

COURSE GUIDE

EDU 426 SPECIAL EDUCATION

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INTRODUCTION

Welcome to Special Needs Education. This two- credit unit course is an introductory course on Special Needs Education. This course will be available to all students offering education.

The course is made of 16 units which were grouped into six modules:

- Basic Concepts in Special Education
- Education of the Intellectually Retarded
- Education of the Hearing- Impaired and Communication Disorders
- Education of the Physically and Health- Impaired and Learning Disabled
- Gifted and Talented Development
- Education of the Visually -Impaired

THE COURSE

This course is a compulsory course. This course is mainly on the education of special needs individuals. The course sheds lights on what special education is. It draws out the nitty gritty of special education, including meaning, causes, historical perspectives and development, characteristics and educational approaches different areas of exceptionalities.

WHAT YOU WILL LEARN FROM THIS COURSE

The main aim of special needs education is to introduce its audience to basic concepts in special education with the view of developing the intellectual, moral and physical growth of an individual child.

COURSE AIMS

This course is designed as an introductory course to Special Needs Education. It is to expose learners/audience to special needs children who may experience learning problems and learning difficulties as a result of disabilities or other forms of special educational needs.

The courses emphasis will be on meaning, historical perspective, causes, characteristics, identification and educational approaches to different categories of children with special needs. The course shed light on different categories of special needs education. Such as education of the intellectually retarded, learners with communication disorders,

physically and health impaired, gifted and talent development, education of the visually impaired, learning disabled etc.

The major goal of this course is to prepare future teachers and educators for delivery and evaluation of education and special education programme. The course will enhance better performances of both teachers and learners.

COURSE OBJECTIVES

At the end of this course, you should be able to:

- explain special education
- identify the relationship between general education and special education
- identify the relevance of research studies in the field of special education
- state the importance of information communication technology to special needs education
- give different categories of children with intellectual retardation and methods of educating them
- list the causes and characteristics of learners with hearing impairment and strategies of educating them
- distinguish between neurological impairment and muscular conditions
- identify the characteristics of gifted and talented children
- design an appropriate curriculum for the gifted and talented children
- identify children with visual impairment in the classroom
- explain the relevance of rehabilitation to special needs education.

WORKING THROUGH THE COURSE

The learner should participate actively in the course and attend tutorial lessons.

COURSE MATERIALS

Major components of the course are:

- i. Course Guide
- ii. Study Units
- iii. Assignment File

STUDY UNITS

There are sixteen (16) units contained in six modules in this course, namely:

Module 1 Basic Concepts in Special Education

- Unit 1 Overview of Special Education
- Unit 2 Research in Special Needs Education
- Unit 3 Information and Communication Technology in the
Education of Learners with Special Needs
- Unit 4 Current Issues in Special Education

Module 2 Education for the Intellectually- Retarded

- Unit 1 Definition, Categories and Causes of Intellectual Retardation
- Unit 2 Characteristics, Identification and Educational Method of
Teaching Intellectually - Retarded Children

Module 3 Education of the Hearing - Impaired and Communication Disorders

- Unit 1 Definition, Causes and Classification of Hearing Impairment
- Unit 2 Identification and Educational Placement of Hearing Impaired
Children
- Unit 3 Learners with Communication Disorders

Module 4 Education of the Physically and Health -Impaired and Learning Disabled

- Unit 1 Definition, Types and Causes of Physical and Health- Impaired
- Unit 2 Meaning, Causes, Identification and Educational Intervention
for Children with Learning Disabilities

Module 5 Gifted and Talent Development

- Unit 1 Definition, Characteristics and Administration of Gifted and
Talented Children
- Unit 2 Curriculum Modification for Gifted and Talented Students

Module 6 Education for the Visually - Impaired

- Unit 1 Definitions, History, Causes and Prevalence
- Unit 2 Characteristics and Educational Approaches of Visual
Impairment

Unit 3 Rehabilitation of the Visually- Impaired

RECOMMENDED TEXT

A list of books and references appears in every unit to guide the learner in searching for more information on the concepts presented.

ASSIGNMENT FILE

In this file, you will find all the details of the work you must submit to your tutor for marking. The marks you obtain for these assignments will count towards the final mark you obtain for this course.

PRESENTATION SCHEDULE

The presentation schedule included in this course guide provides you with important dates for completion of each tutor-marked assignment. You should therefore try to meet the deadlines.

TUTOR-MARKED ASSIGNMENT

There are 16 TMAs in this course. You need to submit all the TMAs. The best 4 will therefore be counted. When you have completed each assignment, send them to your tutor as soon as possible and make sure that it gets to your tutor on or before the stated deadline. If for any reason you cannot complete your assignment on time, contact your tutor before the assignment is due to discuss the possibility of extension. Extension will not be granted after the deadline, unless on exceptional cases.

FINAL EXAMINATION AND GRADING

The end of course examination for this course will be for about 3 hours and it has a value of 70% of the total course work. The examination will consist of questions, which will reflect the type of self-testing, practice exercise and tutor-marked assignment problems you have previously encountered. All areas of the course will be assessed.

The time between the last unit and the final examination can be used for revision. You might find it useful to review your self-test, TMAs and comments on them before the examination. The end of course examination covers information from all parts of the course.

COURSE MARKING SCHEME

Assignment	Marks
Assignments 1-16	16 assignments, 30% from the best 3 Total = 10% x 3 = 30%
End of Course Examination	70% of overall course marks
Total	100% of course materials

ASSESSMENT

There are two aspects of the assessment of the course. First are the Tutor-Marked Assignments and the other is a written examination. Your assignment must be submitted to your tutor for formal assessment in accordance with the stipulated deadlines. The work you submit to your tutor for assessment will account for 30% of your total course mark.

At the end of the course you will need to sit for a final written examination of two hours duration. This examination will account for 70% of your total course mark. The examination will consist of questions, which reflect the types of exercises and tutor marked problems you have previously encountered. All areas of the course will be assessed.

HOW TO GET THE MOST FROM THIS COURSE

In distance learning, the study units replace the lectures in the conventional systems. This is one of the great advantages of distance learning; you can read and work through specially designed study materials at your pace, and at a time and place that suit you best. Think of it as reading the lectures instead of listening to a lecturer. In the same way that a lecturer might set you some reading to do, the study units tell you when to read your set books or other material, and when to undertake computing practical work. Just as a lecturer might give you, in class, exercises, your study units also provide exercises for you to do at appropriate points. Each of the study units follows a common format. The first item is an introduction to the subject matter of the unit as how a particular unit is integrated with the other units and the course as a whole.

Next is a set of learning objectives. These objectives itemise what you should be able to do by the time you have completed the unit. You should use these objectives to guide your study. When you have finished the unit, you must go back and check whether you have achieved the objectives. If you make a habit of doing this you will significantly

improve your chances of passing the course. Exercises are interspersed within the units and answers are given. Working through this exercise will help you to achieve the objectives of the unit and help you to prepare for the assignments and examinations.

The following is a practical strategy for working through the course:

1. Read this course guide thoroughly
2. Organise a study schedule. Refer to the 'course content', for more details.
3. Once you have created your own study schedule, do everything you can to stick to it. The major reason that students fail is that they get behind with their course work. If you get into difficulties with your schedule, please let your tutor know before it is too late.
4. Turn to unit 1 and read the introduction and the objectives for the unit.
5. Work through the unit. The content of the unit itself has been arranged to provide a sequence for you to follow.
6. Review the objectives for each study unit to confirm that you have achieved them. If you feel unsure about any of the objectives, review the study materials or consult your tutor.
7. When you are confident that you have achieved a unit's objective, you can then start on the next unit. Proceed unit by unit through the course and try to pace your study so that you keep yourself on schedule.
8. When you have submitted an assignment to your tutor for marking, do not wait for its return before starting on the next unit. Keep to your schedule. When the assignment is returned, pay particular attention to your tutor's comments.
9. After completing the last unit, review the course and prepare yourself for final examination. Check that you have achieved the unit objectives (listed at the beginning of each unit) and the course objectives listed on this course guide.

TUTORS AND TUTORIALS

There are 8 hours of tutorials provided in support of this course. You will be notified of the dates, times and location of these tutorials as well as the name and phone number of your facilitator, as soon as you are allocated a tutorial group.

Your facilitator will mark and comment on your assignments, keep a close watch on your progress and any difficulties you might face and provide assistance to you during the course. You are expected to mail your Tutor-Marked Assignment to your facilitator before the schedule

date (at least two working days are required). They will be marked by your tutor and returned to you as soon as possible.

Do not hesitate to contact your facilitator by telephone or e-mail if you need assistance. The following might be circumstances in which you would find assistance necessary, hence you would have to contact your facilitator if you:

1. do not understand any part of the study or the assigned readings
2. have difficulty with the self-tests
3. have a question or problem with an assignment, with your tutor's comments or with the grading of an assignment.

You should endeavour to attend the tutorials. This is the only chance to have face to face contact with your course facilitator and to ask questions which are answered instantly. You can raise any problem encountered in the course of your study.

To gain much benefit from course tutorials, prepare a question list before attending them. You will learn a lot from participating actively in discussions.

SUMMARY

Special Education is intended to provide you with sound and adequate knowledge about learners with special needs. Special education is designed to help the exceptional children (both gifted and disabled individuals) in making the maximum use of their capabilities in order to contribute their quota to the socio-economic development of their country.

In order to achieve this, you have been exposed to: Basic concepts in special education. You have also been introduced to different categories of special needs children. Upon completion of this course, you will be equipped with adequate knowledge and skills for better service delivery. It expedient that you should try to apply the knowledge and skills you have acquired in this course to enhance and facilitate better job performance in your chosen career.

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MODULE 1 BASIC CONCEPTS IN SPECIAL EDUCATION

Unit 1	Overview of Special Education
Unit 2	The Place of Research in Special Needs Education
Unit 3	Information and Communication Technology in the Education of Learners with Special Needs
Unit 4	Current Issues in Special Education

UNIT 1 OVERVIEW OF SPECIAL EDUCATION

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1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Definitions
3.2	Historical Perspective and Development
3.3	General Education and Special Education
3.4	Terminologies in Special Education
3.5	Individualised Education Programme
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	Reference/Further Reading

1.0 INTRODUCTION

Persons with special needs are found in all societies of the world. Within and outside our different institutions of learning we find learners with special needs that require unique responses to their education. These categories of children cannot benefit from the conventional classroom because they require special education and related services if they are to realise their maximum potential. These special need children may have learning or attention difficulties, intellectual retardation, behavioural problems, physical and health related problems, disordered communication, hearing impaired and visually impaired.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define special education in your own word
- recount a brief history of special education

- identify the relationship between general education and special education
- distinguish area of differences and relationships between general education and special education
- itemise and explain terminologies in special education.

3.0 MAIN CONTENT

3.1 Definitions

- Special education is that type of education that is specially designed to meet the uncommon needs of exceptional students.
- It is the education of learners with special needs in a way that addresses the learners' individual differences and needs.
- Special education is the education specially designed to suit the special needs children who may experience learning problems and learning difficulties as a result of disabilities or handicaps or other forms of special educational needs (Obani, 2004).
- Therefore, special education is designed to help the exceptional children (both the gifted and the disabled individuals) in making the maximum use of their capabilities in order to contribute their quota to the socio-economic development of their country.

3.2 Historical Perspectives and Development

Special education has passed through different phases. These phases or stages could be categorised as: The Pre-Christian era, the Christian era and the post Christian era.

The Pre-Christian Era: This was before the advent of Christianity. This period could be referred to as the “Dark Ages.” During this period children with special needs were maltreated, dehumanised and ostracised. It was largely the epoch of ignorance and superstition. It was the period when some of the handicapped were used as royal clowns, jesters or gladiator fighters to entertain the nobles among them. Further, some persons with disabilities were locked up in asylums believing they were demon possessed.

In the pre-Christian era, the city/state of Sparta did not have any programme for persons with disabilities; they were either eliminated or were exposed to harsh and unfriendly weather to die at the top of mount Taygetu gradually.

Further in ancient Rome, Balbus Balaesus the Stutterer, was caged and displayed along the Appian Way to amuse travellers who thought his speech was funny.

In the pre-Christian era in Nigeria, special need children were not catered for. No special education provision was made for them.

The Christian Era: It was the period that emphasis was laid on love and charity. Christianity laid more emphasis on love for fellow human beings. The content of love for one's fellowman was evidenced by the words in "as much as ye had done it unto one of the least of these brethren ye have done it unto me." During this period, the inhuman treatment towards persons with disabilities began to fade.

Post Christian Era: The formal education of special needs children began to see the light of the day primarily from the early 1800s. Most of the originators of special education were European physicians.

The early years of special education witnessed the remarkable contributions of the likes of Jean Itard, Edward Seguin, Valentine Howe, Thomas Hopkins Gallaudet, Samuel Grialety Howe and a host of others.

In Nigeria, the formal education of special need children dated back to 1950s when the first special school was established in Gindiri in the present Plateau State by Sudan Interior Mission. However, our people had ways of taking care of persons with special needs among them before the advent of Western education. The missionaries played vital roles in the establishment of special schools in Nigeria. For example Pacelli School for the blind was established in 1962 in Lagos by Archbishop Taylor of the Catholic Church. The Wesley School was established by the Methodist Church in Surulere, Lagos in 1958 and a host of other special schools began to spring up across the nation.

3.3 General Education and Special Education

The aim of education is to develop the intellectual, moral and physical growth of an individual child while special education aims at dealing with children with special learning problems/difficulties and needs.

Obani (2004) states that special education looks beyond the ordinary methods and provision of the conventional school system in order to tackle the problems affecting the handicapped child's ability to learn effectively. Special education is **child - centred** and not **subject-centred**.

Though, the relationship between general education and special education became a matter of concern to policy makers and researchers in the 80s ,the 1990s reform proposal gave birth to inclusive school movement where special need learners will be educated in the class with their non- disabled counterparts.

SELF-ASSESSMENT EXERCISE

Can you identify some differences between special education and general education?

3.4 Terminologies in Special Education

Special education has its own terms, registers/jargons. Some of these registers are used interchangeably.

Disability: Disability and handicap are sometimes used interchangeably. A person is disabled if a person loses a part of his body and this does not prevent him from carrying out the functions expected of the lost part.

Handicap: A person is handicapped if he/she loses part of his body and this has prevented him from carrying out the functions expected of his/her lost part.

Inclusive Education: It is a system of education designed to restructure general education schools and classrooms to accommodate all students including learners with special needs.

3.5 Individualised Education Programme

Children have individual differences as a result of which the rate at which individuals learn varies. This is also applicable to children with special needs. Individualised instruction is a kind of educational programme that is specifically designed to meet the individual child's specific needs, problems, challenges and special educational needs.

Individual educational programme must include current educational performance, instructional goals, special education and related services, age of the learners, criteria and procedure for determining that the instructional objectives are being met. It is pertinent to note that for educational programme to be appropriate for each learner with disability, it must be individualised. Therefore the tools that offer appropriate education to learners with disabilities are:

- The Individualised Family Service Plan (IFSP) – for infants.
- The Individualised Education Programme (IEP) – Preschool through high school learners.

4.0 CONCLUSION

In this introductory unit, you have learnt about the basic concepts in special education. You have not only learnt about meanings and

definitions of special education, you have learnt about the historical perspectives and development of special education. You can also distinguish between general and special education.

5.0 SUMMARY

In this unit, we have learnt about basic concepts in special education. We also discussed the definitions of special education. Further, we learnt about the historical perspective and development of special education. We shed light on the differences and relationship between general and special education. Certain concepts in special education were also discussed, such concepts include disability, handicap, inclusive education and individualised education programme.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What do the concepts “disability” and “handicap” mean?
- ii. Distinguish between general education and special education.

7.0 REFERENCE/FURTHER READING

Obani, T. C. (2004). *Handicap, Disability and Special Education. What Parents and Teachers Want to Know*. Ibadan: Book Builders.

UNIT 2 RESEARCH IN SPECIAL NEEDS EDUCATION

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- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Definitions
 - 3.2 Special Education and Special Needs Education
 - 3.3 Relevance of Research in Special Needs Education
 - 3.4 Barriers to Research Activities in Special Education
 - 3.5 Strengthening Research in Special Education
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

There is no doubt that research projects have contributed a lot to the development and progress made in special need education. There are still a lot to be done in the field of research in Nigeria for special needs education to keep abreast with counterparts in developing nations of the world.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define research in your own words
- identify the types of researches
- identify the relevance of research studies in the field of special education.

3.0 MAIN CONTENT

3.1 Meaning and Definition

The word **Research** is made up of two syllables 'RE' and 'search'. Literally, 'RE' means to repeat while 'search' means to look for something. Various scholars may define research in various ways; for example, Aborisade (1997) defines research as a systematic thinking strategy which involves a planned and formalised collection, analysis and interpretation of data for problem solving.

Fawole, Egbokhare, Itiola, Odejide and Olayinka (2006) agree that there can be many definitions of research. Three definitions have been highlighted from their list of definitions.

1. Research is an endeavour to study or obtain knowledge through the use of systematic approach with the intent of clarification.
2. Research is a curiosity-driven activity that has the purpose of discovery and advancement of knowledge (Basic Research).
3. Research is a systematic investigation including research development, testing and evaluation, designed to develop or to contribute to generalisable knowledge. From the above definitions one can deduce therefore, that research is systematic, it is designed to obtain knowledge and the results of a research are verifiable.

There are types and mode of research. The types of research are basic and applied. Basic, pure or academic research gives the people the opportunity of gaining new knowledge and developing new theories in a discipline while applied research is directed at an existing problem. It finds solution to practical problems in education. Research modes can be in form of collaboration, contract, sponsored and consultancy. Collaborative research studies are carried out by two or more individuals or organisations.

Contracted Research

An industry or organisation can request an individual to carry out research project for them. It is a joint effort.

Sponsored Research

Grants can be given to individuals or an individual can apply for grants to carry out a research study. Sponsored research studies are either basic or strategic but the outcomes are commercially - oriented.

Consultancy

Tapping the skills and expertise of a specialist on a particular project.

SELF-ASSESSMENT EXERCISE

Distinguish between contracted research and sponsored research.

3.2 Special Education and Special Needs Education

Special education and special needs education are used interchangeably. There are some individuals who can learn very fast, there are those who are slow learners. There are others who have difficulties in learning. There are others who have special learning needs that occur as a result of sensory, intellectual, psychological or socio-cultural deficiency. There are others that are precocious and prodigious, all the aforementioned need special education in order to function maximally.

What is Special Education?

Special education means specially designed instruction that meets the unusual needs of exceptional students. Special materials, teaching or equipment and/or facilities may be required (Hallahan and Kauffman, 2003).

Obani (2004) sees special education as the education that is concerned with children who have been adversely affected to a greater extent, by one or more of these factors. Special education deals with children with special learning problems, difficulties and needs. It applies special methods and uses special equipment that takes the special problem of the children into consideration.

From the above, one can deduce that special education is designed to meet the needs of persons with special need. Special needs education merely entails simple modifications, adaptations, adjustments innovations and management of the curriculum, methods and materials in addition to the other resources and practices of regular schools to fit and meet the special learning needs of those who present different forms of disabilities and learning difficulties (Obani, 2006).

3.3 Relevance of Research in Special Needs Education

Research is meant to better and improve the learning and educational standard such as in teaching, classroom administration, psychological assessment, child growth and development.

Adebisi (1998) identifies the relevance of research in special education in the following ways. These are to:

- assess the effectiveness of a programme in special education
- find possible effect of taking certain decision
- find solution to practical problems that have been discovered in special education
- evaluate the authenticity of certain concepts in special education.

Unarguably, research studies have contributed in no small measure to improvement and progress made in special needs education over the years. Over the years, in the education for the intellectually retarded for example, it was through research that it was realised that physiological method, play therapy etc. were adopted as effective methods of teaching the intellectually -retarded.

It was also through curiosity and passionate investigation that Valentine Hauy discovered in 1771 that the blind could read and write by making use of their fingers. In addition, it is through research efforts that dog was discovered useful in guiding the blind if well trained.

Through systematic investigations, it has been found out that the blind can study mathematics and sciences up to the university level, their disability notwithstanding. It is obvious that the blind can manipulate computer and access the internet conveniently.

In the same vein, research has revealed to us that there are classes and degree of giftedness and how they can be taught. Even in our days, through research, it has been found out that inclusive education is beneficial to children with special needs.

It is also through various research studies that nomenclature have been changed in special education. Also, through careful and extensive investigations novel facts are discovered about nature and manifestations in disability, leading to shift in the existing perspectives on issues in special education. This is exemplified in the changes made to the nomenclatures such as handicapped to disability, intellectually and not mentally 'retarded' etc.

Related to the above, Kolo (1997) believes that research improves performance and efficient practices. In special education, certain problems are solved in the education for the visually -handicapped persons through research. For example, technological innovations for meeting psychological, mobility, orientation and educational needs of the visually-handicapped person have been developed.

3.4 Barriers to Research Activities in Special Education

There are many challenges to research activities in special education as highlighted below:

Culture and Tradition

In Africa, there are a number of cultural taboos and traditions that are inimical to the success of research in special education. Traditions

believe “as it was in the beginning, so it is and so shall it be.” Culture and tradition make things to be static and stagnant. In some cases it does not give room for flexibility.

Attitudinal Issues

There is no doubt that one’s attitude determines one’s altitude. The lackadaisical or non-challant attitude towards research activities in special education is also a factor. Further, in their race to catch up with the developed countries quickly, many developing countries fail to understand the following about research:

- The nature of the research enterprise
- The long gestation periods of many research activities: the products we see on shelves in markets have taken years to get to the public
- The expensive nature of research
- The speculative nature of research
- The need for continual and uninterrupted research engagement as strategy for sustainable development
- The imperative of seeing research as a veritable strategy for sustainable development (Egbokhare, Olayinka, Taiwo, Alonge and Obono, 2006).

It is not a national interest. Many developing nations of the world have focus and give priorities to research and as a result; researchers are encouraged and motivated. But this is not so in some countries of Africa including Nigeria.

Personnel Constraints

Many young researchers do not show interest in research studies because of the cost implication of the research work and the exorbitant and unaffordable cost of publishing in some scholarly international journals.

Ethical Issues

There are ethics peculiar to various fields. Research is of no exception. Many people are in the field of research but never bother to obey the rules of the game. Data are manipulated and figures are falsified; results of researchers are not reproducible simply because, the rules of research studies have been violated.

Inadequate Funding

Researchers and research works are not well funded. Research studies in the field of special education are capital intensive. Equipment will be needed; tests will be adapted where necessary when it is not available. Some of the research studies in special education take years before they can be completed.

Inadequate Data

This is a challenge to research studies in special education. There is no particular place that we have as a databank. For instance, the statistical number of persons with disabilities is not available in the country. There should be the urgent need for census of persons with disabilities in Nigeria.

3.5 Strengthening Research in Special Education

In order to put research in special education in the place of pride, it deserves that certain factors must be considered:

Research Factors

The researcher must have self conviction. He/she must know what, how and why he/she is doing what. He must have a focus. He must be skilful on how to carry out research projects.

Government Factor

There should be proper funding on the part of government, various foundations, philanthropists, organisations, individuals and non government organisations.

Societal Factors

There should be public enlightenment on research. Some of the parents of persons with disabilities in some cases hide their disabled child at home and will not tell the truth whenever they are to fill any questionnaire. Through seminars, workshops and conferences society can be delivered from the demon of culture and tradition in respect of barriers to research studies.

Documentation Factors

There should be proper and adequate documentation of research works. Workshops should be organised on how to keep documents and various records.

4.0 CONCLUSION

In this unit, various scholarly definitions of research, types and mode of research studies have been discussed. The relevance of research work to special needs education was also discussed. Further, various challenges and constraints to research activities in special education were itemised.

5.0 SUMMARY

You have learnt about various definitions of research. Research could be defined as a systematic thinking strategy which involves a planned and formalised collection, analysis and interpretation of data for problem solving.

6.0 TUTOR-MARKED ASSIGNMENT

- i. Define research in your own word.
- ii. Of what benefit is research to Special Needs Education?

7.0 REFERENCES/FURTHER READING

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UNIT 3 INFORMATION AND COMMUNICATION TECHNOLOGY IN THE EDUCATION OF LEARNERS WITH SPECIAL NEEDS

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
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- 4.0 Conclusion
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1.0 INTRODUCTION

Technological revolution has transformed many aspects of our life, including how we communicate, how we spend our free time and especially how we work. As the life and work place demands have changed as a result of this technological revolution, so have conceptions of the successful adults and the relevant educational experiences they should encounter while attending school (Siddiqui, 2004).

Due to advancement in technology, teaching and learning process have taken a new dimension now. The situation has changed from old order of textbook consultation by teachers for onward delivery in the classroom. Through technology, both teachers and students alike can now interact with the internet to update their knowledge on any issue in different disciplines.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define information communication technology
- identify the relevance of information communication technology to special needs education.

3.0 MAIN CONTENT

3.1 Definitions

Information technology is a term that encompasses the notion of the application of technology to information handling which include: generation, organisation, storage, retrieval and dissemination of information (Maduagwu & Ajobiewe, 2006). Information Communication Technology (ICT) involves telephones, cables, television, satellite communication, computers internet and global system of mobile communications (GSM) the use of information communication technology cuts across all disciplines and for all segments of the society (either the young or the old, male or female).

Information Technology (IT) was defined by the Information and Technology Association of American (ITTA) as “the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware”. It deals with the use of electronic computers and computer software to convert, store, protect, process, transmit and retrieve information securely.

UNESCO (2002) defined ICT as the range of technologies that are applied in the process of collecting, storing, editing, retrieving and transfer of information in various forms. The definition implies that in an effective teaching and learning, relevant information will go a long way in the achievement of stated goals and objectives. One dominant aspect of Information Communication Technology (ICT) which has revolutionised the world is the INTERNET.

3.2 The Internet

The internet is a worldwide “network or wireless” that allows people to communicate and interact with one another regardless of physical proximity. The internet was initially created to help foster communication among government sponsored researches. In the last few decades, it grew steadily to include educational institutions, government agencies, commercial organisations and international organisations. It is undergoing a phenomenal growth with connections increasing faster than any other network ever created. The internet has made it possible for the world to become a global village connecting people from different geographical locations (Ogundele, 2008).

3.3 The Uses of ICT in Education

ICT is a generic term referring to technologies which are used for collection, storing, editing and passing information in various forms (SER, 1997). Effective educational research cannot take place without passing of relevant information through the teacher to the learners and vice versa. A personal computer is the best known example of the use of ICT in education, but the term multimedia is also being frequently used. Multimedia can be interpreted as a combination of data carriers, for example video, CD-ROM, Floppy disc and internet are software in which the possibility for an interactive approach is offered (Smeets, 1996).

ICT can be used in education in the following ways as highlighted by SER, 1997 and Pilot, 1998.

1. **ICT as an Object:** This refers to learning about ICT. Mostly organised in a specific course. What is being learnt depends on the type of education and level of the students. Education prepares students for the use of ICT in education, future occupation and social life.
2. **ICT as an Assisting Tool:** ICT is used as a tool for example while making assignment, collecting data and documentation, communicating and conducting research. Typically, ICT is used independently from the subject matter.
3. **ICT as a Reference to ICT Medium for Teaching and Learning:** ICT is used as a tool for teaching and learning itself, the medium through which teacher can teach and learners can learn. It appears in many forms, such as drill and practice exercises in simulations and educational networks.
4. **ICT as a Tool for Organisation and Management in Schools:** The main thrust of the use of ICT in this paper focuses on the Special Needs Education. This is the education that is specially designed to meet the needs of persons with one form of handicapping condition or another and the gifted and talented individuals. Obaje (2007) sees special education as an area within the frame work of general education that provides teachers with the training for special needs children who cannot benefit from regular classroom setting. Special needs education is also seen as “the education that is given in the regular classroom teachers sometimes with the collaboration of specially trained teacher to all children regardless of their physical, sensory and psychological differences.

SELF-ASSESSMENT EXERCISE

Highlight the relevance of ICT to special needs education.

3.4 Categories of Children with Special Needs

Categories of children with special needs include the following:

- Children with learning disabilities
- Children with intellectual retardation
- Children with behaviour disorders
- Children with hearing impairment
- Children with visual impairment
- Children with physical impairment
- Children with communication disorders, modern communication and children with special needs.

Modern communication technology has introduced a lot of devices like computers satellites, film slides, fax, video-disc, cellular etc. which have been noted to facilitate the teaching-learning processes of children with special needs. Computers are tools for teachers and students.

They can be used for creation of individualised and collaborative instruction and can manage and generate instructional research and administrative data. Computers are now used by everybody irrespective of individual disposition. Children with special needs can use computer to have access to various subject areas (Stephens, Blackhurst and Magliocca, 1988).

The Gifted and the Creatively Talented

The computer is a learning, productivity and simulation tool which the gifted and talented can use for explanatory work to control their learning environment and performance. Learning programme is on creative activity, they can do simulation games and science experiment. The “slides tape show” reported by Frith and Reynolds (1993) provided creative activities for them to select a topic for show, write the scripts, develop graphics, make the slides, develop audio music at the beginning and at the end of the presentation and finally integrate the slide with the audio component to ensure the presentation of the show. For the group also, the computer has been used to facilitate independent study.

Children with Specific Learning Difficulties

Some children with learning disabilities have specific learning difficulties in reading, writing, spelling or listening while others may

have difficulty in calculation, reasoning or some form of perceptual problems. Usually some deviant behaviours like impulsivity, hyperactivity, distractivity, etc. are exhibited. The only common educational characteristic is that they show a discrepancy between their potential to learn and their actual performance of attainment.

Computer for children with learning difficulties is reinforcement and can provide recreational and vocational opportunities. With this group, computer has been used in designing programmes to avoid learning problems. Tape recorded materials have been used to address specific deficit. Caption films have been utilised in teaching this category of special needs children. Computer has also been used to teach complex skills through computer assisted instruction and simulation (Carnine, 1989).

Children with Behaviour Disorders

There are children with behaviour disorders. They have problems of attention span, retention deficits and lack of motivation. For these categories of children, computer can meet their needs in terms of:

- Reduction of distraction and irrelevant stimuli
- Prompts and cues
- Instruction in small manageable steps
- Specification and repetition of task directions
- Practice for over-learning
- Immediate and frequent reinforcement
- Feedback in a non threatening manner.

These children have also being taught how to operate the micro computers from picture prompts (Frank, 1988) thus facilitating instruction. Improved communication skills have been noted through taped-words treatment.

Children with Hearing Impairment

For children with hearing impairment, a wider world of communication has been opened to them through the use of telecommunication devices which allow them to receive messages through videotaped presentations. The speech synthesiser that permits children with hearing impairment to see in prints what others are communicating to them. Messages are displayed on the screen for them to see and read. Deaf net is another computer-based telecommunication network that leads to expand the deaf potential for social interaction with them and the hearing persons of the world. This system is like an electronic post office with the private mail boxes into which messages are saved until collected by the owner.

Children with Visual Impairment

Hallahan and Kauffman (1988) noted that in recent years a minor explosion in communication has resulted in electronic devices for use in the teaching-learning process of children with visual impairment. For example, the optacon converts print materials to a tactile image. It can be adapted to read a computer screen, an electronic calculator or a typewriter. The Kurswell reading machine converts prints into speech when material is placed face down on a scanner, the individual hears the material being read by an electronic voice, at a level as fast as human speech. The speech plus calculator or talking calculator displays information visually and speaks. It performs basic operations such as addition, subtraction, multiplication and division as well as computer square roots and percentages. Computer has also been used to increase the level of interaction between children with visual impairment and the sighted world (Olson, 1983). Computer with low vision and devices assist mobility of this category of special needs people. Computer with synthetic speech (Duxbury word processor) help in pronouncing texts for them. The computer can tell children with visual impairment about other information displayed on the screen. These children can also use the electronic communication system (network) vis-à-vis Braille, to send information to one another in Braille. Computer helps to display typed information in large letters. These children can also use the computer to change the background of the text in different contrasting colours.

Children with Physical Impairment

Many of such children do have birth injuries, illness or accidents that affect their range of motion, physical strength, co-ordination, communication and interaction with instructional materials (MC Cormic and Haring, 1986). The physical problems of these children interfere with their ability to participate fully in classroom instructional programmes (Stephens, Blackhurst and Magliocca, 1986). Computer can break these barriers imposed by physical impairment. For example, children with cerebral palsy can use keyboard (with holes) to access the curriculum. Mainstreamed special needs children with paralysis, amputees, etc. may use a rubber tipped/stick to operate a keyboard. Those who are unable to use a mouth stick or headwind may operate switches with different parts of their bodies over which they have control. Computer has been used to improve communication skills in children with cerebral palsy (Gall Loke, Jones, Isantis Vogel and White, 1989).

Children with Communication Disorders

These are children who experience difficulties in their communication skills, which exert significant impact on their daily lives. Some of these speech and language disorders include: stuttering, delayed speech, articulation disorders, voice disorder and aphasia. Head pointer attached to a computer can be useful to them. Speech synthesiser provides children with communication disorder access to social and economic integration.

Children with Intellectual Retardation

Children with intellectual retardation are a group of special needs children with very low intelligence that is below the average and they tend to have maladaptive behaviour. There are three groups of children with intellectual retardation (the educable, the trainable and the totally dependent). The use of computer for any of these groups varies with their needs. Generally, computers are used to enhance the education of the intellectually retarded children in the following ways:

- reduction of distraction and irrelevant stimuli
- specification and repetition of task directions, presentation of prompts and cues
- presentation of small segment and meaningful instruction (task analysis).

The summary of all the uses of computer with appropriate programming has been suggested to include the following:

- provides a multisensory approach to learning
- used to teach a wide range of subjects
- gives a variety of reinforcement
- provides continuous encouragement
- Facilitates active participation in the learning process
- Used with diverse students populations
- provides direct individualised interactive instruction
- allows a student to learn at his own rate
- remembers student responses
- provides instant feedback
- provides remediation, development or enrichment, depending on the need of the learners
- provides repetition, drill and practice in a meaningful manner
- provides diagnostic and prescriptive information to the teacher used as an ideal management and retrieval system for students records assessment scores, students objectives and IEPs

- frees the teacher from hours of repetitions, paper and pencil activities (Handford & Bloanc, 1981).

4.0 CONCLUSION

In this unit, we have learnt that with the advent of information and communication technology life has been made easier to live and duties easier to perform. This is not so for the able individuals alone, the disabled are also part of the beneficiaries. Thus, this unit has discussed the various ways by which ICT is beneficial to both the positively exceptional individuals (the gifted and talented) and other persons with special needs who are having one kind of handicapping condition or another.

5.0 SUMMARY

In this unit, we learnt about information technology as the study, design, development, implementation, support or management of computer based information systems, particularly software application and computer hardware. We also learnt about the uses of ICT in education and special needs education.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What is Information Technology?
- ii. Of what benefit is Information Communication Technology to the education of children with special needs?

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UNIT 4 CURRENT ISSUES IN SPECIAL EDUCATION

CONTENTS

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- 2.0 Objectives
- 3.0 Main Content
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 - 3.1.1 Full Inclusion
 - 3.1.2 Full Continuum of Placements
 - 3.2 The Nomenclature Issue
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 - 3.3.4 Autism
 - 3.3.5 Attention Deficit and Attention Deficit Hyperactivity Disorders
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1.0 INTRODUCTION

The adage "there are two sides to every story" applies to special education. In the early years of special education, there was one clearly defined goal - an appropriate education for students with disabilities. Parents, professionals, and students with disabilities rallied together to attain this right. Having secured this goal, the allies splintered into numerous advocacy groups, each fighting for different issues in special education. Issues such as school reform, full inclusion, standards assessment, and disability classification can be viewed not only from at least two perspectives, but from many variations or degrees of each.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- differentiate between special education and the regular form of education
- list the different categories of persons with special needs
- state the different type of programmes available to persons with special needs.

3.0 MAIN CONTENT

3.1 Special Education and Reform Issues

School reform has been a burning issue since the early 1980s, but special education was not often included in discussions of reform until about the turn of the twentieth century. In the early years of the twenty-first century, the following are the issues involved:

3.1.1 Full Inclusion

In full inclusion, all students regardless of disability, health needs, academic ability, service needs, and often, preference of parent or student are educated full-time in a general education class in their neighborhood school (the school they would attend had they no disability). In this model, the child receives special education support services in the general education classroom. Full inclusion requires either a team teaching approach or consultation of the regular classroom teacher with a special educator. In team teaching, a classroom will have both a general education teacher and a special education teacher equally sharing the responsibility to teach the whole class. In consultation, a special education teacher works with many general education teachers, meeting with them and answering questions as needed or on a regular schedule.

Proponents of full inclusion believe that pulling a child out of the classroom to provide special education services or placing the child in a self-contained classroom or special school is inherently unfair and inferior and, therefore, not just. They also argue that both the students with disabilities and their peers benefit from full inclusion, an argument that often places greater emphasis on social interaction than academic achievement.

3.1.2 Full Continuum of Placements

Proponents of a full continuum of alternative placements noted that since 1975 the law has mandated a continuum of placements including placement:

- (1) full-time in a general education classroom
- (2) part-time in a special education resource room
- (3) full-time in a special education self-contained classroom
- (4) in a separate special education school
- (5) at a residential facility
- (6) in the hospital.

They agree that full-time placement in general education is appropriate for some students, but not for every student with disabilities. Proponents also argued that in accordance with the education policy, each student should be assessed and placed individually. Many students with disabilities commonly need a more structured and clearly defined environment, either academically or behaviourally, than a general education classroom can provide. Also, students with severe emotional or behavioural disabilities can infringe on other students' education in a general education classroom by either monopolising a teacher's attention or by placing peers and teachers in physical danger. While believing that students should be educated in the least restrictive environment with nondisabled peers to the maximum extent appropriate, proponents of the continuum also believes that it is immoral and illegal to place every student in the exact same placement regardless of individual needs.

SELF-ASSESSMENT EXERCISE

Identify different reform issues that have taken place in special education.

3.2 The Nomenclature Issue

Controversies surrounding labels and categories of disabilities are a major concern to parents and professionals. One issue is whether students should be labelled at all. Proponents of labels such as *learning disabled*, *deaf*, or *autistic* are of the opinion that these labels provide a common ground for professionals, researchers, and parents to discuss practices and share knowledge about particular disabilities. Labels help teachers and administrators prepare for and provide a student with an appropriate education. Schools can better manage their budgets if they can explain what they normally do with the funds already provided for them and why they still need more funds.

Opponents of labels argue that labels permanently stigmatise the student. They believe that teachers and administrators lower their expectations of a labelled student, creating a vicious cycle in which the student is given fewer challenges and falls further behind what is expected of the child. An extension of the labelling issue is categorical versus non-categorical labelling. Categorical labelling specifies a disability based on categories in the national policy of education. Non-categorical labelling tags a student as disabled or developmentally delayed without specifying the precise disability. Non-descriptive labels can provide educators and parents additional time to observe and evaluate the child before making a decision on disability type. Though this can help avoid mislabelling, the benefits of categorical labelling are lost.

3.3 Disability Classifications

Some disabilities can be measured and defined objectively, and thus are easily identifiable. If a child is classified as blind, there is usually agreement about what blindness means and whether the child qualifies for special education or other services. However, many disabilities are not easy to identify and label. Judgemental categories such as learning disability, intellectual disabilities, emotional disturbance, autism, and giftedness require professional judgement and subjective analysis. Severe and multiple disabilities, though often easier to identify, also create controversies because judgement is required to distinguish the level of disability (mild, moderate, or severe).

3.3.1 Learning Disability

The majority of students categorically labelled have learning disabilities (LD). This is ironic because LD is one of the most difficult disabilities to define. Some individuals believe that LD is simply a social construct for those students who have not had adequate instruction. Another concern is that the policy's definition of LD describes what LD is not, rather than what it is, leaving localities with the task of finding an appropriate definition for it. Most people define LD using a discrepancy between the student's actual achievement and the student's presumed ability or IQ. The problem is that not all localities use the same discrepancy standard or the same tests to measure achievement and ability and discrepancy scores have inherent limitations.

3.3.2 Intellectual Disabilities

Intellectual Disabilities (ID) is identified by below average intellectual ability and poor adaptive behaviour that is pervasive in all areas of life. Intellectual ability and adaptive behaviour can both be ambiguous, as

different tests yield different intelligence quotients and assessment of adaptive behaviour requires subjective judgment. A disproportionately large number of children from minority populations and low socioeconomic status are identified as having intellectual disabilities, giving rise to the argument that identification of intellectual disabilities is biased (too many African-American and Latino students and too many poor students are identified, but too few children of Asian descent are identified).

3.3.3 Emotional Disturbance

Emotional disturbance (ED) refers to severe and protracted difficulties in relationships with other people. Controversies abound regarding who should be included in the category of emotional disturbance (ED). The policy of education excludes from ED students who are socially maladjusted but not emotionally disturbed, but it does not define social maladjustment. Confounding the problem is another clause describing ED as "an inability to build or maintain satisfactory relationships with peers and teachers", which can be interpreted to mean social maladjustment. Thus the language of the law seems self-contradictory. Another issue in ED is disagreement on the actual number of students with this disorder. Many estimates based on prevalence studies range from 6 to 25 per cent of the student population, but less than 1 per cent of the school population has been identified as having ED for special education purposes.

3.3.4 Autism

Autism is a pervasive developmental disability affecting approximately one in five hundred children. Its onset is noted before the age of three years. Professionals find it hard to agree on a definition. One of the main controversies in definition involves the closely related syndromes of Asperger's and Pervasive Developmental Disorder (PDD). There is great confusion and disagreement as to whether these are separate disabilities or different levels of severity of autism. Causes as well as the best treatments are also disputed for each.

3.3.5 Attention Deficit Disorder and Attention Deficit Hyperactivity Disorder

Attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD) have always been controversial. One reason for this is that the characteristics of ADD/ADHD, including careless mistakes on school work, forgetting daily activities, fidgeting with hands or feet, or talking excessively, can distract an average child. What makes a diagnosis of ADD/ADHD difficult is determining whether these

characteristics are beyond normal for the student's age and have become a disability. In fact, some professionals argue that ADD/ADHD does not exist and that the label is used haphazardly on students who simply exhibit inappropriate behaviour and a lack of discipline. Furthermore, IDEA does not acknowledge ADD/ADHD as a separate category but includes it under "other health impaired" (OHI). There is also a growing concern that too many children are being medicated for ADD/ADHD.

3.3.6 Gifted and Talented

Gifted and talented are the opposite of disabilities, but some, if not all, of the same issues discussed previously apply (e.g., stigma of identification, judgment in assessment). Opponents of special programmes for gifted and talented students argue that separating them from their non gifted classmates is elitist and that all students should be exposed to a superior, highly challenging education. A disproportionately high number of Caucasian and Asian students are identified as gifted, while a disproportionately low number of African-American and Hispanic students are found eligible for gifted programmes. Proponents of special education for gifted students believe that these students need a special curriculum. Gifted students who are asked to work below their ability level or tutor their less gifted peers become bored and lose motivation. Identifying gifted students is also difficult because there is not one universally accepted definition, nor is gifted a category acknowledged under the law. The decision to provide gifted education and to determine what qualifies a student as gifted is often a local responsibility.

3.3.7 Severe and Multiple Disabilities

Compared to other conditions, there is less uncertainty in the identification of students with severe and multiple disabilities (SMD). Increased numbers of children identified as having SMD, however, is a fairly new trend in special education. Advances in medicine and technology are helping more children than ever before survive serious medical emergencies and severe injuries. This increase has spurred changes in special education and has placed new demands on personnel and the physical environment. These children often need assistive and medical technology in the classroom, as well as personnel knowledgeable about this equipment. Some of these students need continuous support from a classroom assistant, especially when included in general education.

3.4 Classroom Environment

Three trends in special education have especially significant influence on the classroom environment, they are: (1) early intervention and prevention, (2) technology, and (3) transition plans.

1. **Early intervention and prevention:** Early intervention and prevention of disabilities are not new ideas, but they have experienced increasing emphasis. Schools are realizing that early intervention and prevention not only benefit children in the long run but save money as well by reducing the later need for costly services. Two significant issues are the appropriate role for the family of the child and whether the intervention should be child-centered or teacher-directed. In addition, obstacles to early intervention and prevention are still being addressed.
2. **Technology:** Technology permeates our society with increasing intensity and reaches into classrooms. It helps students overcome limitations previously placed on them by a disability. Computer programmes allow keyboarding and navigation of the internet by eye movements. Cochlear implants allow deaf students to hear, and new prosthetics (artificial body parts) provide greater mobility and participation in education and society.
3. **Transition:** This is transition from one school setting to another or from school to work. Firstly, there must be transition-planning conferences for children exiting early intervention programmes; the second is a statement of needed services for the transition from high school to higher education or work in the Individualised Education Plan (IEP) for students age fourteen or older. Other forms of transition planning, such as from middle school to high school or from a self-contained or restrictive environment to a less restrictive environment, are also becoming common.

3.5 Special Education Teachers

There is a critical teacher shortage in special education in all areas of licensure. Reasons include a shortage of people going through teacher training programmes in special education and entering the field, and alarmingly high exit rates for special education teachers. For example, statistics from 1993 to 1994 shows that the total demand for special education teachers was 335,000, yet there were only 18,250 special education degree graduates, covering a mere 5.4 percent of the demand. Because of this gross need, alternative licensure programmes have evolved: army personnel are being trained for a second career in teaching and drastically intensified and accelerated summer programmes are replacing four-year licensure programmes. While these programmes

can help place more teachers in the classroom, some professionals question the quality of both the teacher education programmes and the newly licensed teachers. Also, some districts fill special education positions with teachers having either no prior education experience or with only general education experience and provide provisional or conditional licensure to these newly hired teachers. Due to these difficulties, teacher retention has also become a critical issue.

Debate also exists over categorical or non-categorical licensure. Proponents of categorical licensure argue that each disability category is substantially different from others and that teachers should be highly specialised in that area. Proponents of non-categorical licensure argue that teachers should be prepared to teach all children and should have the expertise to address differing abilities and disabilities.

A closely related issue is a trend in higher education to merge the special education teacher programme into the general education programme, doing away with special education altogether. The arguments for and against this teacher education structure are similar to those for categorical versus non-categorical licensure.

3.6 Funding Issues

Funding issues and controversies affect all areas of education, including special education. Because special education requires services above those specified in the general education curriculum, additional funding is critical. In 1975, the federal government acknowledged the need for additional funding of programmes of persons with special needs and promised to supplement it by 40 per cent of the excess costs incurred in implementing the act's mandates. Unfortunately, the federal government has never come close to fulfilling this promise. Over the years, however, there has been a greater effort to provide these funds to the states.

Other issues persist at the local level. One common controversy stems from a belief that because the law requires special education services, these programmes are funded first, utilising the money that would otherwise be spent on general education. Another disputed issue is programme consolidation - the blending of categorical programmes such as special education, English as a second language, or other separately funded programmes. Proponents believe that by pooling resources, all children can benefit and can be educated more effectively. Opponents of programme consolidation believe it will diminish both the rights of children in these programmes as well as the quality of special services provided.

4.0 CONCLUSION

In this unit, we have highlighted various issues and controversies in special needs education. These controversies and issues, although the most widespread and disputed issues facing special education, represent only a small fraction of the numerous issues permeating special education today. School reform, labelling and classification, inclusion, teacher shortage, and special education funding can often be seen in the headlines of newspapers nationwide. Even though every story has two sides, more work is needed to ensure that every student's story will have a happy ending.

5.0 SUMMARY

In this unit, we have learnt about various issues and reforms that have taken place in special education. Reforms such as full inclusion, full continuum placement, nomenclature issues and funding issues were also discussed.

6.0 TUTOR-MARKED ASSIGNMENT

- i. (a). Mention different categories of persons with special needs.
(b). Discuss briefly two (2) of the categories mentioned in
- ii. What are the various educational programmes for persons with special needs?

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MODULE 2 EDUCATION FOR THE INTELLECTUALLY- RETARDED

- Unit 1 Definitions, Categories and Causes of Intellectual Retardation
- Unit 2 Characteristics, Identification and Educational Methods of Teaching Intellectually- Retarded Children

UNIT 1 DEFINITIONS, CATEGORIES AND CAUSES OF INTELLECTUAL RETARDATION

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Definitions
 - 3.2 History of Intellectual Retardation
 - 3.3 Classification of Intellectual Retardation
 - 3.4 Causes of Intellectual Retardation
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Persons with intellectual retardation or cognitive disabilities are found in any society of the world. Individuals with intellectual retardation and those who teach or take care of them must learn all the essential skills needed or required to improve the living standard of the retarded.

It is paramount to know that the group of persons with disabilities belong to different families, they also have friends and siblings. Different societies of the world find it difficult to understand them; hence, they are called different names. In Great Britain for instance, they are referred to as mentally retarded or intellectually retarded while in the Nigerian society, persons with intellectual retarded have names or labels other than the ones given by their parents. For instance, the Yoruba called them “Dindirin” while the Ibo call them “Onye Iberibe” and the Hausa refer to them as “Dolo” or “Wawa”.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- discuss the different definitions of intellectual retardation
- explain the degree of severity and outcome of intellectual retardation
- identify different categories of children with intellectual retardation
- mention the possible causes of intellectual retardation.

3.0 MAIN CONTENTS

3.1 Definitions

There are various definitions of mental or intellectual retardation.

Mental retardation is a generalised disorder characterised by sub-average cognitive functioning and deficit in two or more adaptive behaviour with onset before the age of 18, (AAMR, 2002).

In a related definition the American Association of Mental Deficiency defines mental retardation thus “A significantly sub-average general intellectual functioning that originates during the developmental period and is associated with impairment in adaptive behaviour (Grossman, 1973).

However, many professionals prefer the 2002 AAMR definition because it is more encompassing and detailed. The 2002 AAMR definition opines that one must be cautious in the use of I.Q scores, stresses concepts of adaptive behaviour and systems of supports. The definition of AAMR has three (3) major components.

- Intellectual functioning
- Adaptive behaviour
- Systems of support.

Intellectual Functioning: It means that the individual has been evaluated with instrument or test that has capacity to measure traits of intelligence in it entirely but the individual with intellectual retardation has significantly sub-average intellectual functioning.

Adaptive Behaviour: This is simply the ability to cope with one’s environment. It is a behaviour everyone uses to function in daily life. Persons with mental retardation and others with one disability may have

difficulties in this area because they do not have the skills needed in specific situation.

System of Support: This deals with social intelligence, the ability to interpret social behaviour of other people and to interact with them. Persons with intellectual disabilities require support in every area, especially the profoundly and severely mentally retarded.

SELF-ASSESSMENT EXERCISE

Identify the key factors in the definition of the intellectually - retarded.

3.2 History of Intellectual Retardation

Persons with intellectual retardation have been neglected in most societies of the world. The history of the intellectually retarded dated back before the birth of Christ. Data (2006) avers the Greeks in 1552 B.C. and the Romans in 449 B.C. were among the first to recognise people officially as mentally retarded. Attitude of people towards the mentally retarded in the early societies were harsh and in-human. The beginning of 19th century brought dramatic turning point in the life of the mentally retarded. The first attempt to educate an individual with mental retardation was recorded. In 1798, three hunters discovered a 12 years old boy in the woods of Aveyron in France. The boy was later christened Victor, the wild boy of Aveyron, Victor was a profound mentally retarded, unsocialised and had no language. Victor was also thought to be uneducated and very difficult to teach. As providence would have it. He was brought to Jean Itard, an experienced physician. Jean Itard tried to educate Victor but he was unsuccessful though there was little improvement. Later Edward Seguin continued with the work of his master Jean Itard. Edward later established the Pennsylvania training school. Samuel Gridley Howe founded residential school in United State i.e. the Massachusetts school for the idiot and feeble minded youth.

3.3 Classification of Intellectual Retardation

In classifying intellectually retardation children certain factors such as the degree of retardation, clinical symptoms, educational purpose and historical beliefs, and causes are taken into consideration. Intellectually-retarded children are classified in different perspectives. These are traditional, degree educational and clinical.

TRADITIONAL CLASSIFICATION	CLASSIFICATION ACCORDING TO DEGREE	EDUCATIONAL CLASSIFICATION
Moron: IQ 50-85	Mild	Educable Mentally-Retarded
Imbecile: IQ 25-50	Moderate	Trainable Mentally-Retarded
Idiot: IQ 0-25	Severe/Profound	Totally Dependent-Mentally Retarded.

The following are the clinical classification of intellectually -retarded.

- Cretinism
- Down syndrome
- Hydrocephaly
- Microcephaly
- Cridu chat.

3.4 Causes of Intellectual Retardation

Today, researchers in the field of special education have revealed that intellectual retardation is caused by many factors. Many of the causes are known but others remain mysteries that cannot be explained.

The causes of intellectual retardation can be categorised according to the time at which the cause occurs.

These are as follow: Prenatal (before birth)

Perinatal (during birth)

Postnatal (after birth)

The prenatal causes can also be grouped into:

- (a) **Chromosomal Disorders:** These are genetic causes of intellectual retardation. There are some genetic syndromes that can cause intellectual retardation such as Down syndrome, William syndrome, fragile X syndrome and Prader Willi syndrome.
- (b) **Errors of Metabolism (Inborn):** The child will not be able to metabolise basic substances in the body as a result of inherited deference's in enzymes such as amino acid, vitamins, carbohydrate etc. Also, Phenylketonuria is a hereditary factor that results in inability of a person to metabolise phennylalaline which builds up certain toxic in the body that can result in brain damage.

- (c) **Developmental Disorders of Brain Formation:** These are:
- (i) Hydrocephalus: This is a condition characterised by the enlargement of head because of too much pressure of the cerebrospinal fluid.
 - (ii) Microcephalus: This is a condition causing development of a small, conical- shaped head.
- (d) **Environmental Factor:** Myriads of environmental factors can affect a woman during pregnancy and the foetus she is carrying. Such factors are:
- Maternal malnutrition
 - Drinking alcohol during pregnancy
 - Exposure of pregnancy to excessive radiation
 - Maternal rubella.

Perinatal Cause (During Birth)

The following are perinatal causes

- The use of forceps
- Insufficient oxygen.

Postnatal Causes (After Birth)

The postnatal causes of intellectual retardation can be categorised into two (2):

- Biological postnatal causes
- Psychosocial postnatal causes.

Biological postnatal causes include infections, diseases, malnutrition while psychosocial postnatal causes include poor environmental circumstances, (unassimilated environment).

4.0 CONCLUSION

In this unit, you have learnt about intellectually- retarded children. You learnt about various definitions of intellectual retardation. You did not only learn about classification of intellectually- retarded children.

5.0 SUMMARY

In this unit, we have learnt about who the mentally or intellectually- retarded are. We considered various definitions especially the one given by the American Association of Mental Retardation (2002). We also discussed the classification and causes of intellectually- retarded children.

6.0 TUTOR-MARKED ASSIGNMENT

- i. Give two definitions of intellectual retardation and explain them.
- ii. What are the possible causes of intellectual retardation?

7.0 REFERENCES/FURTHER READING

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UNIT 2 CHARACTERISTICS, IDENTIFICATION AND EDUCATIONAL METHOD OF TEACHING INTELLECTUALLY-RETARDED CHILDREN

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Characteristics of Intellectual Retardation
 - 3.1.1 Intellectual Characteristics
 - 3.1.2 Academic Characteristics
 - 3.1.3 Social Characteristics
 - 3.2 Identification of Children with Intellectual Retardation
 - 3.3 Methods of Educating Children with Intellectual Retardation
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

People have different behaviours and characters. Intellectually- retarded persons are likely to experience deficits in attention, memory, language development, self-regulation, social and emotional development. We note that persons with intellectual retardation are candidates for a variety of social problems. For instance, they find it very difficult to keep friends because they cannot start up a conversation.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- educate people on how to prevent retardation in children
- identify the different characteristics of an intellectually retarded children
- list various methods of training and education of the intellectually retarded children.

3.0 MAIN CONTENT

3.1 Characteristics of Intellectually -Retarded Children

Intellectually- retarded children exhibit certain behavioural characteristics. These have been grouped into intellectual, and social.

3.1.1 Intellectual Characteristics

Intellectual characteristics exhibited by learners with intellectual retardation are:

- Impaired cognition: the memory and learning capabilities are deficit, they find it difficult to grasp abstraction
- Find it different to perform simple tasks
- Find it difficult to store, retrieve and transfer ideas
- Insensitive to environmental cues
- Inability to use abstraction in solving problems
- Inability to generalise their experiences to other situations
- They cannot learn any of the school subjects such as reading, arithmetic, and handwriting frequently without repetition.

3.1.2 Academic Characteristics

- Individual with intellectual retardation learns very little on their own from objects, events and situations
- They fail consistently and are made to remain in a class for a long period of time without appreciable improvement
- They lack confidence in themselves
- Find it difficult to learn school subjects such as Arithmetic, writing and reading.

3.1.3 Social Characteristics

- Find it difficult to participate in group activities because of interpersonal relationships that exist in group activities.
- They are followers rather than leaders.
- They have low frustration to tolerance as a result of repeated features. This affects their social interactions.
- They exhibit poor language skills. Inability to understand directions and find it difficult to express themselves.

3.2 Identification of Children with Intellectual Retardation

It is better to identify children with intellectual retardation early in life especially during the pre-school years because they are not developing speech language or motor skills at the same rate as their classmates without disabilities. The defining of children with intellectual retardation will assist the classroom teachers in identifying them before appropriate referral is made. The following characteristics may fall under three headings.

- (a) Problems with cognition
- (b) Problems with adaptation behaviour
- (c) Need for supports to sustain.

SELF-ASSESSMENT EXERCISE

What method will you employ to identify intellectually retarded children in the classroom settings?

3.3 Methods of Educating Children with Intellectual Retardation

Various methods can be used in educating children with intellectual retardation. These methods are highlighted below:

- **Physiological Method:** It lays emphasis on the development of imperfect sense organs supplemented by academic and occupational training. This method was developed in the mid-nineteenth century by Edward Seguin. He used series of exercises to provide proficiency in audition, vision, touch and taste.
- **Permissiveness Method:** This was developed by Maria Montessori. The use of toys is permitted to teach the intellectually retarded. She advocated individual method and that the principle of permissiveness should be encouraged.
- **Project Method:** This method utilises many manual activities and correlates academic subject matter with workshop crafts and home economics. This method was propounded by John Duncan.
- **Picture Exchange Communication System (PECs):** You use pictures to depict all activities.
- **Baby Sign:** Through this method the teacher pronounces a word and he/she demonstrates it for the learners e.g. sleep.
- **Play way Method:** Through dancing. You encourage them to learn in a relaxed atmosphere.
- **Systematic Instruction:** It involves instructional prompts, consequences for performance and transfer of stimulus control.

Water-Down Approach

This method emphasised learning from simple to complex. The teaching should be water down so that individuals with intellectual retardation would learn.

Distinctive Methodology

Distinctive methodology was propounded by Alfred Strauss in 1940s. It is prototype of individual instruction or individualised programme. This method will assist the intellectually retarded children to learn.

Adima Approach

Adima worked with the mentally retarded children in Nigeria. He drew his source from philosophy of Nigeria Education. He was of the opinion that the intellectually retarded should have separate curriculum from the normal or traditional curriculum. This is what ADIMA approach stands for:

A – Adaptation: The traditional curriculum should be adapted to the needs of mentally retarded children.

D – Demonstration: The actual teaching of mentally retarded should rely heavily on demonstration.

I – Instruction: The demonstration should be based upon instructional materials related to the content of the curriculum.

Further, “Token Principle” is essential in special education. Reward instances of generalisation from one skill to another.

Present facts and concepts in sequence that is from simple to complex. Intellectually retarded learners should be given training skills in verbal expression, cognitive skills, self-help skills, social skills and vocational skills.

Mental Age: Mental age of the child should be given serious consideration. Further, in teaching children with intellectual retardation certain things should be noted:

- (a) Learning materials should be concretised, meaningful and relevant
- (b) The use of repetition is essential
- (c) Reinforcement of learning through using a variety of sense modalities – visual, vocal auditory and touch.

4.0 CONCLUSION

In this unit, you have learnt about the characteristics of children with intellectual retardation. We have also discussed methods of identifying them added to the above, we highlighted strategies and methods of educating them in a classroom setting.

5.0 SUMMARY

In this unit, we have learnt about the mentally retarded children. We also highlighted different characteristics being exhibited by children with intellectual retardation. These characteristics are intellectual, academic and social. We also learnt about methods of identifying them and the mode of educating them.

6.0 TUTOR-MARKED ASSIGNMENT

- (a) Itemise and explain various characteristics of children with intellectual retardation.
- (b) How do we educate children with intellectual retardation?

7.0 REFERENCES/FURTHER READING

American Association on Mental Retardation (2002). *Mental Retardation: Definition, Classification and Systems of Support* (10th Ed.). Washington, D.C.: AAMR.

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MODULE 3 EDUCATION OF THE HEARING - IMPAIRED AND COMMUNICATION DISORDERS

Unit 1	Definitions, Causes and Classification of Hearing Impairment
Unit 2	Identification and Educational Placement of Hearing - Impaired Children
Unit 3	Learners with Communication Disorders

UNIT 1 DEFINITIONS, CAUSES AND CLASSIFICATION OF HEARING IMPAIRMENT

CONTENTS

1.0	Introduction
2.0	Objectives
3.0	Main Content
	3.1 Definition of Hearing Impairment
	3.2 Causes of Hearing Impairment
	3.3 Classification of Hearing Impairment
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

1.0 INTRODUCTION

The ability to hear and turn sounds into meaning is an assumption of life to many living souls. It is an ability we often take for granted. The organ of hearing is one of marvelous gifts of God. The ear is very important because it is one fundamental way we learn about the thoughts, ideas and feelings of others by listening to them. Hearing impairment is full or partial decrease in the ability to detect or identify sounds. The term has been variously defined by several authorities, researchers and scholars of repute in the field of medicine, audiology and education.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- give your own definition of deafness
- list and explain the major causes of hearing loss

- mention signs and symptoms of hearing impairment.

3.0 MAIN CONTENT

3.1 Definition of Hearing Impairment?

Scholars have defined hearing impairment in various ways. We are going to examine these definitions.

Abang (1992) described hearing impairment as disability ranging from mild to profound condition and classified it into the following groups:

- (a) those with slight hearing loss
- (b) those with mild hearing loss
- (c) those with moderate hearing loss
- (d) those with severe hearing loss
- (e) those with profound hearing loss.

In a similar vein, World Health Organization WHO (2005) defined hearing impairment as complete or partial loss of ability to hear from one or both ears.

The term hearing impairment is a generic term that is made up of two distinct classes based entirely on the severity of the impairment. These two classes or groups are the hard of hearing and deafness.

Therefore, hearing impairment is a hearing loss, whether permanent or fluctuating that adversely affects a child's educational performance.

Hard of Hearing: These are individuals in whom sense of hearing through defective is functional with or without a hearing aid. They are also referred to as individuals with partial hearing loss (Mba 1995).

Deafness: Children who cannot hear sounds at all or above certain intensity are grouped as being deaf. A deaf person can be described as one whose hearing is disabled to an extent that his understanding of speech through ear alone with or without the use of a hearing aid.

3.2 Causes of Hearing Impairment

Like other disabilities, causes of hearing impairment may fall under three stages of life such as prenatal (before birth), perinatal (during birth), and postnatal (after birth).

Prenatal stage

This is from the time of conception to delivery. This stage is a very crucial stage in the life of the foetus most especially the first three months (trimester). Anything that affects the mother at this stage is likely to have direct impact on the foetus. Some of the conditions that could lead to hearing impairment at this stage are as follows:

- heredity
- rhesus incompatibility factor
- un prescribed drugs taken by the mother during pregnancy
- lack of proper antenatal care
- malnutrition.

Heredity: This is a situation where traits of hearing impairment or deafness are transmitted from parents or grandparents to the children. There are many hereditary diseases and syndromes that can lead to hearing impairment such as otosclerosis. When it runs in the family from generation, the hearing loss or impairment usually follows as a pattern called autosomal dominant. When both parents do not have a hearing loss but carry a gene that causes it, this is called autosomal recessive and the implication is that at least one child out of four will have hearing impairment.

Rh Factor: This is also known as blood in compatibility. It is a situation whereby Rh positive mixes with Rh negative. In other words, if a mother with Rh negative conceives of a foetus with Rh positive, the mother develops antibodies against the foetus causing anoxia in the blood stream. This result is breakdown of the foetal blood stream leading to such birth defects as deafness, intellectual retardation or cerebral palsy.

Maternal Diseases: There is no doubt that certain diseases could attack expectant mother which may place the foetus at risk by being born with profound deafness. Some of these include rubella, cytomegalovirus influenza, syphilis and whooping cough.

Un Prescribed Drugs Taken by the Mother during Pregnancy: Drug abuse or drug misuse during pregnancy can act as catalyst to successful delivery of the new born baby. Examples of such drugs that are dangerous during pregnancy are chloroquine, quinine, tetracycline etc.

Insensitive to Antenatal Care by the Expectant Mother: During pregnancy an expectant mother is expected to register in a certified clinic and attend antenatal clinic where adequate facilities and care are available. Some women exhibit lackadaisical attitude towards this.

This nonchalant attitude may expose the mother and the unborn baby/child to unwanted risk that could be prevented if adequate care and counseling had been given to them.

Malnutrition: During pregnancy the foetus in the womb depends solely on the mother therefore it is expedient for the pregnant mother to feed on balanced diet. A malnourished mother is likely to give birth to a malnourished child who will be at the risk of impairment.

Perinatal Stage

This is the period from the outset of labour till the arrival of the baby. This stage is very delicate and some of the things that could lead to hearing impairment at this stage are:

- Prolong labour
- Anoxia insufficient of supply of oxygen
- Misuse of forceps.

Postnatal Stage

This is the period after delivery. The postnatal causes of hearing impairment are:

- **Infection/Diseases:** There are certain infections on diseases that can attack the child after birth. Such diseases as chicken pox, measles can affect the child if they are prolonged and untreated.
- **Age- Related Hearing Loss:** Also known as presbycusis is the natural decline in hearing that many people experience as they get older. This is partly due to loss of ear cells in the cochlea.

Acoustic trauma: Injury caused by loud noise can damage ear drum thereby resulting in hearing loss.

Drugs: Certain drugs, such as some powerful antibiotics, antimalarial drugs can cause permanent hearing loss.

Head Injury: Direct head injury, particularly trauma severe enough to cause unconsciousness, can cause inner ear loss.

SELF-ASSESSMENT EXERCISE

Compare the characteristics of a normal hearing person to that of a hearing impaired student.

3.3 Classification and Educational Placement of Children with Hearing Impairment

Various attempts have been made to classify deafness. Mykleburst in Alade (2005) classified deafness according to the following major factors. Deafness can be classified according to degree of deafness.

- (1) **The Deaf:** These are those in whom the sense of hearing is non functional for the ordinary purpose of life. This group has total loss of hearing.
- (2) **The Hard of Hearing:** These are those in whom sense of hearing though defective is functional with or without hearing aids. This group has partial hearing loss.

The bases of classification are as follows:

- (1) **Acquired Deafness:** This is also known as adventitious deafness. It refers to deafness that occurred later in life, when language and speech skills have been fully developed. The individual is born with normal hearing, but later becomes non-functional through illness or accident.
- (2) **Congenital Deafness:** The congenitally deaf are those who are born deaf. The individual has never heard any meaningful sound nor acquired speech and language speech at all.
- (3) **Pre-lingual Deafness:** This is deafness present at birth or occurring early in life at an age prior to speech development and language acquisition.
- (4) **Sensori-neural Deafness:** This includes hearing loss that results from accident and diseases affecting the normal functioning of inner ear.

Conductive Deafness: Conductive hearing loss is described as a loss resulting from defects of the conductive pathways of the ear i.e. the external and the middle ear with normal inner ear.

Central Deafness: This includes all hearing loss, which results from lack of normal functioning of the auditory pathways leading from the inner ear to the interpretive areas of the brain.

Jerger (1980) and Okuoyibo (2006) audiologically classified hearing impairment according to level of hearing loss in decibels (dB) using audiometer thus:

- Normal hearing - 0dB - 20dB
- Mild/moderate loss - 21dB - 60dB
- Severe loss - 61dB - 80dB

- Profound loss - 81dB - 100dB.

A child with profound hearing loss automatically falls into the group earlier referred to as the deaf.

4.0 CONCLUSION

In this unit, we learnt about what hearing impairment is all about, we also discussed various types and causes of hearing impairment. Light was also shed on classification of persons with hearing impairment.

5.0 SUMMARY

The organ of hearing is one of the marvelous gifts of God. The term hearing impairment has been variously defined by several authors and researchers. Hearing impairment includes deafness, hard of hearing; various causes and classification of hearing impairment were also highlighted and discussed.

6.0 TUTOR-MARKED ASSIGNMENT

- i. Give your own definition of deafness.
- ii. What are the possible causes of hearing impairment?
- iii. List and explain the signs and symptoms of hearing impairment.

7.0 REFERENCES/FURTHER READING

- Abang, T. B. (1992). *Handbook of Special Education for Special Educator in Developing Countries*. Jos: Andex Press.
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UNIT 2 IDENTIFICATION AND EDUCATIONAL PLACEMENT OF HEARING - IMPAIRED CHILDREN

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Identification and Assessment of Persons with Hearing Impairment
 - 3.2 Educational Placement
 - 3.3 Classroom Applications for the Hearing- Impaired
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Hearing is one of the “distance senses” that provides us information from outside our bodies. When hearing is limited, our ability to communicate with others will be limited. We have many hearing impaired learners in our schools. In order to teach the deaf child, the teachers should possess certain qualities and skills in the education of learners with hearing impairment.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- identify and manage a hearing impaired child in a classroom setting
- list the major types of assistive technology designed for persons with hearing impairments itemise classroom applications for the hearing impaired.

3.0 MAIN CONTENT

3.1 Identification and Assessment of Persons with Hearing Impairment

Early identification of deafness is very crucial in working with the hearing impaired. Informal identification centres mostly on observation

by teachers, parents and others around the child. The following signs have been suggested to be noted among children (Webster, 1986):

- the child complains of earache, fullness of visible discharge
- the child may be educationally weak
- the child shows signs of speech problem
- the child may always ask for repetition of statement.

Hearing identifies a child with any or some of these traits. It is advisable to refer such to an audiologist for audiological assessment.

3.2 Educational Placement

The ideal placement for the child with hearing impairment is the regular school where they will be educated alongside with their counterparts. This is a form of integration. Today we talk of inclusion which is the highest form of integration. Though we have the closed type of schooling system called segregation, in segregation, the hearings impaired are educated in separate schools specially prepared for the deaf alone.

Apart from the above, we have methods of educating the hearing impaired:

1. **Oral Approach:** This involves the teaching and using of speech exclusively for persons with hearing impairment.
2. **Bilingual – Bicultural Approach:** This method involves the teaching of American Sign Language (ASL) as their first language and written English as their second language.
3. **Total Communication:** This method combines oral speech and manual communication. This method allows the child to communicate through whatever mode is easiest and most effective.
4. **Manual Approach:** This method consists of the use of finger spelling and signs in communicating with the hearing impaired. This method does not allow the use of speech.

SELF-ASSESSMENT EXERCISE

Distinguish between oral approach and manual approach in teaching the hearing impaired.

3.3 Classroom Applications for the Hearing –Impaired

- Seat learners with hearing impairment where they can see everyone who may be speaking.
- Provide ample lighting particularly on instructional visual aids.
- Be sensitive to classroom noise and seek to reduce it.
- Employ the use of maps, globes, charts to demonstrate Basic concepts.
- Use familiar concepts and concrete objects as much as possible.
- When speaking, do not be too fast so that the learner can gain from you through lip reading.
- Keep your hand from your face when speaking.
- Use sign or finger spelling or promote speech reading when giving instruction.
- Do not back the student when addressing them. Also, avoid writing on the chalkboard while talking.

Added to the above, learners with hearing impairment may benefit a lot from the following:

- Assistive Technological Devices
- Computer Assisted Instruction (CAI)
- Speech digitisers and synthesisers.
- Talk communication devices for the deaf
- Amplification devices (hearing aids)
- The internet.

4.0 CONCLUSION

In this unit, you have learnt about ways of identifying and assessing the hearing impaired children and how best we can place them educationally.

5.0 SUMMARY

In this unit, we have learnt about who the hearing impaired children are? We also shed light on the strategies and methods of identifying them and we have also discussed how they can benefit educationally in a classroom setting.

6.0 TUTOR-MARKED ASSIGNMENT

- i. How can the hearing- impaired children benefit from ICT?
- ii. Of what relevance are assistive technological devices to the education of hearing impaired.

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UNIT 3 LEARNERS WITH COMMUNICATION DISORDERS

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Definition of Communication Disorders
 - 3.2 Classification of Speech Disorders
 - 3.2.1 Articulation Disorders
 - 3.2.2 Voice Disorders
 - 3.2.3 Language Disorders
 - 3.2.4 Disorder of Fluency
 - 3.3 Educational Approaches to Speech Disorders
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Communication is as old as man. Language is the foundation for all learning. We use language to express our thoughts, needs, observation and interact with friends and family. For most people learning to communicate effectively it comes naturally while some have challenges in communication. There is no doubt that our society places high value on oral communication.

2.0 OBJECTIVES

At the end of this unit, you will be able to:

- describe “speech impairment” and “language impairments”
- mention characteristics of language impairment
- identify the possible causes of language impairment.

3.0 MAIN CONTENT

3.1 Definitions

Communication disorder is impairment in the ability to use speech or language to communicate. It is pertinent to understand the concept of communication before one can have a clear understanding; at least two people are involved in communication process; a sender and a receiver.

There must also be a message, the sender has a thought or idea which is interpreted into a code the receiver can understand. Therefore communication occurs only when the receiver can correctly decode the message of the sender. If the receiver cannot decode correctly the message from the sender, it then means that communication is unsuccessful.

Communication requires the receiver to use the eyes, the ears or even the tactile (touch) sense (as do those who use Braille) to convey the message to the Brain where it is understood. Therefore, communication is the process of exchanging knowledge, ideas, opinions and feelings through the use of verbal or non verbal (e.g. a gesture) language (Smith, 2007).

Speech disorders are abnormal speech that is unintelligible, unpleasant or interferes with communication. A person may have speech impairment if he/she has problems or difficulties in the following areas: Articulations, fluency and voice.

3.2 Classification of Speech Disorder

Speech Disorders are impairments in the production and use of oral language. Speech disorder can have effect on how a person interacts with others in different settings. Speech disorders include disabilities in making speech sounds, producing speech with normal flow and producing voice.

Speech disorders can be classified according to several criteria. But the major classification of speech disorders could be in the following order:

- Articulation disorders
- Voice disorders
- Language disorders
- Disorder of fluency.

3.2.1 Articulation Disorders

This is abnormal production of speech sounds. It exists when the process of producing speech sound is flared and as a result of this, the speech will be incorrect. Articulation problems may result in the omissions additions substitutions or distortions of certain speech sounds. Therefore a child may say “dood” girl instead of “good” girl. Articulation problem has been found to constitute the largest proportion of speech disorder. The words that are mispronounced may be initial, middle, or final words or letters. Missing, substituted, added or poorly pronounced word/sound may make a speaker difficult to understand.

Causes of Articulation Problems

Okuoyibo and Makinde (2004) opined that the causes of articulatory disorders can be divided into two:

- (a) The physical malformation of articulators e.g. the mouth, the lips or palette (cleft palette), the jaws or teeth. Any abnormality in the formation of the above structures could lead to articulation disorder.
- (b) Functional causes, this refers to disorders that occur in the presence of normal articulators. A good example is faulty learning of poor speech model.

3.2.2 Voice Disorders

This is an abnormal spoken language production, characterised by unusually pitch, loudness or quality of sounds. An individual is said to have voice problem if such individuals speak with a voice that differs in pitch loudness or quality from the voices of others of the same age and sex in their cultural group.

Pitch: This is an aspect of voice. It is perceived high or low sound quality.

Loudness: Intensity can be used to describe loudness. Voice can be described as either being too loud or too soft.

Causes of Voice Disorders

Voice disorders may occur as a result of the following:

- (a) The way the voice is being used
- (b) Undue abuse of the voice by screaming, shouting, straining.
- (c) Cold
- (d) Imitation
- (e) Hearing impairment
- (f) Brain damage – stroke.

3.2.3 Language Disorders

Language is the complex system; we use to communicate our thoughts and feelings to others. A person that has language impairment will have breakdown in one of the three aspects of language. These are:

Form: This is the rule of language including phonology, morphology and syntax.

Phonology: Rule within the language governing combination of sounds.
Phonological Awareness: This includes understanding, identifying and applying sound/symbols relationships (letter sounds rhyming). Aphasia is a major form of language disorder. It is the partial or complete loss of the ability to speak or to comprehend spoken words due to injury or disease.

Causes of Language Disorders

The causes of language disorders are:

- (i) Brain damage
- (ii) Hearing impairment
- (iii) Genetic causes
- (iv) Environmental factor (unstimulating environment).

Characteristics of Language Disorders

- Cannot create rhymes
- Is unable to follow oral direction
- He/she has inadequate vocabulary
- Has difficulty in expressing personal needs
- Exhibit poor concept formation
- Cannot break words into syllables
- Has poor voice quality such as distracting pitch.

3.2.4 Fluency Problems

Speech is suppose to flow sequentially and uninterrupted. But when speech sound begins to be jerky, not smooth according to time sequence, we can then talk of speech disorder of time. Fluency disorders or dysfunctions usually involve hesitations and repetition of parts of words that interrupt the flow of speech. Stutter and cluttering are fluency problems. Stuttering is the lack of fluency in an individual's speech pattern often characterised by hesitation or repetition of sounds on words. We should note that stuttering can be learnt. It can be hereditary.

3.3 Educational Approaches

In order to enrich classroom environment and help learners to develop better language skill, certain strategies should be put in place. The following methods can be employed.

- (a) Instructional supports
- (b) Explicit language instructions
- (c) Language sensitive environment.

4.0 CONCLUSION

In this unit, we learnt about what communication is all about. We were exposed to classification of speech disorders, such as articulation disorders, voice disorders and language disorders. Not only this, possible causes of all these disorders were identified.

5.0 SUMMARY

In this unit, we have learnt about various definitions of communication. Communication disorder is impairment in the ability to use speech or language to communicate. Various causes and characteristics of communication disorders were identified. Methods of educating children with communication disorders were also discussed.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What is speech impairment?
- ii. List and explain two characteristics of language impairment.
- iii. What are the causes of communication disorders in children?

7.0 REFERENCES/FURTHER READING

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MODULE 4 EDUCATION OF THE PHYSICALLY AND HEALTH -IMPAIRED AND LEARNING - DISABLED

- Unit 1 Definition, Types and Causes of Physically and Health - Impaired.
- Unit 2 Meaning, Causes, Identification and Educational Intervention for Children with Learning Disabilities

UNIT 1 DEFINITION, TYPES AND CAUSES OF PHYSICALLY AND HEALTH- IMPAIRED

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Definition of Physical and Health Impairment
 - 3.2 Causes and Types of Cerebral Palsy
 - 3.2.1 Types of Cerebral Palsy
 - 3.2.2 Causes of Cerebral Palsy
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Children and adult with physical or health disabilities live in our midst. They are part and parcel of our societies. Physical disabilities and health impairment may be congenital or acquired later in life.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define physical and health impairment
- distinguish between neurological impairment and muscular condition
- identify chronic and infectious diseases.

3.0 MAIN CONTENT

3.1 Definition

Physical disability is a condition that interferes with individual's ability to use his body. Most of these conditions affect the nervous, muscular or skeletal system and in most cases they have mild, moderate or severe impact on mobility and motor skills. Health impairment, on the other hand is a condition that involves the internal organs and the blood and which requires ongoing medical attention (Kirk Gallagher and Anastaswoo, 1997).

Physical impairment can be divided into two (2).

- (i) Neurological impairments and
- (ii) Muscular/Skeletal condition.

Neurological impairments are:

- Cerebral palsy
- Multiple sclerosis
- Muscular dystrophy
- Polio
- Seizure
- Spinal Cord disorders.

Muscular/Skeletal conditions are:

- Limb deficiencies
- Juvenile Arthritis
- Skeletal Disorders.

Cerebral Palsy: This is not a disease. It is an incurable condition caused by brain injury resulting from damage associated with lack of oxygenated blood to the brain, some children with cerebral palsy show only one indication of brain damage such as motor disorder, others may exhibit combinations of symptoms. Although cerebral palsy may be incurable, advancement in medicine and rehabilitation technologies shows that long term intensive physical therapy in combination with surgical procedure bring improvement.

3.2 Causes and Types of Cerebral Palsy

The following can be possible causes of cerebral palsy; material infections, diseases, toxic substances, excessive exposure to x-ray during pregnancy. The use of forceps, high fever, hypoxia cerebral bleeding, oxygen deprivation, direct trauma to the brain.

3.2.1 Types

Cerebral palsy can be classified thus:

- (a) Hemiplegia: it involves one half of the body (right or left)
- (b) Diplegia: legs are involved more than arms
- (c) Quadriplegia: all four limbs are involved
- (d) Paraplegia: only one leg is involved.

Other problems associated with cerebral palsy are spasticity characterised by stiffness or tenseness of muscles and inaccurate voluntary movement.

Multiple Sclerosis: It is a chronic disease common in adults that causes the myelin covering the nerve fibers of the brain and spinal cord to degenerate, impeding the transmission of electrical signals from the brain to other parts of the body.

Muscular Dystrophy: Though very rare, is a disease that weakens and then destroys the affected individual muscles.

Seizures: The most common type of neurological impairment in children is epilepsy. It is a condition of recurrent convulsion caused by abnormal brain electrical activity. People with epilepsy have recurrent seizure.

SELF-ASSESSMENT EXERCISE

Distinguish between neurological impairment and muscular condition.

3.2.2 Causes

Seizures can be caused by any kind of damage to the brain due to insufficient oxygen (hypoxia), low blood sugar (hypoglycemia), infections, and physical trauma.

Spina bifida: Spina bifida is a neural tube defect or abnormality of the spinal column as a result of an embryonic developmental failure. It is a

congenital impairment which results in the outward protrusion of the meninges which cover the spinal cord (Ladipo, 2006).

Poliomyelitis: It is caused by a viral infection. If the virus successfully destroys the cells of the spinal cord, it results in paralysis of the muscles of the lower limbs. Different symptoms may occur in form of fever, painful muscle spasm and the inability to move the limbs that are affected.

Muscular/Skeletal conditions are very common in children. This manifests itself in limb deficiencies, juvenile arthritis and robotics. Limb deficiencies involve missing or non functioning arms or legs resulting in mobility problems while juvenile arthritis is a profound and painful muscular condition seen in children. Using of high-tech devices to perform motor skills is called “robotics”.

Health disabilities can be grouped into two. These are:

- (i) Chronic illnesses.
- (ii) Infections diseases.

The chronic diseases we refer to here are asthma, cysties fibrosis, diabetes, congenital heart defects, tuberculosis (TB), childhood cancer, blood disorders.

The infectious diseases are HIV and AIDS, hepatitis B, it is worthy to note that disability is no respecter of any race or age. However, it can be prevented if the following are adhered to:

- (a) Good hygiene
- (b) Good prenatal education
- (c) Avoidance of injuries
- (d) Universal immunisation programme.

4.0 CONCLUSION

In this unit, we have learnt about who physical or health disabled children are. We have also discussed that these individual require considerable flexibility, accommodation and adjustment to both learning and physical environment. We discussed that physical impairment are classified into neuromotor and muscular impairments while health disabilities is classified into chronic illnesses and infectious diseases.

5.0 SUMMARY

In this unit, we have learnt about physical and health related problems. Physical impairment are divided into two; Neurological impairment and muscular conditions. Health disabilities can also be grouped into two; Chronic and infectious diseases.

6.0 TUTOR-MARKED ASSIGNMENT

- i. Who are the children with physical or health impairment?
- ii. How are physical or health disabilities classified?

7.0 REFERENCES/FURTHER READING

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UNIT 2 MEANING, CAUSES, IDENTIFICATION AND EDUCATIONAL INTERVENTION FOR CHILDREN WITH LEARNING DISABILITIES

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Meaning of Learning Disabilities
 - 3.2 Causes of Learning Disabilities
 - 3.3 Identification of Learning Disabilities
 - 3.4 Educational Intervention for Children with Learning Disabilities
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

The child with learning disability has strengths in many areas but weaknesses in some core attributed that lead to underachievement. The learning disability is unexpected because of the above average or average intelligence as the weaknesses lead to difficulties with achievement and adaptive functions, but not all areas of adaptations (Netcher, Morris and Lyon, 2006).

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define the term learning disabilities
- mention educational interventions for children with learning disabilities
- list 5 characteristics and 4 causes of learning disabilities.

3.0 MAIN CONTENT

3.1 Meaning of Learning Disabilities

Learning disabilities are disorders that affect the ability of an individual to process, analyse and store information. The individual with learning disabilities exhibits discrepancy between potential and achievement. Learning disability is sometimes referred to as learning disorder,

learning difficulty or learning difference. People with learning disabilities possess average or above average intelligence, yet they encounter difficulties in learning. They have an innate potential to learn if they receive early intervention. Learning disabilities could be mild, moderate or severe, people with the difficulty have different strengths and weaknesses, and they can be found in almost all classrooms. Nothing physical depicts a learning disability, and people with the disorder are not discovered until they get to school where they experience persistent failure. It should be noted that learning disability is not the same thing as intellectual disability.

The Individuals with Disabilities Education Act (2004) defined learning disability as a disorder in one or more of the basic psychological processes involved in understanding or using language spoken or written, that may manifest itself in an imperfect ability, to listen, think, speak, read, write, spell or to do mathematical calculations, including such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia.

Smith (2004) described learning disability as a discrepancy between what the child ought to be able to learn and what the child can actually learn.

3.2 Causes of Learning Disabilities

Nobody is really sure of the causes of learning disabilities; the causes as at now are largely based on hunches and assumptions. The suspected causes of learning disabilities as posited by Siegal (2009) are genetics, a minimal brain injury, neurological problems, biochemical reaction and psychological issues. Some of the suspected factors that could cause the disorder according to Smith (2004), Kirk and Gallagher (1989) are minimal brain injury, inadequate instruction, hereditary factors, structural brain differences, drug abuse and malnutrition.

3.3 Identification/Characteristics of Children with Learning Disabilities

Messina and Messina (2004) enumerated some signs that can be used to identify pre-school children with learning disabilities. According to them such children:

- speak later than most children
- have pronunciation problems
- have slow vocabulary growth and are unable to find the right word
- lack interest in story telling

- have difficulty rhyming words
- have trouble learning numbers, alphabets, days of the week, colours and shapes.
- exhibit poor memory for routines
- are extremely restless and easily distracted
- have difficulty sitting still
- show lack of persistence at tasks
- have trouble interacting with peers
- have difficulty following directions or routines
- are slow to develop fine motor skills
- have trouble learning self help skills e.g. (tying shoelaces)
- are clumsy
- show reluctance to draw or trace
- have trouble reading from left to right.

Experience and observation also show that Nigerian children with learning disabilities exhibit the traits listed below:

- Poor memory
- Poor spelling
- Poor handwriting
- Poor reading
- Grips writing materials too tightly or too loosely
- Avoid reading aloud
- Unable to form simple and correct sentences
- Unable to comprehend read passages
- Uses vocabulary that is below age
- Poor mathematical/arithmetic concept/ may not be able to tell the time
- Poor art work
- Avoidance of tasks considered difficult
- Fails to submit class work and assignment for marking
- Hyperactivity (in some)
- Hypoactivity (in some)
- Inability to read the mood of others
- Easily distracted
- Inability to transfer knowledge
- Gives excuses
- Aggression
- Feign illness
- Truancy
- Inferiority complex.

For high school and adults with learning disabilities, Messina and Messina (2004) noted that they exhibit the following traits:

- Continue to spell incorrectly, frequently spell the same word differently in a simple piece of writing
- Avoid reading and writing tasks
- Trouble summarising
- Trouble with open ended questions on tests
- Weak grasp of information
- Foreign language problems
- Poor written expressions
- Mental fatigue
- Weak memory skills
- Difficulty adjusting to new setting
- Work slowly
- Poor grasp of abstract concepts
- Either pays too little attention to details or focuses on them for too long.
- Misreads information.

That an individual exhibits one or some of these traits that can be used to identify learning disabilities does not or may not signify that the individual has learning disabilities. If several or some of these traits are persistent over a considerable length of time, learning disabilities is present.

3.4 Educational Intervention for Children with Learning Disabilities

Educational interventions for children with learning disabilities can be very tasking. Educational interventions are diverse because of the individual differences exhibited by those affected. In a class where there are twenty pupils with learning disabilities, the teacher may need to plan twenty different programmes. These children may exhibit different problems in reading, writing, spelling, arithmetic etc., and what works for one child may not work for another. To buttress the above view, Steele (2005) stated that curricular and instructional decisions based on the individual child make the teaching of learning disabilities easier. Irrespective of the educational intervention planned for children with learning disabilities, Individualised Educational Programme (IEP) is essential. IEP is a one on one programme that ensures that each child's unique needs are met. Educational intervention needs a multidisciplinary approach, it must be early and it must be intensive in nature. Children with learning disabilities must be included, although when IEP is needed the teacher should create time to render the needed services, when

instructions are generalised, these children sometimes do not benefit. The multidisciplinary approach needed by children with learning disabilities involves special educators, regular teachers and professionals that are related to the field of special education.

The teachers of these children must be qualified and the use of rote learning must be discouraged. Children with learning disabilities will gain little or nothing in an overcrowded class because of the additional support that they need. Parents should be involved in whatever interventions to be planned, parents involvement is necessary so that they can continue at home from where the teacher stops at school. Relevant instructional materials should be used to teach children with learning disabilities. Creative arts should also be employed to reach all concepts, because it boosts their memory and makes learning easier.

Specific intervention strategies are not discussed here because these interventions most of the time are specific to the individual child. An example of a tool that can however be used to make learning meaningful for children with learning disabilities is the computer. The computer is a versatile instrument that can enhance the learning ability of these children. For example children who have writing problems should be encouraged to use the computer to do their work, magnetic letters can be used to teach reading while computer games can be used to teach most, if not all subjects to these children.

In some cases children can be required to answer questions orally during tests and examinations, so as not to deprive them of education. Teachers should be aware of the learning modality of each child and fashion out their lessons so that it can take care of such modalities. Teachers of children with learning disabilities should be patient; they also need to be abreast of information as they unfold where these children are concerned. When teachers are not qualified, uninterested and impatient, children with learning disabilities will not benefit within the classroom setting they become frustrated and may drop out of schools.

4.0 CONCLUSION

In this unit, you have learnt the meaning and definition of learning disabilities. You have also learnt about the likely causes of learning disabled children. Light was also shed on educational approaches. You have learnt about the characteristics of learning disabled children.

5.0 SUMMARY

In this unit, we have learnt about the definition of learning disabilities as disorders that affect the ability of an individual to process, analyse and

store information. We further discussed the characteristics of learning disabled children such as having difficulty sitting still, have pronunciation problems; have difficulty rhyming words. We also learnt about educational interventions for children with learning disabilities.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What are the different types of learning disabilities?
- ii. What are the educational programmes available for children with learning disabilities?

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MODULE 5 GIFTED AND TALENT DEVELOPMENT

- Unit 1 Definition, Characteristics and Administration of Gifted and Talented Children.
Unit 2 Curriculum Modification for Gifted and Talented Students

UNIT 1 DEFINITION, CHARACTERISTICS AND ADMINISTRATION OF GIFTED AND TALENTED CHILDREN

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 The Meaning of Giftedness
 - 3.2 Definition of Giftedness
 - 3.3 Characteristics of Gifted Students
 - 3.4 Administrative and Educational Programmes for Gifted and Talented Students
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Gifted and Talented individual are found in every society of the world. In ancient Greece for instance, in the days of Plato to be precise, these group of children are categorised thus:

- (a) Children of Gold
- (b) Children of Silver
- (c) Children of Bronze.

When one looks critically at various events on the globe, one will be marveled at the brains behind diverse inventions in various fields of human endeavour. Therefore, one can tag these superior and extra ordinary events to be the products of the persons we called the prodigious, the precocious and the gifted.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define the term gifted and talent
- list common characteristics of giftedness.

3.0 MAIN CONTENT

3.1 The Meaning of Giftedness

Key Points:

- Many definitions of giftedness have been proposed. They vary according to whether they are conservative or liberal; are single or multi-dimensional; and focus on potential or performance.
- Part of the reason for the variation in definitions is that their advocates are searching for one 'true' definition when manifestations of giftedness will differ across time and cultures.
- Thus, it is unlikely that a single definition of giftedness will receive unanimous endorsement.

Nevertheless, the breadth of definitions can contribute to a comprehensive view of giftedness and suggest avenues for future research.

3.2 Definition of Giftedness

As Davis and Rimm (1998) observe, 'Defining gifted and talented is both an important and complicated matter. Our definition has implications for whom we identify as being gifted, and for our programming or curricular decisions. The resulting label we apply to children can have both positive and negative effects on their self-esteem, self-expectations and family and peer relationships. (Davis and Rimm, 1998).

Yet the literature on giftedness yields some contradictory definitions. This lack of clarity means that the concept of giftedness is difficult to defend because it is defined too loosely while being measured too restrictively Gagne (1995). This is perhaps inevitable because the skills that are regarded as most valuable will differ across time and between societies (McAlpine, 1996). Therefore our definition must be sensitive to and will depend on these contexts (Borland, 1990).

Reflective on the diversity of definitions, McAlpine (1996) points out that definitions differ according to whether they are conservative or

liberal, are single or multi-dimensional, and focus on potential or performance.

Conservative versus Liberal: Conservative definition tends to restrict the areas included in the gifted category or how many people will be regarded as gifted (Renzulli, 1986) – say, the top 5% on a given ability measure. These definitions use a single criterion, such as high intelligence (as measured by an IQ test), to define giftedness. Liberal definition, in contrast, observe that there are no discernible differences in productivity between the top 3-5% and the 10-15% who fall just below that IQ level and so include up to 15-20% of the population in the gifted category (Reid and Renzulli, 1982; Renzulli, 1982).

Single versus Multi-dimensional: Some definitions focus on achievements within the academic domain only, while others include achievements in a number of domains. The more dimensions a definition embrace, the more liberal the definition is likely to be. The push for an inclusive definition reflects a valid desire to avoid excluding individuals who truly are gifted. At the same time there is recognition that, although the notion of giftedness needs to be broadened, it cannot become so broad that everyone is regarded as gifted than exceptional, as exceptionality would then be the norm (Runco, 1993).

Potential versus Performance: Some definitions require evidence of ability, others include under achieving children within the gifted category, despite the fact that they are not demonstrating remarkable abilities in everyday situations.

Ultimately, as Sternberg and Davidson (1986) observe, ‘Giftedness is something we invent, not something we discover; it is what one society or another wants it to be’. We construct the category of ‘giftedness’ statistically by choosing where to place the demarcation between ‘giftedness’ and average abilities. This decision is entirely arbitrary (Birch 1984), and probably has as much to do with how many resources are available for addressing advanced learners as it has to do with any characteristic that distinguish gifted from average learners. In other word, our definition is political as well as psychological (Sapon-Shevin, 1994). Therefore, we must temper our justice about children’s abilities and needs with an awareness of the limitations of the constructs and tools that guide our practice.

3.3 Characteristics of Gifted Students

Being gifted in America today is not necessarily a positive experience. Gifted students and their parents experience a lot of rejection from an educational system in which conformity is valued and most kids are

expected to work along with the group without resistance or complaint. I have long wondered why we can spend considerable time and effort teaching students to appreciate diversity in ethnic and cultural terms, but we do not extend that mindset to differences in learning ability. I've never met a gifted kid who asked to be born that way. It just happens. We need to consider giftedness as simply another difference and make gifted kids as welcome in our classrooms as any other students.

There are already so many definitions for giftedness that I hesitate to offer another. However, in terms of classroom teaching, I define gifted students as "those who have ability in one or more learning areas that exceeds grade/age level expectations by two years or more". By this definition, the regular curriculum cannot possibly provide the challenge these students need to continually move forward in their learning.

In recent years, some fascinating new insights into giftedness have emerged from the work of Polish psychiatrist and psychologist Kazimierz Dabrowski (1902-1980). When Dabrowski studied a group of gifted children and youth, he found that they displayed what he called 'over excitabilities'. They perceived all kinds of stimuli more intensely than others, they were super-sensitive to everything in their environment and felt the joys and sorrows of life more extremely than other children. Today, over excitability (OE) is considered a marker of giftedness, one of the many things to look for when identifying a gifted child. Dabrowski believed that OE may lead to a series of positive disintegrations, a developmental crisis, during which the individual rejects the status quo and questions everything. When things go well, this process continues and the person emerges as an autonomous, authentic human being with carefully thought out values and beliefs. When they don't, the person may get stuck in antisocial behaviour, disharmony, and despair. Dabrowski's theories help us to understand why living with the gifted kids can be such an incredible challenge.

People often ask me for a short list of the characteristics gifted children has which make identification easier. I believe that any student who possesses most or all of the following five characteristics is probably gifted.

1. Learns new material faster, and at an earlier age, than age peers.
2. Remembers what has been learned forever, making review unnecessary.
3. Is able to deal with concepts that are too complex and abstract for age peers.
4. Has a passionate interest in one or more topics, and would spend all available time learning more about that topic if he or she could.

5. Does not need to watch the teacher to hear what is being said; can operate on multiple brain channels simultaneously and process more than one task at a time.

Other characteristics are described throughout this unit. To be gifted, one does not have to possess all these characteristics. However, when you observe students consistently exhibiting many of these behaviours, the possibility that they are gifted is very strong. Trust your own observations more than the evidence of mediocre standardised test scores of poor grades. Listen respectfully to parents whose descriptions of their children at home match some of the information presented here. Sometimes, gifted kids choose to not appear gifted at school while continuing to demonstrate gifted characteristics at home.

It's rare to find a child who is "gifted across the board". Most gifted kids are more likely to be gifted in one or two specific areas and average or even below average in others. For example, many highly verbal youngsters appear deficient in bodily kinesthetic abilities, especially in Gymnasium or physical education classes. This is because their physical abilities may be developmentally appropriate to their age but seem glaringly different from their intellectual abilities. Children who show evidence of giftedness in one or two areas are as eligible for compacting and differentiation opportunities as those who are gifted in many or all areas.

Before we get into characteristics, I want to reassure you that you will probably never need all of this information. Chances are, you will not be asked to formally identify gifted students and they often identify themselves by showing their readiness for compacting and differentiation. The characteristics are included here in case you want and need guidelines for recognising gifted behaviours. You may choose to share this information with the parents of gifted students in your classroom.

SELF-ASSESSMENT EXERCISE

Mention the main difference between gifted and talented development.

3.4 Administrative and Educational Programmes for Gifted and Talented Students

The administration of a gifted educational programme is crucial to the success of their programme. In fact, the success of any educational programme for the gifted depends on it. According to some scholars, there are three main administrative provisions for the gifted. They are

ability grouping, acceleration and enrichment (Clark, 1983; Adesokan, 1990).

Ability grouping allows some students to be separated from the regular students. The selection is done through the level of measured intelligence. Thus, ability grouping can be done in the form of special classes or schools with special groups meeting prior to or after school. There are also the pull out programmes during school hours in which gifted students could be separated for a given period of time before returning to the regular programme. A good example of such practice is that of the special school programme for the gifted in Nigeria, called Suleja Academy in Minna, Niger State.

Ortion (1980) observed that the longer the gifted are allowed to be in special programmes, the greater will be their gains. This observation is valid for the mathematicians studied by Bloom (1982). Bloom who attributed their success to the opportunities of special programmes which enhanced the exploration of topics of their interest to greater depths as well as gave them the opportunities of developing their own techniques in solving problems in such areas.

The following are several forms of ability grouping as recorded by Clark (1983) and Adesokan (1990).

(a) Regular Classroom and Regular Classroom with Clusters

In this setting, the gifted are grouped with non-gifted in a regular classroom. It is the most inappropriate organisation for the gifted owing to the reliance on group instruction and or rigid curriculum. The instruction provides the same experience for everyone. Whitemore (1986) commented on this as follows: "It seems likely that future research could prove that the regular classroom is the most restrictive environment for the gifted, child". This is due to the conventionalised nature of the curriculum. Gifted and talented students need a flexible and dynamic curriculum in order to function properly.

(b) Regular Classroom with Pull Out

Here, the regular students are grouped with the gifted students, but they have an opportunity to mix with other gifted students for a part of the day. They also have access to resource room, a special class, field trip; seminar and other unique learning arrangements. The disadvantage of this setting is that the gifted students are made to do the regular work for the period they were absent. The pull out time is also inadequate in meeting all their learning needs. Moreover, the regular teachers

sometimes resent the interruption of their classes by the pull out programmes.

(c) Regular Classroom with Clusters and Pull Out

The gifted students are grouped with the regular students and there are more opportunities for interaction with other gifted peers. Consequently, there is a better follow through with the gifted programme. The quality of the programme depends on the regular teachers and the pull out teachers. In this setting, the gifted students are also made to do the regular curriculum for the period they were away.

(d) Individualised Classroom

In this milieu, individual and flexible small group instruction, assessment is used in determining the curriculum and materials for each student. The classroom is decentralised and given access to many different types of learning. In most cases, such classes are usually upgraded with students from different age levels and learning centers often found in the same classrooms. The disadvantages are that gifted students are usually isolated with no one to share their ideas with, if they are few. This setting also requires the services of specially trained competent teachers in order to avoid the problem of being unstructured.

(e) Individual Classroom with Cluster

Here, students have access to many types of learning; there are also other gifted learners whom they can share their ideas with. The setting is also flexible with small group instructions. It requires the services of a competent teacher otherwise it would be unstructured and disorganised.

(f) Individual Classroom with Clusters and Pull Out

It has the advantage of individual flexible small group instruction, with assessment being used to determine the curriculum and materials of each student. There is access to many types of learning experiences. More resources are available to both students obliged to do the work of the regular curriculum as in the case of the pull out classroom.

(g) Special Class with Some Integrated Classes

The design is by subject area, with the advantages of moving into integrated classes for subjects that stress talents. The gifted students in this milieu have the opportunity of appreciating other talents. This is very useful to the moderately gifted individuals. The setting requires services of specially trained teachers in order to avoid disorganisation.

(h) Special Class

The environment in his setting is highly conducive for the learning styles of the gifted as it is specially designed to suit their learning needs. There is the added advantage of their being challenged to their full potential in all areas owing to the flexibility of the environment.

(i) Special School

This is mostly used for the highly gifted and talented. As such, the services of specially trained teachers are of utmost importance. The environment is conducive for the stimulation of the potentialities of the gifted. The only disadvantage is that the gifted students are isolated, allowed to integrate with their regular peers. Moreover, this sort of setting could lead to maladjustment later in life, since the gifted would eventually work with the regular students who form the majority in the society. An example of such a school in Nigeria is the Suleja Academy, where we have the concentration of identified gifted students as a special school.

(j) Special Group

Gifted students can experience this as an adjunct programme after school or during summer. The students' experiences range from special interest group or classes with single subject content to an open varied approach. There are disadvantages if used as a total gifted programme as there are no provisions for special learning needs or interests of the individual students. Moreover, the programme lacks continuity. It is however, adequate if used as enrichment in a regular setting.

Therefore, ability grouping may provide a partial answer to the learning needs of gifted students: Other modifications have to be made in order for the programme to succeed, at all levels of educational settings. Also, since there are individual differences among this category of children, individualised instructions are to be adopted in their education. Thus, there should be encouragement of all areas of intellectual functioning. On the other hand, total segregation should be avoided and the services of specially trained teachers should be secured. Consequently, parents and teachers should communicate with each other as their cooperation is critical to the success of the programme.

4.0 CONCLUSION

In this unit, you have learnt the meaning and characteristics of the gifted and the talented individuals. You have learnt various definitions of

gifted and talented children. You have also learnt about their characteristics and various educational programmes.

5.0 SUMMARY

In this unit, we have learnt that gifted and talented is both an important and complicated matter. Our definition has implications for who we identify as being gifted. We also discussed the characteristics of gifted student such as (i) learns new materials faster, and at an earlier age than age peers (ii) Remembers what has been learnt forever, making review unnecessary etc., we also discussed administrative and educational programmes that the gifted and talented children can benefit from.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What are two approaches to education of the gifted children?
- ii. List and explain four characteristics of the gifted and the talented individuals.

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UNIT 2 CURRICULUM MODIFICATION FOR GIFTED AND TALENTED STUDENTS

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Curriculum Modifications for Gifted and Talented Students
 - 3.2 Content Modification
 - 3.2.1 Abstractness
 - 3.2.2 Complexity
 - 3.2.3 Variety
 - 3.2.4 Organisation and Economy
 - 3.3 Learning Environment
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

The appropriate school curriculum for the gifted is qualitatively different from the programme for the non-gifted students (Maker, 1993). According to her, the implication is that, the basic curriculum must be examined and changes or modifications made, so that appropriate curriculum could be provided for the gifted.

2.0 OBJECTIVES

At the end of the unit, you should be able to:

- design an appropriate curriculum for the gifted and talented children
- highlight the kind of environment that can enrich education of the gifted and talented.

3.0 MAIN CONTENT

3.1 Curriculum Modifications for Gifted and Talented Students

Gallagher (1994) also stated that the basic curriculum for the gifted can be modified in content, process and learning environment, i.e. the physical and psychological environments. While Renzulli (1991) added

the product elements (the end products expected of children as a result of the processes used) as a dimension that must be considered.

3.2 Content Modification

The content of the curriculum consists of the ideas, concepts, descriptive information, and facts that are presented to the student. It can assume a variety of forms and can differ in its degree of abstractness, complexity, the way it is organised, and the subject areas covered.

3.2.1 Abstractness

The major focus of discussion, presentations, reading materials and lectures in a gifted programme should be an abstract concepts and generalisations. Ideas that have a wide range of applicability or that transfer both within and across disciplines or fields of study. Concrete information and factual data are intended as illustrations or examples of the abstract ideas rather than as the major focus.

3.2.1 Complexity

Visually abstract ideas are also complex, but abstract ideas vary in their degree of complexity. The abstract ideas presented to gifted students need to be as complex as possible. The complexity of an abstract idea can be determined by examining the number and complexity of concepts and the number and diversity of the disciplines or traditional content areas that must be understood or integrated to comprehend the ideas.

3.2.3 Variety

In the past year, variety has been the definition of enrichment and in many programmes has been the only content modification made for gifted students. The concept of variety suggests that in a gifted programme, ideas and content areas not taught in the regular curriculum should be taught.

3.2.4 Organisation and Economy

Since knowledge in most areas is increasing and changing more rapidly than ever before, and since gifted students have a limited amount of time to spend in school and in the programme, every learning experience must be the most valuable that can be offered. To achieve economy, content must be organised to facilitate transfer of learning, memory, and understanding of abstract concepts and generalisations. According to Bruner (1983) these results can be achieved if the content is organised

around the key concepts or abstract ideas to be taught rather than arranged in some other fashion.

Study of People

Gifted students are likely to become the scholars, leaders and creative, productive individuals of the future. They also enjoy reading biographies and autobiographies. For these reasons, along with their potential for learning to deal with their own talents and possible success, gifted students used to study creative and productive individuals. An analysis of problems these individuals faced should be included, along with the way they handle their problems, their personal traits, their career or professional characteristics, and their social interactions.

The Study of Methods

Gifted students should study the methods of inquiry, the investigative techniques used by scholars in different disciplines. They need practice in using these methods and they should learn a variety of techniques. Such studies can contribute to a better understanding of the content area and enhance the independence of the students.

Process Modification

The process aspect of the curriculum involved the way new materials is presented, the activities in which the students engage, and the questions that are asked. Process includes teaching methods and the thinking skills or process developed in the students.

Higher Levels of Thinking

The methods used in gifted programme should stress the use rather than acquisition of information. Since gifted students can rapidly and almost effortlessly acquire information, they should be expected to apply it in new situations, use it to develop new products.

Open – Endedness

Questions and activities for gifted students should include a greater percentage of open-ended indicators that there is no predetermined right answer. The questions or activities should be provocative in that they stimulate more thoughts, permits and contributes to the development of students centered interaction pattern.

Discovery

The activities designed for gifted students should include a greater percentage of situations in which the students use their inductive reasoning process to discover patterns, ideas and underlying principles. Such guided discovery has several advantages for these children:

1. It increases their interest through involvement in learning;
2. It builds on their natural curiosity, their desire to figure out the 'how and why of things' (Renzulli, Smith White, Callahan & Hartman, 1994), and their desire to organise and bring structure to things; and
3. It increases their self-confidence and independence in learning by showing that they are capable of figuring things out for themselves.

Evidence of Reasoning

Another important process modification for use with gifted students is to ask them to express not only their conclusions but also the reasoning that led them to these conclusions. This aspect of teaching is especially important when using a discovery approach, developing higher levels of thinking and asking open-ended questions. Using this strategy, students learn different reasoning process from other students, and they are encouraged to evaluate both the process and products of others' thinking. It also provides a vehicle for the teacher to assess the student's level of thinking.

Freedom of Choice

Whenever possible, gifted students should be given the freedom to choose what to investigate and how to study their interest and excitement in learning will be increased by such techniques. However, not all gifted students are independent learners, so they may need assistance in making and executing their choices.

Group Interaction Activities and Simulations

Structured activities and simulation games should be a regular part of the curriculum for the gifted students to enable them to develop their social and leadership skills. These activities should include following a set of rules interacting with a small group of students, peer evaluation and self analysis or critique. Both peer evaluation and self analysis will be more effective if the activity has been videotaped or audiotaped.

Pacing and Variety

The final two process modifications serve mainly as facilitators of the success of other changes. Pacing refers to how rapidly new materials is presented to the students. Variety simply suggests that the teacher use various methods to maintain the interest of the children and to accommodate the different learning styles of the students.

Product Modification

Products are the ‘ends’ of instruction. They can be tangible or intangible, sophisticated or unsophisticated. Sophisticated products involve detailed, original work, while unsophisticated ones involve paraphrasing or copying. Products can include reports, stories, plays, dances, ideas, speeches, pictures and illustrations. The products expected from gifted students should resemble the products developed by professionals in the discipline being studied (Renzulli, 1994). These professional products will differ from typical student’s product in the following ways:

- **Real Problems:** The products developed by gifted students should address problems that are real to them. Students can be allowed to choose a specific area of concern within a certain field of study and to design an investigation around the area.
- **Real Audiences:** The products developed by gifted students should be addressed to real audiences, such as the scientific community, the city council or a government agency. These students should not be developing products that are only seen or heard by the teacher. If real audiences are not available, other students can make up a stimulated audience.
- **Transformation:** Gifted students products should represent transformations of existing information or data rather than being mere summaries of other people’s conclusions. Original research, original artwork, and other such products should include the collection and analysis of raw data. If students have used their higher levels of thinking, they must produce a product that is a true transformation.
- **Evaluation:** Often students’ products are only directed and evaluated by the teacher. The products of professionals are evaluated by the audiences for whom they were intended. Products of gifted students should be evaluated by appropriate audiences, including simulated audiences of peers. Students should also be encouraged and required to complete an extensive self evaluation of their own products.

SELF-ASSESSMENT EXERCISE

How can you enrich curriculum for the gifted and talented children?

3.3 Learning Environment

According to Maker (1982) learning environment refers to the physical and psychological climate of the school and classroom. The learning environment appropriate for the gifted students is not too different from that of other students. There are many dimensions of learning environments that are important and different individuals have different preferences for certain aspects (for example, amount of noise, light or presence of colour). All environment modifications presented in this section were chosen because they met the following three conditions:

1. They are preferred by the gifted as a group
2. They are necessary for implementing the content, process and product modifications advocated; and
3. They build on the characteristics of gifted students.

(a) Student-Centered versus Teacher-Centered

Environments for gifted students should include a focus on the students' ideas and interest rather than on those of the teacher. There should be a high degree of emphasis on students' discussions rather than on teacher talk, a pattern of interaction should seldom have the teacher as a central figure or focus.

(b) Independence versus Dependence

This dimension of the environment refers to the degree of tolerance for an encouragement of student initiative. The focus is on having students solve all the problems rather than having the teacher solve all the problems, including those related to classroom management.

(c) Open versus Closed

This aspect of the environment refers to the extent to which restriction affect the student and goes beyond academic into non academic areas. The physical environment needs to be open to permit new people, materials and things to enter. The same is true of the psychological environment. It must permit new ideas exploratory discussions, and the freedom to change directions to meet new situations.

(d) Accepting versus Judging

There are three major elements of this dimension:

- (i) Attempting to understand students ideas;
- (ii) The timing of value judgments; and
- (iii) Evaluation rather than judgment.

Before teachers can assess student idea, they must accept and understand those ideas, that is, they must attend or listen actively, accept the ideas, and then request clarification, elaboration and extensions of the ideas before challenging them.

(e) Complex versus Simple

As a dimension of classroom climate, complex versus simplicity refers to both the physical and the psychological environment. A complex physical environment, which is necessary for the gifted, includes a variety of materials, references, and books; a balance of hard and soft elements; and a variety of colours. A complex psychological environment which is also necessary for gifted students includes challenging tasks, complex ideas, and sophisticated methods.

(f) High Mobility versus Low Mobility

This dimension of the environment refers to the amount of movement allowed and encouraged. To permit gifted students to develop professional products, allow movement in and out of the classroom and access to different environments, materials and equipment.

Complex Environment

A complex physical environment as observed by Maker (1982) required a variety of materials, references and books, a balance of hard and soft elements and variety of colours and challenging tasks. Secondly, high mobility should be encouraged, which include movement in and outside the classroom. The appropriateness of any educational programme for the gifted should be evaluated on how well these modifications are provided for the gifted by the curriculum.

Clark (1993) in support of an appropriate curriculum for the gifted opined that gifted programmes should extend beyond fact-gathering to provide opportunities for gifted students in the curriculum so as to find their areas of interest and abilities. Except students experience the problem of those efforts chosen areas of interest and through personal efforts developed real solution that affects others in these areas, we do

not have a separate programme for such learners that are designated as gifted. Therefore, the gifted curriculum should reflect the learning needs of the students which should be based on assessment of their characteristics as well as other learning styles.

4.0 CONCLUSION

In this unit, we learnt about the appropriate school curriculum that is of benefits to the gifted and talented students. We also discussed about content modification of the curriculum.

5.0 SUMMARY

We have learnt that the education of students with special gift or talents should be based on curriculum designed to accommodate advanced cognitive skills, instructional strategies that is consistent with learning styles and group of instructions. This curriculum should incorporate enrichment, acceleration as educational approaches.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What are two approaches to education of the gifted? How do they differ from one another?
- ii. Design an appropriate curriculum for gifted children at JSS level.

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MODULE 6 EDUCATION FOR THE VISUALLY - IMPAIRED

- Unit 1 Definitions, History, Causes and Prevalence
 Unit 2 Characteristics and Educational Approaches of Visual
 Impairment
 Unit 3 Rehabilitation of the Visually-Impaired

UNIT 1 DEFINITIONS, HISTORY, CAUSES AND PREVALENCE

CONTENTS

- 1.0 Introduction
 2.0 Objectives
 3.0 Main Content
 3.1 Definition of Visual Impairment
 3.2 Causes of Visual Impairment
 3.3 History of Visual Impairment
 3.4 Prevalence of Visual Impairment
 4.0 Conclusion
 5.0 Summary
 6.0 Tutor-Marked Assignment
 7.0 References/Further Reading

1.0 INTRODUCTION

Persons with visual impairment are found virtually in all societies of the world. Records confirm the outstanding works of some distinguished blind individual such as Homer, the Greek poet who in the 8th century B.C. composed the odyssey and the illiad. It was in the 18th century that the visually impaired began to experience an appreciable integration into the society. Personalities such as Nicholas Saunderson a blind man rose to the pick of his career as a professor of mathematics and a host of others.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define visual impairment
- mention at least five causes of visual impairment and explain them
- write brief history of visual impairment in relation to Nigeria

- classify the history of visual impairment into three stages
- rate prevalence of visual impairment in Nigeria in comparison with some other countries like USA.

3.0 MAIN CONTENT

3.1 Definition of Visual Impairment

Visual impairment has been viewed by various people based on their perceptions, disciplines and the effects it imposes on them. Millais (2010) saw it as the condition of lack or reduction in visual perception due to physiological or neurological factors. Eniola (2008) categorized persons with visual impairments as those with total blindness, those with low vision and those who are partially sighted. However, the term “Visual Impairment” is now generally accepted as referring to people within the visual range of no sight at all to useful but defective vision, rather than the more strictly categorical terms of “blind”, “low vision” or “partially sighted” (Nkangwung, 2010).

Total blindness is the inability to discriminate light from dark, or the total inability to see. Total blindness is otherwise known as legal blindness, and has visual acuity of 20/200 or less in the better eye after the best possible correction with glasses (Heward, 2004).

Low vision is a severe visual impairment with minimal visual function after correction. It can be increased through the use of optical aids and environmental modifications (Corn & Ryser, 1989). Students with low vision learn from vision and other sense. Functional vision will depend on factors such as lighting, size of print or objects, and distance. Low vision is characterised by visual acuity of 20/200 to 70/200 (Snellen) or 6/18 to 6/60 in the better eye after the best possible correction or a field of vision between 20 to 30 degrees (WHO, 1992).

Individual with partial sightedness would be able to use the sight to move about, but may not be able to use it for academic task. The category is based on the simultaneous consideration of the three aspects of vision namely; visual acuity, field of vision and visual functioning. In a broad sense, visual defects into loss of clear vision, central vision or peripheral vision. All these losses are considered by measuring visual acuity, field of vision and level of visual functioning.

Visual acuity refers to the ability of the eye to see details. The visual acuity for distance is measured as the maximum distance at which a person can see a certain object, divided by the maximum distance at which a person with normal eyesight can see the same object. Thus a visual acuity of 6/60 means that the person examined can see, at a

distance of 6 metres, the object which a person with normal eyesight would be able to see at 60 meters. If vision is so impaired that to see the biggest E of the E-chart, the person has to come within 6 meters or even nearer, he is considered blind. The simplest method of testing visual acuity is to see whether the person can count fingers at a distance of six metres (6 m).

Field of vision refers to the extent which both eyes can easily see in front. The normal field of vision is 180 degrees in front of eye. It is determined by the Confrontation Test in which mapping is done on a chart having concentric circles marked upon it. The simplest method of testing is to bring snapping finger from the side of the ear to the front, move it up and down, and mark the position where the person can see the finger.

Visual functioning relates to the condition of the eye. It is determined by the experience, motivation, needs and expectation of each individual in relation to whatever visual capacity is available to satisfy curiosity and accomplishment of activities for personal satisfaction. The visual functioning refers to the degree to which ability of a person to use vision for all daily activities.

3.2 Causes of Visual Impairment

Visual impairment is a condition that is found in every corner of the globe, and which causes vary from place to place. It can affect a person at any particular age or stage in one's lifetime. The causes of visual impairment may be right from developmental stages in the womb before birth, a condition called prenatal causes. It could be at birth (perinatal) as well as later in life (Postnatal condition). Examples of causes of visual impairment would therefore be discussed under three stages mentioned:

Prenatal Causes

This may be as a result of hereditary factors which may affect the cornea, lens, retina, optic nerve and other muscles or organs of sight. It could also be as a result of infections or diseases from pregnant mother. Such diseases include syphilis or gonorrhoea, German measles (rubella) malformation or dislocation of the lens or any of the refractive media and muscles of the eye during developmental stages of the foetus could lead to visual impairment. Also important is the diet of the mother during pregnancy, if a pregnant mother is malnourished, smoking or abusing drugs, it could lead to visual impairment in the new born baby.

Perinatal Causes

These are causes of visual impairment during birth. They include the wrong use of forceps during delivery, delay or prolonged labour, venereal diseases of mother could affect the child's eye as he/she is passing out of the mother's canal.

Postnatal Causes

These are things that result into visual impairment in a child after birth. They include hormonal imbalance, infectious diseases such as small pox, chicken pox, scarlet fever, trachoma, epilepsy, onchocerciasis (river blindness), measles, cataract, glaucoma, strabismus, retinitis pigmentosa among others (Olukotun, 2003). Accident and injuries involving the organs of sight can also results in visual impairment.

Apart from diseases, physiological and pathological causes, the Nigerian traditional culture believes in different causes of visual impairment, for instance, havoc from evil spirit and witches, prolonged gaze at nakedness of an opposite sex, punishment for past sins committed by parents, anger of the gods and the violation of traditional norms (Osinuga, Adebisi & Ajobiwe, 2004). Traditional or cultural causes according to Osinuga et. al. have no scientific proof.

SELF-ASSESSMENT EXERCISE

Identify possible causes of visual impairment in children.

3.3 History of Visual Impairment

Since the prehistoric age of man's existence, conditions of disabilities have been with man. One of these conditions includes visual impairment. Like other categories of disabilities, visual impairment has inspired various treatments based on perceptions of the people. These treatments range from negative to positive across the ages. Although the condition of visual impairments was perceived differently by people at different phases of history, however the nature of the condition remains the same. This realisation has called for the need to deal proactively with the condition through formal education. This earlier conviction led to the widespread establishment of special institutions, some of which cater for the needs of persons with visual impairments. Some of these found their ways to missionaries in earnest in the 1940's.

However, the possibility of educating them looks more of mirage than reality. Obani (2004) avers that some cultures still view people with disabilities and handicaps as having been cursed. In a developing

country like Nigeria, where the literacy level is around the halfway mark, there are still widespread primitive and superstitions beliefs about handicaps. To him, people with disabilities are very likely to be wrongly perceived and therefore treated. It is essential at this point to shed light on the historical progression of education of persons with visual impairment from the earliest time to the present under the following stages in Nigeria.

- The Pre-Missionary Stage
- The Missionary Stage
- The Post-Missionary Stage.

The Pre-Missionary Stage

The Pre-Missionary stage dates back as far as the advent of the missionaries in Nigeria. The actual missionary impact on education in Nigeria dates back to 1840. Before this time, the blind were mistreated by most primitive societies in the world then. The Western education was not concerned with special education in Nigeria until a century later.

The Missionary Stage (1940–1970)

After the 2nd World-War there was a dramatic turnaround in the education for persons with visual impairment. Their story changed; the first school for the blind was established in Gindiri by Sudan Interior Mission in 1953. Also, in 1962, Pacelli School for the Blind was established by the Catholic Mission under Archbishop Taylor. The nation began to witness the birth of many special schools for the blind. Even though during this period, education system witnessed various educational ordinances but all were silent on special education.

The Post-Missionary Stage (1970 to date)

The missionaries played major role in the establishment of special schools and in the growth of special education in Nigeria. Nigeria government started to involve in the education of persons with disabilities as from 1970. Zindif (1997) opines that complete involvement in the education of the disabled by government did not take place until the 1970s when the then Head of States, Major General Yakubu Gowon declared government's interest in the education of the disabled. He directed that all the state Ministries of Education must establish units for special education so as to strengthen the existing schools. Today, elements of special education are being taught in our colleges of education and some universities' faculty of education. A lot

of improvements are being made in special education especially in the education of persons with visual impairment (Adebisi, 2007).

3.4 Prevalence of Visual Impairment

Throughout the world, approximately 314 million people live with visual impairment. Out of which, 45 million are totally blind. However, this aggregate did not mirror individual country's statistics on prevalence. For instance, of this summation, 87% live in developing countries (WHO, 2010). This disparity between the global south and north are not unrelated to barriers to eye care which are consistent across most demographic groups. On the other hand, the differences in prevalence of blindness between the different countries in Africa and Asia could be due to differences in the causes of blindness, access to eye care services, or differences in life expectancy. Therefore, the quality of the few local eye care services, financial barriers and a widespread lack of eye care knowledge present major challenges for eye care provision, and readily predetermine each country's prevalence level of visual impairments.

For example, while the United States of America recorded 3.3 million adults of age 40 and above are having one visual impairment or the other, a developing country such as Nigeria recorded 4.25 million adults of the same age as its prevalence level of visual impairment (Kyari, Murthy, Gudlavalleti, Sivsubramaniam, Gilbert, Abdull, Entekume & Foster, 2009). The WHO global data on blindness for 2002 categorised Nigeria along with a group of other countries in the region as having an estimated prevalence of blindness of 9% among those aged 50 years and 1% for the population of all ages. In particular, the rate of blindness in Nigeria is consistently high in all Nigerian states with 10.2% in Delta State as the least and 26.3% in Yobe State as the highest.

Aside the different level of economic growth as a probable factor, age is also a leading factor in some country's prevalence level of visual impairment. For instance, a United States report established that rapid increase in visual impairment is not unconnected with the aging process of the population. In Nigeria, the magnitude of blindness among adults aged 40 years and for all ages was estimated. Based on survey findings, it is estimated that 1.13 million individuals aged 40 years are currently blind in Nigeria. The North West, being the zone with the largest population, harbours the largest number of adults with blindness in Nigeria (28.6%). It was also established that 2.7 million adults aged 40 years had moderate visual impairment and an additional 0.4 million adults had severe visual impairment. Thus, a total of 4.25 million adults aged 40 years in Nigeria suffer moderate or severe visual impairment or blindness. Though, there is a high frequency of risk among women, the

recent findings did not establish age as a major predictor in the prevalence of visual impairment in Nigeria (Kyari, *et al.*, 2009).

The following are the prevalence rates of the common visual impairments in Nigeria as identified by the Nigeria National Blindness and Visual Impairment Survey 2005–2007.

- Cataract: The prevalence of cataract blindness was 1.8% (95% CI: 1.57–2.05)
- Glaucoma: 16.7% (prevalence 0.7%; 95% CI: 0.6–0.9)
- Corneal Scarring: from all causes was responsible for 7.9% of blindness 84% of blindness was due to avoidable causes
- Uncorrected refractive errors were the commonest causes of mild and moderate visual impairment (77.9% and 57.1% respectively) being responsible for visual impairment in 2.46 million adults in Nigeria (i.e. acuity of < 6/12–6/60)
- “Operable” Cataract (i.e. visual acuity of < 6/60) affects 400,000 people and glaucoma has caused blindness in a further 150,000 adults.

The prognosis on the prevalence of visual impairment in relation to the major causes of visual impairment by the next decade was not encouraging. According to Nigeria National Blindness and Visual Impairment Survey 2005–2007, by the year 2020 the number of adults with operable cataract will increase by 43% to 600,000 assuming that the incidence of severe visual impairment and blindness due to cataract and cataract surgical coverage remain unchanged over the next 12 years.

4.0 CONCLUSION

In this unit, you have learnt about who the visually impaired persons are. You have also learnt about different categories of and degrees of visual impairment. You have been exposed to possible causes and symptoms of visual impairment.

5.0 SUMMARY

In this unit, we have learnt and defined visual impairment as people within the visual range of no sight at all to useful but defective vision rather than the more strictly categorical terms of “blind” “low vision” or “partially sighted”. We also discussed brief history of education of learners with visual impairment. The prevalence of visual impairment was discussed. By now you should be able to identify various causes of visual impairment as before, during and after birth.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What is visual impairment?
- ii. Name and explain three (3) aspects of vision.
- iii. List five (5) causes of visual impairment and explain them.

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UNIT2 CHARACTERISTICS AND EDUCATIONAL APPROACHES OF VISUAL IMPAIRMENT

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Characteristics of Visual Impairment
 - 3.2 Educational Approaches and Consideration for Visual Impairment
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Students who are blind differ from those who have low vision. They also have individual differences. We should remember that no one set of characteristics fits all. For example, learners with low vision read print and can access the general education curriculum alongside their peers without disabilities.

In order to enhance effective teaching for the visually impaired, the visually impaired learners must be given training skills in listening, Braille etc. the teacher should understand the child, visual functioning. Also develops a predictable and understand system to initial communication.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- state the characteristics of visual impairment in relation to type of visual loss, severity, age of onset and environmental experiences
- enumerate the educational approaches and considerations for learners with visual impairment mention the components of unique curriculum.

3.0 MAIN CONTENT

3.1 Characteristics of Visual Impairment

Visual impairments have characteristics some of which imposes certain constraints on the individual's developmental tasks. However, the

degree of this constraint depends on the type of visual loss, severity, age of onset, intellectual ability and environmental experiences. The lack of vision or reduced vision may result in delays or limitations in motor, cognitive and social development. Without visual input, an infant may not be motivated to reach and move toward interesting objects in the environment. As soon as the infant with a visual impairment finds it exciting to hear sound, he or she will begin to reach and move toward the objects in the environment that make sound. This does not occur until several months later, since hearing sounds does not motivate toward objects as soon as seeing objects does.

Cognitively, the child who has a visual impairment cannot perceive objects in the environment beyond his or her grasp, including those that are too large or too small or are moving. While use of other sense enables the child to obtain information about the environment, a cognitive limitation does exist in the range and variety of experiences. Socially, a child with a visual impairment is limited in interaction with the environment. The child cannot see the facial expressions of parents, teachers and peers; cannot model social behaviours through imitation; and sometimes is unaware of the presence of others unless a sound is made. While touch provides direct information, it is often socially unacceptable. The older child is limited in the ability to orient to environmental cues and travel freely.

SELF-ASSESSMENT EXERCISE

Identify signs and symptoms of visual impairment.

3.2 Educational Approaches and Considerations

It is the current practice, especially in developed countries, that students with visual impairments are being mainstreamed successfully into regular classes for many years in spite of their condition. They receive instruction from specially trained teachers in the additional skills necessary to increase independence. The unique curriculum (otherwise called curriculum plus) for students who are blind includes reading and writing through the use of Braille, Typewriting, Listening skills, Personal-Social and Daily Living Skills, Orientation and Mobility, career education, and instruction in the use of special aids and equipment. In addition to these areas, students with low vision and visual limitations may need instruction in the efficient use of vision and in the use of optical aids, assistive technology and alternative learning materials.

However, since educational services for children with visual impairment vary according to individual needs. Residential schools or regular

classroom (inclusive settings) with special assistance may be an appropriate educational approach for individual students. Based on the characteristics of learners with visual impairment, the educational approaches and considerations should reflect the essence of Individualised Educational Plan (IEP), which advocate that individuals should be allowed to progress at their own rate, through equal accessibility to instruction without the barrier of disability (Scholl, 1986).

Considering the peculiarity of this group, intervention approaches by both parent and teacher should focus on active participation of the child in all activities. Because children with visual impairment may not be able to learn by watching what is going on around them, they must learn “by doing” and interacting with their environment. Interventions should focus on the development of contingency awareness and the intrinsic motivation and drive of the very young infant and the development of the physical skills that are necessary for the child to move out and explore. Children with visual impairments should be given the opportunities to participate in all the activities that they encounter. If a child cannot participate independently, explore ways that he can be assisted through the activity, allowing him to participate and complete the tasks appropriate to his level of development.

Also, there is the need to concretise concepts as much as possible, since the learner’s condition implies minimal or zero response to visual stimuli. At all time the teacher should make as explicit auditory inputs as possible, even for the low vision children. For a totally blind child or a child who cannot see enough to imitate, the teacher may need to move the child through an activity to demonstrate what he wants the child to do. When demonstrating a new skill, it is easier to be behind the child so that the teacher’s body is in the same orientation as the child’s. Following the demonstration, the child should be allowed to practice the concept too.

Braille: Braille is a system of communication that is written in raised dots and perceived through the tactual sense (sense of touch). It is made up of elements called Braille cell. The Braille system was introduced in the nineteenth century in France by Louis Braille. We have the literary Braille code, the Nemeth Code and a Unified Braille Code.

Slate and Stylus: It is a method of writing in Braille in which the paper is held in a slate while a stylus is pressed through opening to make indentation in the paper.

Listening Skills: Listening skills play an unparalleled role in the life of children with visual impairment. Listening gives opportunities for

reaching the visually handicapped certain concepts like the sounds wild animals, Trucks and even the flood of traffic. Listening skills assist the visually impaired in mobility and orientation. It is essential therefore, that proper education should be given to children with visual impairment on this.

Mobility and Orientation: Ability to move gracefully and knowing ones environment is important. In order for children with visual impairment to be mobile he/she should be giving training in mobility and orientation. This includes the use of long cane, guide dogs, human guide.

Technological Aids

A lot of technological devices are available for the visually impaired individual to learn one of such device is Kurzweil 1000, others are computer system (Use of JAWS) softwares.

4.0 CONCLUSION

In this unit, you have learnt about various characteristics of the visually impaired persons. You have also learnt about different signs and symptoms. You have learnt about how to educate them and what it takes to educate them.

5.0 SUMMARY

Students with visual impairment exhibit certain characteristics. Cognitively, the child who has a visual impairment cannot perceive objects in his/her environment. Mobility and orientation is equally very important in education of the visually impaired.

6.0 TUTOR-MARKED ASSIGNMENT

State the characteristics of visual impairment in relation to types of visual loss, severity, age of onset, and environmental experiences.

7.0 REFERENCES/FURTHER READING

Heward, L. W. (2004). *Exceptional Children: An Introduction to Special Education*. (7th ed.). Ohio: Merrill Prentice hall.

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UNIT 3 REHABILITATION OF THE VISUALLY-IMPAIRED

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Definitions
 - 3.2 The Visually -Impaired and Vocational Education
 - 3.3 Types of Rehabilitation Programme
 - 3.4 Community -Based Rehabilitation
 - 3.5 Persons involved in Rehabilitation
 - 3.6 Workshops and Employment Opportunities for the Visually- Impaired in Nigeria
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

The visually- impaired are often marginalised in Nigeria just like any minority group. This marginalisation may arise from prejudices, stereotyping attitudes of people towards them and socio-economic deprivation. People with special educational needs have hitherto lived their lives so to speak watching from sidelines while medical professionals, educationists, social workers and scientists actually run their lives.

It is a fact that persons with special need have access to socio economic rights as others but in reality they are denied access to existing social services and economic support. Most individual with special need are denied access to adequate information that could improve their socio-economic conditions. Therefore, in order to improve the living standards of individuals with visual impairment, vocational rehabilitation is necessary. Rehabilitation of learners with visual impairment is an avenue of making them to be self-actualised.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define rehabilitation in your own words
- mention and explain what is meant by Community -Based Rehabilitation (CBR)

- itemise the challenges facing the rehabilitation of the visually-impaired in Nigeria.

3.0 MAIN CONTENT

3.1 Definition

Rehabilitation is a practical aspect of special education that assists in restoration of handicapped persons to the maximum usefulness of which is capable physically, mentally and vocationally.

However, the visually impaired are persons with any limitation for normal visual functioning that occur as a result of visual disorder. This includes the partially sighted, the blind and individuals with low visions. Various authors have defined rehabilitation in different ways, especially from professional point of view. Eni-Olorunda (2001) quoting World Health Organisation (WHO) committee (1981) defines rehabilitation as all measures to reduce the impact of disabling and handicapping conditions and to enable the special need and challenged individual to achieve social integration. Therefore, vocational rehabilitation involves bringing a person with special needs back to near normal life, as much as possible through a vocation.

3.2 The Visually- Impaired and Vocational Education

The human eye plays a vital role in anything we do. Generally, the thinking in most quarters is that if any suffer sight loss, one has become useless. To such a person, life is assumed to be meaningless. But in the field of special education this presumption is not valid. This is perhaps why Obani (2003) declares that “there are no handicapped persons, only that persons that are made handicapped by poor perception, negative attitude and the reluctance of society to adjust and accommodate people with special needs.

3.3 Types of Rehabilitation Programmes

Rehabilitation programmes for children with special needs can be classified as follow.

3.3.1 Psychological Rehabilitation

By the time a child is declared medically blind, automatically there are bound to be reactions and counter reactions from parents and the immediate family. Guilt feelings may ensue from the parents. This situation if not well managed can lead to separation or divorce. It is essential therefore for the parents to understand themselves. The parents

need to be educated and counselled on the education of learners with visual impairment.

3.3.2 Medical Rehabilitation

This involves team of medical personnel. It also includes all medical attention and services rendered to the blind after being identified and certified as having problem with sight. The doctors refer such patients to experience ophthalmologists for proper diagnoses. After all diagnosis had been completed and there is no improvement then the ophthalmologist has the right to certify an individual blind.

3.3.3 Educational Rehabilitation

After the medical aspect of rehabilitation has failed to correct the sight of the child by an ophthalmologist an appropriate educational programme should be in place so that the child will not be a liability in life. An ideal educational programme for the blind should first be in the nursery school where they are exposed to learning and other daily living activities such as dressing, toileting, brushing of teeth, bathing, washing, eating etiquette. After the nursery school the child is exposed to primary school education. Secondary school education is the next; here provisions are made for remedial and supportive services for the blind child in the resource room of that institution to complement the work of the classroom teacher.

Of course the blind child who performs excellently in his/her academic work in the secondary school has the opportunity of proceeding to the tertiary institution. Such blind students may gain admission to the University, Polytechnic, College of Education, etc.

SELF-ASSESSMENT EXERCISE

Identify different types of rehabilitation for persons with special needs.

3.4 Community -Based Rehabilitation (CBR)

This is a concept that assist the visually impaired for example to be rehabilitated in their environment. Community -Based Rehabilitation can be defined as “a concept that involves the entire community whereby the resources of that community is used to improve the living standard of the disabled and the handicapped persons themselves including their families. It is also a way of integrating persons with disabilities into their communities.

3.5 Persons involved in Rehabilitation

The following are principal agents in rehabilitation of the visually-impaired.

(a) Rehabilitation Teachers

The Rehabilitation teacher counsels the blind and his parents in respect of adjustment to blindness. He/she also guides the blind to learn necessary skills in a particular centre.

(b) Rehabilitation Counsellor

The role of a counsellor in rehabilitation centre cannot be overemphasised. Counsellor assists children with special need to overcome the problems and adjustment to the new situation. Olukotun (2003) avers that parents of children with special need in the society face a lot of psychological, social, economic and emotional problems because of the conditions of their disabled children.

3.6 Workshops and Employment Opportunities for the Visually -Impaired in Nigeria

There are different kinds of workshops available for persons with visual impairment. These are as follows shelter workshop. This type of workshop is tailored towards the employment of blind individuals who are not capable of competing with the sighted. The purpose of the workshop is to provide them with some sort of income. Actually, shelter workshop is an avenue for blind persons of low intelligence.

Training Workshop: This kind of workshop assists and trains blind individual; it also prepares them for a job.

Production Workshop: This exposes the blind persons to various types of vocations. This is a way of empowering them. It will assist them to hold key positions in firm or in industry. They can be given training to the poultry keeping, foot mats, flower vases, cane and mosaic materials. The blind can also benefit from different skill professions such teaching, music, law, agriculture, administration etc. also from semi skilled professions, telephone operators, typists, stenographers etc.

4.0 CONCLUSION

In this unit, you have been exposed to meaning of rehabilitation. We also discussed types of rehabilitation. Light was shed on the agents of

rehabilitation and how the visually impaired can benefit from rehabilitation through different workshops.

5.0 SUMMARY

Rehabilitation is a practical aspect of special education that assists in restoration of handicapped persons to the maximum usefulness of which is capable physically and vocationally. We also discussed types of rehabilitation such as psychological, medical, educational and community- based rehabilitation.

6.0 TUTOR-MARKED ASSIGNMENT

- i. What is rehabilitation?
- ii. List 3 types of rehabilitation and explain 2 of them.
- iii. In what ways can the visually- impaired benefit from rehabilitation.

7.0 REFERENCES/FURTHER READING

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