching children with diverse needs. The scholars

add that individuals with intellectual disabilities may find it harder to learn in school when separated from their families. This is the reason why there are growing needs for teachers who would have the desire and the qualification to teach these individuals to be able to qualify as a teacher for individual with intellectual disabilities. The teacher needs to obtain such qualification or equal teaching experience about the job. Some of the requirements involve a degree of psychotherapy, social science, applied psychology, master's degree in education or alternative licensure programme for special education can also be accepted in this teaching job and allied field of expertise.

Positive attitudes and perceptions are other qualities that a teacher of intellectually disabled student has to possess. Reid and Johnson (2011) posit that, a teacher's attitude towards a certain subject matter may affect his/her behaviour and response toward it. Thus, it is not only important to understand what teachers know, misperceive and do not know about intellectual abilities, but also to gain insight into their attitudes and personal opinions of the disability, which ultimately come to affect the way in which they deal and manage persons with intellectual disabilities. The authors content that even if the teacher has the best knowledge of the disability but has a negative attitudes toward it, his/her behaviour toward the students will be negatively affected. . In other words, what teachers know and how they perceive PWIDs could influence students' academic, emotional and social development (Girio & Owens, 2009). To overcome any negative attitudes, vocational trainers for intellectual disabilities themselves must be concerned with the daily affairs of the classrooms, the subjects that were taught, the students in the class, their various levels of cognition and cooperation, and the assignment of various types of grades because teaching cannot be limited to what goes on in the classrooms alone but effective

teachers must be aware and exposed to as much the political, environmental, and psychological activities and factors that influence the students and other members of the learning community who all form an essential part of the school (Afful-Broni, 2004).

The main objective of vocational education and training (VET) is to help develop the individuals including PWIDs knowledge of science and technology in a broad occupational area requiring technical and professional competencies and specific occupational skills. To achieve this, Olaitain (2007) cited in Puyate (2008) postulates that teachers who are the major operators of vocational educational systems or programmes, are expected to effect and impart the needed knowledge to the trainees. This can only be effective if the teachers are in their right frame of mind. This needs stimulus such as providing them with the needed remuneration, incentives, allowances, promotion and so on. If government places much importance on vocational education programmes, then ‘the horse that muzzles the corn’, must not be neglected because the teacher is the centre of the implementation of any education programme. Clearly, the success of vocational education and training at special education has a lot of relevance to classroom teachers and it is therefore important for all teachers to be exposed to rudiments in special education so as to become effective in their teaching and skills training, understand the needs of all pupils and to help children who will be at risk for intellectual disabilities (Avoke, 2008).

Besides, both teachers and related service personnel like speech-language pathologists need to abreast themselves of communication challenges facing individuals with intellectual disabilities. Communication is indeed one of the major elements of success in any human relationship. People are by nature social animals, and the means of living in a manner that is healthy and that would enhance this social

life of the human person is through proper communication (Afful-Broni, 2004). Effective communication is the hallmark of any teaching and learning processes. Speech and language comprise the major message systems or tools most often used in human communication and especially in teaching and learning (Hallahan, Kauffman, & Pullen, 2009 cited by Yekple & Deku, 2014). Vocational teachers must be skillful at how they teach and communicate their knowledge (Adams, 2008). Students with intellectual disabilities have difficulty with concentration, communication skills, understanding instructions, and difficulties in becoming independent. Teachers must therefore handle and teach with various techniques in learning including basic effective communication and social interaction (Zhang & Stecker, 2008, cited in Yeboah, 2015).

### **2.5.2 Related service personnel in vocational training programmes**

In addition to the academic services provided by the teacher, children with disabilities are entitled to receive related services. The term related services is defined as “transportation and such developmental, corrective, and other supportive services... as may be required to assist a child with a disability to benefit from special education” (Batshaw, Pellegrino & Roizen, 2007). According to World Health Organization [WHO] (2001), persons with disabilities may experience a wide range of impairments in body structure and functions, limitations in their ability to participate meaningfully in activities of daily life, and restrictions in their ability to be an active part of their community. Special-needs related services and training are commonly recommended to address these issues. These services according to Gately (2015), create an environment in which special-needs students can receive individual or differentiated teaching or other support. According to IDEA (2004), these services include speech-language pathology and audiology services; psychological services;



physical and occupational therapy; recreation, including therapeutic recreation; social work services; counselling services including rehabilitation counselling; orientation and mobility services; interpreting therapeutic recreation; medical services and nurse services.

Hohenshil (2008) observed that many vocational programmes in community settings lack the above-mentioned training and/or service providers to meet the needs of all students. However, this study's findings would serve as a true reflection of the case in Ghanaian schools with the Dzorwulu Special School for the intellectually disabled as a point of reference. For students who need special education related services to access and be successful in job training, it is critical that they receive vocational training before they complete high school. Several approaches are available for alleviating learning difficulties and developing learning skills. Hohenshil (2008), advised that it is critical that vocational training programmes for students be designed so that they have the skills they need to be successful in employment in the community.

The practice of using teams of professionals, often from different disciplines, who work together to meet the needs of individuals with disabilities and their families has existed in clinical and educational settings for many years. According to Storey and Horner (2011), the Individuals with Disabilities Education Act (IDEA) encoded this concept into federal legislation that stipulates that teams identify students with disabilities, plan and implement intervention for them. The authors continued to add that in recent years, teams have expanded to include personnel who support the work of professionals. IDEA allows paraprofessionals and assistants who are appropriately trained and supervised according to laws, regulations or written policies to assist in providing special education and related services to children with disabilities.

Another reason for considering the use of support personnel in vocational training programmes is to provide an effective way of increasing the frequency and intensity of services for populations of clients that are ever more diverse and whose problems are often complex. When drawn from the surrounding community, support personnel may provide a link to families that are culturally and linguistically diverse, thereby increasing access to vocational training services by potentially underserved populations (Weiner, 2003). This author added that the integrating support personnel as an additional support to direct professional expertise where it is most needed, help to ensure that the needs of all clients are appropriately addressed.

Depending on their training, experience and personal qualifications, support personnel can assist with tasks as simple as record keeping, or with more demanding activities, such as assisting with generalization of learned skills to multiple settings (Mank & Horner, 2011). According to Mank and Horner (2011), changes in the service delivery system, increasing numbers of individuals who need communication and related services, ever-rising costs of providing an array of services, as well as technological and scientific advances, have resulted in an expanding scope of practice for the profession of speech-language pathology. In meeting these professional challenges, growing numbers of related service persons working in educational and clinical settings are acting not only as service providers, but also as managers of service delivery systems.

According to Giangreco, Edelman, Luiselli and MacFarland (2008), support personnel are people who, following academic/vocational and/or on-the-job training, are qualified to perform tasks as directed and supervised by licensed and/or certified personnel. Depending upon their training level, or the setting in which they function, they may be identified by various titles. The most common terminology includes

“paraprofessional”, “assistant”, “associate”, or “aide”. In any given practice setting, more than one level of support personnel may operate, differentiated according to training and scope of responsibilities. Similarly, in the view of Sowers, Hall and Rainforth (2012), the purpose of using related and support personnel is to augment the delivery of services by the related service personnel by redirecting their expertise. The authors further posited that utilizing such a service delivery model does not prevent ongoing, active recruitment of related service persons to the workforce. Rather, having different levels of support personnel allows for increased diversity in the workforce, providing opportunities to build career ladder options. Some of these support personnel include:

- Speech-language pathologist
- Occupational therapy and
- Vocational therapists
- Physical therapy



#### **2.5.2.1 Speech-language pathologist**

The speech-language pathologist is a very important professional in the vocational training programme of persons with intellectual disability. Speech-Language Pathologist (SLP) is a professional title. The SLP’s traditional role has been to serve students in special education with speech, language or hearing problems. This service delivery is given to the client outside the classroom. Now, the SLP forms partnership with the regular teachers and teachers in special education, assists children with communication disorders in various ways; assists individual therapy for the child; collaborates with vocational teachers and counsellors; works closely with

clinicians from all disciplines; and provides services and caring for parents whenever necessary (Gadagbui, 2014).

Speech-language pathologists, sometimes called speech therapists, assess, diagnose, treat, and help to prevent disorders related to speech, language, cognitive-communication, voice, swallowing, and fluency. Speech-language pathologists work with people who cannot produce speech sounds or cannot produce them clearly; those with speech rhythm and fluency problems, such as stuttering; people with voice disorders, such as inappropriate tone or harsh voice; those with problems understanding and producing language; those who wish to improve their communication skills by modifying an accent; and those with cognitive communication impairments, such as attention, memory, and problem solving disorders. They also work with people who have swallowing difficulties (Blask, 2011, Hunt et al, 2003).

According to Blask, (2011) and Hunt et al., (2003), speech, language, and swallowing difficulties can result from a variety of causes including stroke, brain injury or deterioration, developmental delays or disorders, learning disabilities, cerebral palsy, cleft palate, voice pathology, mental retardation, hearing loss, or emotional problems. Problems can be congenital, developmental, or acquired. Speech-language pathologists use special instruments and qualitative and quantitative assessment methods, including standardized tests, to analyze and diagnose the nature and extent of impairments. As a result, speech-language pathologists develop an individualized plan of care, tailored to each patient's needs. For individuals with little or no speech capability, speech-language pathologists may select augmentative or alternative communication methods, including automated devices and sign language, and teach their use. They teach patients how to produce sounds, improve their voices,

or increase their oral or written language skills to communicate more effectively. They also teach individuals how to strengthen muscles or use compensatory strategies to swallow without choking or inhaling food or liquid. Speech-language pathologists help patients develop, or recover, reliable communication and swallowing skills so students can fulfill their educational, vocational, and social roles.

Similarly, Blask (2011) has also pointed out that speech-language pathologists keep records on the initial evaluation, progress, and discharge of clients. This helps identify problems, tracks client progress, and justifies the cost of treatment when applying for reimbursement. They counsel individuals and their families concerning communication disorders and how to cope with the stress and misunderstanding that often accompany them. They also work with family members to recognize and change behavior patterns that impede communication and treatment and show them communication-enhancing techniques to use at home.

Most speech-language pathologists provide direct clinical services to individuals with communication or swallowing disorders. In medical facilities, they may perform their job in conjunction with physicians, social workers, psychologists, and other therapists. Speech-language pathologists in schools collaborate with teachers, special educators, interpreters, other school personnel, and parents to develop and implement individual or group programmes, provide counseling, and support classroom activities (Mank & Horner (2011). These scholars contend that some speech-language pathologists conduct research on how people communicate. Others design and develop equipment or techniques for diagnosing and treating speech problems. According to Giangreco et al., (2008), speech-language pathologists usually work at a desk or table in clean comfortable surroundings. In medical settings, they may work at the patient's bedside and assist in positioning the patient. In schools,

they may work with students in an office or classroom. Some work in the client's home.

From the point of views of Blask (2011) and Hunt et al (2003), speech-language pathology is not physically demanding, it requires attention to detail and intense concentration. The emotional needs of clients and their families may be demanding. Similarly, Hohenshil (2008) has pointed out that although the speech-language pathologist (SLP) may delegate specific tasks to support personnel in speech-language pathology (SLP), the legal and ethical responsibilities reside with the professional. Professional liability must remain the shared responsibility of the supervising SLP and/or the employing agency. Support personnel may execute specific components of a speech and language service delivery programme, as specified in a treatment plan, under the direction and supervision of a qualified SLP. Support personnel execute only those tasks that are within their scope of responsibilities and that they have the training and expertise to perform. The SLP must provide at least the minimum specified level of supervision to ensure quality of services for all persons served. The amount of supervision may vary, depending on the complexity of the training and the amount and type of the experience of individual support personnel. The employing agency must maintain documentation of pre-service training, in-service training, and supervision of all support personnel. SLPs and their employers must hold paramount the individual needs of clients when determining the appropriateness of a support personnel service delivery model (Sowers, Hall, & Rainforth, 2012).

### **2.5.2.2 Role of occupational therapist in vocational training programmes**

Another very important area in the delivery of vocational training programmes is occupational therapy. Occupational therapist focuses on evaluating the cognitive, motor, and sensory processing skills needed for independence in self-care, play, and school performance, which are the primary “occupations” of childhood (Batshaw, Pellegrino & Roizen, 2007). Although playing will be the choice for most young children, therapy incorporates a variety of interventions including exercise, sensory stimulations, physical agents, splinting or casting, adaptive aids and equipment, and behavioural training, depending upon the needs of the individual child (American Occupational Therapy Association [AOTA], 2002).

Occupational therapy practitioners, through their education and training, have the skills to evaluate worker capacities, task performance, and the work environment and to provide interventions related to these areas. According to Weiner (2003), using a client-centered perspective, occupational therapists evaluate the impact of wellness, cognition, physical disabilities, psychosocial factors, and medical conditions on work performance. In particular, occupational therapists possess the distinct ability to evaluate the intersection of an individual’s work demands and the work environment through evidence-based task analysis. The occupational therapy evaluation can identify supports and barriers to success in the work environment, including work culture that can be addressed in the intervention plan to enhance work performance (Weiner, 2003). This scholar puts forward that the occupational therapist also considers other contexts and environments that may support or hinder the ability to fulfill the worker role, such as access to transportation and the ability to dress oneself in a timely manner for the work day. These specialized evaluation skills allow

the occupational therapist to understand and deliver results in the complex psychosocial and physical work environment (Blask, 2011, Hunt et al, 2003).

Blask, (2011) and Hunt et al, (2003) observed that occupational therapists work with employers, workers, and other vocational training professionals or team members to create and implement feasible and individualized intervention plans in broad areas. They also evaluate the outcomes of these interventions and make any necessary adjustments. Furthermore, the occupational therapist works with the client to determine any gaps between the demands of the job and the individual's existing performance abilities, and remediates or compensates for the differences in a timely manner. The occupational therapist will determine the history of the current condition or injury, consider any potential change in the condition over time, develop a comprehensive and individualized intervention plan to address problem areas, help to implement the plan, and evaluate its effectiveness.

Another area of potency of the occupational therapists has to do with work conditioning of the clients. According to Storey and Horner (2011), the occupational therapist uses a systematic approach to restore the performance skills of workers recovering from long-term injury or illness. There is a focus on restoring musculoskeletal and cardiovascular systems, as well as safely performing work tasks. This is typically achieved through work simulation and individualized interventions to improve physical capacity that occur 3 to 5 days per week for 2 to 4 hours per session.

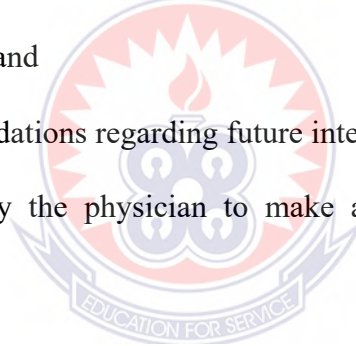
Work hardening has also been identified as one other duty of the occupational therapists. In the view of Weiner (2013), this approach is similar to work conditioning; however, it is multidisciplinary and can involve psychomedical counseling, ergonomic evaluation, job coaching, and/or transitional work services.



Treatment is typically provided 5 days per week for 2 to 4-plus hours per day. Clients in work-hardening programmes may progress to transitional work programming by actually performing job duties at their place of employment. If necessary, final adaptations and/or reasonable accommodations can be determined during this period of transition.

Goldstein (2008) has also mentioned functional capacity evaluation (FCE) as one of the numerous duties of the occupational therapists: The occupational therapist uses standardized and validated advanced testing in order to

- determine safe job matches for return to work
- determine the level of reasonable accommodations necessary for reinstating an injured worker; and
- make recommendations regarding future interventions. The results of the FCE may be used by the physician to make a disability rating for insurance purposes.



Another job of the occupational therapist is concerned with environmental modification. Mank and Horner (2011) put forward that the occupational therapist, together with the worker and the employer, makes recommendations for modifications to the workplace environment to facilitate successful employment performance. Examples of environmental modifications pointed out by this scholar include raising or lowering the lighting, creating a new layout of the workspace, modifying work-related tools and devices, and minimizing distractions.

Transitional work programmes have been identified as another area of performance by the occupational therapist. Mank and Horner (2011) said that transitional work uses the actual work tasks and environments as a form of

rehabilitation. After becoming familiar with the individual's job requirements and measuring the individual's functional abilities, the occupational therapist determines tasks that the individual can safely and dependably perform at work. The occupational therapist works with the employer to identify environmental and task modifications that will support work performance, and makes detailed recommendations to the treating physician, who releases the individual to modified work within these parameters. Work performance is closely monitored and discussed among the occupational therapist, employer, and individual, and modifications change as the worker develops more skills (Sowers, Hall, & Rainforth, 2012).

### **2.5.2.3 The contribution of the vocational therapist**

Vocational therapy is often used in combination with a structured (occupational or physical therapy) rehabilitation programme and is designed to enable individuals with limitations in their mental or physical function to resume productive employment (Giangreco et al., 2008). Similarly, Goldstein (2008) contended that individuals who have experienced impairment in their functional level due to illness or injury may require vocational therapy to allow them to work efficiently at work or return to work. Vocational therapy works with individuals and their new physical or mental status to find an appropriate occupational match.

Hohenshil (2008) opined that vocational therapy involves an assessment phase where the individual's skills and aptitudes are evaluated through tests, which is an integral part of vocational therapy. These tests may take several forms and are used to assess an individual's general intelligence level and his or her aptitude, interests, and work skills. For example, an individual's performance in a series of standardized tests may be compared to a list of essential aptitudes that are grouped by occupations and listed in the Dictionary of Occupational Titles. If a match is obtained and the

individual is willing, a job search may be initiated. Another method often used to assess an individual's vocational needs may be a work sample measure. This test measures characteristics such as eye, hand, and foot coordination; dexterity; and spatial discrimination abilities (Hohenshil, 2008).

Vocational training may involve business or vocational instruction, college or university education, and on-the-job training. If the individual qualifies, as in the case of veterans, state and/or federal funds may be used to pay for this training. Additionally, many employers participate in programmes that use both state and private funds to cover the wages of the individual in training (Hohenshil, 2008). This scholar adds that vocational therapy may also involve re-training. Re-training in computers for example, may be essential for success in today's job market. As such, individuals who have lost jobs as a result of company downsizing, industry elimination, or whose skills are now obsolete are candidates for vocational therapy. Finally, structured workshops are also common methods of training individuals with severe disabilities. These workshops focus on topics such as money management, communication skills, and appropriate business attire (Hohenshil, 2008).

#### **2.5.2.4 The contribution of the physical therapists**

Fundamentally, physical therapists focus on evaluating the influence of motor development, along with the disabled's physical capacities and limitations, on the person's potential for functional mobility within the environment (Batshaw, Pellegrino & Roizen, 2007). Apart from the childhood support services, physical therapist services can be sought at the vocational schools, where several certificate and diploma programmes can prepare them for the rigors of working in a physical therapy practice (Blask, 2011). These programmes focus on the basics that students will need to know about physical therapy in order to perform entry-level work, such

as the principles of treatment, medical terminology, effective communication and the like. Many diploma or certificate programmes can take up to six months, but some – especially those completed online – can take as little as one month.

According to Storey and Horner (2011), physical therapists work with patients who have suffered from injury or illness, helping those patients regain a wider range of movement and manage pain. Physical therapy assistants also help patients, but do so under the supervision of a physical therapist. Physical therapy aides often have less responsibility but still perform important duties, such as cleaning equipment, washing linens, helping patients move to the treatment area or taking care of clerical tasks.

From the viewpoint of Weiner (2013), the physical therapy profession (also called ‘physiotherapy’ in many parts of the world) tends to be more focused on evaluating and diagnosing movement dysfunctions as well as treating a person’s injury itself. While an occupational therapist will often also do diagnosis, the physical therapist will be more likely to diagnose and treat the physical source of the problem; the injured tissues and structures. Weiner further adds that both physical and occupational therapists are trained extensively in anatomy and the musculoskeletal system resulting in both being very knowledgeable about musculoskeletal injuries and rehabilitation than a general practitioner medical doctor.

Physical therapy is done by a physical therapist, who is considered to be a movement expert. These experts can help the patient identify as well as treat the problem that affects their ability to move. Certain problems may also affect the patient’s ability to carry out daily activities. A physical therapist uses treatment techniques to help the patient move the injured body part with ease (Mank & Horner, 2011).

### **2.5.3 Material resources for vocational training programmes for the intellectually disabled.**

Education is essential if Africa is to move out of poverty, ignorance and disease. According to Asabere-Ameyaw (2015), it has long been believed that without education there will be no development but he argued that there is the need for deeper intellectual thinking in order to understand just exactly how education and development connect. To address some of the practical problems of development, the author points out that technical-vocational education which is connected to indigenous and local cultural resource knowledge, should be taken to a higher level across board. The educational and training needs for individuals of intellectual disability do not end up just because they have completed general education system for a period of time. According to Rycher and Salganik (2001) today, more than ever, vocational education and training is vital to sustaining and enhancing one's skills, especially in response to changes in job acquisition modes that impact virtually every profession.

Several vocational training programmes are identified for persons with intellectual disabilities. Some of them include agricultural, business, health, education, home economics, trade and industry, and technical occupation. Other studies stressed that since career for PWDs are designed to suit their needs, they are mostly trained in sewing, weaving, hair dressing, leather work, rubber work, wood work, batik/tie and dye, bead making, poultry keeping, basketry, carpentry and calabash work (Hammill & Batel, 1990; Grigal, Neubert & Moon, 2001; Neubert, 1997; Hayford, 2000; Szymanski & Parker, 2003; McCrea & Miller, 2004 cited in Afelete, 2014).

The integration of technology is an essential component to augment training programmes, yet constant advances make this difficult to fund and preserve. For

vocational studies, the exposure to and experience with modern and advanced technologies easily translate into marketable skills when entering the labour force. The inclusion of learning/training technologies will supplement the students' experience by giving direct access to broad resources, diversify skills and develop one's adaptability and creativity ((Joint Information Systems Committee-JISC, 2006 cited in Cave, & Blyth, 2008). Technology is divided into two categories and defined as digital (e.g. the Internet, wireless local area network communication, intranet) and mechanical or industry-specific (e.g. agricultural equipment, automotive repair tools, industrial equipment). Both digital and mechanical technologies require that trainers and instructors remain proficient with the latest trends, methods and equipment. Spaces for learning technologies will remain more cost-efficient and better serve user purposes for longer periods if designed flexibly, rather than expressly for technologies with uncertain longevity (Temple, 2007 cited in Cave, & Blyth, 2008). The teachers use different methods and materials to teach their students and for their effective learning. With the passage of time, different methods and techniques are being adapted in the field of education and teachers use different kind of equipment and aids to make effective education and training.

For the training programmes to have positive correlation on the job market, there should be appropriate and adequate teaching and learning materials and equipment for effective vocational education and training programmes (Afelete, 2014). Some of these materials and mechanical or industry-specific equipment (mechanical technologies) include farming tools, carpentry tools, masonry tools, sewing machines, materials for bead making, rubber works, door mats, etc (Nabwana, 2014). However, according to this author, most of these resources required are available but inadequate in these special schools.

Aside the mechanical technologies, digital technologies such as teaching aids as such as audio-visual aids arouse the interest of learners and help the teachers to explain the concepts easily. These devices present unit of knowledge through auditory or visual stimuli making teaching and learning more effective. They show the knowledge to be presented and help in making learning experience real, living and vital. They supplement the work of the teacher and help in the study of the text books. According to Sofi (2017), “audio visual aids are those instructional aids which are used in the classroom to encourage teaching-learning process and make it easier and interesting. Audio-visual aids are the best tool for making teaching effective and the best way of disseminating knowledge” (p.271-272). Some of the instructional aids include charts, maps, models, film strip, projectors, radio, and television (Rather, 2004 cited in Sofi, 2017).

According to Rather (2004 cited by Sofi, 2017), audio visual aids are effective tools that invest the past with an air of reality and the aids provide the learners with realistic experiences which capture their attention and help in the understanding of the historical phenomena. They appeal to the mind through the visual auditory senses (Jain, 2004 cited by Sofi, 2017). There is famous Chinese proverb “one seeing is worth, a hundred words” it is the fact that we receive knowledge through our senses. There is another proverb that” if we hear we forget, if we see we remember, and if we do something we know it” so it means that use of audiovisual aids make teaching-learning process more effective.

As Kishore (2003) said “audiovisual aids stimulate thinking and understanding” (Sofi, 2017, p.271). The use of audiovisual aids in teaching-learning process has diverse values (Mohanty, 2001 in Sofi, 2017). Audiovisual aids give chance to speakers to make a more professional and consistent presentation. The

teaching profession is filled with countless opportunities to enrich the academic lives of students. While some concepts and educational objectives will be easy for students to grasp, others especially for PWIDs will require creative and innovative thinking to ensure that important learning objectives are met. Using audiovisual aids in teaching in the vocational settings is one way to enhance lesson plans and give students additional ways to process subject information (Kunari, 2006 cited in Sofi, 2017). In addition, auditory trainer or the speech training unit; computerize speech synthesizer, low-tech teaching materials such as the speech and language tests; language augmentation board and toys are other necessary tools and materials for vocational education and training for PWIDs (Gadagbui, 2007).

In addition to the learning and training technologies, vocational education and training settings also require available and adequate study rooms or space types that should be conducive with good lighting and ventilation systems (Gadagbui, 2003) to meet the needs of the trainees, trainers, and staff. According to National Institute of Building Sciences (NIBS) of 2017, a training facility for individuals with intellectual disabilities must have flexible and technologically-advanced learning environments that are safe, healthy, comfortable, aesthetically-pleasing, and accessible. It must be able to accommodate the specific space and equipment needs of the training programme and curriculum. The building guide of NIBS (2017) pointed out that the classrooms which include auditoriums, conference rooms, and seminar rooms must be sizeable enough and well designed for lecture style instruction and training; to encourage interaction in the form of roundtable discussions and teleconferences. Other type of classrooms include audio/visual rooms, computer training rooms, and dry laboratories well equipped with needed computer workstations and internet for the students.



User support spaces are other facilities required for successful vocational education and training. These include trainee storage space with lockers, coat closets, or cubbies; library or quiet reading room with study cubicles; observation rooms for simultaneous translation of instruction into a second language; common space for recreation and social gathering; cafeteria or dining hall; medical centre; and restrooms (National Institute of Building Sciences, 2017). Again the guide points out that other important facilities for training of individuals who are intellectually disabled is an administrative support spaces. These support spaces may include administrative offices that are acoustically and/or visually designed; and trainer offices which may be shared space and equipment, including computers, phones, fax machines, desks, libraries, and supplies. Another important facility is the operation and maintenance spaces. These may include general storage space for items such as stationery, equipment, and instructional materials; food preparation area or kitchen; Computer/Information Technology (IT) Closets where data on students about their IEP, types of training, transition processes, employment, follow up etc are kept; and maintenance closets (National Institute of Building Sciences, 2017). According to Afful-Broni (2004), the administration of the vocational education and training schools or centres must concern themselves with teaching, learning/training and community services and it must work closely with teachers.

Though ultimate goal of all types of education is vocation, many poor families look at education in terms of how it will support the family in the long term. If children can complete their education cycle and emerge with a set of skills that can facilitate their access to decent work with improved working conditions, this will make the vocational programmes more appealing to parents, who are the main family decision-makers. According to International Labour Organization (ILO) (2011) there

is the need to make several considerations when it comes to the design of vocational training centres including that of the intellectually disabled. Some of the important design considerations include but not limited to; flexibility, technological connectivity, indoor environmental quality, signage, security and occupant Safety, and operations and maintenance.

The International Youth Foundation (2011) has it that many training courses are specifically designed to enhance a trainee's competency with new software and hardware. The International Youth Foundation (2011) contended further that in some cases, technology has even changed the way instruction is provided to the intellectually disabled from traditional live instructor-led courses to self-directed learning and individualized instruction. According to the International Youth Foundation (2011), distance learning using telecommunication technologies like cable television, internet, satellites, and videotapes, is popular because it allows students from across different cultures to participate in courses remote from the point of instruction.

The increasing reliance on technology and resulting improvements do require that spaces be flexible in their design to include and allow for new technological methods and devices. To maximise infrastructure utility, appropriations for digital technology need to be organised in a way to maintain and support rapidly changing advancements and learning space needs (Lonsdale & Vavoula, 2004). To properly support digital technology systems and capitalise on their capabilities, classrooms, administrative offices, teachers offices and other parts of the institution must be fitted, which may require additional staff to provide technical support and expertise (Whitaker, 2002). Malamoud (2010) puts out that given that technology is driving a variety of changes in the organizational and architectural forms of training facilities, a

lot of issues, particularly information technology (IT), must be considered when incorporating it into a training facility of the intellectually disabled. Malamoud said that currently, many training facilities provide IT connection in only a few areas, like computer training rooms, business stations, and media centers. Because IT is becoming an integral part of training curricula, designers should plan new training facilities to have a distributed, robust, and flexible IT infrastructure, which would allow technological access for the intellectually disabled.

Again, Malamoud (2010) pointed out that during the planning stage, a consideration must be made to identify all necessary technological systems (e.g., cable/data systems such as audio/visual systems, speaker systems, internet access, and local area networks and wireless fidelity), and provide adequate equipment rooms and conduit runs for them. Furthermore, Malamoud contended that there is the need to allow for computer and Internet connectivity at desks, as appropriate. Consider equipping fixed desks with under-top computers to ensure adequate sightlines between trainers and trainees. Malamoud added that there is again the need to consider and accommodate for wireless technologies, as appropriate, and for existing training facilities, consider improving access to the IT infrastructure as renovations are undertaken.

In order for VET institutions to operate safely and efficiently, heating, lighting, ventilation, acoustics and area have unavoidable implications on design. Unlike traditional schools, vocational schools or programmes require the installation of complex systems to meet the needs of the curriculum and be in accordance with local, regional or national regulations. Management of sound, heat and student activity presents a specific challenge to spatial flexibility and to support pedagogic approaches (Joint Information System Committee, 2006). Additionally, the variety of

equipment, tools and machines make it necessary to provide access to utilities such as fume exhaust systems, compressed air, dust collection systems, electrical connections and storage containers (Indiana Technology Education, 2000). Environmental conditions, industry machinery and technical equipment all place constraints on space, influence its design and limit how the space can be employed and changed in the future.

## **2.6 Challenges faced by the vocational educational programmes.**

In spite of the claim that technical and vocational education and training (TVET) remains relevant in the economies of developing countries, TVET still faces a lot of challenges especially in the context of developing countries. The nature and characteristics of TVET itself presents unique challenges to institutions and administrators (Mustafa et al., (2005); Boateng, 2012, cited in Ouandji, (2014). Some of the challenges facing vocational education training programmes include inadequate funding, lack of basic instructional facilities for training, lack of trained professional teachers, lack of appropriate physical facilities, lack of teaching and learning materials and equipment, irrelevant curricula, ineffective teaching, wrong perceptions of VET among others.

Financial burden has been cited as one of the major challenges of vocational training programmes all over the world. Despite the importance given to TVET by many governments, the training system in Africa is largely underfinanced. Generally, the provision of technical and vocational skills and especially formal TVET is expensive, since facilities, material, equipment and maintenance costs are high (Atchoarena & Delluc, 2001, cited in Kingombe, (2011). Apart from the high cost of materials, Fullan, (1991), cited in Woyo, (2013) argued that another financial challenge that militates against management of TVET programmes concerns

outsourcing and that international literature argues that TVET is a more expensive model of learning than academic education. The author argued that relatively the cost of equipping vocational classrooms and workshops and the training of vocational/technical trainers is very high.

According to the World Bank (2001), most of the countries are having it difficult to meet the high cost of teaching and learning materials and equipment for TVET. This according to Ndala, (2006) has prompted many secondary schools to abandon technical and vocational subjects. The financing of TVET as percentages of public expenditures varies considerably from country to country. It ranges from a low of 0.9% a decade ago in Ethiopia to 12.7% in Gabon in the same period (ILO, 1998/1999 cited in Kingombe, 2011). According to Laing (2013), the Ministry of Education of Ghana, which finances and oversees the majority of TVET institutions in Ghana, has consistently allocated less than 2% of its budget to the TVET sector. Likewise Ebeh (2011), cited in (Yangben & Seniwoliba, 2014), pointed out that only one percent of the Ghana Education Service (GES) budget is allotted to TVET which does not portray any seriousness in technical and vocational education, while poor infrastructure development at the technical/ vocational institution in polytechnics are left unattended to (GES, 2007) cited in (Yangben & Seniwoliba, 2014).

This situation leads students' completing programmes with only theoretical insight without any practical skills for the construction industry. According to George Ferguson Laing, the Coordinator for Information, Publicity, and Promotions at COTVET, Asawansi Technical Institute in the Central Region still relies on equipment from the mid-1940s to train its students. He further pointed out "for TVET to become relevant we need to find the financing to adequately equip our institutions".

He also lamented that though the importance of TVET notwithstanding, stakeholders are yet to come up with a sustainable financing structure (Laing, 2013).

The government's attitude towards vocational education for individual with intellectual disabilities is a very key factor in the effectiveness or otherwise of the programmes (Puyate, 2008). Puyate further pointed out that the process of provision and implementation of any vocational education programme lies on the shoulders of the government. On his part, Akyeampong (2002) posits that sources of funds for capital projects for vocational and technical education come from the Central government or from donor agencies/non-governmental organisations channelled through the Ministry of Education. Raising the same concerns Laing (2013) pointed out that for technical and vocational education and training (TVET) to take its rightful place in Ghana, funding and financing challenges among others must be overcome. Laing (2013), challenges the Council for Technical and Vocational Education and Training (COTVET), as the regulator of the sector, to finding solutions to most of these challenges.

Another challenge that was raised by researchers facing vocational education and training programmes of persons with intellectual disabilities is inadequate qualified and shortage of staff leading to sub-standard skills training at these special schools. Kyere (2009) points out that there are several challenges that hinder effective preparation of adequate quantity of teachers for the education delivery process in Ghana. According to Kyere, one unit that is normally affected most in the form of inadequate teaching staff is the special education unit resulting in poor quality in the delivery of TVET programmes (Woyo, 2013).

Casely-Hayford and Lynch (2003) cited in (Kyere, 2009) pointed out that majority of graduate special needs teachers pursuing diploma and degree courses in

special education in University of Education, Winneba (UEW) go back to the mainstream schools or find their way to the Senior High level pursuing their second area of concentration or leave the teaching profession all together. With this, the authors are of the view that most disaffected teachers do not want to teach children with special education needs (SEN) but simply wish to obtain a degree or diploma when they enter UEW. Other factors pointed out were poor remuneration, new career choices, pressure from family, lack of job satisfaction and frustration by administrators. These account for the reason why most teachers feel reluctant to accept posting to special schools resulting in scarce teaching staff in special schools in general and schools for intellectually disabled in particular.

Also relating to the problem of scarce teaching staff is qualification of those who are in active service in the schools for intellectually disabled (Casely-Hayford and Lynch, 2003, cited in Kyere, 2009). In a study by Nabwana (2014), only 13.9% of the respondents were specialized in training learners with intellectual disability. This is an indication of the need for specialized training for teachers for learners with intellectual disability. The author points out that the findings of the study supports Kelchner (2011) who maintains that special education teachers must have professional qualifications that will enable them to help children with special needs. This shortage in qualified teachers in vocational education and training with other factors has led to reductions in quality of provision and reduced learner interest and learners increasingly see academic subjects as offering better opportunities than TVET subjects (Akyeampong, 2010).

Yangben & Seniwoliba (2014) posit that generally the quality of vocational training is low, with undue emphasis on theory and certification rather than on skills acquisition and proficiency testing. Inadequate instructor training, obsolete training

equipment, and lack of instructional materials are some of the factors that combine to reduce the effectiveness of training in meeting the required knowledge, skills and objectives for vocational education and training for students with intellectual disabilities. Furthermore, although vocational programmes in schools were intended to offer vocational orientation to learners within a school-based setting, delivery conflicted with policy objectives. According to Akyeampong (2002), 13 specialized vocational subjects were offered, rather than a more general vocational curriculum, and teachers failed to implement the proposed integrated approaches (Osei, 2004 cited in Yangben & Seniwoliba, 2014).

Teaching vocational subjects especially intellectually disabled requires special competencies with more attention to pedagogy of VET instead of reading, writing and mathematics (Hoeckel, 2007). To achieve this, teacher development for VET has a critical role to ensure quality teaching in competencies development, which includes knowledge, skills and attitude relevant to the rapidly changing labour market United Nations Educational Scientific and Cultural Organization International Institute for Capacity Building for Africa (UNESCO-IICBA, 2011).

Furthermore, one other serious challenge facing vocational education and training programmes for intellectually disabled is lack of quality and availability of the requisite teaching and learning materials and equipment. Material resources for studies are essential for quality vocational education but Ndala (2006) argues that many African countries have limited resources for education. He reiterates that this phenomenon does not only account for unavailable tools, but also in many cases what may be available are outdated. Other studies also identified obsolete, and inadequate teaching and learning materials for both teachers and students; and lack of workshops and equipment as factors that contribute to ineffective teaching and learning activities



in vocational education which may result in low skills acquisition (Yangben & Seniwoliba, 2014; Woyo, 2013; Kyere, 2009).

As noted earlier, vocational training programmes are supposed to prepare the trainee for a specific vocation. This means that, training has to be practical in nature. It also suggests that during training, the trainee should have access to the tools and equipment that is used in industry. “Unfortunately many of our training institutions are ill equipped, and are therefore forced to rely heavily on theoretical methods of teaching. Even though some institutions are better equipped than others, the general situation is less than satisfactory” (Laing, 2013). The author indicated that for instance, Asawansi Technical Institute in the Central Region still relies on equipment from the mid-1940s to train its students. For vocational training for the intellectually disabled to become relevant the author said “we need to find the financing to adequately equip our institutions”.

The debate on improving the quality and provision of vocational education for intellectual disabilities in developing countries has often revolved around the question of relevance of the curriculum. Remarkably, this has been an outstanding concern for VET since its inception (Ndala 2006). Further literatures have also shown that most of the curricula in developing countries in West Africa originated from their colonial administrators (Avoke, 2005). This could explain why special attention was not paid to developing a separate curriculum for individuals with intellectual disabilities. In Ghana, special education elements of the curriculum were adapted from practices in other countries and had little connection with the educational reforms (Avoke & Avoke, 2004).

Most often than not, curriculum for teaching and learning for intellectual disabilities focuses on skills that these individuals need to use frequently in school, at

home, and in the community, neglecting functional skills in the natural contexts in which they are performed. It is important to also note that, curriculum in units and segregated or residential settings for students with intellectual disabilities do not seem to be consistent with labour market requirements (Muuya, 2006 cited in Yeboah, 2015). Muuya further points that vocational education and training programmes focus more on behavioural control and containment and moral behaviour instead of appropriate curriculum combining literacy and numeracy with functional academics and life skills training. Akyeampong (2002) also argues that whilst many of the objectives of the vocational/technical programmes emphasize the development and acquisition of practical skills, the final assessment devotes more time to theory than practical work assessment.

Redddan and Harrison (2010, cited in Woyo, 2013) argue that TVET institutions need to restructure their programmes to be receptive to the needs of the job market, especially the industry's ever changing needs. Thus, TVET curricula must focus on outcomes in terms of the skills, knowledge and attitudes required by industry and commerce in a bid to achieve this goal to address the concerns that there is no synergy, like advanced market economies, between industry and academia and thus, there is a wider variance between the curricula that TVET institutions offer and what industry expects (Woyo, 2013).

According to Yeboah (2015), teachers of individuals with intellectual disabilities can benefit from exposure to current literature on meeting the needs of these students. This literature emphasizes the need for teachers to plan their materials well, have clear goals and objectives, teach to their objectives, and assess students directly and frequently. Since individuals with intellectual disability experience difficulty in maintaining the skills and knowledge they have acquired, they require

frequent opportunities to practice new academic and functional skills. To make successful teaching, Novignon (2014) recommends that the skills in the curriculum be mostly activity based, and specifically, lessons that will increase activity and individuals' participation in class and school should be expanded. Going beyond the individual students, Ndala (2006) posits that the adaptation of curriculum for the intellectual disabled should suit the needs and realities of the country.

Besides, serious derogatory perceptions continue to be a hindrance to vocational training programmes for the students within the bracket of intellectually disabled. In the final draft by African Union (2007) "Strategy to Revitalize Technical and Vocational Education and Training (TVET) in Africa", one of the key issues outlined as facing TVET is negative perceptions and low prestige from parents, the students themselves and the general public. It is generally considered that vocational pathway only fits for the academically and intellectually less endowed. Per these perceptions, entry requirements in TVET institutions in Sub-Sahara Africa are normally lower than that of universities and other academic institutions (Woyo, 2013). This argument is supported by Ouandji (2014) who postulates that in many countries, students entering the vocational education stream find it difficult if not impossible to proceed to higher education and professional development.

In Ghana, most parents and guardians have dreams of their wards becoming Doctors, lawyers, or accountants. Trades like auto mechanics, hairdressing, bead/doormat/ making, dressmaking/tailoring, and carpentry are considered to be the preserve of children who do not have the mental ability to pursue a university education. These trades are also thought to be better suited for those coming from the bottom stairs of the socio-economic ladder (Laing, 2013; King & Palmer, 2007). This

perception according to the authors is limiting the numbers of young people going into Technical and Vocational education and training.

The worse according to Ouandji (2014) is the impression sometimes created by governments that the primary objective of the vocational education path is to keep dropouts and “lockouts” from the basic and senior high school system off the streets, rather than project this type of training as an effective strategy to train skilled workers for the employment market. The term “lockouts” refers to students who are unable to move up the educational ladder, not because of poor grades but because of lack of places at the higher level. The opinion that technical subjects are for people whose academic performance is insufficient to cope with a more intellectual course of study Fafunwa (1971) cited in Ndala (2006) may also be a factor behind the poor salaries attached to technical jobs in government. The Government of Ghana wants vocational/technical education to occupy a prominent position in our Senior High Schools and that is why COTVET was established to regulate TVET, yet Ghanaian schools pay little or no attention to vocational/technical subjects. Teachers and students seem not to understand what it is all about and consequently, develop some contempt and dislike for the subjects (Yangben & Seniwoliba, 2014).

Further, the view of parents in Ghana on vocational education is that the vocational skills are not competitive enough for more high-income jobs in the labour market (Ryeetey, Doh, & Andoh, 2011). Meanwhile the results of their investigations showed that people have less positive attitudes against the vocational and technical education and vocational education is not easily accepted as having bad reputation in the society (McKenna & Ferrero, 1991; Rossetti, 1990; Gilliland, 1967; Saavedra, 1970 in Ryeetey, Doh, & Andoh, 2011). However, a variety of studies also indicate that in technical and vocational fields, public education systems generally have a

weak track record in meeting the demands of the labour market. As a result, prospective employers often pay little attention to certifications and instead insist on a demonstration of skills and abilities (World Bank, 2005, cited in Ndala, 2006).

Investigation presents that the general view against vocational education is negative and that the vocational training programmes are suffering from the low status and bad image in the society (Blanck, 2009). According to Blanck, parents in Greece are keener to persuade their children to study in general schools rather than enrolling them in the Greek vocational and technical school due to the believe that their children will be prevented to continue in higher level of education if they enrol in technical schools. Negative employer attitudes can be one of the most serious threats to the success of vocational education programmes for intellectual disability. Disability may be perceived as taboo and employing persons with disabilities may be expected to affect the prosperity of businesses. This negative stereotypical views on the concept of intellectual disability are deep-seated and prevail in most countries (Yazbeck et al., 2004 cited in Parmenter, 2011). Teachers' negative attitudes also play a role in influencing VET courses. The students who received more doubts, uncertainty, dissatisfied admonishing and strict actions in their teacher were more prone to demonstrate more negative view to their vocational course and feel less satisfied with the programmes (AlSa'd, 2007; Henderson & Fisher, 2008 in Reynolds, 2012).

Suggesting solutions to the challenges of vocational education and training programmes, George Ferguson Laing, the Coordinator for Information, Publicity, and Promotions at COTVET said "there is the need for all stakeholders, including prospective trainees, training providers, industry, parents, and the State, to shed the

outmoded perceptions of TVET and channel our energies into building a strong and attractive TVET super-structure, to spearhead our development efforts” (Laing, 2013).

In addition to the challenges discussed above, negative attitudes towards intellectually disabled people hinders smooth running of vocational programmes. Throughout history, people with disabilities have been subjected to several forms of cruel acts. In Ghana, some communities with strong religious beliefs attribute disability or abnormality to punishment from the gods for sins or evil deeds of the community, family or mostly parents. Such people with disability are banished or killed secretly at early age mostly in the night or if fortunate abandoned in an institution.

Explaining the social model of disability, Avoke (2005, p. 4 cited in Kyere, 2009) indicates that, “It is the society that largely create barriers for the disabled; and that the difficulties of living as a disabled person are due to discrimination and prejudices, rather than impairment”. This model simply explains that, it is social restrictions, attitudes, superstitions, beliefs and stereotypes that compound the severity of a disable person but not necessarily his or her impairment or retardation. The former President, Mahama expressed misgivings about maltreatment of persons with disability in the country especially the rate at which some of these persons are prevented from occupying significant positions in the society (myjoyonline.com, 25-02-2016). On her part, the Minister of State for Gender, Children and Social Protection, Otiko Afisah Djaba has passionately appealed to Ghanaians to stop stigmatizing and discriminating against persons with disabilities to enable them exert their confidence and participate fully in national development (Myjoyonline.com, 05-12-2017).

In delivering a paper on “Promoting rights of persons with disabilities in Ghana”, Casely Ato Coleman pointed that culturally, some parents think that having children with disability is a curse or burden on them. This and other perceptions can only be countered, according to him, by extensive social mobilization and community engagement backed with the enforcement of the right social protection laws and policies. Like the former President of Ghana Mahama, he pointed that persons with disabilities are also human beings and entitled to the same rights and privileges defined under the 1992 constitution of Ghana (Coleman, 2017).

Also missing in the vocational education vocational training programmes for persons with intellectual disability is orientation and counselling (Kyere, 2009) which according to the author are major components of any meaningful vocational education and must not be ignored in anyway. More importantly, many studies have shown that people with intellectual disabilities often have multiple secondary impairments, including complex physical and mental health problems (Parmenter, 2011). Due to this, Kyere (2009) posits that guidance and counselling into vocational education at the early stages as well as counselling in the school and job coaching into the job market after skills training should be a constant services provided to students of intellectual disabilities as well as their guardians and parents.

The process which must involve parents, must be done through a comprehensive support needs assessment of the person with intellectual disabilities, not only for the purposes of employment, but also for other life activities, including community living and leisure activities (Riches et al., 2009a, 2009b; Thompson, et al., 2004 cited in Parmenter, 2011). Guidance and Counselling activities should therefore be based on the need and total development of intellectual disability students. It is a duty of all personnel in a setting to identify the needs of individual so that programme

activities can be designed to meet such needs (Abo, 2014). The author argues that choice of career is very important in the life of human beings especially individuals with intellectual disability. Sometimes, it is the type of career that determines a person's happiness, comfort and level of adjustment in the world of today. The author further posits a person's social economic status is also being determined by his career.





## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This chapter presents the methodology for the study. The areas covered were: research design, population, sample, sampling technique, instruments, validity, reliability, and procedure for data collection and analysis.

#### 3.2 Research design

The research design used in this study was a descriptive survey so as to report participants' view descriptively the way it was expressed (Robson, 2003 cited by Amedzake, 2011). According to Isaac and Michael (2009), descriptive designs can involve a one-time interaction with groups of people or a study might follow individuals over time. Descriptive studies, in which the researcher interacts with the participant, may involve surveys or interviews to collect the necessary information. Isaac and Michael (2009) added further that descriptive studies are usually the best methods for collecting information that will demonstrate relationships and describe the world as it exists. This type of design is often used in a study before an experiment to know what specific things to manipulate and to include in an experiment. Bickman and Rog (2008) suggested that descriptive designs can help answer questions such as “what is” or “what was”.

Similarly, Polit and Hungler (2011) contended that descriptive research designs deals with thick, rich descriptions of phenomena which emerge from qualitative studies, case studies, observational studies, interviews, and portfolio assessments. Descriptive research design is unique in the number of variables employed. Like other types of research, descriptive research can include multiple

variables for analysis, yet unlike other methods, it requires only one variable (Weekes, 2012). With this design, the researcher collected the data from the sample used for this study and it was found out that there was no bias.

### 3.3 Population

Burns and Grove (2013) described population as all the elements that meet the criteria for inclusion in a study. All individuals or objects within a certain population usually have a common, binding characteristic or trait. The population for the study consisted of all teachers at the Dzorwulu Special School for students with intellectual disabilities.

### 3.4 Sample size

According to Parahoo (2007) sample is a proportion of a population. A sample denotes a small representation of the research population (Cohen, Manion & Morrison, 2004). The sample size for the study was made up of seven (7) teachers comprising four (4) males and three (3) females selected from the Dzorwulu Special School.

The entire sample for the study is presented in table 1.

**Table 1: Demographic data on the sample for the study**

<b>Sex</b>	<b>Number</b>	<b>Percentage (%)</b>
Male	4	57
Female	3	43
<b>Total</b>	<b>7</b>	<b>100</b>

**Source: Field data (2017)**

Table 1 presents the number of teachers sampled for the study from the Dzorwulu Special School for the intellectually disabled. The table shows the total numbers and percentages of the sample per their sexes.

### **3.5 Sampling techniques**

Purposive sampling was used in this study. Burns and Grove (2013) described purposive sampling as a method of sampling where the researcher deliberately chooses who to include in the study based on their ability to provide necessary data. The rationale for choosing this approach was that the researcher was seeking teachers' view on the vocational education programmes at Dzorwulu Special School for persons with intellectual disabilities. The teachers were appropriate to provide the relevant information by virtue of their experience. In this study only teachers who were eligible were purposively chosen to participate.

### **3.6 Research instrument**

The instrument for the study was in-depth interview guide for the teachers. The in-depth interview guide comprised thirteen items to reflect the research questions aiming at ascertaining teachers' views on the nature and model of vocational training programmes; quality of teachers and importance of related service personnel; availability of resources; challenges militating against vocational training programme at Dzorwulu Special School. These yielded the qualitative data collected to answer the research questions.

### **3.7 Validity of instrument**

To ascertain the validity and the reliability of the instrument for the study, the interview guide was given to the researcher's supervisor and other lecturers and colleagues in the Department of Special Education for editing and evaluation.

### **3.8 Procedure for data collection**

In the data collection process, the researcher obtained a letter of introduction from the head of department of Department of Special Education (see Appendix B). After a brief meeting with the authorities of the school, a date was fixed and the researcher visited the school to collect data from the teachers. The interview guide was administered to seven teachers focusing on the nature and model of vocational training programmes, quality of teachers and related service personnel, availability and quality of resources and challenges facing vocational training programmes at the Dzorwulu Special School.

### **3.9 Data Analysis**

The qualitative data from the interviews were categorized according to the research questions and emergent themes. Interview transcriptions from each respondent were also written on separate sheets and were coded. These codes (A, B, C, D, E, F & G) were used instead of names of individuals involved in the study with the aim of maintaining anonymity of the respondents. Cohen (2000) warned that it is important to maintain the anonymity of the respondents, and these were adhered to.

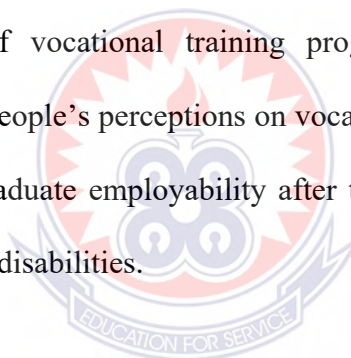
## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

The chapter presented the analysis of the various data that were gathered from the research sites in relation to the studies of the vocational training programmes regarding the provision of skill training for persons who are intellectually disabled at the Dzorwulu Special School for persons with intellectual disabilities.

The main themes of the study were analyzed in terms of the nature of vocational training programmes for persons with intellectual disabilities, level of collaboration between the teachers and related service personnel, resources available for the development of vocational training programmes for the persons with intellectual disabilities, people's perceptions on vocational training programmes at the school as well as the graduate employability after the Dzorwulu Special School for persons with intellectual disabilities.



#### 4.2 Theme 1: the nature and models of vocational training programmes for persons with intellectual disabilities.

In order to solicit views of the interviewees on the nature and models of vocational training programmes being practiced at the Dzorwulu Special School for Persons with Intellectual Disabilities (PIWDs), the researcher asked four questions. The first question under this category was “how different is your vocational training programmes from that of the other persons without disabilities”?

All the respondents of this particular question indicated that the vocational training programme at the Dzorwulu School for Persons with Intellectual Disabilities do not vary in form or model from what is practiced at the regular schools. For

instance, Respondent A mentioned *“it is the same as regular school but they spend less time in the classroom”*. Respondent B also stated *“the vocational programme in their school is different from that of the regular school”*. However, when asked of the differences, he could not tell and only smiled. In the view of Respondent G, she said *“our vocational programme can be described as being the same as that of persons without disabilities”*. Similarly, Respondent G also stated *“there is no difference between the two. Both instructors use the same strategies and techniques and arrive at the same result”*. Respondent F also mentioned *“Ok, I will say they are the same but when it comes to the learning capacity, that there is a little bit of difference because their attention span is shorter as compared to those at the regular school. Respondent D also stated “there is no difference in the vocational training, they are all entreated with the same programme line. But the time that they spend in the class is different”*. On his part Respondent G said *“in the regular school, the level of students’ understanding knowledge and level of assimilation of what has been taught is higher than persons with intellectual disabilities. Giving example the respondent said that for the same subject it could take two to three weeks as compare to one week at regular settings”*.

From the above responses, it can be noticed that there is not much difference in the vocational training programmes for persons with intellectual disabilities at Dzorwulu Special School for the intellectually disabled and that of their counterparts in the regular setting. The only difference between the two has to do with the understanding and comprehension levels, and the length of time of training. However the researcher was with the view that vocational training programmes for PIWDs should be clear different from those without disabilities. Perhaps it must be quite flexible than that of the abled peers but at Dzorwulu Special School they are almost

running the same programmes with regular students. Vocational training programmes at special schools like Dzorwulu Special School ought to be more disability-friendly as pointed out by Razzak (2015) that vocational training is the preparation for jobs that call for extensive practical experience and training. Disability-suitable and market oriented vocational training, job related training, job placement or self-employment opportunity and reasonable accommodation in work place is very much successful package in the world which has really supported to enhance the economic life of persons with disabilities (PWDs) in many places. According to Razzak (2015), providing vocational training to PWDs is a bit different and complicated than other people since their functional limitations and essential supports needed varies according to disability category and level of severity. So the suitability of training, management of essential environment and appropriate training delivery method or approach are the key factors to be considered while providing vocational or job related training to PWDs. The model and approaches of vocational training also varies as per the country, culture, need and resource; however there are some very regularly practiced approaches or model of trainings. Considering the standards of this author, the Dzorwulu School must be prepared to make some adjustments in their vocational programmes.

Another question was “which model(s) of vocational training do you practice here, and how is it done”? The responses went in a similar direction again. Respondent B listed *beads making, craft, agriculture, and ironing*. Respondents D added that *they also have doormat making, and key holder designing as well as hairdressing and the garment making class*. The other respondents mentioned that the above listed areas makes the list quite exhaustive.

It can be noted from the respondents that even though there are several models of vocational training programmes available, the Dzorwulu Special School has adopted the mainstream model of vocational training. At these centres needy people like intellectually disabled are trained for specific job or business (page 10). This idea of the school sticking to only one model is in line with the viewpoint of Giangreco et al., (2008) that there are several models such as CBR, sheltered, peer, and apprenticeship of vocational training programmes for individuals with intellectual disabilities. Some of these models are similar to that of what is practiced in other disability categories, while others are peculiar to persons who are intellectually disabled like mainstream model. What appears to be a lapse is about how the persons who find themselves in profound and severe categories are catered for at the Dzorwulu School. According to Giangreco et al., (2007), under the medical model of service delivery, people with intellectual disabilities who were assessed or deemed to be unsuitable for employment were catered for in “activity therapy centre” programmes, where one of the goals was to prepare them for employment options.

#### **4.3 Theme two: material resources available for supporting vocational programmes at Dzorwulu Special School for Persons with Intellectual Disabilities.**

In answering this question, the researcher asked several sub-questions. The very first amongst them was: what is the state of your material resources for teaching in the vocational programmes? The responses went as follows: Respondent A answered: *“the materials are quite good”*. Respondent B pointed out that *“the materials are always available for us to execute our programmes or activities for them”*. Respondent C also mentioned *“the material resources are always in usual state because proper care is taken of them”*. Contrarily, Respondent D said the



materials are not adequate. Unlike respondent D, Respondent F also said *the materials are quite good and manageable*". Respondent G agreed with the other four respondents by saying *"the materials are quite OK"*.

With the exception of Respondent D who skewed towards a different direction, all the other respondents mentioned that material resources for the vocational training programmes at the Dzorwulu Special School for Persons with Intellectual Disabilities are in good supply and quality as expected. This development goes contrary to the contention of Laing (2013). The author many of the training institutions in Ghana are ill equipped, and are therefore forced to rely heavily on theoretical methods of teaching. Even though some institutions are better equipped than others, the general situation is less than satisfactory" (Laing, 2013).

Also, in the view of Ndala (2006); Kyere (2009); & Yangben and Seniwoliba (2014), lack of premises, materials, and equipment have also been serious challenges to vocational training programmes. According to the authors, vocational training programmes are supposed to prepare the trainee for a specific vocation. This means that, training has to be practical in nature. It also suggests that during training, the trainee should have access to the tools and equipment that is used in industry. Unfortunately many of the training institutions in Africa are ill equipped, and are therefore forced to rely heavily on theoretical methods of teaching. Notwithstanding, the case of the study site is quite different. They have a lot of equipment that are being utilized to enhance effective teaching and learning in the school.

The researcher was also interested in finding out how well technological tools are being utilized in the Dzorwulu School for Persons with Intellectual Disabilities. With this in mind, the researcher asked "how well do you employ technological tools eg. Computers in your work"? With the responses, Respondent B said *"there is no*

*computer”* while Respondent C stated *“we do not employ technological tools”*. Respondent E also stated *“we don’t use computers”*, Respondent F said *“we don’t use any technological tools for now”*, while Respondent G contended that *“there is no computer”*.

From the above responses, it can be deduced that the study site is lagging behind in the area of technology especially when it comes to computer usage. This will not make the practice of vocational education at the Dzorwulu Special School very effective. According to National Institute of Building Sciences (NIBS) of 2017, important facilities that need mentioning are an Audio/Visual-Equipped Rooms (rooms equipped for audio/visual and Internet-based instruction), Computer Training Rooms (rooms equipped with computer workstations and internet access for each student), as well as dry Laboratories.

Another question of interest was *“what specific duties are expected of you as a teacher/instructor in the vocational training programme? In response, Respondent A said “to assist students when they are learning, especially during the vocational training class”*. Respondent B mentioned *“to use my skills to teach the students throughout the vocational training programmes and also to guide them to be relatively independent in their societies”*. Respondent C also contended *“teachers teach these students the methods of doing things and also to impart knowledge”*. Similarly, Respondent D mentioned *“as a teacher, I am supposed to assist pupils who are in difficulty in the teaching and learning processes and also to direct them towards effective learning and training”*. Respondent E also pointed out that *“we are there to support these children and to help them accomplish their aim in life”*. Respondent F also said *“the instructor in the vocational programme is supposed to serve as an educator, an advocator and also a broker”*.

All the respondents treaded towards one direction pointing towards teaching of basic skills and helping the pupils to acquire knowledge that is worthwhile for them to achieve their educational aims as students. The various responses are similar to the responses of 318 special educators, related services providers, and parents of students with severe disabilities who rated a set of support services functions commonly cited in Giangreco (1990). In the study the respondents indicated that the four most important functions for serving students with severe disabilities were, developing adaptations, equipment, or both to allow for active participation or to prevent negative outcomes (e.g., regression, deformity, discomfort, pain, transferring information and skills to others (e.g., related services providers, educators, parents, serving as a resource, support, or both to the family).

#### **4.4 Theme three: level of collaboration between teachers and related service personnel in the vocational training programme for persons with Intellectual Disabilities at Dzorwulu Special School.**

The researcher was interested in finding out whether there is some kind of support from related service persons in the vocational training programmes in the above mentioned school. The first question asked in this respect was “what particular roles do related service persons play in your programme”? Respondent A said “*these personalities organize in-service training, and capacity building workshops*”. Respondent B also stated “*they guide us with their knowledge and skills in learning of our programmes*”. Respondent C also stated “*basically, they assist us by guiding us to go through what we teach our students*”. Respondent D mentioned “*the related service persons do support them and give advice*”. Respondent E said “*they are given some pieces of advice by the related service persons*”. Respondent F also pointed out “*some related service persons fund some of their school programmes*”.

The various responses give a clear indication that related service persons are actually visible in the school and they are actually working for the good of the school which go a long way to support the observation of Hunt, Soto, Maier and Doering (2003) who pointed out that related services providers such as speech-language pathologists, school psychologists, physical therapists, and occupational therapists serve vital roles in supporting the education of many students with intellectual disabilities in vocational education environments.

Again, the responses are in line with the views of Inge (2008) who mentioned that it is important to note that much of the knowledge and many of the skills that related services personnel possess are not exclusive or unique to any particular discipline and may or may not be possessed by all those of a particular profession. The author continued to say that the fact that someone has a related services title (e.g., physical therapist, speech-language pathologist) in no way guarantees that he or she has had training or experience to provide vocational school-based services for children with a wide range of developmental disabilities. Furthermore, every discipline that serves students with disabilities overlaps with other disciplines to varying degrees, sometimes substantially so. This is one reason why it is important to consider the potentially overlapping roles that special educators and other specialists, family members, and related services personnel share.

It is also worth noting that the performance of related service persons in the school has a bearing with the observation of Giangreco (1996 cited in Giangreco et al, 1999) that in vocational education models, team members (including teachers) must communicate with each other to identify the potential interrelationships among their disciplines and to avoid unnecessary gaps, overlaps, and contradictions among their

recommendations and activities. This communication is essential to ensure that individually determined student supports are provided in ways that

- effectively achieve specified outcomes,
- use resources in a responsible manner,
- are status enhancing or status neutral for the student, and
- are “only as special as necessary” (Giangreco, 1996 cited in Giangreco et al, 1999).

Another question of interest asked by the researcher was “how important is related service persons to your job as a vocational training programme instructor”? Several points were raised by the respondents at this stage. Respondent A had it “*they provide support to the children to make them relatively independent*”. Respondent B also stated “*they organize workshops and symposia for teachers of the vocational training classes*”. Similarly, Respondent C pointed out “*they serve as guides for the children with special needs in the vocational training classes*”.

All the above responses indicate clearly that related service persons are strong pillars behind the vocational training programmes at the Dzorwulu Special School for the Persons with Intellectual Disabilities. This special assistance hinges on a similar philosophy with the human capital theory as put forward by Bohlander (2001) that the human capital concerns knowledge, skills, and capabilities of individuals that have economic value to an organization. The author continued to describe human capital as “the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being”.

Setback is a reversal or check in progress. In most cases, there are setbacks that kick against some aspects of a programme. This made the researcher interested in

finding out the respondents' views on the setbacks they face as they work with the related service personnel. The researcher asked; what are some of the setbacks in your quest to work with related service persons? In responding, Respondent A mentioned that *she has no particular setback working with these individuals*. Respondent B also stated *"there are no setbacks in relation to working with these individuals"*. Respondent C also said *"so far, I haven't encounter any significant setback while dealing with related service persons"*. Respondents D, E, and F also stated equally that *there are no setbacks in their interactions with the related service personnel*. These responses rather are contradictory to the views of Backup (2009) who contends that there are numerous common practices that interfere with the provision of educationally necessary related services in a vocational training programme for the persons that are intellectually disabled. According to the scholar, families and school personnel interact with related-services personnel as "experts" rather than collaborative team members, families and general educators have insufficient involvement in related-services decision making, groups of individuals serving the same student do not always function as a team. Other setbacks raised by the scholar include autocratic decisions about support services are made by related-services providers in isolation without consideration of the interrelationships among the services provided by team members, each discipline develops separate goals based on discipline-specific assessments, related-services planning, implementation, and evaluation often are unrelated to the educational programmes, pull-out approaches that do not match the intended educational functions of related services are used, students are placed in special education schools or classes so they can receive related services rather than being provided services that support them in general education programmes and placements that are less restrictive.

#### **4.5 Theme four: challenges facing the work of vocational training at the Dzorwulu Special School for Persons with Intellectual Disabilities.**

The first question asked by the researcher concerned funding of the vocational training unit of the Dzorwulu Special School for Persons with Intellectual Disabilities. The first question posed was: how financially are you resourced in this programme? Respondent A said “*I depend solely on government funding*” while respondent B said “*it is financed by government*”. Furthermore, Respondent C indicated “*as a government institution, we depend on only government for finances*”. Similarly, Respondent D mentioned “*we are not financially resourced*”, and Respondent E said “*it is all dependent on the government*”. The responses from F and G were not different. The former mentioned “*I depend solely on the government for funding*”, while the latter pointed out “*the programme is basically depended on the central government for funding*”.

Deducing from the responses above, vocational training programmes at Dzorwulu Special School for PIWDs is underfunded. This assertion is made based on the fact that according to Laing (2013), the Ministry of Education of Ghana, which finances and oversees public vocational institutions in Ghana, has consistently allocated less than 2% of its budget to the TVET sector. Again if Dzorwulu Special School for PIWDs is funded by the central government according to the respondents, then the training is lacking adequate financing which agrees with Ebeh (2011), cited in (Yangben & Seniwoliba, 2014), who pointed out that only one percent of the Ghana Education Service (GES) budget is allotted to TVET which does not portray any seriousness in technical and vocational education.

The researcher was also interested in finding out the kinds of perceptions being held by parents and the effect of these perceptions on their work. With this in

mind, the researcher asked “what kind of perceptions do parents and other people have about the vocational training programme”?

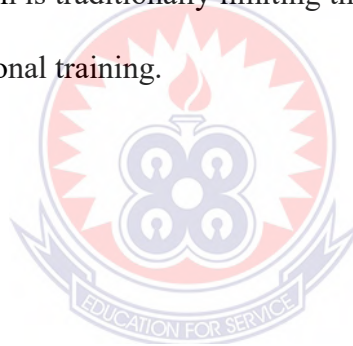
The responses went as follows: Respondent A said “*the people and parents see that the programme is useful*”, Respondent B indicated “*there is no bad perception about it*” while Respondent C responded “*I believe they see it as any normal vocational training programme*”. Further to these, Respondent D said “*they don’t have any bad perceptions about it, they rather encourage us to go on, whiles*” Respondent E also pointed out “*they don’t have any perceptions about it; they rather see it as something we are doing to help their children*”. Finally, Respondent G had this to say; “*some parents and other people see it as helpful*”.

Upon a critical study of the responses above, it is clear that parents and other people do not have any negative perceptions of the programme as it is practiced elsewhere. The case of Dzorwulu is quite different since the respondents made it clear that there are no perceptions hindering the practice of vocational training programmes at the school. This advancement goes contrary to the observation made by Ndala (2006); and Yengben and Seniwoliba (2014) that it appears the intention and the idea of establishing vocational education for the intellectually disabled has failed. According to these authors, in spite of the efforts by the government and other stakeholders to improve access, quality structured content of technical and vocational schools in Ghana, majority of the public still have poor perception about technical and vocational education programmes. The authors cited an instance where some people are of the view that curriculum of technical and vocational schools are excessively theoretical and abstract instead of being purely practical and related to the job market.

Negative perceptions have been a major impediment to vocational training programmes for the persons who are intellectually disabled. These perceptions have



come from parents and the students themselves. Laing (2013) contended that one of the greatest challenges facing vocational training for the intellectually disabled in Ghana currently is the low prestige it enjoys from the public. Most parents and guardians have dreams of their wards becoming doctors, lawyers, or accountants. Trades like auto mechanics, hairdressing, and carpentry are considered to be the preserve of children who do not have the mental ability to pursue a university education. These trades are also thought to be better suited for those coming from the bottom rungs of the socio-economic ladder. The author continued to add that the poor perception that technical and vocational education is an option reserved for those Ghanaian intellectually disabled who are unable to achieve the grades to enter into higher grammar education is traditionally limiting the numbers of young people going into technical and vocational training.



## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Overview

This chapter provides the summary of findings, conclusion, and recommendations.

#### 5.2 Summary of the study

The purpose of the study was to investigate the vocational training programmes for Persons with Intellectual Disabilities at the Dzorwulu Special School in the Greater Accra Region of Ghana. Four research questions were used to guide the study. The purposive sampling technique was adopted for selecting the study site and participants. An interview guide was used for collecting the necessary data for the study.

Data gathered were analyzed using descriptive analysis backed by verbatim quotes to substantiate some of the views of the respondents. The main research questions of the study were analyzed question by question in terms of the nature and model of the vocational training programmes being offered in the school, the material resources available for the training programmes, the level of teachers and related service collaboration as well as the challenges facing the programmes at the school.

#### 5.3 Main findings

- The study found that there are different kinds of vocational training programmes for persons with intellectual disabilities in the Dzorwulu Special School for the intellectually disabled. It was also found that the vocational

training programmes as it is run at the school are not different from what is practiced at other regular schools in the country. Some of the kinds of vocational training programmes at the school include doormat weaving, bead making, agriculture – poultry and gardening, key holder designing as well as hairdressing and the garment making.

- The study also established that there is enough stock of material resources available for use at the school. However, it was clear that the materials are not being taken care of as required. It was further established that the materials available are not those that are supported by technology.
- The study also found that there is teacher-related service collaboration. The study pointed out that related service personnel organize in-service trainings for the staff of the school intermittently that go a long way to help in the vocational training programmes of the school. It was pointed out that they were not working as a team in training the students directly.
- The study also brought to light that the only visible challenge of the Dzorwulu special school for the intellectually disabled concerns funding. The government is the sole provider of all funding which is not enough. Attempts made to receive extra funds from well-wishers and philanthropist have proved futile.

#### **5.4 Conclusion**

The study concluded that the vocational training programmes being offered for students with intellectual disabilities at the Dzorwulu Special School are going on successfully as far as the various kinds of training programmes, the resources availability and suitability, the teacher-related service personnel are concerned. It is

also important to note that the programmes do not come without challenges, however, the challenges are not substantial enough to ruin the programmes.

## **5.5 Recommendations**

Based on the findings the following recommendations have been made as a way of improving the vocational training programme at Dworwulu Special School:

1. There is the need for acquisition of the required computers and audio-visual aids for the use of Information and Communication Technology (ICT) in training the students.
2. The authorities of the school must make sure there is the needed infrastructure and staff for proper stock taking and good material management procedures put in place to take good care of the materials.
3. The Headmaster and other stakeholders must engage in other fundraising activities to raise enough funds for the programmes. This could involve government departments, non-governmental organizations, employers, philanthropists among others.
4. The teacher and related services collaboration should go beyond just capacity building and in-service training for teachers to adopting the practice of using teams of professionals, often from different disciplines such as speech-language pathologist, occupational therapist, vocational therapist, and physical therapist working together with the teachers to meet the needs of individuals with disabilities and their families.

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## **APPENDICES**

### **APPENDIX A**

#### **UNIVERSITY OF EDUCATION, WINNEBA**

#### **DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND MANAGEMENT**

#### **INTERVIEW GUIDE**

**Dear respondent,**

This interview guide intends to collect information on an investigation into vocational training programme for Persons with Intellectual Disabilities in Ghana: A case study at the Dzorwulu Special School of Greater Accra Region in Ghana and your school has been chosen to participate in the research. The data collected will be solely used for the purpose of the study. Therefore, your objective responses to the items will help in coming up with good idea of the problem and possible recommendations to the issues raised in the study. All respondents are assured that all information provided will be treated with the strict confidentiality it deserves.

## Interview Guide

1. How different is your vocational training program from that of the other persons without disabilities?
2. Which mode(s) of vocational education do you practice here, and how is it done?
3. What particular roles do related service persons play in your program?
4. How important is related service persons to your job as a vocational training program instructor?
5. What are some of the setbacks in your quest to work with related service persons?
6. What specific duties are expected of you as a teacher/instructor in the vocational training program?
7. In your view, how can you be strengthened to perform better than it is now?
8. What is done by stakeholders to ensure your professional development?
9. What is the state of your material resources for teaching in the vocational program?
10. How well do you employ technological tools eg. Computers in your work?
11. How financially are you resourced in this program?
12. What kinds of perceptions do parents and other people have about the vocational training program?
13. How often do your graduates get employed after transition?

## APPENDIX B



### DEPARTMENT OF SPECIAL EDUCATION UNIVERSITY OF EDUCATION, WINNEBA (UEW)

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Our Ref:

January 4th, 2016

The Headmaster,  
Dzorwulu Special School – Accra.

Dear Sir,

#### INTRODUCTORY LETTER

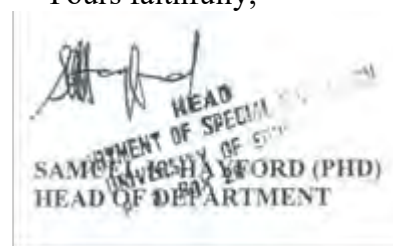
Mrs. Mawulorm Afelete, is a Master's Student of the University of Education, Department of Special Education, Winneba is undertaking research on the topic '**an investigation into vocational training programmes for persons with intellectual disabilities in Ghana: a case study at the Dzorwulu Special School**' in Accra, Ghana.

She would need your assistance to access data from your school. I would therefore, be grateful if you could provide her with the necessary assistance.

Your cooperation in this regard is highly appreciated.

Thank you.

Yours faithfully,

A handwritten signature in black ink is written over a rectangular stamp. The stamp contains the following text: 'HEAD', 'DEPARTMENT OF SPECIAL EDUCATION', 'UNIVERSITY OF EDUCATION, WINNEBA', and 'SAMUEL AGYEMANG (PHD) HEAD OF DEPARTMENT'.

## APPENDIX C

### REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL.

University of Education, Winneba  
Department of Special Education  
P. O. Box 25. Winneba.  
Central Region.

24th February, 2016.

.....  
.....  
.....

Dear Sir,

### PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL

I congratulate you for the good work you are doing in your school. I am currently a Master's degree student at the University of Education, Winneba. As part of my course, I am required to do a research. The purpose for the study is to **'investigate into vocational training programmes for persons with intellectual disabilities in Ghana: a case study at the Dzorwulu Special School'**.

All information provided for the purpose of this research will be treated with utmost confidentiality.

I hope that you would grant me permission to collect the data for my study.

Yours faithfully,

.....  
**Mawulorm Afelete**

## APPENDIX D

### INFORMED WRITTEN CONSENT TO PARTICIPATE IN RESEARCH

University of Education, Winneba  
Department of Special Education  
Box 25, Winneba

18th March, 2016.

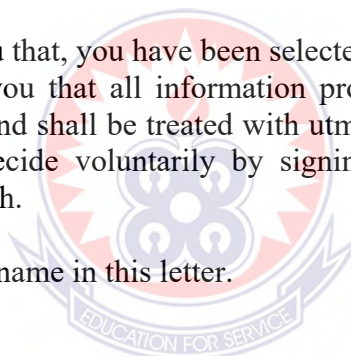
Dear Teacher,

### LETTER OF CONSENT TO PARTICIPATE IN RESEARCH

I thank you for the great work that you are doing for your school. I am a student at the University of Education, Winneba pursuing a Master's degree course in Special Education. I am to conduct a research in your school as one of the requirements for the course. The purpose for the study is to **'investigate into vocational training programmes for persons with intellectual disabilities in Ghana: a case study at the Dzorwulu Special School'**.

I am happy to inform you that, you have been selected to participate in this study. I would like to assure you that all information provided would solely be used for research purposes only and shall be treated with utmost confidentiality. On your part, you are requested to decide voluntarily by signing below if you accept to be a participant in this research.

Please do not write your name in this letter.



.....  
Research Participant  
(Signature only)

.....  
Researcher

## APPENDIX E

### LETTER OF APPRECIATION TO THE SCHOOL

University of Education, Winneba  
Department of Special Education  
Box 25, Winneba

9th May, 2016.

.....  
.....  
.....

Dear Sir,

### LETTER OF APPRECIATION

I am writing back in connection with data collection for my research in which your school participated. Data collection may not usually be an easy task for researchers. In my case, it was successful because I got maximum support and cooperation both from you as a school head and from other participants, all of whom willingly participated in the research.

I would therefore like to convey my sincerest gratitude to all, especially you for making it possible for me to obtain data for my study.

May God bless your struggles in the service of our country.

Yours faithfully

.....  
**Mawulorm Afelete**