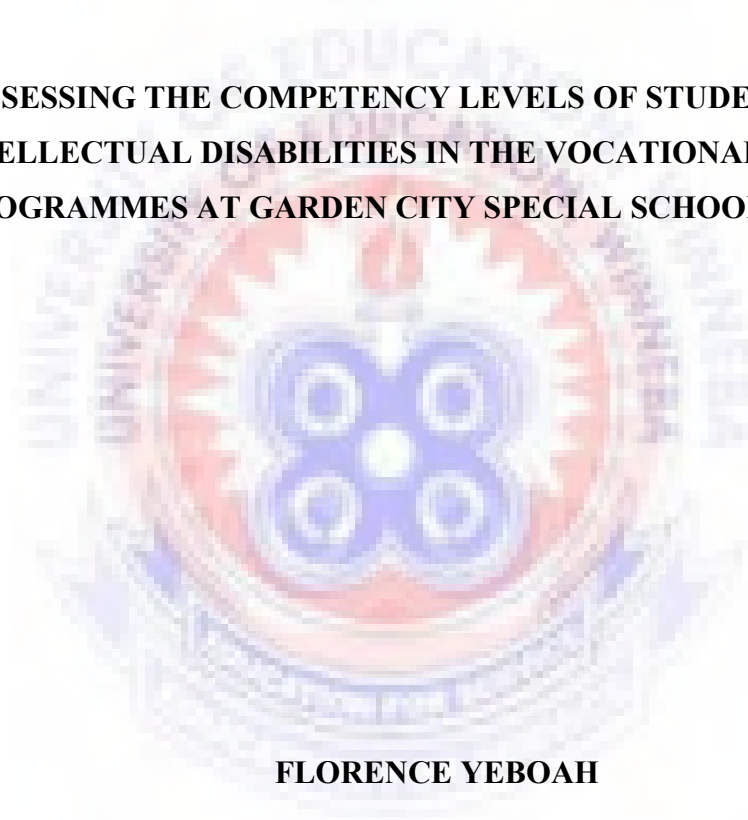


# **UNIVERSITY OF EDUCATION, WINNEBA**

**ASSESSING THE COMPETENCY LEVELS OF STUDENTS WITH  
INTELLECTUAL DISABILITIES IN THE VOCATIONAL TRAINING  
PROGRAMMES AT GARDEN CITY SPECIAL SCHOOL, KUMASI.**



**FLORENCE YEBOAH**

**OCTOBER, 2015**

# **UNIVERSITY OF EDUCATION, WINNEBA**

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The logo of the University of Education, Winneba, is a circular emblem. It features a central sunburst or starburst design in red and white, surrounded by a blue border. The text "UNIVERSITY OF EDUCATION, WINNEBA" is written around the perimeter of the emblem.

**FLORENCE YEBOAH**

**A Thesis in the Department of SPECIAL EDUCATION, Faculty of Educational  
Studies submitted to the School of Graduate Studies, University of Education,  
Winneba, in partial fulfilment of the requirements for award of Degree of Master of  
Philosophy (Assessment in Special Education) degree.**

**OCTOBER, 2015**

## DECLARATION

### CANDIDATE'S DECLARATION

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

SIGNATURE.....

.DATE.....

### SUPERVISOR'S DECLARATION

I, Grace Yawo Gadagbui (Prof.), hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Thesis as laid down by the University of Education, Winneba.

SIGNATURE.....

DATE.....

## **DEDICATION**

I dedicate this work to my husband, Ernest Adu-Gyamfi and my sweet girl, Nana Serwaa Adu-Gyamfi .



## **ACKNOWLEDGEMENT**

Appreciating your partners can be a gratifying and at the same time challenging endeavour. You stand the risk of leaving out key stakeholders who have contributed in one way or another to the success of a project.

This project has been a product of the contribution of many people. I would like to single out the following for mentioning: Prof. Grace Yawo Gadgabui, my supervisor and lecturer at the Department of Special Education at UEW, who despite her numerous duties to pain going through this work to make it a success. Prof. may the good Lord greatly bless you with longevity and good health; Dr. Alexander M. Opong, Dr. Yaw N. Offei (Head, Department of Special Education) and the late Dr. Ocloo (O. C.).

I am very grateful to my dear friend, Joseph Kwadwo Ampratwum (Prof. Ortago) whose infringing support, motivation, contributions and dedications have led to the production of this work. Kwadwo, the sky indeed is your limit, may you live to fulfil all your aspirations and dreams.

I am again, ever mindful of the unparallel love, prayer and support of my lovely husband. I am deeply thankful for your encouragement and faithfulness in reminding me that you

are my number one support, I love you Obempa, may you be blessed with long life and good health.



## ABSTRACT

*The purpose of the study was to assess the competency levels of students with intellectual disabilities in the vocational training programmes at Garden City Special School, Kumasi. A case study design with a mixed research strategy was adopted for the study. The population was 98 – made up of 82 students and 16 teachers. The sample size consisted of 15 students and 5 teachers. A purposive sampling technique was adopted to select the sample size. The researcher gathered both quantitative and qualitative data to measure the students' competencies in the processes involved in batik/tie and dye and leather work (sandal making) as well as the other challenges militating against vocational training programme. The findings indicated that comparatively, students' competency in batik/tie and dye skills were higher than in leather work. Thus, students had reached stages in the conscious competencies matrix in the former than the later. It was generally noted that challenges militating against students' competencies in the vocational training programmes in the school were inadequate qualified personnel in vocational training, time constraint, problem of fine motor skills; student's attitude towards the training of the vocational training and students reporting late after re-opening. Based on this it was recommended that efforts should be made by the school and management authorities to well to provide the needed materials for the training in order to improve on students' competencies in vocational skills.*

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

Competency is the capability to apply or exhibit a set of related knowledge, skills and abilities required to successfully perform tasks in a defined work setting. It often serves as the basis for skill standards that specifies having a sufficient skill, ability and knowledge in a particular endeavour. Simply put, it is the ability to demonstrate the skills and strategies efficiently with the resource and equipment that are available especially to students with intellectual disabilities. Students with intellectual disabilities are exceptional students with sub-average intellectual functioning who may deviate from the abled individuals in their physical, mental and social characteristics. For instance, they have difficulties in learning and retaining new information and adapting to new situations. They develop more slowly than their peers and require additional support to develop. They have difficulty with concentration, communication skills, understanding instructions, and difficulties in becoming independent.

Intellectually disabled students are categorized according to the severity of their conditions. Thus mild, moderate, severe and profound and again, based on how much support they would need to function as competently as possible – intermittent, limited, extensive and pervasive.

These students have one unique need which is quite different from all other disability groups. They depend on vocational training programmes for a living. Vocational

training programmes enable individuals to acquire relevant skills which promote quality of life, self-worth, respect and dignity. They therefore, require vocational training programmes in order to develop their maximum potentials. Preparing individuals with intellectual disabilities for total independence and employability therefore requires a comprehensive trans-disciplinary vocational programmes and an emphasis on post-school planning, which is an important role for special schools.

In developed countries like, the United States and United Kingdom, some individuals with intellectual disabilities have been successfully trained and placed in competitive employment (Cherono, 2003). Unfortunately, the field of vocational education and training for individuals with intellectual disabilities in Africa has not lived up to the standards as practiced in the developed countries mentioned earlier. In South Africa for example, vocational education and training has been badly neglected, hence the adaptation of the United States' vocational training programme as a framework for developing suitable programmes for such individuals (Akoojee, Gewer & McGrath, 2005).

In Ghana, special schools for individuals with intellectual disabilities are established primarily to provide functional academics and vocational skills to this category of children to make them live independent lives after schooling. The concern is that, since these schools provide pre-vocational skills training for children with intellectual disabilities, they should be able to apply the skills and knowledge acquired from the programme in any job setting for which they are trained.

The vocational programmes in the special schools for the intellectually disabled students are categorised in different areas: farming, basketry, batik and tie-dye

making, envelop making, broom making, poultry keeping, sewing, craft and home management. These programmes provide a broad spectrum of skill areas for individuals with intellectual disabilities.

The idea 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. For individuals with intellectual disabilities to live independently and to play social roles successfully in their communities, they must be taught skill-based curriculum which is aligned to their individual needs. Based on the International Labour Organization (ILO) objectives and principles, various vocational training programmes are expected to be designed for individuals with disabilities to enable them meet the exigencies of life after schooling (Munkholm & Fisher, 2008). These programmes should also enable individuals with disabilities to learn vocational skills where possible under the same principles, measures, methods and conditions as their non-disabled individuals as far as their medical and educational conditions permit them.

In Ghana, in terms of vocational training programmes in specific special schools, Garden City Special School in Kumasi (Ashanti Region), the Three Kings Special School at Battoir (Volta Region) and Twin City Special in Takoradi (Western Region) provide basketry, batik and tie-dye making, envelop making, broom making, poultry, sewing, wood work and home management. These aim at preparing individuals with intellectual disabilities for the job market. Moreover, curriculum for special schools for individuals with intellectual disabilities in Ghana outline some vocational skills needed to enhance independent living and employability of students with intellectual disabilities. The curriculum made for the vocational training programmes at Garden

city special school seems to be adapted by teachers and the learning materials are planned according to each teacher's own adaptation of the curriculum. However, it seems very few of the students are able to demonstrate the appropriate skills after leaving the school for transition in the work setting. It is therefore necessary to assess the competency of students in the vocational training programme at Garden City Special School.

### **1.2 Statement of the Problem**

In a preliminary survey by the researcher during her internship programme in the school suggests that some students at Garden City Special School experience difficulties in demonstrating the skills they had learned in vocational training at the school, this is because they have difficulty in measuring and cutting materials into required sizes, folding of materials, tying of materials and waxing in batik/tie and dye. Besides, it seems students find it difficult in pattern making, cutting the pattern into needed shapes and sizes, identification of the patterns (left from right and), gluing and fixing of the patterns in leather work (sandal making). Again, there seems to be inadequate material resources, inadequate qualified professionals and limited vocational programmes with regard to teaching vocational skills to these segments of students. This situation is not limited to Ghanaians alone, a study carried out by Morris and Levinson (2005) revealed that if children with intellectual disabilities are not taught well in vocational training, they end up being burden in their community and the nation as a whole. This was supported with findings from Powel's (2007) studies in South Africa (Cape Town) where only 20% of students with intellectual disabilities were benefiting from vocational training due to the lack of availability of required tools, methodology and professionals to teach these individuals. Due the fact



that students with intellectual disability may not do well or qualify for higher academic studies, majority ascertain that the best curriculum for these individuals will be vocational courses to equip them with the requisite skills to be employable.

### **1.3 Purpose of the Study**

The purpose of the study was to assess the competency levels of students with intellectual disabilities in vocational training programmes at Garden City Special School and how the programmes prepare them to acquire skills necessary to lead independent lives in future.

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

The objectives of the study were:

1. To assess students' competency levels in the processes involved in batik/tie and dye at Garden City Special School.
1. To assess students' competency levels in the processes involved in leather work (sandal making) at Garden City Special School.
2. To identify the challenges militating against the competency of students in the vocational training programmes at Garden City Special School.

### **1.5 Research Questions**

The following research questions were raised to guide the study:

1. How competent are students in the processes involved in batik/tie dye making at Garden City Special School?
2. How competent are students in the processes involved in leather work at Garden City Special School?

3. What are the challenges militating against the pre-vocational training programmes at Garden City Special School?

### **1.5 Significance of the Study**

The findings of this study would help in revealing the competency levels of students with intellectual disabilities in the processes involved in batik/tie and dye making. This would enable the school system take measures to improve on students' skills.

Also, the result of the study would help in finding out the competency levels of students in the processes involved in leather work. This would also enable the teachers to employ the necessary means of improving on their methodologies to help improve the skills of students.

The result of the study would again help in identifying the challenges militating against the pre-vocational training programmes. This would help the stakeholders to find proper solutions to the problems to improve on the programmes.

### **1.6 Delimitation**

The study focused on only individuals with intellectual disabilities at Garden City Special School with particular interest in investigating the competency of students in the processes involved in batik/tie and dye and leather works (sandal making) – measuring and cutting material into required sizes, folding of material, tying of material and waxing; pattern making, cutting the pattern into needed shapes and sizes, identification of the soles (left from right), gluing and fixing of the patterns as well as the challenges militating against student's competency in vocational training programmes at Garden City Special School.

### **1.7 Limitation**

The main limitation of this study was that data were collected from the students and teachers in only one special school in the country. Therefore, their responses may not be representative of all special schools in Ghana. The scope of the study could have covered more schools and given more holistic picture of the problem under study. The time frame for the final presentation of the project, as well as inadequate financial support did not permit for wider coverage of the study. Due to the small sample size, the researcher does not intend to generalize the findings.

### **1.8 Definition of Terms**

**Competency:** the capability to apply or exhibit a set of related knowledge, skills and abilities required to successfully perform tasks in a defined work setting. It often serves as the basis for skill standards that specifies having a sufficient skill, ability and knowledge in a particular endeavour.

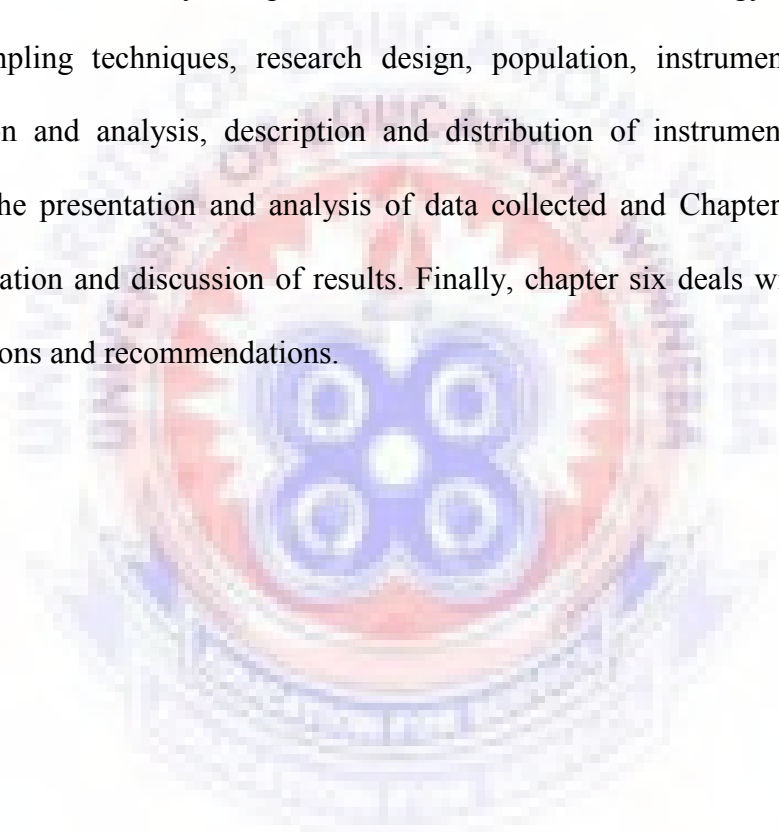
**Vocational training:** A particular job or work that individuals are engaged in to enable them to earn a living.

**Intellectual disabilities:** Intellectual disability is a disability characterized by significant limitations both in intellectual functioning and in adaptive behaviour, which affects many everyday practical skills. This disability originates before the age of 18 (AAIDD, 2010).

**Independent living:** being able to have the same level of choice, control and freedom in one's daily life as any other person.

### **1.9 Organization of the Chapters**

The study was presented in six chapters. Chapter one comprises the background to the study, statement of the problem, aim and objectives of the study, research questions, significance of the study, delimitations of the study, limitations, operational definition of terms and general layout of the study. Chapter two focuses on the literature review taking into account the research objectives and the theoretical framework of the study. Chapter three deals with the methodology including sample and sampling techniques, research design, population, instruments used in data collection and analysis, description and distribution of instruments. Chapter four covers the presentation and analysis of data collected and Chapter five focuses on interpretation and discussion of results. Finally, chapter six deals with the summary, conclusions and recommendations.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter provides related literature and theoretical frame work that support the study. The discussions have been organized under the following strands:

1. Theoretical Framework of the study
2. Vocational programmes for individuals with intellectual disabilities.
3. Competency levels of students in the processes involved in batik/tie and dye
4. Challenges militating against the pre-vocational training programmes
5. Preparing individuals with intellectual disabilities towards employment
6. Transitional programmes for individuals with intellectual disabilities.
7. Summary of Literature

#### **2.1 Theoretical Framework of the study**

The study adopted the Conscious Competence Learning Model Broadwell (1970). The origin of this model is unknown even though it is widely being used in research relating to measurement of competence. It is most commonly known as the „conscious competence learning model“, sometimes „conscious competence ladder“ or „conscious competence matrix“, although other descriptions are used. The conscious competence model explains the process and stages of learning a new skill (or behaviour, ability, techniques). It is a useful reminder of the need to learn and train others in stages.

The Conscious Competence Learning Model often comes in four stages though occasionally a fifth stage or level is added in more recent adapted versions. The

learner or trainee always begins at stage 1 – „unconscious incompetence“, and ends at stage 4 – „unconscious competence“, having passed through stage 2 – „conscious incompetence“ and - 3 „conscious competence“.

Teachers and trainers commonly assume trainees to be at stage 2, and focus effort towards achieving stage 3, when often trainees are still at stage 1. The trainer assumes the trainee is aware of the skill existence, nature, relevance, deficiency, and benefit offered from the acquisition of the new skill. Whereas trainees at stage 1 - unconscious incompetence - have none of these things in place, and would not be able to address achieving conscious competence until they have become consciously and fully aware of their own incompetence. This is a fundamental reason for the failure of a lot of training and teaching. If the awareness of skill and deficiency is low or non-existent – for an example, the learner is at the unconscious incompetence stage - the trainee or learner would simply not see the need for learning. It is essential to establish awareness of a weakness or training need (conscious incompetence) prior to attempting to impart or arrange training or skills necessary to move trainees from stage 2 to 3.

People only respond to training when they are aware of their own need for it, and the personal benefit they would derive from achieving it.

The progression is from quadrant 1 through 2 and 3 to 4. It is not possible to jump stages. For some skills, especially advanced ones, people could regress to previous stages, particularly from 4 to 3, or from 3 to 2, if they fail to practise and exercise their new skills. A person regressing from 4, back through 3, to 2, would need to develop again through 3 to achieve stage 4 - unconscious competence again. For

certain skills in certain roles stage 3 conscious competence is perfectly adequate. Progression from stage to stage is often accompanied by a feeling of awakening - 'the penny drops' - things 'click' into place for the learner - the person feels like they've made a big step forward, which of course they have.

We each possess natural strengths and preferences. We each therefore find progression to stage 3, and particularly to stage 4, easier in some skills rather than in others. Some people would resist progression even to stage 2, because they refuse to acknowledge or accept the relevance and benefit of a particular skill or ability. In these cases it's obviously not too clever to attempt to progress the person to stage 3. Instead find the person a more suitable role, or allow an adapted approach to the current role if appropriate and viable. People develop competence only after they recognise the relevance of their own incompetence in the skill concerned. Table 2.1 shows the conscious competence matrix. Table 2.1 Conscious Competence Matrix.

**Competence**

**Incompetence**

**3-Conscious competence**

**2-Conscious incompetence**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• the person achieves „conscious competence“ in a skill when they could perform it reliably at would</li> <li>• the person would need to concentrate and think in order to perform the skill</li> <li>• the person could perform the skill without assistance</li> <li>• the person would not reliably perform the skill unless thinking about it - the skill is not yet 'second nature' or 'automatic'</li> <li>• the person should be able to demonstrate the skill to another, but is unlikely to be able to teach it well to another person</li> <li>• the person should ideally continue to practice the new skill, and if appropriate commit to becoming 'unconsciously competent' at the new skill</li> <li>• practice is the single most effective way to move from stage 3 to 4.</li> </ul> | <ul style="list-style-type: none"> <li>• the person becomes aware of the existence and relevance of the skill</li> <li>• the person is therefore also aware of their deficiency in this area, ideally by attempting or trying to use the skill</li> <li>• the person realizes that by improving their skill or ability in this area their effectiveness would improve</li> <li>• ideally the person has a measure of the extent of their deficiency in the relevant skill, and a measure of what level of skill is required for their own competence</li> <li>• the person ideally makes a commitment to learn and practice the new skill, and to move to the 'conscious competence' stage</li> </ul> |
|---|---|



---

<b>4 - unconscious competence</b>	<b>1 - unconscious</b>
<ul style="list-style-type: none"><li>• the skill becomes so practiced that it enters the unconscious parts of the brain - it becomes 'second nature'</li><li>• common examples are driving, sports activities, typing, manual dexterity tasks, listening and communicating</li><li>• it becomes possible for certain skills to be performed while doing something else, for example, knitting while reading a book</li><li>• the person might now be able to teach others in the skill concerned, although after some time of being unconsciously competent the person might actually have difficulty in explaining exactly how they do it - the skill has become largely instinctual</li><li>• this arguably gives rise to the need for long-standing unconscious competence to be checked periodically against new standards</li></ul>	<ul style="list-style-type: none"><li>• the person is not aware of the existence or relevance of the skill area</li><li>• the person is not aware that they have a particular deficiency in the area concerned</li><li>• the person might deny the relevance or usefulness of the new skill</li><li>• the person must become conscious of their incompetence before development of the new skill or learning could begin</li><li>• The aim of the trainee or learner and the trainer or teacher is to move the person into the 'conscious competence' stage, by demonstrating the skill or ability and the benefit that it would bring to the person's effectiveness.</li></ul>

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Source: Broadwell (1970)

## **2.2 Vocational programmes for individuals with intellectual disability**

According to Szymanski and Parker (2008) Vocational programmes are subsumed under seven different areas which are agriculture, business and office, distributive, health, home economics, trade and industry and technical occupations. McCrea and Miller (2004) opined that vocational programmes are further simplified to include mushroom farming, batik/tie and dye, basketry, weaving, carpentry, leather work, poultry, bead making and calabash work which constitute an important component of preparing individuals with intellectual disabilities to enter the world of work. However, vocational programmes should not end as employment begins, developing your career is important at all stages of your working life. Whether you're starting out and need to gain new skills to enter a profession or you are an experienced professional who needs to remain up-to-date with skills in their job, developing your career is vital to being successful in your particular line of work). Activities must be adapted to meet the needs of individuals with intellectual disabilities because the interaction of the developmental nature of individuals with intellectual disabilities and the developmental nature of career education can lead to a variety of impediments in career instruction for individuals with intellectual disabilities (Reid, Deutsch, Kitchen & Azanavorian, 2004).

As Kanchier (1990) said vocational programmes should be dynamic and life long process because individuals with intellectual disabilities are always changing as they grow. He gave a framework for vocational training programme for individuals with intellectual disabilities which is particularly useful for counsellors who need to integrate their own services with the services offered by other members of the Individualized Educational Programme (IEP) team.

Hammill and Bartel (2000) further reported that vocational training programme focuses on helping those with intellectual disabilities to acquire skills and techniques that are used in vocational training to assist such individuals to acquire relevant skills. Kniel (2002) contends that the selection of vocational programmes should be relevant to individuals with intellectual disabilities, and the activities should be simple and repetitive.

Hayford (2000) carried out an evaluation of vocational programmes in four special schools for the individuals with intellectual disabilities in Ghana. The researcher noted that, the four special schools in the study concentrated on the provision of vocational activities such as batik/tie dye, weaving, bead making and poultry. These vocations appeared too limited in exposing individuals with intellectual disabilities to other vocational options and job market.

In their vocational interest, individuals with intellectual disabilities may lack realistic information about occupation and vocations in which to base their interest. With regard to individuals' preferences, teachers and parents can help identify short-term skill areas that will be developed into long-term vocational outcomes.

Studies into vocational programmes for intellectually disabled students in the United State have identified a number of programme practices which are associated with the successful vocational training of intellectually disabled students (McDonnell, Hardman, McDonnell, Kiefer- O'Donnell, 2005). These programmes include person-centred transition planning and transition assessment, community-referenced curriculum and instruction, an individualised vocational programme, job placement

prior to leaving school and the importance of family involvement (Sitlington, Clark & Kolstoe, 2000).

Howley (2010) posited that an individualized vocational programme should be developed according to the students' individual needs. This is a specially designed programme with inputs of team members (i.e. the disabled child, parents and class teacher) to meet an individual's needs. Involving individuals with intellectual disabilities in decision making in terms of vocational programme choices will create opportunities for them to have a say in their own education and future.

Besides, Szymanski and Parker (2008) opined that, school counsellors serving elementary schools can collaborate with teachers to help individuals with intellectual disabilities develop vocation interest and the ability to make choices among vocational activities. For example, instructional activities at all grade levels may be designed to expose students with intellectual disabilities to a wide variety of job-related skills. The identification of preferences can help the individual's define preferences that may translate to preferred occupational environments.

Furthermore, Avoke and Avoke (2004) argue that schools should incorporate vocational education programmes and experiences early in the lives of individuals with intellectual disabilities. The authors also affirmed that the paramount importance of daily living skills, work experiences and vocational education is deeply infused within a robust vocational system.

Thressiakutty and Rao (2001) suggest that, there should be on-going support services to help individuals with disabilities to continue on vocational training programmes.

Given the importance of support services, the authors suggest the following:

- To arrange for extensive vocational training
- To observe the individuals at their job sites
- To provide additional remediation in academic subjects.
- To teach necessary skills needed to succeed in their career.
- To liaise with the employer to bring in improvement in the performance
- To lead them towards independent living and attend quality of life
- To organized social warning exercise for better acceptability in the work community.

Furthermore, one major objective in educating individuals with intellectual disabilities is the acquisition of literacy and numeracy skills, and also vocational skills for self-dependency. In segregated settings, the curriculum is geared towards functional education and life skills training for individuals with disabilities (Mutua & Dimitrov, 2001). Teachers for individuals with intellectual disabilities in segregated facilities focus on teaching their students how to communicate their needs, employ self-care skills for basic hygiene, maintain appropriate behaviour, employ functional academics, to be safe, and how to employ appropriate social skills (Mwangi, Kerre, Wabuge, & Mugo, 1999).

### **Competency levels of students in the processes involved in Batik/Tie and Dye**

Batik/tie and dye is a resist technique of dyeing which involves folding, tying, sewing or knotting the fabric with raffia, twine nylon thread or any suitable material that is capable of resisting dye absorption before dying (Adu-Akwaboa, 1994). The process

involves twisting, folding or crumpling the fabric, tying it and immersing it wholly or partially in the dye solution for 15 to 30 minutes. Where more colours are required, the tying and dyeing process is repeated as many times as the number of dye colours but, starting with the lighter shades and ending with the darker colour. During dyeing, the parts of fabric that are not tied or sewn absorb the dyes while the tied or sewn portions prevent dyes from penetrating the fabric. The two actions thus create varied designs in the fabric after untying it.

The actual colour of the dye develops after dyeing when the fabric is allowed to lie in the open for oxidation to take place. This occurs when the dyed fabric is either spread out or immersed in a solution containing an oxidising agent such potassium dichromate or hydrogen peroxide where vat dyes are used. The whole process ends by washing, rinsing, drying and ironing the dyed fabric. This method can produce accidental colour and design effects which can be difficult to replicate. The technique is however, simple and cheaper to use in decorating textile materials.

Sackey (2002) defines batik as a Javanese word that literally means „drawing or writing with wax“. In effect areas of fabric that are drawn or written with wax are not coloured. Herberholz and Herberholz (1998) also indicate that batik is a resist technique and describes the art as an ancient process of decorating fabric. In the application of molten wax by brush, Herberholz and Herberholz recommend the use of a natural brush and not synthetic one since it is likely for the synthetic brush to melt in hot wax.

According to Adu-Akwaboa (1994) the process of batik entails application of molten wax to localised areas of fabric with the help of a tool such as jaunting, brush, cushion foam or wooden blocks, and subsequently immersing the fabric in a dye solution for

15 to 30 minutes. In the course of dyeing, areas that are waxed resist dye absorption whilst unwaxed areas take up the colour dye. De-waxing, which involves removing the wax from the fabric is done by immersing it in hot water so that the wax melts and falls off the fabric. Unlike tie-and-dye technique of fabric decoration where accidental designs are produced, the batik method produces calculated or well defined designs. It also gives out a characteristic crackle effect which occurs as the hardened wax breaks off during the dyeing and rinsing process.

### **2.3 Challenges militating against the pre-vocational training programs among individuals with intellectual disabilities**

Sarah and Gidiglo, (2003) stated that inadequate resources, training, facilities and vocational instructors are some contributing factors rendering the training and development of students with intellectual disability ineffective thereby affecting their competency levels. These authors pointed out that for a successful vocational training for the intellectually disabled, there should be enough resources and vocational instructors in the special schools in Ghana.

Huang and Cuvo, (2006) suggested that securing and sustaining employment for individuals with intellectual disabilities can be an extraordinarily challenging enterprise. In the absence of full time employment, options that include further education and training, leisure, recreation and voluntary work are essential components of a valued and well supported life in the community, and therefore need also to be a focus equipping students with the necessary skills to enhance their competency levels.



Poor attitude of students towards vocational training programs also their competency levels- thus, their inability to understand the relevance and the usefulness of the training. With this, Vlachos (2008) postulated 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. Motivation plays a role in making decisions about what one would really like to do and what will be acceptable in the community

Again, students with intellectual disabilities who suffer from cerebral palsy spend more time in vocational training due to their problem of fine motor skills to manipulate the materials and tools of the training.

The researcher also thinks that lack of parental involvement in the vocational training is a contributing factor. Obi, (2004) opines that parents more than anyone else, provide the needed support to the special needs child. Avoke & Avoke (2004) further stated that the family is the only constant in the child's life and as a result serves as advocates and case managers for the student with intellectual disabilities. These authors also noted that the families help inculcate in their children functional skills that will educate them to cope with adult responsibilities.

Power (1991) stated that professionals who are concerned about the long-term employment for individuals with intellectual disabilities need to identify a range of supports that will enhance each individual's success in the community and



employment. Szymanski (2005) also suggests that school counsellors at the elementary level can work collaboratively with teachers to help increase students' awareness of their abilities and interests that may transfer to future career opportunities.

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. Not only must curriculum focus on skills that these individuals need to use frequently in school, at home, and in the community but teaching functional skills in the natural contexts in which they are performed is necessary. 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 (Muuya, 2006). Muuya further suggests that rather than the more appropriate curriculum combining literacy and numeracy with functional academics and life skills training discussed earlier, programmes for these children focused more on behavioural control and containment and moral behaviour. Curriculum orientation, although guided by the need for the children to acquire skills in self-reliance among others, are largely dependent on the goals and orientations of religious, private, or other organizations in terms of funding.

Individuals with intellectual disabilities do best in learning environments where visual aids such as charts, pictures, and graphs are used. These visual tools are also useful for helping students to understand what behaviours are expected of them. Using charts to map students' progress is very effective. Charts can also be used as a means of providing positive reinforcement for appropriate, on-task behaviour in conjunction with a token economy. Individuals with intellectual disabilities require immediate feedback in order to make a connection between their answers, behaviours, or questions and the teacher's responses. A delay in providing this immediate feedback may disrupt the formation of a connection between cause and effect in the student's mind, and the learning point may be missed (Reynolds, Zupanick & Dombeck, 2013). 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 (Mutua & Dimitrov, 2001).

Individuals with intellectual disabilities may find it harder to study in school when separated from their family. 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 requirement involves 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.

Teachers also need to remember that the job requires more than educational qualification, but a combination of clinical methodology and a direct caring responsibility. Their role also requires so much focus on improvement on the quality of life and transformational changes for the individuals with intellectual disabilities. The teacher's role also is to work and care for individuals with intellectual disabilities primarily teaching them basic literacy and values formation.

Besides, teachers are to identify and modern educational curriculum as needed to meet the individual needs. Teachers handle and teach with various techniques in learning including basic effective communication and social interaction. The teachers are able to show activeness and demonstrate intensive training to set personalised goals and in case for older individuals with intellectual disabilities a more skilled teaching strategy and plan of action. The last but most required qualification of the teachers of individual with intellectual disabilities is their personality and behaviour (Zhang & Stecker, 2008).

The teachers have all the knowledge, ability, tolerance and patience to cope with individuals with intellectual disabilities and are highly trained to do a very critical undertaking of handling a different job. They play a very important role to lead the path of a child in a more straight direction. A teacher in this field should have a specific qualification and specialization to make the work more effective (Szymaski & Parker, 2005)

Furthermore, the teacher needs to possess knowledge in educational psychology or other social or behavioural science to enable him to technically understand, the world

of the individual with intellectual disabilities. Some schools may require teachers to pass a qualification examination or have some years of experience in the field. Some schools may even require an authentic recertification and re-evaluation from previous teaching experience so as to prove teachers' special qualification, while others may only require a basic teaching experience with the ability to handle such special children (Ministry of Education, 2005). Since teachers are the ones to evaluate and nature the value of the individual characteristics of such individuals. They must be open to individuals with intellectual disabilities and maintain a high level of tolerance.

For their part, Phelps and Hanley-Maxwel (1997) were of the view that the responsibility of the teachers is focused basically on the transformation and revival of the intellect of the individuals with intellectual disabilities. The teacher's personal tender loving care is important in this type of job. It is more than just a technical learning experience. Teachers have a personal option to learn to love individuals with intellectual disabilities by expressing a genuine concern and interest in teaching them. The teachers use constant training and practical methods of teaching. Their emphasis is more on functional education. Teachers also teach individual with intellectual disabilities basic skills in typing, reading and writing as well as outdoor games for fun and recreation (Wirenski, 2003).

#### **2.4 Preparing Individuals with Intellectual Disabilities towards Employment**

Human resource development improves economic growth and productivity. This leads to economic emancipation, social mobility and political stability. Training and skills development play a vital role in individual's productive capacity and are integral part of Human Resource Development (Brown & Gerber, 1994). Rapid economic growth

demands a mixture of skilled workers. The accelerated economic progress of the Asian Countries like China, Japan, Malaysia and also Australia are the excellent examples in point. It is an established fact that technical education and vocational training can help individuals to generate income and contribute towards economic growth and social development of a country by acquiring knowledge and skills (Wehmeyer, Lattin, Lapp-Rincker & Agran, 2003).

The economic growth of a country crucially depends on skills for producing goods and services (Ballard, 1995). Investment in physical and human capital leads to the development of services sector, that invariably follows industrialization and modernization, requires mid-level human resource duly possessing entrepreneurial, secretarial and other skills (Brown & Gerber, 1994).

Blackorby and Wagner, (1997) in a study mentioned three types of skills development: creative and cognitive skills (problem solving and linking creativity to action), personal and social skills (conflict resolution, refusal skills, peer mediation, coping skills, facilitation skills, and navigational skills) and vocational and job skills (job and career options and entrepreneurship). In Pakistan for instance, training of various skills is imparted through technical education, vocational training and informal traditional system (Kazmi, 2007).

Employment issues underscore the need for a multifaceted career development programme. Career development is a cyclical process that involves self-knowledge about personality, interests, skills, and abilities; understanding of the world of work and the requirements of specific occupations; and the ability to match one's abilities and skills satisfactorily with an occupation and a work environment. Aspects that influence the process are occupational aspirations, self-efficacy expectations, and

career maturity. Other essential factors include positive self-esteem, emotional intelligence, knowledge of one's civil rights regarding disability, awareness of accommodations, and skills for self-advocacy and disclosure. Several of these factors build upon the experience of disability and reinforce each other. For example, effective self-advocacy requires positive self-esteem. Simply enduring in the face of the many obstacles individuals with disabilities present may be a building block of emotional intelligence (Reiff, 1998). These success factors and the career related research cited previously suggest practices that should be the focus of career development for individuals with intellectual disabilities.

Michaels (1997) advocates an ideological shift from a focus on deficits to a belief in the gifts, capacities and dreams of individuals with disabilities, in other words, reframing of individuals with disabilities' experience on the part of professionals. The following practices can be implemented within this framework; many are the same practices that would be used with individuals without disabilities, but they are adjusted to the needs of the disabled population: (1) accurate self-knowledge about skills, abilities, interests, and goals as well as knowledge of one's disability; (2) world-of-work knowledge acquired through career exploration, job shadowing and appropriate work experience; (3) self-efficacy enhancement through attribution retraining, anxiety reduction, and reframing; (4) self-advocacy skills, including knowledge of civil rights, disclosure issues, accommodations, assistive technologies, and compensatory strategies; (5) job-search skills; and (6) development of personal qualities such as persistence, resilience, and the ability to build social support networks. Individualized Transition Plans should be developed as early as possible, be comprehensive, communicate high expectations, reflect the student's preferences, and

be developed in cooperation with parents and social service agencies (Blackorby & Wagner 1997).

Employment for individuals with intellectual disabilities requires that such individuals successfully perform a wide range of jobs, and can be dependable workers. The type of jobs these individuals are able to perform will depend on their strengths and interest. Examples include animal caretakers, laundry workers, building maintenance workers, library assistants, data entry clerks, mail clerks, store clerks, messengers, cooks, sales personnel, hospital attendants, housekeepers, statement clerks, automobile detail workers and clerical aids (Hitchings & Retish, 2000).

Cameto, Marder, Wagner and Cardoso, (2003) state that combining the curriculum content and instruction with job placement that can be on or off the school will ease the transition from school to work. This concept gives students the opportunity to get curriculum content input and learn specific job skills. Many employers exclude individuals with intellectual disabilities from the work because of persistent, but unfounded myths, fears and stereotypes (Kortering & Braziel, 2000). For instance, some employers believe that workers with intellectual disabilities will have higher absentees than employers without disabilities (Ohler, Levinson & Barker, 1996). These authors found that, employing individuals with intellectual disabilities will not lead to higher insurance rates or more workers compensation as claims.

Just as non-disabled adults work to earn their living, individuals with intellectual disabilities also have the potential to work and earn when provided with the necessary training, placement and other supports. Presently, many of such individuals are idle, work in sheltered workshops or work a few hours every week. Their earnings do not reflect their capabilities. To make employment realistic for individuals with



intellectual disabilities, appropriate jobs from the open market needs to be identified (Rojewski, 1996). Simple jobs that require minimum supervision and low risk need to be selected for successful training and placement.

In schools for individuals with intellectual disabilities set up for training and daily working, the students are assigned to be on job training which suit their potential. Students with intellectual disabilities will have their time-table or duty schedule, throughout the school period, weekends and even vacation. Activities aimed at preparing these children to be employed by the school, as well as to train them on jobs, or they have job training in school. Main activities for example are picking up rubbish and waste, cleaning toilets, watering flowers, growing vegetables, gardening, growing mushrooms, dyeing clothes, washing and ironing clothes, doing kitchen work to prepare food, handicraft, and so on. These activities are organized to train them in various jobs they can enjoy doing and feel well and also have self-esteem. Besides, many schools work closely in collaboration with accredited vocational schools and technical institutions as networks for vocational training. Some schools provide job training at schools with invitee teachers from networked institutions, some send their students to these institutions to attend the job training. When some of the students pass and complete their training, the schools sometimes employ them to work at school, or transfer them to workforce, such as business enterprise, private and government sectors. The students have to be well trained, knowledgeable, and capable to do the job.

Preparing individuals with intellectual disabilities for workforce, an important factor is that such individuals must be ready, be qualified, and up to standard requirement. They must be keen in daily living skills, be able to get medical rehabilitation, having



the tools and media to help them access to public services, and then they will be ready in conducting their career of the job.

## **2.5 Transitional programmes for individuals with intellectual disabilities**

Transitional programmes are designed programmes designed for individuals with intellectual disabilities. Programmes may include functional skills and structural skills for the teen-ager, technical training for the youth and neighbourhood centred and special training for the elderly, or a combination of any of the above (Ten, 2007). Thressiakutty and Rao (2001) suggested that transition planning currently ranks as one of the top priorities of special education and vocational rehabilitation programmes in the United States and the United Kingdom.

According to Morgan and Morgan, (2006), transitional programmes are aimed at enhance the academic, vocational and technical performance of students with disability. At the least such programmes give them they have the opportunity to understand basic academic learning so that they can integrate in their real life. Through this they can also experience socialization and interdependence. Those who may not be able to come to school also be trained at home using correspondent learning where they may require the help of their parents or guardian. Their schedule then will be dependent on their availability and their capacity to learn.

There are also programmes that need special attention that do not focus primarily on intellect but also on behaviour. The programmes are eligible for mental development and cognitive diagnosis depending on their disability. They associate cure to learning and are best for students during their toddler years so that they can maintain their status till they have grown (Ramesh, 2004).

There are also programmes that may focus on transitional independence especially for young adult and teenagers who have been experiencing puberty and adolescence. In such programmes the individuals are taught to do household chores, responsibility management and interpersonal development in addition to academic training so that they can accomplish certain tasks at home even on their own. Mental experts say that this programme should be given to the young adult rather than children or the elderly because they are the individuals who are physically capable of handling the task (Wang, 2003).

It is very important for the parents to identify what kind of transitional program they have to enrol their children in so that they can focus on their status and basically learn from it. The hassle of programme those are not suited for the student would create even more mental disruption in the students' life (Shearman & Shearan, 2011). Individuals with intellectual disabilities need to learn close to someone or with the supervision of their parents or immediate guardian during the first few weeks of their learning experience and later on if they are familiar with the studies then they can begin to let go slowly for the students or patients to work independently (Wang, 2006).

Wang, (2006) emphasized that the overall goals of the transitional program is to help student and family to bring together the best possible outcome of the person who are suffering from intellectual disability so that their transition is smooth and secure. According to Wang, intellectual disability is not at all a hindrance for a student to learn the behaviour of a normal individual and that they too have the rights to education. Transition programmes are intended to develop the students with

intellectual disabilities to full maturity as possible so that they will not just be normal human being like everyone else but they would see themselves progressive and organising individuals.

Wang (2006) suggested that transition from high school to adulthood is a major life change for most young adults and their families, and generally it is depicted as an especially stressful time for young people with disabilities and their families. Adequate planning is therefore required to address the challenging impact of this stage of life on families.

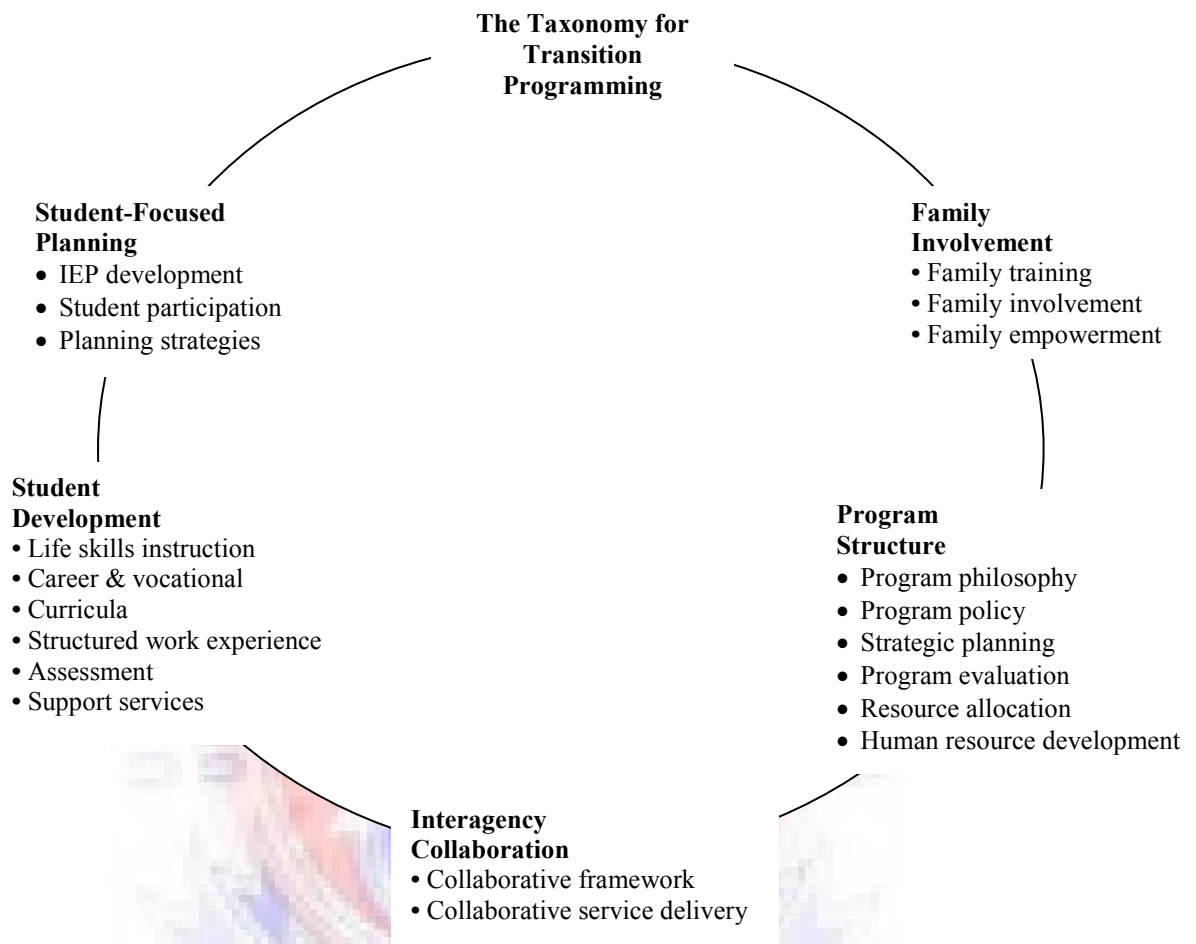
In terms of educational transition, at school levels as individualized education programme is designed for each student and student's parents are invited to participate in the programme design and educational placement. Also, individualized educational programmes cover assistance in transitions from preschool to elementary school, from elementary school to senior vocational high school and from senior (vocational) high school to college/university (Hung-Chin, 2010). With regard to employment transition, the needs of individuals with intellectual disabilities are taken into consideration by providing barrier-free vocational training and employment services, namely vocational rehabilitation. In terms of career transition, Lin noted the welfare demands of individuals with intellectual disabilities in different stages of their careers which require that the related government departments at individuals' levels communicate and coordinate with each other and make individualized career transition plan to provide the individuals with intellectual disabilities with complete and continuous services.

Shearman and Shearan (2011) said that employment is most important because having a job:

- is considered important and enhances social status
- is what the majority of adults do for a large portion of their day
- provides wages or money to participate in other activities
- increases integration – provides contacts and opportunities for other integrated activities
- is productive – being engaged in worthwhile activities increases self esteem;
- promotes individual growth

There are a wide range of activities undertaken in educational settings that have been found to increase the possibility of individuals with intellectual disability's transitioning from school to work. Transition from school has long been a recognised speciality within the broader context of service provision. As a result, what constitutes best practice has been described comprehensively in the literature for some time (Haugh, 1993; Wehman, 1993). Mirfin-Veitch (2006) has provided an overview of developments in transition programming and those directly involved in providing transition services and developed resources that guide practitioners. Based on this work one is able to identify a number of key activities and practices that enhance the likelihood of successful transition from school to work for individuals with intellectual disabilities.

**Figure 1: The Taxonomy for Transition Programming (Kohler, 1996; 2000)**



The Taxonomy for Transition Programming, presents with practices organized according to five key areas indicative of successful transition-focused programming and an outcome-oriented planning process. These areas are student-focused planning, student development, interagency collaboration, family involvement, and programmes structure. The Taxonomy was the starting point for the Transition Specialist Competencies generated by the Division on Career Development and Transition (2000) and the distinguished Standards for the Preparation of Transition Specialists published by Council for Exceptional Children (2001).

Transition planning appears to establish a critical platform from which to develop goals and learning experiences that prepare an individual for the world of work. While more active transition planning may be a feature in the last two to three decades, schools still find it difficult and challenging to provide the opportunity for genuine goals and aspirations to develop the possibility of employment for individuals with disabilities in general. It is also important to recognise that the values, attitudes and behaviours that lead people to the world of work evolve throughout childhood and young adulthood, not just in the year before we leave school. Young individuals with intellectual disabilities must also benefit from experiences that evolve over time as opposed to having these compressed into a one or two year transition programmes (Kohler, 2000).

According to Haugh (2006), transition from school can be a daunting time when the normal anxieties around parenting teenagers are complicated by the vulnerabilities and barriers that young people with intellectual disabilities may experience. In addition there is a whole new world of post-school service providers, new funding systems to grapple with and the possibility that there may be multiple providers involved in different support roles – each wanting to ensure parent involvement. Including parents as active and contributing members of the transition planning team from the beginning is essential. Again, this can be problematic if transition planning is compressed into the last year or two of school. There may be anxieties and issues that need time to work through and options that need exploring. In addition the range of post-school options, including employment support, is constantly evolving and changing. The pattern of post-school support services that emerges as the point of

transition approaches can also lead to significant lifestyle decisions for parents in terms of their support roles.

Huang and Cuvo, (2006) suggested that securing and sustaining employment for individuals with intellectual disabilities can be an extraordinarily challenging enterprise. In the absence of full time employment, options that include further education and training, leisure, recreation and voluntary work are essential components of a valued and well supported life in the community, and therefore need also to be a focus of transition planning. The tendency is to respond to these needs by way of congregate programme options rather than exploring more individualized and supported options that are consistent with the vision of an inclusive community.

Individuals with intellectual disabilities are making it clear that they share the aspirations of their age group peers for access to the world of work on the same basis as everyone else. Access to “an ordinary life” also includes participation in the broader life of the community and in ways that people feel valued and included (Kohler 2000).

Parents are also making it increasingly clear that there is a pronounced scarcity of post-school services that are able to effectively support their children’s participation in a range of inclusive work, further education and leisure/recreation options (National Advisory Committee on Health and Disability, 2003). There is still some considerable movement required to reach a point where such options are the norm rather than the exception.

Powell, Pancsofar, Steere, Butterwarth and Rainforth, (1996) stated that people with intellectual disabilities have the same needs with regard to employment as other people.

These needs are as follows:

- Security: most workers prefer situation in which they know that their jobs will continue in future.
- Paid employment: members of society earn wages to provide for their needs and employment.
- Training opportunities: employees often given in-service training to advance skills as well as to ensure opportunities for career advancement.
- A career: individual should have specific careers that lead to various job experiences.
- Benefits through job-provided benefits individual are able to take care of health needs and enjoy periodic paid for their work.
- Fair bosses: all employees seek supervisors who will be fair and treat them with dignity and respect.
- Opportunities for career advancement: many workers seek to increase job responsibilities and duties as they advanced.
- Safe work condition: no employee should jeopardize health safety as a result of work performance. Well-lighted, well ventilated locations as well as safe materials and tools needed by the individuals with intellectual disabilities.
- Friendly co-workers: workers wish to be associated and helpful. Work is enhanced by the interactions of the people who work together.



As the special schools for intellectual disabilities in Ghana have no specific duration for their training programmes, one may wonder how and when transition services are introduced to the individuals. Wehman (2003) suggested that by the time a student is 14-15 years old, substantial information should have been gathered on students' preference, capabilities and skills in each type of job. This data will serve as basis for the selection of specific vocational training options for students. If these processes are adhered to, even those with intellectual disabilities in the special schools, will have relevant skills to lead full or semi productive lives after training.

Vlachos, (2008) highlighted certain aspects that must be considered when planning for their future and job placement of individuals with intellectual disabilities. These aspects involve Physical, Cognitive, Moral, Affective, Self-concept and Social aspects.

In terms of physical, individuals with intellectual disabilities reach their physical milestones, like sitting, crawling and walking later than other children. This may have a disruptive influence on the child's normal flow of development. A learner's surroundings can be adapted to limit the effect of his/her physical disability, though he/she still needs an inner drive to successfully complete tasks.

Also, cognitive aspect refers to the personal will to consciously and intentionally do something, which is a driving force or motivation in a person's life. To formulate a goal is a cognitive exercise, but to actively follow the goal is a cognitive or motivational exercise. 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. Motivation plays a role in making decisions about what one would really like to do and what will be acceptable in the community.

Furthermore, moral aspect or moral judgment involves deciding between right and wrong and is linked to the level of cognitive development. Individual with disabilities find it difficult to predict the outcome of their actions and therefore find it difficult to avoid negative outcomes. People's values are the basis for what they find worthy in other people and in themselves. Values undergird codes of conduct, preferences leading to choices, and ideas leading to decision-making. Examples of positive values for all high school students are courage, honesty, cooperation, respect, justice, hope, conservation, health, perseverance, friendliness, trust, honour, integrity, efficiency, initiative, kindness, loyalty and responsibility. As the learners are constantly bombarded in making the right moral choices, they constantly come in contact with other people and choices in relationships are necessary (Gumpel, Tappe & Araki, 2007).

Moreso, Howley (2010) opines that affective development refers to the development of feelings, emotions and mood. As with moral aspect there is a connection between the level of cognitive development and affective development. Feelings in individuals with intellectual disabilities are often simplistic, short in duration, difficult to control and characterised by liability. They may experience crippling unhappiness. Anxiety, hostility, rejection and feelings of unworthiness and affective problems occur more

often in individuals with intellectual disabilities. Parents' reactions to having a child with a disability and their expectations of the child's present and future abilities influence their affective behaviour toward the child. This in turn influences the child's behaviour and the child's development of a self-concept.

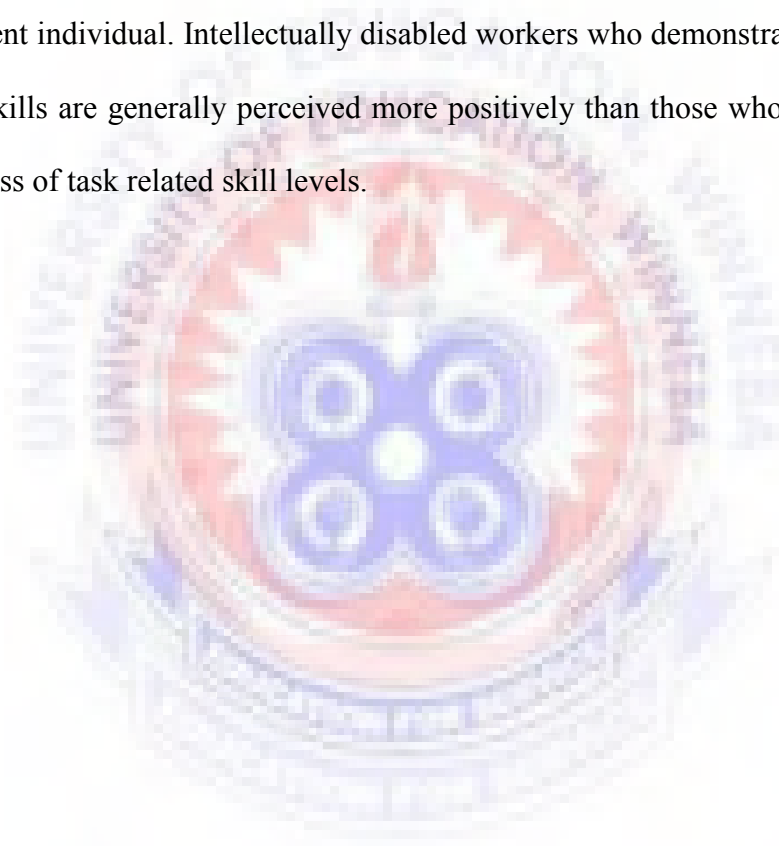
In addition, Creswell (2005) states that individuals with intellectual disabilities find it difficult to reason accurately and logically. This distorts their self-description and could eventuate in unhappiness and self-defeating behaviours. They often experience feelings of intellectual inadequacy and incompetence when compared to other learners. Prolonged stigmatisation triggers an expectancy of failure, an attitude of helplessness and an outer directedness. All of this becomes a vicious circle that reinforces a poor self-concept and poor cognitive functioning. Since work has a central role in human life, it is not surprising that vocational development is easily viewed as the implementation of a self-concept.

Besides, intellectual disability causes impaired judgment which will result in inappropriate actions. Social cognition involves complex cognitive processes and skills that often create problems for individuals with intellectual disabilities. Vlachos (2008) noted examples of complex social cognitive skills as follows:

- Putting oneself in somebody else's position (role taking)
- Perceiving and interpreting the characteristics of other persons accurately
- Interpreting other people's motives and feelings correctly
- Understanding social role expectations
- Understanding the roles that govern social relations
- Establishing and maintaining friendships

- Appropriately judging matters on a moral basis
- Listening and understanding what other people are saying, as well as being able to communicate one's own ideas effectively in response to them
- Being sensitive to the finer nuances of social and emotional interaction.

Vlachaos, (2008) was of the view that appropriate social behaviour may be even more important than academic or job skills in determining whether one is perceived as a competent individual. Intellectually disabled workers who demonstrate competence in social skills are generally perceived more positively than those who lack such skills, regardless of task related skill levels.



## 2.7 Summary of literature

In relation to the present study, it started with the theoretical frame work of the study, which explains the stages of becoming competent in specific skills. The literature reviewed highlighted on vocational programmes for individuals with intellectual disabilities and the resources that are available to enhance effective vocational training for such individuals. Literature also dealt with the availability of qualified teachers to teach vocational skills to such individuals. The transition programme that provides a smooth transition from school to work setting or employment was also discussed based on the special needs vocational and career education model. These models explained skills and programmes required to prepare individuals with intellectual disabilities for their future lives.

The need for acquiring skills in vocational training and availability of resources, both human and materials were identified as crucial for effective education of individuals with intellectual disabilities.

Available literature indicates that, there are lots of vocational skills training that create opportunities for individuals with disabilities in general to become self-sufficient in their future lives. This is evident in literature where independent living and employability featured in most of the studies conducted globally. It can also be inferred from reviewed literature that, the development of skills in a transition-based service provision in special schools is vital, especially for students with intellectual disabilities. Such students need to be taught such that, they will be able to demonstrate the skills effectively and work in order to live independent life in their society.

## CHAPTER THREE

### METHODOLOGY

#### 3.0 Introduction

This chapter presents the methodology for the study. The areas covered study Area, research design, population, and sample size, sampling Technique, instrumentation, reliability, validity, procedure for data Collection and data analysis and Ethical Considerations.

#### 3.1 Research Design

The researcher converged qualitative and quantitative data (mixed research method) in order to provide a comprehensive analysis of the research problem. Yeasmin and Rahman (2012) postulate that the choice of a researcher to adopt a mixed method strategy is largely influenced by the research questions posed which are directed at describing, explaining, observing, verifying and drawing a conclusion which are the basic tenets of both quantitative and qualitative strategies. Hence the choice of mixed research method was motivated by the research questions the researcher raised which were aimed at describing, explaining, observing and verifying as well as drawing a conclusion. Creswell (2005) states that using mixed method enables the researcher to better understand the research problem and best convey the needs of a marginalized group of society (intellectually disabled learners) as he/she collects the data simultaneously.

Subsequently, a case study design was chosen to guide this study. The adoption of this design was as a result of its appropriateness to achieve the study objectives. This is because according to Cohen and Manion (2005) a case study focuses on describing,

examining and explaining a phenomenon. In view of this Garden City Special School for the intellectually disabled was therefore considered as a single case to investigate students' competency in pre-vocational training programmes for students with intellectual disability for transition. This design was also selected because (Desombe 2006; Bryman 2008) noted that a case study approach more or less encourages the use of mixed methods research in order to capture the complex reality under scrutiny.

### **3.2 Population**

The population for the study constituted of 82 students and all the 16 teachers at Garden City Special School. The population of a study may be a group of individuals or people with same characteristics and in whom the researcher is interested Kusi (2012). Population of a study may include people, objects, and institutions which are the objects of the study. Creswell (2005) states that a population refers to group of humans selected for a study.

### **3.3 Sample size**

A sample size of 20 made up of 15 students in the vocational skills class and 5 teachers who handle the students was selected for the study.

### **3.4 Sampling Technique**

A purposive sampling technique was used. With this technique, the researcher chose the sample based on who were appropriate to provide the relevant information to achieve the research objectives. The students at the vocational skills class were chosen because the researcher believed they may have attained some degree of mastery in vocational skills and the teachers handling them.

### 3.5 Instrumentation

The instruments for the study were in- depth interview guide for the teachers and teacher-made test for the students. The in-depth interview guide comprised of nine items which aimed at ascertaining teachers' views on the challenges militating against vocational training programme at Garden City Special School which yielded the qualitative data. The teacher-made test comprised of nine test items, the first four questions measured students' competency in the processes involved in batik/tie and dye for research question one; and the last five questions measured students' competency in leather work (sandal making) on research question two yielding to the quantitative data of the study. Students were scored according to the Ghana Education Service Individualized Education Programme system of scoring these segments of students. This aided the researcher to determine their stages of unconscious incompetent to unconscious competent. Table 3.1 shows the adopted grading system.



**Table 3.1: Adopted GES Grading System in vocational training programme and its interpretation to the conscious competent learning model adopted**

Qualification	Marks obtained	Interpretation
Very good	70% - 80%	Conscious-competent/Unconscious competent
Good	60% - 70%	Conscious-competent
fair	40% - 50%	Unconscious incompetent /Conscious-incompetent

### 3.6 Validity and Reliability of Instruments

To ascertain the validity and the reliability of instruments for the study, a pilot study was conducted for 10 students from Kotei /Deduako Community School for the Intellectually Disabled. The 10 students comprised 6 males and 4 females the test was conducted for thirty minutes on 15<sup>th</sup> July, 2015 in the morning starting from 9:00am to 9:30am for three days. The teacher-made test on vocational training programme was conducted by the vocational teacher with Bachelor of Education in Special Education, the researcher and one research assistant who also holds Bachelor of Education in Special Education and Home Economics playing a supervisory role. This is because the teacher's voice was very familiar and clear to the students. (Cronbach's Alpha value) for the factors identified from the test was .814 which was higher than the 0.70 that is generally accepted in social science research. The internal consistency of items in the test instrument was thus highly reliable meaning that the coefficient level was high for the instrument to be used. Table 3.1 shows the Cronbach's Alpha validity and reliability value.

**Table 3.1 Cronbach's Alpha Validity and Reliability**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.814	.842	9

**3.7 Ethical Consideration**

For ethical reasoning, the researcher ensured that the teachers and the students who participated in the study did so voluntarily without any form of coercion. To guarantee their confidentiality, the participants were told provide data that would not reveal personal identification. The rights of respondents and other parties involved at every stage of this study were treated with utmost care. The following considerations were made to promote and protect the rights and interests of participants at the difference stages of the study.

As a procedure to gain access to the school, an introductory letter from the Department of Special Education, UEW was presented to the authorities of the school. Parents of the students were informed through (P.T.A) meeting. The researcher told participants of their right to participate voluntarily or withdraw from the study at any

stage if they deemed it appropriate to do so. Anonymity and privacy of participants was guaranteed by asking them not to write their names on the interview guide. To try to make participants informed before signing the letters of informed consent, the purpose of the study, the risk and benefits of the study were explained to participant. Participants were verbally assured of confidentiality in the handling of any data or information obtained from them.

### **3.8 Procedure for Data Collection**

The researcher obtained a letter of introduction from the Special Education department of University of Education (see Appendix I) explaining the research focus to the authorities at Garden City Special School. Upon receiving the permission the researcher visited the school to collect data from the students and the teachers. The students were practically tested for appropriate demonstration and display of skills in the processes involved in batik/tie and dye and leather work (sandal making). The skills included measuring and cutting material into required sizes, folding of material, tying of material and waxing in batik/tie and dye; pattern making, cutting the pattern into needed shapes and sizes, identification of the patterns (left from right) and gluing and fixing of the patterns in leather work (sandal making). A period of 12 days was used for the conduction of the teacher-made test by the students starting each day from 9:00am to 9:30am.

The interview guide was administered to five teachers on the challenges militating against the competency of students in vocational programme. The interview lasted for 35mins for each meeting for a period of 10 days.

### **3.9 Data Analysis and Presentation**

The data that were generated from the teacher-made test were entered into the Statistical Package for Social Sciences (SPSS, version 16) for analysis and these findings were presented using the descriptive statistical method which generated percentages, frequency tables and charts. The transcribed data from the interviews were analyzed thematically. Thus, the key themes were identified in the conversations drawn and were discussed. This was done using both the narrative methods and verbatim expression of respondent views.



## CHAPTER FOUR

### DATA ANALYSIS

#### 4.1 Introduction

This chapter presents the data analysis for the study. The findings are presented under sub-themes in line with the research questions. The data is divided into five parts. These include the demographic characteristics of respondents, overview of the vocational training programme at Garden City Special School, students' competence in the processes involved in making batik/tie and dye at Garden City Special School, students' competence in the processes involved in leather work (sandal making) at Garden City Special School and challenges militating against vocational training programme at Garden City Special School.

#### 4.2 Demographic Characteristics of Students

This section discusses the demographic characteristics of the students in final year at Garden City Special School to give an overview of the characteristics of respondents in the study. The parameters discussed include age and gender of students.

##### 4.2.1 Age of Students

Table 4.2 shows that in a class of 15 students in final year, 8 respondents (53.3%) were within the age range of 18-20 years. four (4) respondents (26.7%) were below 18 years while the remaining 3 respondents (20%) were aged above 20 years.

**Table 4.2: Age of final year Students Garden City Special School**

Age (Years)	Frequency	Percent (%)
Below 18	4	26.7
18-20	8	53.3
Above 20	3	20
<b>Total</b>	<b>15</b>	<b>100</b>

Source: Field survey, 2015

#### 4.2.2 Gender of Students

It is observed from table 4.3 below that the class has a higher male population than female. Out of a total number of 15 respondents, 10 (66.7%) were males while their female counterparts were 5 (33.3%).

**Table 4.3: Gender of Final Year Students Garden City Special School**

Gender	Frequency	Percent
Male	10	66.7
Female	5	33.3
<b>Total</b>	<b>15</b>	<b>100</b>

Source: Field survey, 2015

#### 4.3 Vocational training programme at Garden City Special School

Garden City Special School introduced the vocational training program since the establishment of the school for about 38 years ago. The school trains students in animal husbandry, home management, wood work, bead making, door mat making, batik/tie and dye, leather works etc. The school according to the assistant head

teacher, reported has been able to graduate 10 students since its inception to date and all of these graduates are currently employed with one of them being a staff of the school. Also according to the reporter, students spend 6 years in the academic unit learning the literacy and numeracy (functional academics) and later will spend 3 years in the vocational training program based on each child's ability and severity of the condition/retardation. After the 3 years in the vocational skills, the students spend another 3 years in the community to practice the skills they had learned from the school.

It was found out that Garden City Special School has a workshop with some equipment for training students in vocational training programme. The vocational skills teacher reported that the equipment was provided by the P.T.A and other philanthropists. The findings show that all the students who were currently in final year were introduced to vocational skills due to individual responsive to training in a specific area of interest and individual progress in performing a specific task. Currently, they have two lessons every day and the duration for each lesson was 30 minutes. Sarbah and Gidiglo, (2003) stated that appropriate resources, training facilities and vocational instructors should be made available in the training and development of students with intellectual disability. These authors pointed out that for a successful vocational training for the intellectually disabled, there should be enough resources and vocational instructors in the special schools in Ghana.

Report from the school indicates that, there are 5 teachers who handle vocational training programme in Garden City Special School and the training materials available in terms of batik/tie and dye are a piece of calico, palette, dyes, wax, a coal pot, wax tab, table, scissors and thread; and the leather work in the school

are leather, scissors, empty cartons, adhesive glue, brushes, nails hammers, knives. Powel (1991) stated that professionals who are concerned about the long-term employment for individuals with intellectual disabilities need to identify a range of supports that will enhance each individual's success in the community and employment. It was reported that after completion of the vocational training programme at Garden City Special School, the school organises graduation ceremony to raise some funds in the school to purchase equipment and tools for the students in order to help them work effectively in their communities.

### **Research Question 1**

#### **How competent are students in the processes involved in batik/tie and dye at Garden City Special School?**

The processes and skills involved in preparation of batik/tie and dye in this study were understood as the individual student's strength in performing a specific task within each process without single individual performing all the tasks (this could be seen as individual interest in performing a specific task within each process in batik/tie and dye) ability to accurately and consistently demonstrating the processes in batik/tie and dye. To achieve this, the researcher tested the students on four dimensions of making batik/tie and dye and these include: measuring and cutting material into required sizes, folding materials; tying of material and waxing. A practical test of demonstrating the processes involved in using the equipment in making batik/tie and dye was applied to all students and scored according to the GES grading system in vocational training programme for individuals with intellectual disabilities in Ghana.



#### 4.4.1 Measuring and cutting of material into required sizes

From figure 4.4, it could be seen 8 (53.3%) of the students were able to measure and cut materials into required sizes excellently. Based on their performance in line with the conscious competence matrix, these students were judged as having attained unconscious competence, and are thus in stage four within the conscious competence matrix. Those who scored good were 4 (26.6%) and because their performance was also remarkably high, they have attained conscious competence in measuring and cutting materials into required sizes. while the remaining, 3 (20%) were fair in measuring and cutting materials into required sizes and were perceived to be within the unconscious incompetence stage.

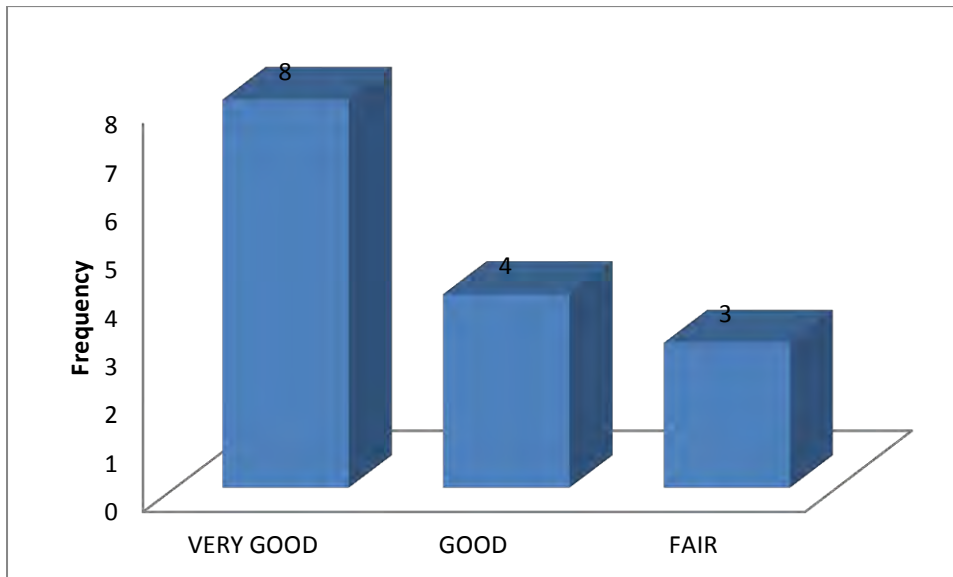


**Figure 4.4: Ranking of students in measuring and cutting materials into required sizes**

#### 4.4.2 Students Ability to fold materials

The ranking of the students who are able to fold materials is shown in table 4.5 below. The scores indicate that 8 (53.3%) of the students could excellently fold materials and

were therefore perceived to have reached the unconscious competence stage. This was followed by 4 (26.6%) of them score good and were considered to be consciously competent. three students (20%) had fair and were judged to be unconsciously incompetent. The results show that these students had not met the standards as demanded by the curriculum since they still operate only at a lower grade.

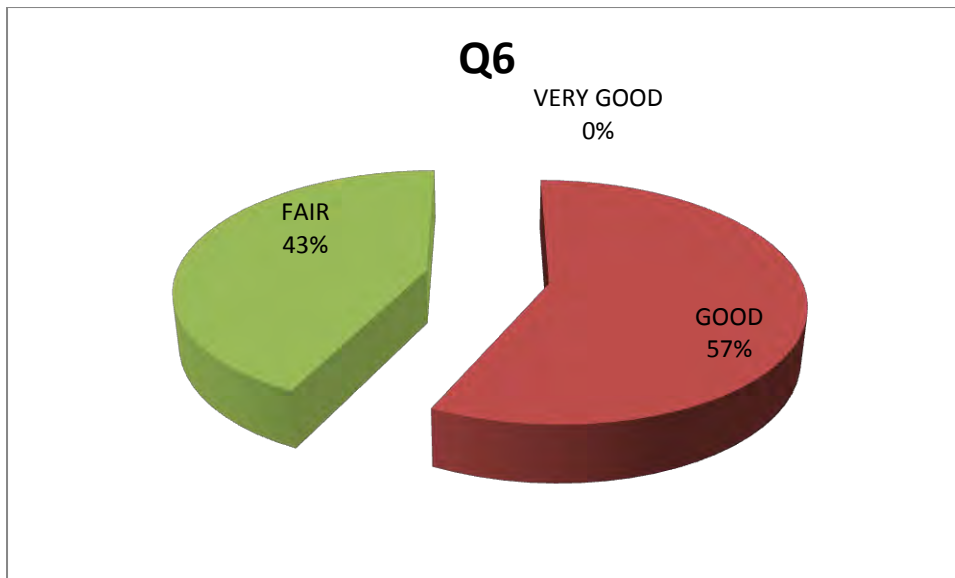


#### 4.5 Ranking of students in folding materials

##### 4.4.3 Students ability in tying of materials

Chart 4.6 below, illustrates the performance of students in tying of materials.

From table 4.6, only 8 students (53.3%) scored good and were deemed to have reached the conscious incompetence. These students understand that there is existence of the skills and they are now trying to learn it. As a result, they were yet to acquire basic understanding of demonstrating skills involve in tying a material. This was supported with the fact that 7(46.6) students perform poorly in terms of tying of materials and they were seeing to have reached unconscious incompetent stage according to the model adopted.



#### 4.6 Ranking students in tying of materials

##### 4.4.4 Student's ability to wax materials

The relevant of one's ability to wax materials is epitomized in his/her ability to demonstrate these skills without depending solely on others, but the person's ability to perform the skills reliably at will. Emphasis was placed on gradual processes of demonstrating skills than speed. Table 4.7 below, illustrates the performance of students on waxing materials.

**Table 4.7 Student's ability to wax materials**

Ranking	Frequency	Percent (%)
Very Good	7	46.7
Good	5	33.3
Fair	3	20.0

From table 4.7, only 7 students (46.6%) scored excellent in relation to waxing materials. These categories of students were able to wax the materials without failing the steps involved in waxing and as a result, they were perceived to have attained unconscious competence. Five (33.3%) also scored very good; these categories had some difficulties in gradually demonstrating the skills in waxing, hence were considered as being consciously competent. three (20%) scored good and were deemed to have reached the conscious incompetence because despite their numerous vocational training for six years, they were yet to acquire basic understanding of waxing materials.

#### **4.5 Research Question 2**

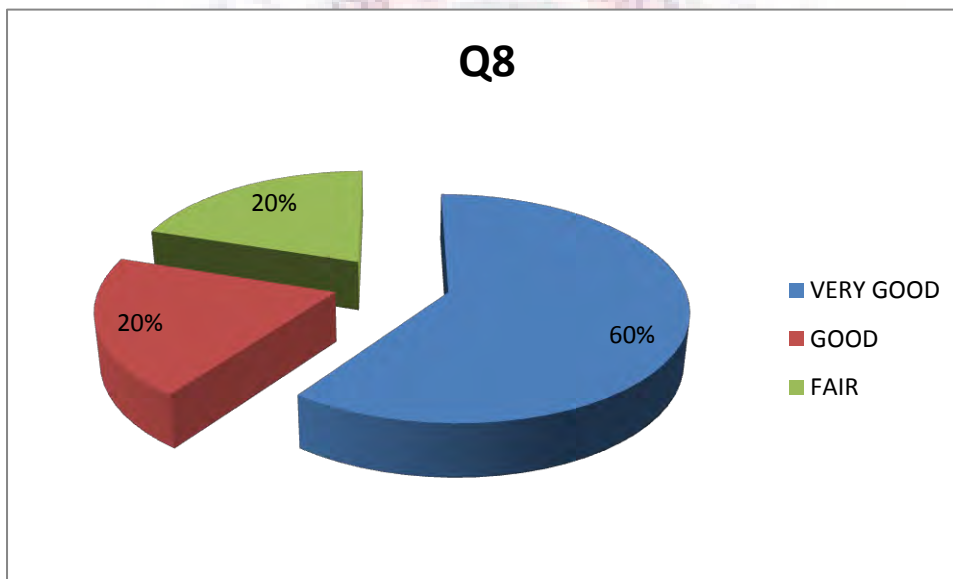
##### **How competent are students in leather work at Garden City Special School?**

To measure their competence in relation to leather work, the students were tested on the following dimensions: patterns making, cutting of pattern into needed shapes and sizes, identification of patterns (left from the right), gluing of the patterns and fixing of the patterns

##### **4.5.1: Students' competency in the processes in patterns making in leatherwork**

According to Hammill and Bartel (2000), vocational training programme like leather work focuses on helping those with intellectual disabilities to acquire skills and techniques that are used in vocational training to assist such individuals to acquire relevant skills for transition program. Figure 4.6 below, indicates the performance of the students at Garden City Special School in the processes involved in pattern making in leather work. Nine students (60%) were excellent at the processes in

pattern making hence are in the unconscious competence stage, while the response of 3 (20%) students was very good and were considered as being consciously competent. The results show that additional practice time is required for this category of students who could easily migrate to the fourth stage of the conscious competence matrix. 3 (20%) scored very poor. These students completely failed to display the processes involved in making patterns in leather work and therefore, were judged as being unconsciously incompetent.



#### 4.6 Ranking students in making pattern in leather work

##### 4.5.2: Students competency in cutting of patterns into needed shapes and sizes

The focus was sought on how the students correctly and nicely cut the patterns into needed size and shapes. Out of this, patterns were given to students to cut them into shapes and sizes which were illustrated in table 4.5.2. From table 4.5.2, a total of 10 students (66.6%) scored excellent, because they were able to cut patterns into needed size and shapes without any assistance from the teacher, they were judged as being

unconsciously competent. Three (20%) students were very good in correcting their mistakes when cutting of pattern into shapes and sizes. This category taught received some assistance to correct their mistakes was very minimal and as a result, they were judged as being consciously competent in this regard.

In addition, a cumulative total of (13.3%) students failed to accurately correct their mistakes personally and therefore required maximum assistance from the teacher. For this category it was observed that because they still lacked the skill, even in their attempt to correct these mistakes, they were found doing different thing and this complicated their response.

Q.9

Ranking	Frequency	Percent (%)
Very Good	10	66.7
Good	3	20.0
Fair	2	13.3

#### 4.5.2. Ranking students in cutting patterns into needed sizes and shapes

#### 4.5.3: Students competency in identification of patterns (left from the right)

The students' performance on identification of patterns (left from the right) is shown in table 4.8. From the table, it is seeing that only four student failed but the majority had amazing performances but with different competencies. For instance, three (20%) scored excellent. They demonstrated exceptional understanding of the procedure in identifying patterns (left to the right) and as a result they were judged as being unconsciously competent. A total of 8 students (53.3%) had good and considered as

being consciously competent while a total of 4 students (26.6%) failed. For them they still lack a mastery of the procedure and need much guidance. They confused the procedure of identifying patterns left from the right for something else; therefore, they were considered not having progressed from the unconscious incompetence stage of the matrix.

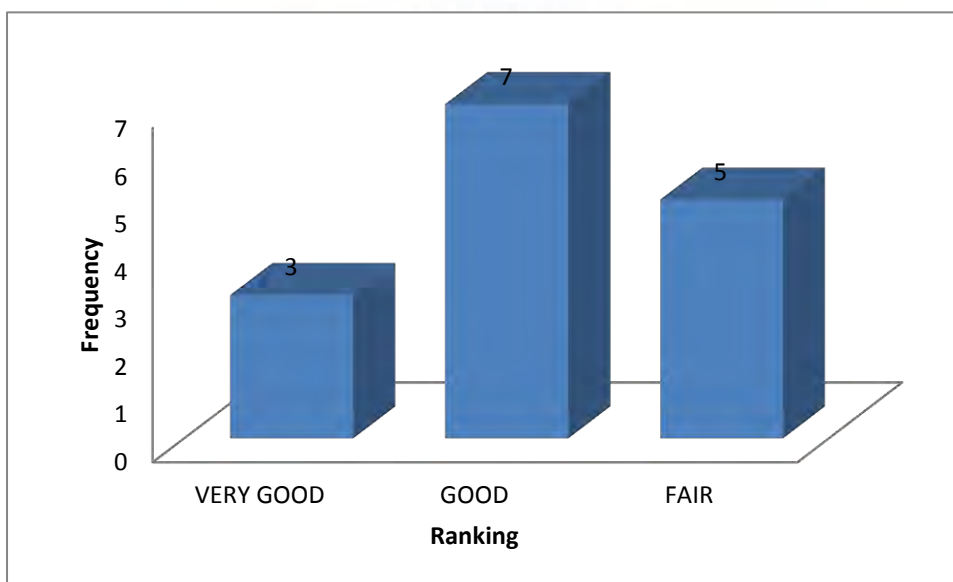


#### **4.8. Ranking students in the identification of patterns (left from the right)**

##### **4.5.4 Students' competency in gluing of the patterns**

The students were examined on how to glue patterns which they had identified left from the right to determine their competency in gluing as far as leather work is concern. Figure 4.8 shows that only 3 students (20%) had reached the unconscious competence stage in gluing of the patterns and this is because they could excellently identify left from the right and glue. This category of students were familiar with both the processes involve in gluing from left to right procedure.

In addition, 7 students (46.6%) scored good and this category of students demonstrated a lower level knowledge as compared to those who scored very good. As a result, they were considered as being within the conscious incompetence stage. The remaining five students who scored very poor were aware of the possibility of gluing but they could not demonstrate hence they were placed under the unconscious incompetence stage.



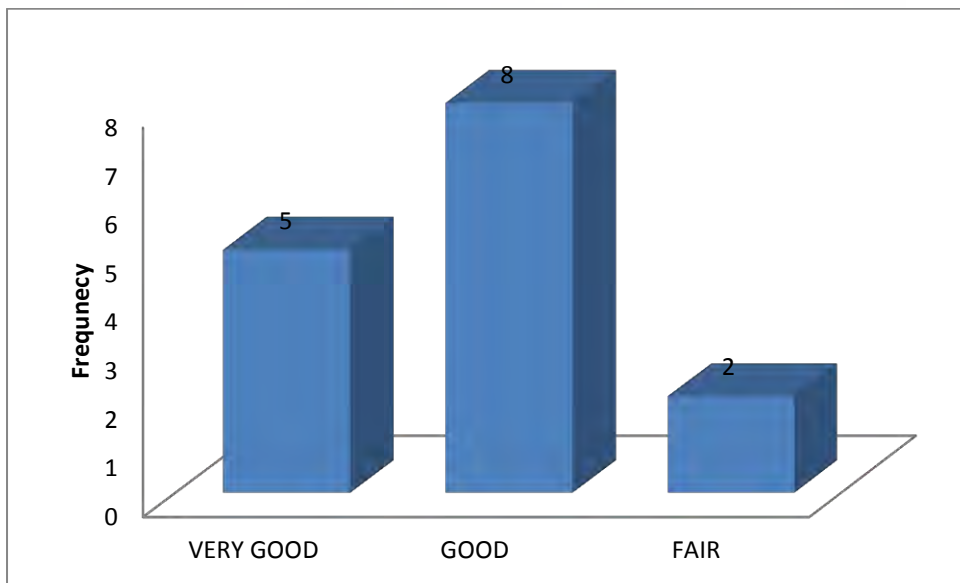
#### **4.8. Ranking students in gluing of the patterns**

#### **4.5.5 Students' competency in fixing of patterns**

Fixing of patterns offers intellectually disabled students the opportunity to complete a whole work in leather work like sandals preparation. Directly in line with this, the students were examined on their ability to fix of patterns. Figure 4.9 show that, five students (33.3%) could execute this task excellently using the fixing wood. These students demonstrated great knowledge of the procedure and this was seen in his ability to help other colleagues with this skill, therefore was judged as being



unconsciously competent. A total of 8 students (53.3%) could use the fixing wood to fix patterns but because they were not capable of demonstrating for their colleagues, they were considered as being consciously competent. Two (13.3%) students were still within stage one of the conscious competence matrix. They averagely and poorly followed the procedure in fixing of patterns.



#### **4.9. Ranking students in fixing of patterns**

#### **4.6 Research Question 3:**

**What are the challenges militating against vocational training at Garden City Special School?**

The third objective of the study sought to identify some of the challenges militating against vocational training at Garden city Special School. As it has been pointed out earlier, vocational training per this study is viewed in two ways namely, Batik/tie and dye and the leather work. As a result of this, the challenges are also grouped under this two-fold dimension of vocational training at Garden City Special School.

#### 4.6.1 Challenges on batik/tie and dye

In the first place, it is worth noting that not all the teachers expressed facing challenges in vocational training. But the number that did not have challenges was the least, because about 85% indicated their unique challenges in training students in batik/tie and dye. The challenges highlighted have been categorized under five broad issues namely: Difficulty in getting materials, student's attitude towards vocational training in batik/tie and dye, lack of personnel in vocational training, time constraint and problem of fine motor skills.

In relation to the first challenge- difficulty in getting materials for vocational training- The teachers explained that they found it difficult to get materials for vocational training since the government has not been providing the school subvention to buy the training materials like calico, dyes, wax and thread. In view of this, the teachers express that they have to rely on other philanthropists for these materials. This means that if they failed to get these materials it takes a longtime for to them practice what they have learnt and this poses a serious challenge. They were un-impressed with the fact that the government has stop providing them with vocational training materials which slow learning process in the school. This is typified in the following expression by one teacher; *"I find it difficult to teach these students when there are no materials to teach these segment of students even though parents are advised to help their wards with these materials"* (field interview data collected in 2015). It was found that the emphasis was on the materials not available to help these students practice what they had taught in the vocational training. And this makes them frustrated and limits their desire to learn and demonstrate their skills.

Directly linked with the availability of materials, another challenge was student's attitude towards vocational training in batik/tie and dye. Accordingly, the teacher's opinioned that since it takes long time to get batik/tie and dye materials, this has affected students to effectively participate in the vocational training. This could be seen in their reaction towards teaching these students. This is because if you teach students without practice it limits their desire to pay attention in class, because these students learn through practice and here is the case they find it difficult to get materials for practice. This has changed student's attitude towards training. Whereas it is true that consistent practice and use of the materials helps a user to develop familiarity in the processes involve in making batik/tie and dye, this familiarity has not been fully developed among the students. Even though the students have vocational training every day, the student's interest towards training is very low. In expressing a viewpoint on this, one teacher states; *"At times the students can easily walk out from class for something else. Therefore, it frustrates teaching and learning processes..."* (field interview data collected in 2015).

Most of the respondents therefore complained that it takes extended practice time for them to develop familiarity in vocational training. Even though, they understood that there was an assigned time to vocational training in the school's time table, their general impression was that, in order to develop their skills in batik/tie and dye and to maximize their potentials in batik/tie and dye, additional practice times beyond the lessons a week should be arranged.

Another challenge that was raised is inadequate qualified personnel in teaching batik/tie and dye. It is well known that teachers play a central role in educating children. However, most of the teachers indicated that they are experts in the field of

special education and here is the case that teaching batik/tie and dye has been added to their program which they don't have adequate skills in teaching them, so they have to learn and teach these students. While it is undeniable that experts who teach these children in their field could give out their best in the areas than any other person. It was found out that the student's inability to participate fully is directly linked with inadequate qualified personnel in the field.

Lastly, some respondents also have difficulty of developing motor skills. This is because, they have deformity in their wrists (fine motor skills) and this had affected their ability to participate in the processes involved in preparing batik/tie and dye. These students find it difficult to position the waxing tab on the right place and this actually frustrate teachers ability to teach them, which at times they believe these student cannot be trained in vocational skills like tie and dye. Out of this frustrations one teacher states „*I find it difficult to teach children with fine motor skills, because they normally shake and misplace the waxing tub for different place.*”(Field interview data collected in 2015). It could be seen that the emphasis was on the student's motor skills which has affected them and this poses a very serious challenge.

#### **4.6.2 Challenges in leather work**

It was also found that about 90% of the teachers at Garden City Special School have challenges in teaching leather work. Their concerns are organized broadly into four, namely: difficulty of getting materials for training, student's attitude towards the training of the leather work, students reporting late to after re-opening.

According Avoke and Avoke (2004) argue that schools should incorporate vocational education programmes and experiences early in the lives of individuals with intellectual disabilities. The authors also affirmed that the paramount importance of daily living skills, work experiences and vocational education is deeply infused within a robust vocational system. Leather work is one of the areas of vocational skills which give students the opportunity to get better job after schooling. Teachers at Garden City Special School have difficulty in getting materials for training. This is because they find it difficult to get tools for training students in the leather work and they find the tool as too old for the vocational training. Students find it very difficult at time to use the tools for the vocational training and this poses a challenge.

It was as well found that, students have poor attitude towards vocational training, this is because there are not enough tools for the training of students which students have to pair with their colleagues which could be seen that these students don't like to pair with their friends so it limits their interest in participating in the vocational training. In expressing this frustration, one of the teachers indicated, "*At times, the students can leave the class whiles teaching them for something else*" (field interview data collected in 2015). Upon further interaction, they explained that the students don't feel happy at all when they wait for their friends to use the tool before given to them and this has limited them in developing their skills for transition program.

Another category of the teachers had the challenge of lateness on the side of the students not reporting to school early after re-opening. This challenge was faced by a number of the teacher's who initially started the program with students for long time. they express that because these segment of students are slow learners when they get to the school late they have to start everything they had thought them again, which

teachers express that when it happens that way it frustrates teachers' ability to teach them again and this poses a serious challenge.

#### **4.6.3 Strategies to Address Challenges militating against vocational training at Garden City Special School**

From the above discussions, it is clear that there are serious challenges that hinder the competence of student in vocational training at Garden City Special. However, these challenges are not being left unaddressed. A number of strategies have been adopted by the vocational skills teachers in collaboration with the students and their parents and these are highlighted below:

##### ***Batik/tie and dye***

There were a number of strategies highlighted by the vocational skills teacher to address the challenges hindering their competence in Batik/tie and dye. In the first place, it was found out that consistent identification of materials and showing of the various steps involve in batik/tie and dye is the strategy adopted by the vocational skills teacher to address the challenge of the demonstrating the step involve in batik/tie and dye. One teacher explained that, "... *they are often given more time to show the processes involve in batik/tie and dyes since these students learn through demonstration and these have help some of the students to gain familiarity in the area of batik/tie and dye as well as improving their competence level*" (field interview data collected in 2015).

Secondly, to address difficulty of students with the identification of the materials used in tie and dye making the way forward has been in developing their familiarity. And

in this regard, one teacher indicated that, *“The teacher has been encouraging them to have additional time for vocational practice during vacations. She emphasized that when they are able to do that then they can practice more to help themselves develop familiarity with identification of the material involve in vocational training”*(field interview data collected in 2015).

Directly linked with the above, another teacher pointed out that, *“During batik/tie and dye lessons each student is given the opportunity to show the various material and when to use it in the processes of tie and dye preparation. And this has helped us to develop familiarity with the steps and materials involve in tie and dye preparation, especially the mixing of the wax and how to position the waxing tab. During tie and dye preparation”* (field interview data collected in 2015).

For preparation of tie and dye in such educational setting, it is important that there is a standard yet simplified reference material which the students can consult to address these challenges. The teacher indicated that, she has prepared a booklet which shows the various colours and how to mix them for tie and dye preparation. It is worthwhile that the students are happy with this reference material. One of the teachers emphasized that, *“this book has simplified directions that give them guidance to addressing not just batik/tie and dye preparation and also other challenges in tie and dye”* (field interview data collected in 2015).

### ***Leather work***

To address the challenges involve in leather work, the teachers indicated that, they always encourage them to show the differences between the right and left pattern in order to become familiar with the identification of the left and right pattern. A teacher



said that, *“they are often given twenty (20) minutes to show the positioning of the right and left pattern and explain the various position to the teacher and this has helped them to understand the position of the various parts”*(field interview data collected in 2015).

Other respondents also expressed that, they have helped them in cutting of the various parts by using other materials like empty cartons if they realized they have gained familiarity before they allow them to use the original materials in leather work.

As it was noted earlier, Garden City Special School finds it difficult to have access to materials and equipment in leather work. When asked what was being done to address this challenge, one respondent said, *“The Parent-Teacher Association (PTA) and benevolent individuals and philanthropists have been encouraged to help the school obtain materials and equipment for the school in order to improve students competency in vocational training”*(field interview data collected in 2015). Just as it was pointed out under the batik /tie skills that students should have adopted learning batik /tie and dye preparation during vacation, it has been encouraged that parents should try the equipment and materials for their children at home so that they can practice during vacations. But most of the teachers believed this is not quite feasible. Their explanation was that, *“If the school under governmental support cannot purchase equipment for their use in school, then it means that most of their parents cannot”* (Field interview, 2015).



#### **4.7 Chapter Summary**

In terms of the first objective, the findings have shown that, measuring, cutting materials into required sizes and folding of materials is not a huge challenge for the students. As a result, 85% to 84% of the students have reached the unconscious competence stages. However, in terms of tying of materials, the findings show that 74% of the students are still within the unconscious incompetence stage in tying of materials.



## CHAPTER FIVE

### DISCUSSION OF RESEARCH FINDINGS

#### 5.0 Introduction

This chapter discusses the results in the light of the literature review and the research questions raised.

#### 5.1 Vocational training at Garden City Special School

The teaching and learning of vocational training particularly the skills in leather work and batik/tie and dye is core to the curriculum at the Garden City Special School. While this might be in response to the revised provisions in recent years by the Ghana Education Service (GES) to incorporate the teaching and learning of vocational skills into the educational curriculum, student's ability to demonstrate skills and to prepare leather work and batik/tie and dye in the school far exceeds meeting this requirement.

The literature reviewed pointed to the fact that vocational skill is essential for students with intellectual disabilities. There is evidence which shows that vocational skills training have a positive impact on these students' lives through motivation to study and this has also helped to develop positive relationships in their academic achievement.

During my interaction with the teachers it was found out that, students with intellectual disabilities depend on the vocational skills and training to make a living, but very difficult to come by the materials and equipment after school.

It must however be emphasized that it is not just about learning the skills in vocational training and using the tools and devices, but rather helping the students to

acquire the necessary competencies. This is necessary because an early study by Muuya (2002) has shown that 60% of students with intellectual disability were not benefitting from vocational training as a result of lack of the needed competencies in demonstrating these skills.

## **5.2 Research Question 1: What are students' competency in the processes involved in batik/tie and dye?**

There is the need to develop student's skills in batik/tie and dye because it impacts in the learning abilities and acquisition of skills. This is because when students have the skills to exercise control over their environment, it leads to greater independence, increases self-sufficiency and enhances self-esteem (Morgan & Morgan 2006). In this current study, skills in batik/tie and dye were measured in four areas and these include (i) measuring and cutting of materials into required sizes, (ii) the ability to fold materials, (iii) student's ability in tying materials and (iv) the student's ability to wax materials .

Based on the performance rating (as shown in Table 4.4, Figure 4.1), it is obvious that measuring and cutting of materials into required sizes, the ability to fold materials and students ability in tying materials is not a challenge among the students in Garden City Special School. This is because in these, the students recorded a 90% pass in line with the grading system; the minimum score was good or fair (50% - 60%). In addition, the study found out that cumulatively 75% and 80% of the students scored very good to good respectively on measuring and cutting of materials into required sizes, the ability to fold materials and students ability in tying materials. This means that, most of the students are responsive to training and practices in demonstrating

skills in vocational training which they depend on for a living and which forms part of their curriculum.

Whereas the number of students within the unconscious incompetence stage in relation to measuring and cutting of materials into required sizes, the ability to fold materials is less, it is necessary to give special attention to these few students to help them progress through the stages of competence as described in the matrix. The varied performance also typifies the need not to presume that all students have learned basic skills in vocational training like measuring and cutting of materials into required sizes, the ability to fold materials, hence, there is the need for revised training and regular checkup on student with deficiency in this regard.

The finding on the student's ability to wax materials indicated that majority of the students performed poorly. This is probably because about 60% of the class is still within the unconscious incompetence stage in waxing materials. The Conscious Competence Matrix explains that people in this stage have a particular deficiency in the area concerned. It was particularly found that 42.7% of the students failed to wax material. This is a matter of grave concern because all the teachers acknowledged the students were introduced to vocational skills like batik/tie and dye since 2009 and currently, every week and it was expected that they should have moved out of the unconscious incompetence stage of the Matrix. It was clear that the amount of time spent develop the competence of students in the tying, waxing and yet a number of them are still unconscious of the need for this skill. Hence their performance has retrogressed from 25.1% to 13.4% as shown in table 4.5.

It could be concluded that the students at Garden City Special School were probably not serious with the training being offered them to develop their competence in waxing but in order to validate such a generalization, it is crucial to consider the effectiveness of training being offered to the students in the school. Secondly, a related factor is how consistent and practical the vocational skills like batik/tie and dye lessons are taught in the weekly schedules. However, this study is limited in its focus on examining the competence of vocational skills trainers and how this could translate in students' competence in the waxing. Thus, it is recommended further research should be carried out on competency of teachers in teaching vocational skills.

Evaluating the students' competence in line with the conscious competence matrix adopted for this study, it is obvious that majority of the students had reached the conscious competence stage in relation to measuring and cutting of materials into required sizes, the ability to fold materials, students ability in tying materials. The students achieve „conscious competence“ in a skill because they performed it reliably at will but need to concentrate and think in order to perform that skill. But characteristically, their competence level could be seen as not yet 'second nature' or „automatic“. That is, they are able to demonstrate the skill to others, but are unlikely to be able to teach it well to another person.

On the issue of student's ability to wax material, the competence level could be judged as conscious incompetence. That is, they understand that improving their skills or abilities in this area would make them effective. Therefore with commitment to

learning and working to address the challenges affecting students skills in batik/tie and dye, majority of the students could move to the 'unconscious competence'

**Research Question 2: What are the student's competency in the processes involved in leather work at Garden City Special School?**

It is evident from figure 4.2 that there is a higher response rate of 80% in the processes in pattern making hence are in the unconscious competence stage, and this possibly shows that they had built familiarity in this area. Even though the students demonstrated their ability involved in the processes in pattern making, it must be stated that the ability to maximize working on leather work links one's competencies on pattern making and the ability to cut patterns into needed shape and size.

The skill in leather work provides added benefit of self-employment that allows the intellectually disabled make a living. It was found that 65.7% of the students scored very good in being able to cut patterns into needed shape and size as shown in table 4.7. As a result majority of the students have become competent in cutting patterns into needed shape and sizes. But because they are located within the conscious competence stage, continuous training and commitment on the part of students to learn more about processes involved in leather work is required. It is also important to mention that a number of the students expressed as a challenge, their inability to demonstrate the processes involved in cutting patterns into needed shape. This could be enhanced through continual practice in vocational training.

In terms of the ability to demonstrating skills in identification of the patterns (left from right) 30% (this includes those who scored very good and excellent) of the class

progressed from stage one to stages three and four of the conscious competence matrix while the remaining 70% could not. Generally the incompetence of this 70% was seen as a great challenge. This is because identification of the patterns left from right is seen to be one of the basic steps for beginners in leather work. And, if six years now, about 60% of the students still lack the basic skill such as identification of the patterns, then it is worth questioning how effective and when would such intellectually disabled students make progress in learning higher skills in vocational training in order to compete with their non-disabled colleagues in the job market.

The reasons for the failure of some of the students in identifying the patterns left from the right is associated with their non-familiarity in the processes involved in leather work and other additional challenges (discussed under the objective 3). That notwithstanding, there is the need for the trainers to review lessons in vocational skill. This would help to refresh the minds of those in stage two to progress to the third and fourth stages. It would also provide those still within stage one, who by participating in this study have become aware of their deficiency to also begin with the desire to learn the new skills in leather work.

From figure 4.3, it was found that cumulatively, 91.4% of the students were competent in being able to gluing of the patterns. These students exhibited their competence in being able to glue patterns using the glue brush. But because majority of the students are in stages two and three of the conscious competence, when they are given further guidance and they are ready to commit themselves to learning, they could easily progress to the fourth stage. The need for guidance is also required to develop students' competence in gluing of patterns

In addition, a higher number of the students are still in stage two of the conscious competence matrix in relation to their ability to fixing of patterns, there is higher risk of finding it difficult to fix of the pattern among students with fine motor skills. This is because students with this kind of deformity have problem with motor coordination. Thus, the need to enhance students' competence in being able to fix pattern is necessary.

**Research Question 3: What are the challenges militating against the competency of students in vocational training at Garden City Special School?**

There are numerous benefits of vocational training among students with intellectual disability. It is particularly noted that through vocational training, students with intellectual disability gain independence and autonomy concerning living and getting jobs (Gallagher, 2002). That notwithstanding, a number of barriers exist to the successful and effective training of vocational skills among students with intellectual disabilities. This is evident in the fact that 90% of the teachers at Garden City Special School highlighted various challenges militating against vocational skills training in the area of batik/tie and dye and leather works.

However, the results of the study show that, the challenges mentioned by the teachers are related to personal response to training in vocational skills among students with intellectual disabilities rather than external influence. These challenges arise due to the individual response to the training and familiarity by the students in developing their competencies in vocational skills. This however excludes having access to vocational skills materials. This very challenge has external influence and its



manifestation is linked with limited financial resources, high costs of equipment and eligibility issues for possessing materials Zhang, 2000.

While a lack of knowledge and support from teachers (Wang, 2006) has been seen as a barrier for vocational skills training among persons with intellectual disabilities, the case of the students at Garden City Special School is different. This is because the various strategies that the teachers highlighted as being used to address their challenges demonstrate knowledge and support from them.

In another study, Zhang and Stecker (2008) indicates that a lack of knowledge and awareness among people with intellectual disability, reluctance to use the equipment, materials, poor device performance, changes in needs or priorities, and feelings of stigmatization are major reasons for underused vocational training equipment and devices. The findings of the study have shown that, the students at Garden City special School have developed knowledge of the need to improve their competence in vocational training like batik/tie and dye skills and leather work.

The study results also seem to suggest that some strategies being adopted by the vocational skills teachers at Garden City Special School to address these challenges are robust and sustainable to develop students' familiarity on the processes involved in batik/tie and dye. This possibly accounts for the fact that, a higher percentage of the students had reached stages three and four of the competence matrix. The students „competence in vocational skill has been affected by difficulty in getting materials and equipment for training.

## Chapter Summary

Evaluating the students' competence in line with the conscious competence matrix adopted for this study, it is obvious that majority of the students have reached the conscious competence stage in relation to measuring and cutting of material to required sizes, ability to fold and tie materials. The students achieve „conscious competence“ in the skills because they performed it reliably at will and need to concentrate and think in order to perform that skill. The skill in leather work provides added benefit of getting employment and preparation of sandals for living. Majority of the students have become competent in making patterns for sandals. But because they are located within the conscious competence stage, continuous training and commitment on the part of students to learn more about pattern making is required. The study showed that, the challenges mentioned by the teachers are related to personal response to vocational skills training rather than external influence. That is these challenges arose due to the individual response to the training and familiarity by the students in developing their competencies in vocational skills.

## CHAPTER SIX

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 6.0 Introduction

This chapter presents the summary, conclusion, and the recommendations for the study.

#### 6.1 Summary

The purpose of this study was to assess the competency levels of students with intellectual disabilities in the vocational programme at Garden City Special School in order to prepare them to acquire skills necessary to lead independent lives in future. Fifteen students with intellectual disability and five of sixteen teachers were purposively sampled from a population of 82 students and sixteen teachers. Data were gathered through a practical competency test (teacher-made) and an in-depth interview guide. The data generated from the practical competency test in vocational skills in batik/tie and dye and leatherwork were entered into the Statistical Package for Social Sciences (SPSS, version 16) for analysis. Findings were presented using the descriptive statistical tools of frequency tables and charts. The transcribed data from interviews were analyzed thematically. That is the key themes were identified in the conversations and these were drawn and discussed. This was done using both the narrative methods and opened quotes from interviews.

The research was conducted among final year students at Garden City Special School in Ghana. It was found out that majority of the students 8 respondents (53.3%) were within the age range of 18-20 years. four (4) respondents (26.7%) were below 18years while the remaining 3 respondents (20%) were aged above 20 years.

In terms of vocational training skills, the school has a hall for training in leather work and batik/tie and dye. The students have lessons (30 minutes per lesson) every day. The findings show that, measuring and cutting materials into required sizes, folding of materials and tying of materials were not a huge challenge for the students. This is because majority (75% and 80%) had higher competencies on measuring and cutting materials into required sizes, folding of materials and tying of materials. However, in terms of student's ability to wax materials, the finding show that 40% of the students are still within the unconscious incompetence stage in waxing of material. That is these students are deficient in waxing of material in the processes involved in tie and dye. Despite the fact that the same amount of time has been spent develop the competence of students in the waxing of materials; these students are still unconscious of the need for this skill hence they performed poorly. Majority of the students, 80% are highly competent in making patterns for sandals and this possibly shows that, they have built familiarity in this area. This finding was supported by the fact that, 60% of the student had reached the conscious competence stage using cutting the patterns for the needed shapes and sizes. However, 95% of the teachers expressed that the, the inability to have access to materials in vocational training is a factor that limits them from becoming unconsciously competent.

Students' competencies in identifying patterns from left to right are poor because 60% are still within the incompetence stages of the conscious competence matrix. But in terms of being able to glue of patterns using the glue brush, cumulatively 91.4% had progressed to stages two and three of the conscious competence matrix. The number of students with higher competence in being able to fix patterns was extremely low.

Vocational skills training at Garden City Special School is not without challenges because 90% of the class expressed various difficulties in developing their competence in leather work and batik/tie and dye. In terms of batik/tie and dye skills, the challenges included: Difficulty in getting materials, student's attitude towards vocational training in batik/tie and dye, inadequate qualified personnel in vocational training, time constraint and problem of fine motor skills.

The concerns on leather work: Difficulty of getting tools for training, student's attitude towards the training of the leather work, students reporting late after re-opening.

The findings suggest that, there are strategies being adopted by the vocational skills teachers in the school to address these challenges. These strategies are robust and sustainable to develop students' familiarity on batik/tie and dye. While the same can be said about the leather work, it was found that difficulty in getting materials and equipment can limit such efforts.

## **6.2 Conclusion**

The study concluded that majority of the students had higher competencies on measuring and cutting materials into required sizes, folding of materials and tying of materials, thus in relation to these skills they were consciously and unconsciously competent. In terms of waxing of materials, majority of the students were either conscious or unconscious incompetent.

Students had higher competencies in making patterns for sandals using pencils. While lower competencies were measured in relation to cutting the patterns for the needed shapes and sizes using scissors. The data showed that challenges limiting effective of

students' competence in vocational training in the school are more personal than external influence. This was because most of the challenges are probably due to the individual response to the training and familiarity in developing their competencies in vocational training. Comparatively students' competence in batik/tie and dye was higher than leather work. Thus, students had reached higher stages in the conscious competence matrix in batik/tie and dye than leather work.

### **6.3 Recommendations**

The following recommendations are made based on the study findings.

1. The school and management authorities should do well to provide the needed materials for the training in order to improve student's competencies in vocational training.
2. A number of the challenges expressed by the teachers on students non-familiarity with the processes in vocational skills. As a result, it is recommended that trainers at the school should engage the students in revised lessons. This will help to refresh the minds of those in stage two to progress to the third and fourth stages. It will also provide those still within stage one to begin to desire to learn the new skill in vocational training.
3. Because the training center is stocked with inadequate materials for leather work it is recommended that efforts should be made by management of the school and other benevolent individuals and philanthropically organizations to help acquire more materials for vocational skills in leather work.

4. It is further suggested that robust and sustainable strategies should be adopted by the management of the school to develop students' familiarity on batik/tie and dye and leather work should be encouraged.

#### **6.4 Suggestion for further research**

Evaluating teacher's competency in vocational training and how it affects the student's performance in vocational training.



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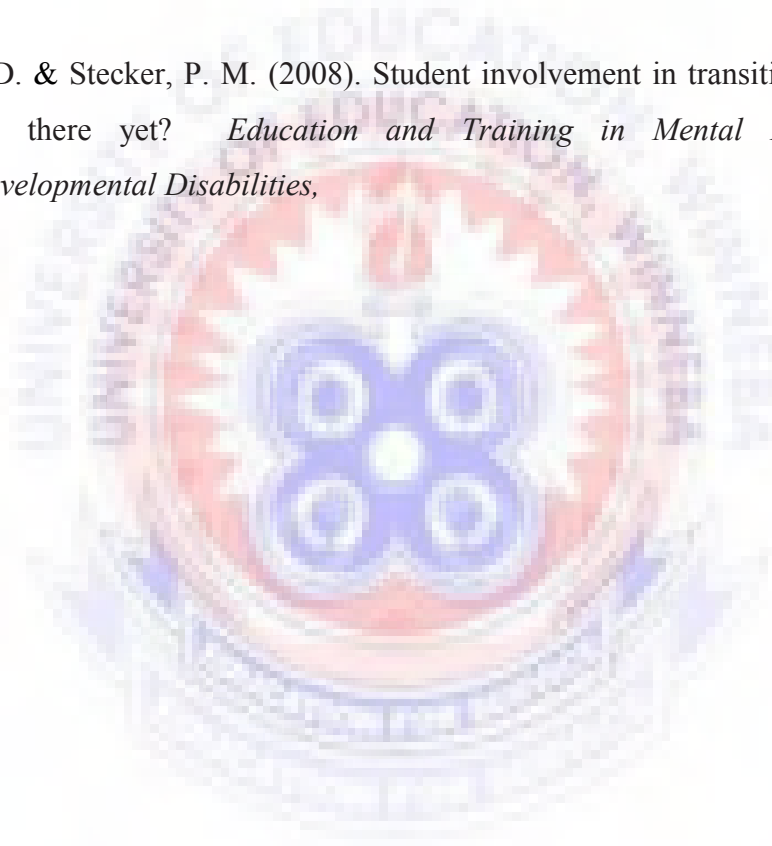
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## APPENDIX I



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

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May 10, 2015

Dear Sir/Madam,

### **LETTER OF INTRODUCTION**

I write to introduce to you Florence Yeboah – an M. Phil student at the Department of Special Education of the University of Education, Winneba.

She is currently working on her thesis **„Assessing the competency of students with intellectual disability in the vocational training programme at Garden City Special School, Kumasi’.**

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

Thank you for time and cooperation.

Yours faithfully,

**SAMUEL HAYFORD (PHD)**



## APENDIX II

### UNIVERSITY OF EDUCATION, WINNEBA DEPARTMENT OF SPECIAL EDUCATION

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These questions are purposely designed for **students** to provide data on the topic “**assessing the competency of students with intellectual disability in vocational training programme at Garden City Special School**”. This thesis is submitted to the Department of Special Education, University of Education, Winneba in partial fulfillment of the requirement for the award of M.Phil Degree in Assessment in Special Education. Therefore, any information that is provided would be treated confidentially and wholly for the academic pursuit.

**Name** ..... **of** ..... **Interviewer:**

.....

*(Compulsory)*

**Date:** .....

**Signature**.....

**INSTRUCTION:** Please either **tick** (✓) where applicable.

#### **Demographic Characteristics of Student**

1. Gender                      Male               Female

2. Age                      Below 18       18 – 20 years       20years and above

**Objective 1: examining the competency of students in the processes involved in batik/tie and dye at Garden City Special Schools.**

1. How do you assess the student's ability to measuring and cutting material into required sizes?

a. Very Good  b. Good  c. fair

2. How do you assess the student's ability in folding of materials?

a. Very Good  b. Good  c. fair

3. How do you assess the student's ability in tying of material?

a. Very Good  b. Good  c. fair

4. How do you assess the student's ability in waxing of materials?

a. Very Good  b. Good  c. fair

**Objective 2: identifying the competency of students in the processes involved in leather work (sandal making) at Garden City Special Schools?**

5. How do you assess the student's ability in making patterns for the sandal?

a. Very Good  b. Good  c. fair

6. How do you assess the student's ability in cutting the patterns for the needed shapes and sizes?

a. Very Good  b. Good  c. fair

8. How do you assess the student's ability in demonstrating the identification of the patterns (left from the right)?

a. Very Good  b. Good  c. fair

8. How do you assess the student's ability in gluing of the patterns?

Very Good  b. Good  c. fair

9. How do you assess the child's ability in fixing of the patterns?

- a. Very Good  b. Good  c. fair



## APPENDIX III

### UNIVERSITY OF EDUCATION, WINNEBA

### DEPARTMENT OF SPECIAL EDUCATION

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#### INTERVIEW GUIDE

This interview guide is purposely designed for the teachers to provide data on the topic “**assessing the competency of students in vocational training programme at Garden City Special School**”. This thesis is submitted to the Department of Special Education, University of Education, Winneba in partial fulfillment of the requirement for the award of M. Phil Degree in Assessment in Special Education. Therefore, any information that is provided would be treated confidentially and wholly for the academic pursuit

**Objective 3: To identify the challenges militating against the competency of students in vocational training programme at Garden City Special School.**

1. When do you introduce students to vocational training programme?
2. How many times in a week do they have practical in vocational training?
3. What is the duration of each practical?
4. How many equipment and materials are available in the school for the vocational training programme?
5. How do you assess the condition of these equipment and materials?
6. What challenges do you face in developing students skills in batik/tie and dye?
7. What challenges do you face in developing students skills in leather work?
8. What is currently being done to address these challenges?

**Name** **of** **Interviewer:**

.....

*(Compulsory)*

**Date:** .....

**Signature**.....

