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ASSESSMENT OF MAINSTREAMING HANDICAPPED STUDENTS INTO TECHNICAL EDUCATION PROGRAMME IN TECHNICAL SCHOOL, MALALI, KADUNA

BY

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PGD/ITE/9/2001/2002

DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION,
FEDERAL UNIVERSITY OF TECHNOLOGY,
MINNA

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A RESEARCH WORK SUBMITTED TO THE DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION, SCHOOL OF SCIENCE AND SCIENCE EDUCATION, FEDERAL UNIVERSITY OF TECHNOLOGY MINNA

IN PARTIAL FULFILMENT OF THE REQUIREMENTS OF THE AWARD OF POST GRADUATE DIPLOMA IN INDUSTRIAL AND TECHNOLOGY EDUCATION

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CERTIFICATION

I, Yunusa Salisu Zangina, Matric No PGD/ITE/9/2001/2002 a post graduate diploma student of the department of industrial and Technology Education Certify that the work embodied in this research work is original and has not been submitted in part or full for any other diploma or degree of this or any other university

Salisu Y. Zangina .....

Name

.....

Signature

APPROVAL PAGE

This Research work has been read and approved as meeting the requirement for the award of PGDTE (Mech. Eng). In industrial and Technology Education of the department of Industrial and Technology Education, School of Science and Science Education, Federal University of Technology, Minna.

Supervisor — Sign. Date 2/08/05

HOD — Sign. Date 8/9/05

External Examiner — sign. Date 10-01-05

DEDICATION

To my family

ACKNOWLEDGMENT

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Abstract

This study was carried out in Technical college Malali, Kaduna after eight (8) Years of mainstream programmed. Two classes of mainstreamed students SS III and SS II which involved fifteen (15) normal and fifteen (15) deaf students in each year group were used, where the normal students served as experimental and the deaf students served as control group. Fourty objective questions were drawn from National and State examination bodies including practical skills, these questions were administered to students as a test and retest items in one (1) hour time. The retest was observed after three (3) days of the first –test. Data were collected from both tests, computed and analyzed for individual mean, average group and coefficient correlation. The coefficient correlation was measured at level +ve 1 or –ve 1 for complete agreement and dis-agreement respectively. The result shown after series of computation implies that there was no definite difference between normal and deaf handicapped students, since the result interwoven between them. Based on these findings, the researcher recommends that: special hearing aids or gadgets, should be provided for the deaf handicapped students to ease the case of attracting attention of normal students; by the sign language, as this eliminate the use of the teachers in the same class, at the same time. Science and Technical teachers should be trained in sign language communication to tech in the mainstreamed class.

CHAPTER I

INTRODUCTION

1.1 Back ground of the Study

Education is a dynamic instrument of change. It is not only the key to success in the market place, but also the key to maintaining freedom in our land and key to the continued growth of freedom through out the world.

It is not a surprise therefore, that the declaration of the right of disabled persons as arrived at in the United Nations General Assembly of 1975, which states that disable persons have the right to education which will enable them to develop their capacities and stills and will hasten the process of their social integration.

(EDUCARE, 1979).

The idea of the 'Right' to Education of 1975 led to the Democratization of Education. The objective of which focuses on ensuring that everybody, without distinction, has the opportunity to exercise his/her right to education (General Conference 1983). It is this right to education which crowner called principles of zero exclusion that is education without discrimination or prejudice.

(All port 1954) defined prejudice as:

"an avertive or hostile attitude toward a person who belongs to a group, simply because he belongs to that group, and is therefore presumed to have objection able qualities ascribed to that group"

In order to fulfill the 'right to education declaration for the hearing impaired at various schools level in Nigeria. The National policy on Education, on which deliberation began in 1973, and which came out of the print in 1977 and later revised in 1981, reiterated Government determination to provide education for all her citizens without any form of discrimination. The policy is emphatic on the equalization of educational opportunities for all and specifically directed that adequate education be provided for the handicapped to enable them fully contribute to the development of the Nation.

The take over of school by state Government from 1970, and the Universal primary Education Scheme of 1976, fully brought special school for the handicapped into the mainstream of the nation's educational structure.

Hallahn and Kaufman, (1975) stated that mainstreaming is a belief which involves educational placement procedure and process for exceptional placement procedure and processes for exceptional children based on the convictions that such a child should be

educated in the least restrictive environment in which his educational and related to the needs can be satisfactorily provided. Since Governments direct intervention in the education of the handicapped in Nigeria, achievement recorded in aspects of special education has been phenomenal. The Federal Ministry of Education set up a special unit for special Education in 1975. Today, there are special Education units or sections most states ministries of education and the Federal capital territory in Abuja. With the establishment of the Federal college of Education (special) Oyo, Departments of special Education in the University of Ibadan and Jos and the Department of special Education in Kaduna Polytechnic, the Federal government has gone a long way in implementing this aspect of national policy on Education.

This intervention by the Government reached vocational and technical school which will be made to reserved places for further education of handicapped Children and adults. Government will provide suitable employment opportunities for handicapped workers, and the ministry of social development, youth and sports will be required to examine the possibilities of establishing sheltered

workshops for those handicapped who, after training, can not bid on equal terms with others for recruitment into commerce and industry. For this study the researcher is referred to handicapped with hearing impaired (Deaf) which according to Taylor, (1971) defined the deaf and partially, hearing students as:

> *"those with impaired hearing who require education by methods suitable for students with little or no natural acquired speech and language, while the partially hearing students are those with impaired hearing whose development of speech and language even if retarded,, is following a normal patterns and who require for their education special arrangement or facilities though not necessarily all the educational method used for deaf students"*

1.2 Statement of the Problem

The uniqueness of the handicapped students need is initiated for majority of them, by the series nature of their impairment which lead to the number of limitations (disability).

Learning disability (Kirk 1962) point to this as:

> *"disorder or delayed development in one or more of the process of speech, language hearing, reading, spelling writing or arithmetic resulting from possible cerebral dysfunction and or emotional or behaviour disturbances*

and not from the mental retardation". Based upon the above context, this study was intended to draw attention of the effect of mainstreaming of normal and handicapped students in Technical school, Malali, Kaduna.

1.3 Purpose of the Study

The major purpose of this study was to assess the effect of mainstreamed handicapped students in Technical education programme specifically the study intends to find out:

i. The individual progress between the normal and handicapped students is General subjects, Trade or occupational subject (theory) and practical skills.

ii. A suitable learning programme for the handicapped students

1.4 Significance of the Study

Evidence on the ground point to the overwhelming support given to segregated education and only minimal support given to mainstreaming programme in this country. (Spelling, 1989) says there is a definite move towards integration of special education services with regular education, and toward de-institutionalization. The primary consideration is that children attends classes with other

children, are taught by the regular teachers while special teacher support services in all subjects or may often provided instruction in certain subjects and share the same dormitories if the school is residential.

Two philosophical questions were pose upon mains training according to (Broiler, 1989).

i. Are the students receiving the same opportunities of education as other children within their own societies?

ii. Is the education provided preparing them for life?

1.5 Scope of the Study

This study of assessment of mainstreamed students would have been designed to cover the entire state, thus Kaduna state. Since there are other three more mainstreamed schools in the state thus:

i. Alhudahuda Secondary Schools Zaria (boys)

ii. Government Girls Secondary School Zonkwa

iii. Government Secondary School F/Kaje

However, the researcher focused attention on the only technical school, with mainstreamed students in the state, because of its uniqueness. And at the end of this study, it is hope that the result obtained would be applied to all mainstreamed schools in the state.

1.6 Assumption of the Study

The following assumptions were made in pursuit of this study

i. Teachers involves especially the special supporting teachers have no idea about technical education, hence interpreting some technical terms seems difficult.

ii. Instructional dissemination may not be equal as the resource teacher read from the text books understand its concept and pass the instruction, then special supporting teacher mold this instructions the way he also understand them and sign them to student. This forming the chain of information, which could cause the lose of some important points of the instruction.

iii. There could be catched or lost of attention from the regular students, because of the sign language done by the special supporting teacher to the handicapped students in the cause of passing instruction.

1.7 Research Questions

There are two (2) research questions, thus:

i. What are the individual progress between the regular or normal and deaf students?

ii. What are the suitable learning programme for the deaf students?

1.8 Hypothesis

The following null hypotheses were tested in the study at tve 1, or – ve 1 for complete agreement or disagreement respectively

i. There will be no significant different between normal and the deaf students on General subjects

ii. There will be no significant different between normal and deaf students on occupational subject

iii. There will be no significant difference between normal and deaf students on acquisition of practical skill.

1.9 Definition of Terms

Assessment: This is the process of evaluation, interpretation of the total function of an individual.

Disability: This is described as either a physical or mental condition which limits a person activities or functions

Exceptional Children: The term is used to include the intellectually gifted and the handicapped children. This term refers to children who

require additional or adoptable teaching methods to enable them to learn

Deaf Students: Are those with hearing impaired who require education by methods suitable for students with little or no natural acquired speech and language, while partially hearing students – Are those with impaired hearing whose development of speech and language, even if retarded, is following normal pattern and who require for their education, special arrangement or facilities though not necessarily.

Handicap: This is a disability of the body or mind that causes a person serous difficulty condition or situation of a physical or mental disability which prevent someone from acting and living as normal people do. In this case the individual can not be able to perform certain functions well like other people.

Impairment: This is referred to the loss of a limb, sight, hear and organ of the body or the entire mechanism of the body.

Mainstreaming: This is referred to the education of the handicapped children with their normal peers in a regular school at the same place. Also at the same time both the handicapped children and the normal peers are integrated and received instruction same time, in the same classroom.

Physical handicap: This is an impairment in one or more areas of the body function.

Special education: This is that branch of education that is devoted to clearing the handicapped of these children so that they can be educated like others and also have their opportunities to other aspects, of the society duly equalized.

Special teacher: This is person that communicate hearing impair students using sign language. He may provide instruction in certain subjects or support services in all subjects.

CHAPTER II

REVIEW OF RELATED LITERATURE

The study focused on the assessment of mainstreaming on technical education programme in Technical school, Malali, Kaduna. Under the following sub- headings

I. Societal awareness of the exceptional people

II. Special education for the handicapped

III. Mainstreaming handicapped education

2.1 Societal Awareness of the Exceptional People.

There have been many attempt by various authors to define who exceptional people are: In an attempt to define who the exceptional child is, several labels have evolved. Examples are: 'children with special needs' 'disable persons' 'handicapped people' and a host of other names.

Some people maintain the belief that mentally retarded individual should be under this umbrella of exceptional people, while others advocate that only the instinctually or those who excel in one skill or another should be under this caption. However, in recent years, professionals in the field of special education have come to accept

the fact that exceptional individual include both the intellectually brilliant as well as the retareded. An exceptional individual can be burn into any family of any social class, race, or religion, such people make up a segment of our population that is generally ignored. The presence of the disable can not be disputed world health organization, (1981) state that 10% of the country's population on average are disable in one way or the other. This reflect that Nigeria with estimate of about 120 million population have 12 million disable.

However, even families to which these individual are burn are looked down upon a wicked, sinful and ungodly. This is because many Nigerian believed that a disable person in a family is a sure indication that someone in that family has sinned seriously against God. Consequently, the disabled person is being punished for the sin, the sin believed to be his or that of a member of his family. The disable people are the people who are popularly addressed by lebels rather than by their names. Thus oday, may be popularly known as the deaf painter, Barong, as the cripple lady who lives on Boki road, and Ada as the blind lady who lives in Igoli, and so the litary of labels continue. It is well to realize that like us, these people have

been given names by their parents and would like to be addressed by their names. All through the ages, in different parts of the world, the disabled people have been ridiculed, ill-treated and in some cases even destroyed.

In our own country the general attitude of most people towards the disable is very negative. For too long, we have adopted a laissez-faire and sometimes hostile attitude towards our disabled people. There are some people in Nigeria who still maintain the superstition belief that microcephatic and hydrocephalic children are not human beings at all and hence should be done away with some go as far as including Mongoloid, in this group. All that is required of such parents they say is to assist these children return to the animal species they are believed to be. Unfortunately even some so called educated ones among us, do hold such superstitions beliefs, some people go as far as believing that if these individuals are left either in the forest or riverside, depending on their orientation, these individual would return to the animal species they are believed to be when not being observed. So must of these children are left to die unprotected and unconsoled. The crime they committed was to be burn. They die deprived of life and perhaps even a grave. The

handicapped people who are allowed to survive in our society, continue to undergo untold difficulties and most after suffer in silence.

Cawley, (1975) distinguishes handicapped from disability, when he referred handicapped as an objective conditions, such as blindness, cleftpalate plate, or cerebral palsy, and disability implies society's responses to a special disabling condition.

The exceptional people, whether their place of origin be Nigeria, America, Europe, or elsewhere, can be more easily described than defined.

2.2 Special Education for the Handicapped

From the historical perspective, the nature of traditional special education practiced in Nigeria many years ago, before the arrival of the present form of special education (formal) was special in many ways: In the first place the handicapped child received lessons in art craft, manual training and in code of conduct (socialization) through imitation and demonstration.

Secondly, the parents and other members of the community participated in this form of traditional system of special education of exceptional children.

Thirdly, every teacher of the traditional education want the handicap child to be independent, sociable, honest, courageous, humble, persevering and of good report at all times.

Before the missionaries came to Nigeria, there were no formal attempt toward educating the handicapped, this must have been because of the restrictions of movement placed on children to constitute a thing of derivation in the family (Ihenacho, 1985) Gada, (1988) stated that handicapped children in Kano state have received little in terms of western education due to the shortage of manpower which still exist. Presumably some handicapped children have attended Quranic schools for their normal education.

The activities of missionaries and voluntary organizations are very outstanding in the field of education generally, and infact they set the pace for the modern form of special education in Nigeria.

A cursory review of the special schools in the country shows that the missionaries and the voluntary organizations were responsible for the establishment of many special schools. It is not necessary to mention all the educational facilities in Nigeria, founded by the missionaries and voluntary organization. However, mention must be made here of the pioneer institutions that in some way or the other influenced the modern out looks of special education.

i. Gindiri school for the blind

This was the earliest school for the blind embellished in the country in 1953 by the Sudan United Mission the purpose of establishing the school was to teach crafts, to young blind children and in some cases academic subjects.

ii. **Wesley school for the deaf**

The school was started in 1956 in a class attached to the Anglican Girls school Lagos, where classes were held twice a week in the evenings by a group of philanthropists, who later formed the society for the care of the deaf. In order to get the school registered for the purpose of undertaking the normal school curriculum, the Methodist mission was contacted through it secretary.

iii. The Nigeria vocational Blind centre, Oshodi.

This centre was established in 1988 by Dr. and Mrs R. C West of the Baptist Mission, Ogbomoso assisted by the Red cross society of Nigeria Ogbomoso branch. These and others not mention were, established by missionaries and voluntary agencies were further intensified there function with the establishment of the special schools, for higher learning, like the Federal College of Education (special) Oyo, Department of special education in Universities of Ibadan and Jos and the department of special education in Kaduna Polytechnic, all converge for the training of special teachers today, in order to clear the manpower shortage in the country.

Federal Republic of Nigeria, (Revised 1981) defined special education as the education of children and adults who have learning difficulty because of different sorts of handicaps. Example blindness, mental retardation, social maladjustment, physical handicap, and etc, due to circumstances of birth, inheritance, social position, mental and physical health pattern, or accident in later life.

As a result, a few children and adults are unable to cope with the normal school class organization and method. The uniqueness of their needs is initiated, for majority of them by the serious nature of their impairments which leads to a number of limitation, (disabilities) and which ultimately make them a disadvantage sub-set of the population. Special resources are needed, Example, special teachers, method, materials, and etc. Boison and Ozoji (1985) "recalled that Nigerian Government's Philosophy of having all children getting the opportunity to learn, whether they are arrange, bright, dull, retarded, blind deaf, crippled, delinquent, emotionally disturbed or otherwise deviants in their capacities to learns"

2.3 Mainstreaming Handicapped Education

Until early seventies, the world focus shifted from residential special education to mainstreaming of special needs children spelling , (1989) says "there is a definite move towards integration of special education services with regular education and towards de-institutionlization. The philosophy of equalization of opportunity must have influenced this shift. If majority of the world children

receive education in the regular schools. Why must certain children be condemned to segregated educational placement. Mer, (1977) "developed an integration placement list of items to be considered before a child is integrated. This list included: average or better learning rate, ability to comprehend spoken direction and follow large group discussion, willingness to ask questions for Clarification, language, special and emotional development, reading level comparable to that of hearing children, academic skills within one grade levels of others in the class, resilient personality, atleast average self control, ability to relate well to normal adults and peers and speech intelligible enough to be understood by the teacher and peers" Despite the numerous advantage of special schools, experts recognize the inevitable more away from it, to mainstreaming education. Meadow, (1987) "states that the integration of students with handicap into the regular education setting positively influences, the attitudes of non- handicapped students towards their handicapped peers. Integrations between handicapped and non-handicapped students enhance, the educational development of handicapped students".

Hallahan and Kaufman, (1975) stated that mainstreaming is a belief which involved an educational placement procedure and processes for exceptional children based on the conviction that such child should be educated in the least restrictive environment in which his educational and related needs can be satisfactorily provided

Berry, (1972) said the over riding motion in Mainstreaming is "Catch the children being good". It is clear that there will never be enough resources to come close to allowing us to provide special classes for all handicapped children even if we thought that was the best programme. Dunn, (1968) had adverse view of separating a child from the regular class because it seems and may probably have serious debilitating effect upon his self-image.

Reterson and Haralick (1977) explained that sharing the same physical environment does not necessarily lead to social interaction between handicapped and non handicapped less than 30% of the time.

A study done by Anderson (1977) testified to these social and educational value mainstreaming" Modeling of appropriate social behaviour greater understanding of the deaf handicapped by the

hearing and vice-versa to mention a few strategies are of great importance. Mainstreaming, an examination of its concept however of incorporating handicapped children into ordinary schools and providing special education for them in the same setting as Kanfman et al (1975) defined mainstreaming relate to temporary instructional and social integration of eligible exceptional children with normal peers based on an ongoing, individually determined, educational of responsibility among regular and special education administrative, instructional and supportive personnel.

Kirk., et al (1975) state that Mainstreaming as the temporary, instructional, and social integration of eligible exceptional children with normal peers based on an ongoing, individually determined, educational planning programming process. This view may requires clarification of responsibility among regular and special education administrative, instructional and supportive personnel in order to make the concept meaningful.

Cospart, (1968) stated that mainstreaming should not be confined to the school classroom, it is an on going process, having relevance only if it is carried into the hearing handicapped child's everyday experience.

Mainstreaming has been described as a legitimate, noble, and worthy consideration. Provided it places the handicapped child in a learning environment where he can grow academically and emotionally (Katz, et al 1974) thus the handicapped should not be placed in mainstream schools or classes merely for the sake of mainstreaming. Attention should be focused on providing them with quality education and access to resources, as well as architectural structures which would add colour to the programme.

Lindsay et al (1986) the structure of the buildings could promote or inhibit effective integration. Mainstreaming tends to benefit both handicapped and non-handicapped and eventually reduced the negative attitude. Meadow, (1987) state that the integration of students, with handicapped into the regular education setting positively influence the attitudes of non-handicapped students towards their handicapped peers.

Shown, (1980) believed that the concept of mainstreaming as officially stated by the council for exceptional children of the United States, recognized that exceptional children have mild range of special educational needs, which vary greatly in intensity and

duration. He also contended that exceptional children should be educated with non-exceptional children only when the intensity is on environment. Including non exceptional children is even with the provision

Ayodele, (1977) feel that a child with a problems, but placed in a regular learning situation without having attention from a special teacher is a Misfit, the child might feel that his caliber and if any progress is noticed on other children and the special child does not seem to be making a headway, he might get frustrated. Mainstreaming is good for situation where teachers know about the individual problems of the special children to avoid wrong placement. Ilodubar (1977) assets that at the post primary level, there is no special school for the disabled. However, is aware the physically handicapped and the deaf have being gaining admission in ordinary schools. Some of these candidates have been successfully integrated into secondary school, trade centres, and technical colleges.

Hagarty, (1987) stated, that mainstreaming is a term that look root in the United State in 1960 as blacks and others suffering discrimination agitated publicly, campaign to remove the restrictions

that affected them and limited their participation in the mainstream of society.

Morgan, (1975) observed that there seems to be a good deal of special laid and often hypocritical talk about social acceptance and mainstreaming of disable people which is not borne out in practice. Mainstreaming has been described by the National Policy on education being feasible and appropriate for some pupils to a significant degree of hearing impairment.

Unesco, (1968) felt mainstreaming should be directed towards providing equal access to education and integrating all citizens into the economic and social life of community. However, inspite of all that has been said about mainstreaming, its is evidence that, mainstreaming as a total solution to special education, is over simplifying the problems and in the final analysis glosses over, the complexity of individual strategies. Mainstreaming can be considered an alternative to special classes and schools for handicapped children. The uniqueness and individual of each child should be over looked. There will always be child who would profit educationally and socially in the programme, while others would do better in special schools and classes. Mainstreaming therefore is not for all

children irrespective of their temperament and the severity of their handicap. In any case, all those who can gain profit by it, should be given the opportunity. And those already practiced, should be assessed in order to justify the ongoing theories and statement. It was based on this reason the researcher found it deem fit to take this topic.

CHAPTER III

METHODOLOGY

3.0 This chapter dealt with the procedure of mainstreaming on Technical Education Programme of Technical school Malali, Kaduna

The following heading are summarized below

i. Research design

ii. Area of the study

iii. Population

iv. Sample

v. Instrument for data collection

vi. Validation of the instrument

vii. Method of data analysis

viii. Decision rule

3.1 Research Design

The design chosen for this study was pre-experimental design of one group pre-test post-test. The design consists of one group as the name indicate with a pre-test that provide information about the group. It is designated by $O_1 \times O_2$.

One department was selected out of three departments, thus civil engineering, consisting of carpentry and joinery, Building

construction and plumbing sections. Other departments are: Mechanical engineering and Electrical Engineering.

The main reason of this design was to find out level of attention distrupted of the normal students when special teacher was translating instructions made by resource teacher to the handicapped using sign language method in the cause of mainstreaming.

3.2 Area of the study

This study was carried out in Technical school Malali, Kaduna North educational zone of Kaduna State. Others Mainstream schools in Kaduna State were Alhudahuda secondary school, Zaria educational zone, Government Girls Secondary School, Zangon Kataf and Government Secondary School, Fadan Kaje. Zonkwa Educational Zone.

3.3 Population of the Study

The population for the study were mainstreamed students of 160 students of 40 students each class. These students were been in the school for the past 2 and 3 years, and the school have been presenting students for city and Guilds of London, later change to

WAEC Technical and now National Technical certificate, recently embarking on mainstreaming programme already eight (8) years now.

3.4 Samples of the Study

The researcher chose cluster sampling as the sample of study where two classes of 30 students each were randomly selected, out of numerous students of SS III and SS II of carpentry joinery and Building construction sections.

3.5 Instrument for the Data Collection

The instruments used for this study were performance test of 40 objective questions, each drawn from the past National Technical Certificate examination and science and Technical schools promotion examination question papers of English Language and communication, Mathematics, Introduction to building construction and practical.

Relevant topics of instrument were delivered to students with resource, special teacher and the researcher in attendant.

3.6 Validation of the instrument

There were 40 objective questions drawn from the past National Technical Certificate examination and promotion examination question papers which were generated by National Business and Technical Examination Board, and Science and Technical Schools Management Board Kaduna State. These questions were further-more given to researcher supervisor for more testing and validation.

3.7 Administration of the instrument

This study began with the instructions deliver on English Language and Communication, mathematics, introduction to building construction and practical skill.

And Later followed by evaluation and conclusion as required in teaching profession. A test was then administered to the students givens a time frame of one hour, under the invigilation of the researcher. When time lapse answer scripts were collected and students were allowed to leave. After three days of the first test another time was fixed for the second test. The same trends of questions and the same students were tested again also the researcher was the invigilator. When time was off answer script

were collected as the first test. The two sets of test were scored and compared for reliability.

3.8 Method of Data Analysis

The statistical tool employed for this data analysis was ordinal scale of inferential statistic where both treated and control groups were computed using the formular of the following mean, and coefficient of correlation to further text the hypothesis of the study.

3.9 Decision Rule

This rule interpret and draw a conclusion or decision on the finding of this study. Each question on the objective was scored one (1) mark, and hence for 40 questions there were 40 marks. The means score of the pretest and post test would be $X = \Sigma fx/N$ form the data on the tables presented in chapter four (4). And therefore standard deviation is given by formula

$$S^2 = \sqrt{\frac{\Sigma(A-A)}{n}}$$

$$\text{Correlation coefficient } r = \frac{\Sigma ab}{\sqrt{\Sigma a^2 . \Sigma b^2}}$$

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter dealt with dates obtained from the instruments administered for the study.

These questions were administered to 30 students, of 15 normal and 15 deaf on pre-test and post-test basis of three days interval.

Tables of finding presented below showed the individual mean score of students, Group average of students, as for normal and deaf and coefficient correlation of the null hypothesis on each subject tested and the findings were presented as shown on the tables:

Keys

N_1 = Normal students pre-test result

D_1 = Deaf students pre-test result

N_2 = Normal students post –test result

D_2 = Deaf students post test result

N = Normal students ind. mean score

D = Deaf student ind. mean score

N = Group Average of normal Students

$\overline{D}$ = Group Average of Deaf students

$\overline{N}$ = Total number of students participated

A. **Research question I**

What are the individual progress between the normal and handicapped students on English language and communication SS III?

From data Presented on table I shown that the individual mean score of normal students with 36. 5 points and 34 points appeared in the first and second positions, while 35.5 points of handicapped students came in the third position.

Thus, shown a difference of 4 points between first and third position.

Research question II

What are the suitable learning programme for the handicapped student?

From the data presented on table 1 on group average results, for English language and communication SS III shown that the group average score of 26.73 points for handicapped student appeared greater than 25.87 points of the normal students.

Thus, showing a difference of 0.86 points

Hypothesis I

There will be no significant difference between normal and handicapped students in general subjects, English language and communication SS III.

This hypothesis was tested using the coefficient correlation formula as follows

$$r = \frac{\Sigma ab}{\sqrt{\Sigma a^2 . \Sigma b^2}}$$

Under the level range of + ve 1 or – ve 1 for complete agreement or complete disagreement respectively.

Data for this were presented on the table I, as follows:

$$r = \Sigma ab = 127.1974$$

$$\Sigma a^2 = 437.8695$$

$$\Sigma b^2 = 298.4335$$

Therefore:

$$r = \frac{127.1974}{\sqrt{(437.8695)\ (298.4335)}}$$

$$= \frac{127.1974}{361.4898}$$

$$= 0.351869$$

Thus, result shown a complete agreement with the null hypothesis, under the level range of + Ve 1.

TABLE 1: ENGLISH LANGUAGE AND COMMUNICATION SS III N = 30

S/NO	PRE_TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{D_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	b^2	ab
1	21	26	25	30	23	28	-2.87	1.27	8.2369	1.6129	-3.6449
2	23	29	27	32	25	30.5	-0.87	3.77	0.7569	14.2129	-3.2799
3	30	30	21	35	25.5	32.5	-0.37	5.77	0.1369	33.2929	-2.1349
4	20	22	36	27	28	24.5	2.13	-2.23	4.5369	4.9779	-4.7499
5	29	30	34	31	31.5	30.5	5.63	3.77	31.6969	14.2129	21.2251
6	11	30	30	29	20.5	29.5	-5.37	2.77	28.8369	7.6729	-14.8749
7	36	27	37	26	36.5	26.5	10.73	-0.23	115.1329	0.0529	-2.4679
8	35	30	33	29	34	29.5	8.13	2.77	66.0906	7.6729	22.5201
9	17	19	20	27	18.5	23	-7.37	-3.73	54.3169	13.9129	27.4901
10	19	20	28	31	23.5	25.5	-2.37	-1.23	5.6169	1.5129	2.9151
11	24	17	19	19	21.5	18	-4.37	-8.73	19.0969	76.2129	38.1501
12	23	21	34	23	28.5	22	2.63	-4.73	6.9169	22.3729	-12.4399
13	26	29	36	30	31	29.5	5.13	2.77	26.3169	7.6727	14.2101
14	20	32	26	33	23	32.5	-2.87	5.77	8.2369	33.2929	-16.5599
15	13	18	23	20	18	19	-7.87	-7.73	61.9369	59.7529	60.8351
			Total						437.8695		
			Average $\overline{N}$		25.87					298.4335	127.1974
					$\overline{D}$ =	26.73					

B. **Research question I**

What are the individual progress between the normal and handicapped students on mathematics SSIII?

From the data presented on table II. The result for mathematics SS III, shown that the individual mean score of handicapped students with 27.5points and 24 points appeared first and second position, while 22.5 points of the normal students came the third position.

Thus, shown a difference of 5 points between the first and third position.

Research question II

What are the suitable learning programme for the handicapped students?

From the data presented on table II for mathematics SS III, shown that a group average of handicapped students with 21.7 points appeared greater than 17.27 points of the normal students.

Thus, shown a difference of 4.43 points.

Hypothesis I

There will be no significant difference between normal and handicapped students in mathematics SS III.

This hypothesis was tested using the coefficient correlation formula as follows:

$$r = \frac{\Sigma ab}{\sqrt{\Sigma a^2 \cdot \Sigma b^2}}$$

under the level range of + ve 1 or –ve 1

for complete agreement or complete dis-agreement respectively

Data for this were presented on table II,

Mathematics SS III, as follow:

$$\Sigma ab = 58.6940$$

$$\Sigma a^2 = 140.4335$$

$$\Sigma b^2 = 199.9000$$

Therefore:

$$r = \frac{58.6940}{\sqrt{(140.4335)\ (199.9000)}}$$

$$= \frac{58.6940}{167.548}$$

$$= 0.354$$

Thus, the result shown complete agreement with the null hypothesis, under the level range of + ve 1

TABLE II: MATHEMATICS SS III

S/NO	PRE_TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{D_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	$b2$	ab
1	14	21	25	24	19.5	22.5	2.23	0.8	4.9729	0.64	1.784
2	18	25	10	16	14	20.5	-3.27	-1.2	10.6929	1.44	3.924
3	13	21	15	20	14	20.5	-3.27	-1.2	10.6929	1.44	3.924
4	14	25	23	37	18.5	31	1.23	9.3	1.5129	86.49	11.439
5	29	24	10	23	19.5	23.5	2.23	1.8	4.9729	3.24	4.014
6	27	25	11	30	19	27.5	1.73	5.8	2.9929	33.64	10.034
7	19	24	26	24	22.5	24	5.23	2.3	27.3529	5.29	12.029
8	18	19	10	24	14	21.5	-3.27	-0.2	10.6929	0.04	0.654
9	20	22	10	20	15	21	-2.27	-0.7	5.1529	0.49	1.589
10	18	13	10	21	14	17	-3.27	-4.7	10.6929	22.09	15.368
11	15	18	19	22	17	20	-0.27	-1.7	0.0729	2.89	0.459
12	15	17	10	20	12.5	18.5	-4.77	-3.2	22.7529	10.24	15.264
13	20	20	24	19	22	19.5	4.73	-2.2	22.3729	4.84	-10.406
14	19	16	20	17	19.5	16.5	2.23	-5.2	4.9729	27.04	-11.596
15	17	20	19	24	18	22	0.73	0.3	0.5329	0.09	0.219
									140.4335		
			Average $\overline{N}$		17.2 $\overline{D}$	21.7				199.9	58.694

C. **Research question I**

What are the individual progress between the normal and handicapped students on occupational subject, such as introduction to building construction (IBC) SS III?

From the data presented on table III, that read introduction to building construction SS III, shown the individual mean score of handicapped students with 33 points and 31 points appeared in the first and second position, while 30 points was for both handicapped and normal students.

Thus, shown a difference of 3 points between the first and third position.

Research question II

What are the suitable learning programme for the handicapped students?

From the data presented on table III, that read introduction to building construction SS III, shown a group average result of 25.63 points for the handicapped students, which appeared greater than 21 . 2 points of the normal students.

Thus, shown a difference of 4.43 points

Hypothesis II

There will be no significant difference between normal and handicapped students on occupational subject, such as introduction to building construction (IBC) SS III.

This hypothesis was tested using the coefficient correlation formula

$$r = \frac{\Sigma ab}{\sqrt{\Sigma a^2 . \Sigma b^2}}$$

Under the level range of +ve 1 or –ve 1 for complete agreement or complete disagreement respectively.

Dada presented on table III, introduction to building construction (IBC) SS III, shown that

$$\Sigma ab = -92.65$$
$$\Sigma a^2 = 218.45$$
$$\Sigma b^2 = 395.17$$

Therefore:

$$r = \frac{-92.65}{\sqrt{(218.45)\ (395.17)}}$$

$$= \frac{-92.65}{293.8123}$$

$$= -0.315$$

Thus, the result shown complete disagreement with the null hypothesis, under the level range of –ve 1.

TABLE III: INTRO. TO BUILDING CONSTRUCTION SS III, N = 30

S/NO	PRE_TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{D_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	$b2$	ab
1	20	25	28	26	24	25.5	2.8	-0.13	7.84	0.0169	-0.364
2	24	28	21	26	22.5	27	1.3	1.37	1.69	1.8767	1.781
3	26	24	25	24	25.5	24	4.3	-1.63	23.04	2.6569	-7.009
4	20	19	24	18	22	18.5	0.8	-7.13	0.64	50.8389	-5.704
5	29	25	31	27	30	26	8.8	0.37	77.44	0.1369	3.256
6	10	24	23	24	16.5	24	-4.7	-1.63	22.09	2.6569	7.661
7	22	31	22	29	22	30	0.8	4.37	0.64	19.0969	3.496
8	25	18	24	17	24.5	17.5	3.3	-8.13	10.89	66.0969	-26.829
9	17	30	17	32	17	31	-4.2	5.37	17.64	28.8369	-22.554
10	14	29	21	35	17.5	32	-3.7	6.37	13.69	40.5769	23.569
11	18	19	21	17	19.5	18	-1.7	-7.63	2.89	58.2169	12.971
	11	26	29	29	20	27.5	-1.2	1.87	1.44	3.4969	-2.244
13	22	20	20	19	21	19.5	-0.2	6.13	0.04	37.5769	1.226
14	20	34	22	32	21	33	-0.2	7.37	0.04	54.3169	-1.474
15	15	29	15	33	15	31	-6.2	5.37	38.44	28.8369	-33.294
			Average $\overline{N}$		21.2 $\overline{D}$	25.63			218.45		
										395.1735	-92.65

D. Research Question 1

What are the individual progress between the normal and handicapped students on practical skill SS III?

From the data presented on table IV, practical (wood work) SS III, the result shown the individual mean score of handicapped students with 40 points, 38 points and 36 points appeared first, second and third position while a 35 points appeared fourth position for the normal student.

Thus, shown a difference of 5 points between first and fourth position.

Research question II

What are the suitable learning programme for the handicapped students?

From the data presented on table IV, practical (wood work) SS III, shown a group average of 30.63 points for the handicapped students, appeared greater than 26. 53 points of the normal students.

Thus, shown a difference of 4.1 points.

Hypothesis III

There will be no significant difference between normal and handicapped students on practical (woodwork).

From the data presented on table IV, practical (wood work) SS III, shown the following

$$\Sigma ab = -71.8165$$

$$\Sigma a^2 = 244.6055$$

$$\Sigma b^2 = 395.2335$$

Therefore:

$$r = \frac{-71.8165}{\sqrt{(244.6055)\ (395.2335)}}$$

$$= \frac{-71.8165}{310.9281}$$

$$= -0.23097$$

Thus, the result shown complete disagreement with the null hypothesis, under level range of –ve 1.

TABLE IV: PRACTICAL (WOOD WORK) SS III, N = 30

S/NO	PRE-TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{B_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	b^2	ab
1	33	30	25	31	29	30.5	2.47	-01.13	6.1009	1.0169	-0.3211
2	26	33	29	31	27.5	32	0.97	1.37	0.9409	1.8769	1.3289
3	30	29	31	29	30.5	29	3.97	-1.63	15.7609	2.6569	-6.9711
4	29	24	25	23	27	23.5	0.47	-7.13	0.2209	50.8369	-3.3511
5	36	30	34	32	35	31	8.47	0.37	71.9409	0.1369	3.1339
6	28	29	15	29	21.5	29	-0.03	-1.63	25.3009	2.6569	8.1989
7	27	36	37	34	32	35	5.57	4.37	29.9209	19.0969	23.9039
8	29	23	30	22	29.5	22.5	2.97	-8.13	8.8209	66.0969	-24.1461
9	22	35	22	37	22	36	-4.53	5.37	20.5209	28.8369	-24.3261
10	26	34	19	40	22.5	37	-4.03	6.37	16.2409	40.5769	-25.6711
11	26	24	23	22	24.5	23	-2.03	-7.63	4.1209	58.2169	15.4889
12	34	31	16	34	25	32.5	-1.53	1.87	1.5129	3.4969	-2.8611
13	25	25	27	24	26	24.5	-0.53	-6.13	0.2809	37.5769	3.2489
14	27	39	25	37	26	38	-0.53	7.37	0.2809	54.3169	-3.9061
15	20	24	20	38	20	36	-6.53	5.37	42.6409	28.8369	36.0661
			Average $\overline{N}$		26.53				244.6055		
					$\overline{D}$ =	30.63				395.2335	-71.8165

E. Research question I,

What are the individual progress between the normal and handicapped students on English language and communication SS II?

From the data presented on table V, shown the individual mean score of 37 points and 31 points of the normal students appeared first and second position, while 30 points came the third position

Thus, shown a difference of 7 points between first and third position.

Research question II

What are the suitable learning programme for the handicapped students?

From the data presented on table V, shown the group average of 25.43 points, of the normal students which appeared greater than 24.33 points of handicapped students.

Thus, shown a difference of 1.1 point

Hypothesis I

There will be no significant difference between normal and handicapped students on English Language and Communication SSII.

Data presented on table v, shown the following

$$\Sigma ab = 45.0459$$

$$\Sigma a^2 = 309.4339$$

$$\Sigma b^2 = 138.3335$$

Therefore:

$$r = \frac{45.0459}{\sqrt{(309.4339)\,(138.3335)}}$$

$$= \frac{45.0459}{206.8937}$$

$$= 0.2177$$

Thus, the result shown complete agreement with the null hypothesis under the level range of + ve 1.

TABLE V: ENGLISH LANGUAGE AND COMMUNICATION SS II, N = 30

S/NO	PRE-TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{D_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	b^2	ab
1	25	25	27	18	26	21.5	0.57	-2.83	0.3249	8.0089	1.6131
2	24	21	23	-	23.5	21	-1.93	-3.33	3.7249	11.0889	6.4269
3	19	30	21	20	20	25	-5.43	0.67	29.4849	0.4489	-3.6381
4	27	26	27	28	27	27	1.57	2.67	2.4649	7.1289	4.1919
5	22	25	22	14	22	19.5	-3.43	-4.83	11.7649	23.3289	16.5669
6	25	29	23	20	24	24.5	-1.43	0.17	2.0449	0.0289	-0.2431
7	21	28	26	27	23.5	27.5	1.93	3.17	3.7249	10.489	6.1181
8	30	21	32	21	31	21	5.57	-3.33	31.0249	11.0889	-18.5481
9	37	24	37	27	37	25.5	11.57	1.17	133.8649	1.3089	13.5369
10	19	20	22	19	20.5	19.5	-4.93	24.83	24.3045	23.3289	23.8119
11	34	28	26	25	30	26.5	4.57	2.17	20.8849	4.7089	9.9169
12	23	31	23	29	23	30	-2.43	5.67	5.9049	32.1489	13.7781
13	27	29	20	20	23.5	24.5	-1.93	0.17	3.7249	0.0289	-0.3281
14	20	26	22	26	21	26	-4.43	1.67	19.6249	2.7889	-7.3981
15	29	27	30	25	29.5	26	4.07	1.67	16.5649	2.7889	6.7969
									309.4335		
				$\overline{N}$ =	25.43	$\overline{D}$ 24.33				138.3335	45.0459

F. Research Question I

What are the individual progress between the normal and handicapped students on mathematics SSII?

From the data presented on table vi for mathematics SS II, shown the individual mean score of 26 points for the handicapped student appeared the first position, and 23 points for the normal student came the second position, while 22.5 points appeared for both normal and the handicapped students which occupied the third position.

Thus, shown a difference 3.5 points between first and third position.

Research question II

What are the suitable learning programme for the handicapped students?

The data presented on table iv for mathematics SS II shown the group average of 18.43 points for handicapped students appeared greater than 18.33 points of the normal students.

Thus, shown a difference of 0.1 point

Hypothesis I

There will be no significant difference between normal and handicapped students on mathematic SS II.

The data presented on table VI, shown the follow:

$$\Sigma ab = -20.537$$

$$\Sigma a^2 = 87.6935$$

$$\Sigma b^2 = 156.9335$$

Therefore:

$$r = \frac{-20.537}{\sqrt{(87.6935)\,(156.9335)}}$$

$$= \frac{-20.587}{115.8071}$$

$$= -0.1773$$

Thus shown complete disagreement with the null hypothesis, under the level range of –ve 1

TABLE VI: MATHEMATICS SS II, N = 30

S/NO	PRE-TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{D_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	b^2	ab
1	15	20	26	15	20.5	17.5	2.17	-0.93	4.7089	0.8649	-2.018
2	16	13	19	-	17.5	13	-0.83	-5.43	0.6889	29.4849	4.506
3	19	25	20	11	19.5	18	1.17	-0.43	1.3689	0.1849	0.503
4	13	17	26	-	19.5	17	1.17	-1.43	1.3689	2.0449	1.673
5	15	20	20	18	17.5	19	-0.83	0.57	0.6889	0.32.49	-0.473
6	17	19	20	11	18.5	15	0.17	-3.43	0.0289	11.7649	-0.583
7	12	19	23	-	17.5	19	-0.83	0.57	0.6889	0.3249	-0.473
8	23	14	23	13	23	13.5	4.67	-4.93	21.8089	24.3049	-23.023
9	12	21	20	18	16	19.5	-2.33	1.07	5.4289	1.1449	-2.493
10	11	20	18	25	14.5	22.5	-3.83	4.07	14.6689	16.5649	-15.588
11	10	22	20	19	15	20.5	-3.33	2.07	11.0889	4.2849	-6.893
12	23	19	19	-	21	19	2.67	0.57	7.1289	0.3249	1.522
13	20	33	20	19	20	26	1.67	7.57	2.7889	57.3049	12.641
14	12	18	22	15	17	16.5	-1.33	-1.93	1.7659	3.7249	2.566
15	21	21	23	20	22	20.5	3.67	2.07	13.4689	4.2849	7.596
									87.6935		
				$\overline{N}$ =	18.33	$\overline{D}$ = 18.43				156.9335	-20.537

G. Research Question I

What are the individual progress between the normal and handicapped students on occupational subject, such as introduction to building construction SSII?

The data presented on table VII, introduction to building construction SSII, shown that the individual mean score of 35 points and 33 points of normal student appeared first and second position while 31.5 points came the third position for both normal and handicapped students.

Thus, shown a difference of 3.5 points between first and the third position.

Research questions II

What are the suitable learning programme for the handicapped students?

From the data presented on table VII, introduction to building construction SSII, shown a group average of 28. 33 points for the normal students appeared greater than 26.13 points of the handicapped students.

Thus, shown a difference of 2.2 points between normal and handicapped students.

Hypothesis II

There will be no significant difference between normal and handicapped students on occupational subject such as introduction to building construction SSII.

From the data presented on table VII, introduction to building construction SSII, shown as follows

$$\Sigma ab = -59.4145$$

$$\Sigma a^2 = 205.8335$$

$$\Sigma b^2 = 244.2335$$

Therefore:

$$r = \frac{-59.4145}{\sqrt{(205.8335)\,(244.2335)}}$$

$$= \frac{-59.4145}{50271.41554}$$

$$= -0.0011818$$

Thus, shown complete disagreement with the null hypothesis, under the level range of – Ve 1.

TABLE VII: INTRO. TO BUILDING CONSTRUCTION SS II, N = 30

S/NO	PRE-TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{D_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	b^2	ab
1	24	23	30	20	27	21.5	-1.33	-4.63	1.7689	21.4369	6.1579
2	31	21	28	-	29.5	21	1.17	-5.13	1.3689	26.3169	-6.0021
3	32	33	29	20	30.5	26.5	2.17	0.37	4.7089	0.1369	0.8029
4	30	29	31	34	30.5	31.5	2.17	5.37	4.7089	28.8369	11.6529
5	24	30	26	23	25	26.5	-3.33	0.37	11.0889	0.1369	-1.2321
6	31	32	30	20	30.5	20	2.17	-0.13	4.7089	0.0169	-0.2821
7	24	29	20	32	22	30.5	-6.33	4.37	40.0689	19.0969	-27.6621
8	28	29	30	20	29	24.5	0.67	-1.63	0.4489	2.6569	-1.0921
9	38	24	32	25	35	24.5	6.67	-1.63	44.4889	2.6569	-10.8721
10	19	26	23	27	21	26.5	-7.33	0.37	53.7289	0.1369	-2.7121
11	31	26	35	15	33	20.5	4.67	-5.63	21.8089	31.6969	-26.2921
12	29	39	25	33	27	36	-1.33	9.87	1.7689	97.4169	-13.1371
13	32	33	31	23	31.5	28	3.17	1.87	10.0489	3.4969	5.9279
14	25	25	29	21	27	23	-1.33	-3.13	1.7689	9.7969	4.1629
15	26	26	27	25	26.5	25.5	-1.83	-0.63	3.3489	0.3969	1.1529
									205.8335		
				$\overline{N}$ =	28.33	$\overline{D}$ = 26.13				244.2335	-59.4145

H. Research Question I

What are the individual progress between the normal and handicapped students on practical (Wood work) SS II?

From data presented on table VIII, practical woodwork SSII, shown the individual mean score of 38.5 points for normal student appeared in the first position, and 37 points of the handicapped student appeared second position, while 36.5 points for both normal and handicapped students came third position. Thus, shown a different of 2 points between first and the third position

Research question II

What are the suitable learning programme for the handicapped students?

From the data presented on table VIII practical wood work SSII, shown the group average of 33.06 points of handicapped students appeared greater than 30.56 points of the normal students.

Thus, shown a different of 2.5 points

Hypothesis III

There will be no significant difference between normal and handicapped students on practical (wood work) SS II.

From the data presented on table VIII, practical (wood work) SS II, shown the following

$$\Sigma ab = -30.8072$$

$$\Sigma a^2 = 242.9340$$

$$\Sigma b^2 = 166.4340$$

Therefore:

$$r = \frac{-30.8072}{\sqrt{(242.9340)\,(166.4340)}}$$

$$= \frac{-30.8072}{4032.47736}$$

$$= -0.0076$$

Thus, shown complete disagreement with the null hypothesis, under level range of –ve 1.

TABLE VIII: PRACTICAL (WOOD WORK) SS II, N = 30

S/NO	PRE-TEST SCORES 40 marks N_1	D_1	POST-Test Scores 40 marks N_2	D_2	Mean Scores $\frac{N_1+N_2}{2}$	Mean Scores $\frac{D_1+D_2}{2}$	$(N - \overline{N}) = a$	$(D - \overline{D}) = b$	a^2	b^2	ab
1	25	29	28	35	26.5	32	-4.06	-1.06	16.4836	1.1236	4.3036
2	20	36	26	33	23	34.5	-7.56	1.44	57.1536	2.0736	-10.8864
3	25	37	38	34	31.5	35.5	0.94	2.44	0.8836	5.9536	2.2936
4	39	35	24	36	36.5	35.5	5.94	2.44	35.2836	5.9536	14.4936
5	28	29	35	31	31.5	30	0.94	-3.06	0.8836	9.3636	-2.8764
6	25	36	37	35	31	35.5	0.44	2.44	0.1936	5.9036	1.0736
7	37	29	34	25	35.5	27	4.94	-6.06	24.4036	36.7236	-29.9364
8	25	33	34	35	29.5	34	-1.06	0.94	1.1236	0.8836	-0.9964
9	30	37	29	37	29.5	37	-1.06	3.94	1.1236	15.5236	-4.1764
10	32	24	25	28	28.5	26	-2.06	-7.06	4.2436	49.8436	14.5436
11	20	36	31	38	25.5	37	-5.06	3.94	25.6036	15.5236	-19.9364
12	38	34	39	30	38.5	32	7.94	-1.06	63.0436	1.1236	-8.4104
13	28	37	38	36	33	36.5	2.44	-3.44	5.9536	11.8336	8.3936
14	26	30	30	35	28	32.5	-2.56	-0.56	6.5536	0.3136	1.4336
15	30	28	31	34	30.5	31	0.06	-2.06	0.0036	4.2436	-0.1236
				$\overline{N}$ =	30.56	$\overline{D}$ = 33.06			242.934	166.434	-30.8072

Summary of Findings

1. From all the results presented on tables I – VIII for the individual mean score of general subject, occupational and practical skill SS III, the handicapped students lead on most science and technical subjects such as mathematics, introduction to building construction and practical except on English language and communications. However, on the same subject SS II, this was not the same, the normal students SS II lead on most subject although there were subject the result interwove between normal and handicapped students.
2. Similarly, the result on group average presented on tables I – VIII, shown handicapped students leading on most subject SS III except English language and communication. But the result for SS II on group average differ from SSIII, which shown normal students leading on most subjects and interwoven in some subject
3. For the hypothesis, tested using coefficient correlation formula, under the level range of + ve 1 or –ve 1 for complete agreement or complete disagreement respectively. The result calculated shown a ration 3:5 for complete agreement and complete disagreement with null hypothesis.

4. It could be argued that mainstreaming is not the solution to the educational problems of the deaf handicapped children, most especially on the technical or craftsmanship in Nigeria. As it was found in this study the problem of attention disruption and interpretation of information, during the sign language done by the special teacher in the acts of translating information made by resources teacher.

5. It was clearly stated as against the teaching profession ethics to have two teachers, standing before the students, teaching at the same time in the same class.

6. Science and Technical teachers should be trained in sign language communication to eliminate the difficulties of translating science and technical terminologies and other important points of the lesson.

Discussion of findings

The findings of this research work, shown the individual mean score, group average and the coefficient correlation between the normal and handicapped students, on subject tested such as English language, Mathematics, introduction to building construction and practical wood work for both SS III and SS II.

And the results obtained clearly indicate the performance of these students as per individual mean score, group average and coefficient correlation between normal and handicapped students in Technical Education programme.

Based upon these results computed the researcher was convinced that the results inter-woven between the two year group, whilst the handicapped students lead on science and technical subjects SS III, normal students equally took lead on same subject SS II.

This could means, the result was on the way proving the assumption already made by the researcher that the normal students were suffering from attention disruption during the sign language exercise, done by the special teacher, at the cause of signing information to handicapped students, when the resource teachers was passing instruction.

Hypothesis were tested under the level range of + ve 1 or –ve 1 for complete agreement or disagreement with the null hypothesis, and these shown a result of the ratio 3:5. which means that out of the eight subject tested three (3) shown complete agreement with null hypothesis, while five (5) shown complete disagreement with the null hypothesis.

Thus, the result on complete disagreement shown more than one and half of complete agreement. These findings were consistent with the reports of the following people.

Meadow, (1987) that state the integration of students with handicapped into the regular education setting positively influence the attitudes of non-handicapped students toward their handicapped peers. Also enhance, the educational development of handicapped student.

Berry, (1972) said the over –riding motion in Mainstreaming is "catch the child being good"

Mirr, (1977) developed an integration placement list of items to be considered before a child is integrated. This list include:

"Average or better learning rate, ability to comprehend spoken direction and follow large group discussion, willingness to ask questions for clarification, language, special and emotional development, reading level comparable to that to hearing children academic skills within one grade levels of others in the class, resilient personality at-least average self control, ability to relate well to normal adults and peers and speech intelligible enough to be understood by the teacher and the peers.

Kirk, et al (1975) state that mainstreaming as the temporary, instructional and social integration of eligible exceptional children with normal peers based on the ongoing, individual determined education planning programming process. This view may requires clarification of responsibility among regular and special education administration, instructional and supportive personnel in order to make the concept meaningful.

Katz, et al (1974) state that the handicapped should not be placed in mainstream schools or classes merely for the sake of mainstreaming. Attention should be focused on providing them with quality education and access to resources as well as architectural structure which would add colour to the programme.

Shown, (1977) believed that the concept of mainstreaming as officially stated by the council for exceptional children of the United state, recognized that exceptional children have mild range of special educational needs, which vary greatly in intensity and direction. He also contended that exceptional children should be educated with non-exceptional children only when the intensity is on the environmental.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter present the following sub-headings:

5.1 Summary of the study

5.2 Implication of the Study

5.3 Conclusion

5.4 Recommendation

5.5 Suggestion for further research

5.1 Summary of the Study

The purpose of this study was to assess the effect of mainstreaming deaf students into Technical Education programme, specifically the study intends to find out.

The individual progress between normal and deaf students in General subjects occupational subject, and practical skills.

Also to find out a suitable learning programme for the deaf students

There were two (2) research questions raised for this study and thus:

What are the individual progress between deaf and normal students in regular class?

What are the suitable learning programme for deaf students in Technical education programme?

The following null hypotheses were tested in the study at +ve 1 or ve 1 for complete agreement or disagreement respectively using coefficient correlation methods:

Ho_1 - There will be no significant difference between normal and deaf students on General subjects such as English Language and communication and Mathematics.

Ho_2 - There will be no significant difference between normal and deaf student on occupational subjects example introduction to building construction

Ho_3 - There will be no significant different between normal and deaf students on practical skills example (wood work practical).

The population for this study were the mainstreamed students of 40 students each class. These students were been in the school for the past 2 and 3 years, and the school has been graduating mainstreamed students, for eight (8) years now, under the National examination council called NABTEB i.e National Business and Technical Examination Board for the award of National Technical Certificate (NTC). The sampling method employed for this study was cluster sample, where two classes of 30 students each were

randomly selected out of numerous students of SS III and SS II of carpentry joinery and building construction section.

And method employed for data collection and analysis were performance test of pre-test post test of 40 objective questions drawn from National and State Examination bodies past question papers on subjects such as English Language, mathematic, introduction to building construction and practical skill.

And the result from these test were analyzed using ordinate scale of inferential statistic, where both treated and control groups were computed, for mean score group average and coefficient correlation to test the null hypotheses of the study.

From the result shown on table I – VIII, the individual mean score has no definite position between normal and deaf students, but it was mostly won the handicapped students especially on science and Technical subjects. Similarly the results on group average for both SSIII and SS II, it was shown handicapped students leading except on one (1) subject.

However, the result on coefficient correlation shown ration 3:5 for complete agreement and disagreement respectively with the with hypotheses.

5.2 Implication of the Study

After discussion of the findings, at the end of this study. It was clearly found that the deaf students benefited most from this programme of mainstreaming into technical education programme for the fact that they are now pull out of discrimination from the social activities of the society. Moreover gain a lot from the occupation hand work experience which pull them out of begging on the street and become self reliance throughout their life time.

The society also benefited from this programme in the same way, it has lessen the number of beggars on the street and gain more of labour force, this would make cheap labour and enhance the productivity and creativity as more hands into the occupational works.

And finally all the tiers of Government and parent would have relieved of educational segregation among their children or people and joined the world in fighting against unequal right to Education as contained in the United Nations General Assembly (1975) that state:-

> "Disable person have the right to education which will enable them to develop their capacities and skills and

will hasten the process of their social integration" (Educare 1979).

5.3 Conclusion

At this junction in time the researcher wish to conclude the study by pointing out a contributing factor which may probably cause the low performance of the normal student as contained in the assumption of the study.

It was also found that some normal students develop interest on sign language, so that they can use it to communicate with deaf students in the hostel and when teachers are not in the class. Based on these reasons and others it is concluded that the suitable learning programme not only for deaf students alone but for the mainstreamed class as whole, is to provide special hearing aids for the deaf student as this would totally eliminate the act of attracting attention of the normal students since from the concept of learning five (5) senses are better than four (4). Also by providing the hearing gadget it means reducing the number of special teachers, in that respect they could be simply used for another

professional subjects, and it would enhance the deaf students to feel more part of the society since they can equally hear and receive instruction direct from the resource teacher without the involvement of special teacher, who may some time mis-instruct them for the reason of chain of information, since he is not professional in all subject These facts are consistence with the report of Katz et al (1974) which described mainstreaming as legitimate noble, and worthey consideration. Provided it place the handicapped child in a learning environment where he can grow academically and emotionally thus the handicapped should not be placed in mainstreaming schools or classes merely for the sake of mainstreaming. Attention should be focused on providing them with quality education and access to resources, as well as architectural structure which would add colour to the programme.

5.4 **Recommendations**

Based on the findings of the study the following recommendation are made:

i. Special hearing aids or gadgets to ease the case of attracting attention of peer group by sign language teacher and also to make the deaf students feel more part of the society by equally

receiving instructions with their peers without involvement of the special teachers.

ii. They should be given places in tertiary institutions to further their education especially on industrial and Technical programmes

iii. Government, non Government organisation and society should provide suitable employment opportunities for handicapped with occupational training.

iv. Government and parents should join hands together in providing this children with tools and equipment after their training from technical institutions for those who wish to do some field work before proceeding for further education

v. Government should establish sheltered workshop for those handicapped who after training, can not bid on equal terms with others for recruitment into commerce and industry.

5.5 Suggestion for Further Research

1. Upon the completion of this study, the researcher wish to suggest repeating of the topic to cover the whole Kaduna State mainstreamed school, as there were three (3) others in different education zone of the state.

2. Moreover the study can also be improved further to cover the country at large.

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APPENDIX I

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION

AUTO TECHNOLOGY
BUILDING TECHNOLOGY
ELECT/ELECT TECHNOLOGY
METAL TECHNOLOGY
WOOD TECHNOLOGY

YOUR REF: _____
OUR REF: ITE/SP/09/2002

DATE: 9th Oct. 2003

THE PRINCIPAL
GOVERNMENT TECHNICAL COLLEGE MALALI,
KADUNA.

LETTER OF INTRODUCTION FOR CANDIDATE CARRYING OUT RESEARCH WORK

SALISU, Y. Z. is an undergraduate student of the Department of Industrial and Technology Education of the Federal University of Technology, Minna. He/~~She~~ is currently under taking a research work on.

ASSESSMENT OF MAINSTREAMING HANDICAPPED STUDENT INTO TECHNICAL EDUCATION PROGRAMME IN TECHNICAL SCHOOL MALALI, KADUNA.

It would be highly appreciated if you could supply him/~~her~~ with the information he/~~she~~ may require from you. All information from you will be treated confidentially.

Thank you so much for your cooperation.

DR. K. A. SALAMI
Project Coordinator

APPENDIX II

MATHEMATICS OBJECTIVE QUESTIONS FOR SSII, DRAWN FROM PROMOTION EXAMINATION QUESTION PAPER (STSMB)

INSTRUCTION: ANSWER ALL QUESTIONS

CHOOSE THE CORRECT ANSWER IN THE FOUR OPTIONS A-D

TIME 1 ½ HOUR

1. Simplify (20)÷ (-4)

   (a) 24 (b) 16 (c) 5 (d)–5

2. Reduce 98/112 to it lowest term

   (a) 7/8 (b) 2/3 (c) 17/112 (d) 1/8

3. Simplify $3^{1/3} - 4^{4/5} + 2^{1/4}$

   (a) $2^{23/60}$ (b) $4.^{7/60}$ (c) 2 3/6 (d) d. $1^{3/60}$

4. Multiply 50.32 by 0.003

   (a) 0.01596 (b) 0.15096 (c) 0.15.396 (d) 15.095

5. Find the value of n if $0.00000067 = n \times 10^{-7}$

   (a) 67 (b) 6.7 (c) 0.67 (d) 0.067

6. Convert 105 tan to a binary number

   (a) 1000/011 b. 1010011 (C) 1100011 (d) 1101001

7. Evaluate 34.83 x 5 5.427

   (a) 189.0 (b) 189.1 (c) 18.91 (d) 0.1891

8. Express 20% as fraction

   (a) 2/5 (b) 1/5 (c) 2/3 (d) 4/5

9. Which is the formula used in finding simple interest

(a) 1= PTR/2 (b) 1=1001/PT (c) 1=PTR/100 (d) 100/PTR

10. Make x the subject of the formula if L= E/x +y

(a) E/L + Y (b) E-LY/L (c) Y-E/LY (d) E-L/LY

11. Factorise $x^2 - x$ x-12

(a) (x-1) (x+12) (b) (x-4) (x+3) (c) (x-3) (x+4) (d) (x-3) (x-4)

12. Simplify 6- (-14) / (-12)

(a) 22 (b) 18 (c) 8 (d) 6

13. Simplify $\frac{6x^3\ y3}{15\ x^2\ y^7}$

(a) 2x3 /3y (b) 3x/5y4 (c) 3y4/5x (d) 2 x /5y4

14. If 2y = 32 find the value of y

(a) 5 (b) 3 (c) 13 (d) 6-

15. Find the simple interest of N600 for 5 years at 9%

(a) N-300 (b) N-61 (c) N-270 (d) N400

16. Use logarithm table to find log of 2

(a) 0.3010 (b) 0.4770 (c) 3011 (d) 0.3101

17 If logs 125 = x, find x

(a) 4 (b) 3 (c) 2 (d). 5

18 Evaluate (81/16)½

19. Simplify $2a \times 3a^2$

(a) $2a^3$ (b) $3a^3$ (c) $6a^2$ (d) $6a^3$

20. Evaluate (m-n) (u+v) it m = 5, n-3u – 1 and v-2

(a) 5 (b) 3 (c) 6 (d) 8

21. If $0.030028 = 3.0028 \times 10^{n}$ what is n?

(a) 2 9b) -1 (c) 1 (d) -2

22. Factorise completely $5-1257x^2$

(a) $1-25x^2$ (b) (1+5x) (c) 5(1-5x) (1+5x) (d) 5(1-5x) (1-5x)

23. What is the probability of having an odd number in a single loss of a fair die?

(a) ½ (b) 5/6 (c) 1/3 (d) 2/3

24. The angles of a triangle are $2y^o$, $3y^o$, and $4y^o$, find y^o

(a) 80^o (b) 20^o (c) 40^o (d) 10^o

25. Express 2.25 /0.015 in standard form

(a) $15x10^2$ (b) 1.5×10^2 (c) $1.5x10^{-1}$ (d) 15×10^2

26. Find x in the equation $x^{-2/3} = 9$

(a) 27 (b) 1/27 (c) -27 (d) 1/9

27 The simple interest on N600 for 5 years at 9%

(a) N300 (b) 270 (c) N200 (d) 350

28. Evaluate 6.085666 correct to 3 significant figure

(a) 6.085 (b) 6.086 (c) 6.09 (d) 6.08

29. Find the area of a circle with radius 7 cm, if = 22/7

(a) $154cm^2$ (b) $49cm^2$ (c) cm^2 (d) 54.cm

30 Evaluate without using table $(0.04)^2$

(a) 0.0016 (b) 0.16 (c) 0.60 (d) 1.4

31. Expand (x + 2) (x-1)

(a) $x^2 + x-2$ (b) x^2-2 (c) $x^2 - x + 2$ (d) $x^2 + x + 2$

32 Calculate the volume of a cube of edge 8.24cm

(a) $8cm^3$ (b) $24cm^3$ (c) $824cm^3$ (d) $559cm^3$

33. Simplify $(1/4)^{-2}$

(a) 156 (b) 15 (c) -16 (d) 4

34. If $9^{2x} = 27^{3x5}$ findix

(a) 2 (b) 3 (c) -3 (d) 4

35. Factorise a^2-17 a + 42

(a) (a-14) (a-3) (b) (1-14) (a+3) (c) (a-6) (a-6) (a+7) (d) (a-6) (9-7)

36. Simplify the 56 km/h to 28 km/minutes

(a) 1.60 (b) 1.30 (c) 1.20 (d) 2.1

37 Evaluate 10000 + 8000÷920 write your answer in standard form

(a) 1.892×10^5 (b) $1.893x20^4$ (c) $1.892x10^3$ (d) 1.892×0^4

38. Find the 20^{th} term of the AP 22, 1.9, 1.6

(a) -3.5 (b) -35 (c) 0.3 (d) -0.3

39. The value of the number whose anti log is 0.3010

(a) 3.0 (b) 5.0 (c) 2.0 (d) 4.0

40 Find the value of 4 (3d-c)-21 when d = 2, C. =4 and f= 3

(a) 3 (b) 2 (c) 4 (d) 5

INTRODUCTION TO BUILDING CONSTRUCTION FOR SSII, DRAWN FROM PROMOTION EXAMINATION

QUESTION PAPER (STSEMB).

Instruction: Answer all Questions

Choose the correct answer in the four options A to D

Time: I hour

1. Which of the following hand tool is used to determine angle of 90^{o} in block laying work?
   a. Straight edge
   b. Spirit level
   c. Club hammer
   d. Steel square
2. Why is the site always cleared before setting out operation?
   a. To have a clean site work
   b. To remove the soft soil
   c. Make it easy for setting out of building
   d. to remove the vegetable soil
3. Cement should be stack in store
   a. With both ends close
   b. With opening at both side
   c. In damp environment
   d. In the open

4. Which tool does a capenter use to share wood

   a. Pointer

   b. Plane

   c. Chisel

   d. None of the above

5. A trowel has

   a. Wooden blade fixed to it

   b. Plastic blade fixed to its wooden handle

   c. An iron blade fixed to its wooden handle

   d. diamond handle fixed to it wooden handle

6. English bond is one of the strongest bond because

   a. It consists of alternated course of header and stretcher

   b. The closer prevent straight joint

   c. It is free of internal straight joint

   d. It avoid straight joint

7. The choice and type of timbering of foundation trenches depends on.

   a. Quality of timber available

   b. Depth of trench and cement

   c. Water table

   d. Type of foundation

8. From the tools below select the tools that can be used for cutting block

   a. Straight edge

b. Hawk

c. Frenchman

d. Bolster

9. A brick cut along the length into two equal part is called

a. Bevelled

b. Queen Closer

c. King Closer

d. Half bath

10. Efflorescent is caused by

a. Salt

b. Sulphate Deficiency

c. Fire

d. Wood Content

11. What is the function of an angle tool?

a. Use for angling work

b. Use of finishing angles in a neat square form

c. Use for making block work

d. Use for squaring job

12. The minimum thickness of foundation concrete is

a. 225mm

b. 150mm

c. 850mm

d. 450

13. D. P.C Means

a. Dam proof course

b. Dam proof construction

c. Dampest of profile on course

d. Danger people should be concern on site

14. Timber when exposed to rain it

a. Becomes strong

b. Strong and changes shape

c. Soaked water, expand and destroys

d. Soaked water and becomes strong

15. The word grading means

a. The sizes of aggregate the same

b. The size should be smaller

c The sizes should be bigger in volume

d. All of the above

16. Safe working techniques means

a. Having a sound knowledge of using the right tool for the right job

b. Having a poor knowledge of righttool

c. Maintenance of tools and machines

d. Personnel safety

17. The ability of soil to carry a load without any settlement is called

a. Bearing capacity

b. Suplhate resistance

c. Settlement capacity

d. Soil pressure

18. Cement means

a. Particles

b. Gravel

c. Substance which bind together the particles of aggregate

d. Reinforce mass concrete

19. The word capillary means

a. Adhession of water

b. The travel or movement of water through every small spaces or pores

c. Capillary wall

d. Surface tension

20. .....resist thermal conductivity than common brick/blocks wall construction

a. Cavity wall

b. Party wall

c. Good parapet wall

d. English wall

21. Block laying tools are divided into

    a. 3½ groups

    b. 4 groups

    c. 7 groups

    d. 2 groups

22. The wood used in construction is derived from

    a. Rivers

    b. Trunks of larger trees

    c. Upland tress

    d. The bush

23. What is the function of a club hammer in conjunction with a cold chisel?

    a. Cutting of holes

    b. Smoothing of holes

    c. Removing waste

    d. Measuring

24. Raft foundation is recommended for.....

    a. Sandy soil

    b. Clay soil

    c. Made up ground

    d. Density populated area

25. Fine aggregate means

    a. Fine stones

c. Clean

d. Empty

e. Nothing

7. The old man is very wise

a. Foolish

b. Clever

c. Primitive

d. Illiterate

e. Indolent

8. He intentionally threw the documents away and somebody picked them up.

a. Carelessly

b. Foolishly

c. Willingly

d. Accidentally

e. Purposely

9. His outspokenness contrasts with what I know him

a. Hurmour

b. Sobriety

c. Taciturnity

d. Dumbness

e. Noise

10. Last year was a year of abundance.

a. Pride

b. Scarcity

c. Joy

d. Distance

e. Plenty

For questions 11 – 30 choose word that best fill the blanks.

11. The case concerns all of us .....

a. Didn't

b. Don't we

c. Doesn't it

d. Did it

e. Isn't it

12. This novel is extremely uninteresting isn't it.....

a. Yes it isn't

b. No, it isn't

c. Yes, it was

d. No, it is

e. Yes, it is

13. The sermon was ..... by the former dergyman

a. Preached

b. Preach

c. Preaches

d. Delivered

e. Conducted

14. It is pretty difficult to choose..... those three boys

a. Between

b. Over

c. None

d. Any

e. Among

15. When we arrived the hall ..... arranged.

a. Had been

b. Has been

c. Had being

d. Has being

e. Is being

16. After a prolonged treatment for tuberculosis, the man was asked to abstain ---------- smoking tobacco

a. From

b. In

c. At

d. Of

e. Off

17. I don't want anything to interfere ---------- my project

a. By

b. Over

c. On

d. With

e. In

18. Our school team has suffered defeat ---------- defeat.

a. On

b. Before

c. After

d. Of

e. With

19. ---------- rich has its own problems

a. On been

b. Being

c. On being

d. Been

e. None

20. You've got to ---------- his friends

a. Put on with

b. Put up by

c. Put in for

d. Put up with

e. Putting up with

21. The principal has gone to Kaduna and will come back in ---------- time

a. two weeks

b. two's weeks

c. two weeks

d. two week

e. two – two weeks

22. I left my pen at home, I'm sure this is ----------

a. Your's

b. Yours

c. Your

d. Yourss

e. Yourses

23. That is not your book it is ----------

a. John's

b. Johns'

c. John's own

d. Johns' own

e. Johns's own

24. They were warned, so they have -------- to blame for the problems they are now facing.

a. Theirselves

b. Ourselves

c. Yourselves

d. Their own selves

e. Themselves

25. If you're sure you have your boots, it means this pair here is ----------

a. Mine

b. Mind

c. My

d. Myself

e. Mine own

26. All my friends live ---------- the same street.

a. On

b. In

c. By

d. Beside

27. My text- books were given to me by ---------- European gentleman

a. An

b. They

c. On

d. Some

e. A

28. ---------- Atlantic Ocean is very important for Nigerian external trade.

a. An

b. A

c. The

d. Some

e. None

29. The school is between ---------- hospital and --------- very big Iroko

a. The -------- a

b. A --------- the

c. The ------ the

d. A -------- a

e. A ------- some

From question 31 – 35 choose the word that contains the same consonant sound as the underlined word sounds.

30. <u>Face</u>

a. Vase

b. Base

c. Phase

d. Pace

e. Pin

31. Knife

a. Kill

b. Neat

c. Climb

d. Kick

e. Love

32. Mission

a. Sip

b. Seep

c. Machine

d. Cheap

e. Used

33. Plier

a. Flier

b. Play

c. Fly

d. Flay

e. Psalm

34. Sheep

a. Sip

b. Seep

c. Machine

d. Cheap

e. Used

From questions 35 – 40 choose option that contain the same vowel sound as the sound underlined in the words.

35. <u>Pull</u>

a. Book

b. Pole

c. Pale

d. Pool

e. Bus

36. <u>Pot</u>

a. Pay

b. Book

c. Above

d. Dog

e. Part

37. <u>Hard</u>

a. Beat

b. Heat

c. Part

d. Rare

e. None

38. Bed

a. Bread

b. Say

c. Wait

d. Heat

e. Hit

39. House

a. Tough

b. Mould

c. Would

d. How

e. Hold

ENGLISH LANGUAGE AND COMMUNICATION OBJECTIVE QUESTIONS FOR SS III DRAWN FROM NATIONAL TECHNICAL CERTIFICATE EXAMINATION (NABTEB).

Instruction: Answer all questions

Choose the correct answer in the four options A-D

1. My father is an old friend of .....

   a US

   b Theirs

   c. They

   D. Their

2. This is your bag of tools is n't .....?

   a. They

   b. Its

   c. It

   d. Its

3. James .....came yesterday

   a. His self

   b. Hiselfs

   c. Himself

   d. It self

4. The modern system.....classification helps the laboratory assistant in his task

a. At

b. To

c. On

d. Of

5. Sick people once depended .....herbalist to cure all their illness

a. On

b. To

c. For

D. In

6. Give me.....on the table

a. the pliers.

b. Some pliers

c. One pliers

d. A pliers

7. .....Old and infirm were rescued first

a. Only

b. Those

c. The

d. Both

8. .....drive from Abuja to Calabar was tiring

a. One

b. The

c. These

d. Those

9. The man wanted to hit his wife with.....heavy metal

a. an

b. These

c. a

d. by

10. We only have.....few nature resources in the state.

a. An

b. a

c. the

d. those

11. .....the moon shine everyday?

a. Does

b. do

c. is

d. would

12. .....it away! I don't like it.

a. taking

b. Took

c. Take

d. Takes

13. The little boy.....each time the old woman approaches

a. Hid

b. Hides

c. Will be hiding

d. Was hiding

14. He can not.....his feet in such a place

a. Find

b. Finds

c. Found

d. Finding

15. Although we were .....our team's spirit was high

a. Defeat

c. Defeats

c. Defeating

d. Defeated

16. Obi.....in town a while before we visited him

a. Has been

b. was being

c. Is being

d. Had been

17. They are reported .....in the examination

a. To have cheated

b. To being cheated

c. To having cheated

d. Have being cheated

18. Had I known, I..... worked harder at my studies

a. Should have

b. Shall have

c. Will have

d. Should has

19. My Uncles .....at the end of this mouth

a. has retired

b. will retire

c. Will retired

d. had been retire

20. Once you start running, you.....never stop.

a. Would

b. Will

c. Could

d. Should

21. The aquatic animals .....of various kinds

a. Were

b. are

c. is

d. are being

22. None of the criminal .....arrested at the scene

a. were

b. is

c. are

d. was

23. Nobody in all the classes.....the solution to the problem

a. Known

b. known

c. is knowing

d. Known

24. Everybody in the house.....happy now that the festival is approaching

a. are

b. were

c. is

d. was

In each of the following sentences there is one phrase underlined. From the list of phrases A-D choose the phrase that is not nearly opposite.

25. The prescribed drugs <u>soothed</u> the pains of the patients

a. Entraptured

b. Worsened

c. Endangered

d. Established

26. Esosa was given a severe punishment for disobeying the prefect

a. Mild

b. Little

c. small

d. minor

27. They discovered that the rope holding the boat to the wharf was slack

a. held

b. tied

c. strong

d. tight

28. There are Vacant flats in the housing estate but the flat beside our flat is.....

a. Occupied

b. Full

c. Filled

d. Used

29. The journey through the jungle was perilous

a. Save

b. Exciting

c. Safe

d. Interesting

30. The coup was aborted at an early hour of the day.

a. Executed

b. Thwarted

c. Subdued

d. Assassinated

From the list of words A-D below, choose the one which is nearest in meaning to the underlined word.

31. The write up was full of errors

a. Wrongs

b. Mistakes

c. Bads

d. Misdeeds

32. The house they packed into was a ramshackle one

a. tumbled down

b. Old

c. Outdated

d. New

33. On every market day a fake doctor comes to this villages.

a. Real

b. Funn er

c. Good

d. Quack

From the list of words A-D choose the word that best completes the sentence

34. I don't think a .....person could drive as dangerously as he did

a. Mad

b. Sense

c. Senile

d. Good

35. Our car wouldn't start so my father opened the..... to check what was wrong

a. Dash board

b. Bonnet

c. Boot

d. Fuel tank

36. I.....from the train

a. Descended

b. Alighted

c. Climbed down

d. Set down

Choose the interpretation you consider appropriate for each sentence

37. The truth <u>dawned on</u> her

a. She began to understand the light

b. She realized the true situation

c. She understood the cause

d. She saw the reason

38. The government was <u>brought down</u> by an army revolt

a. The government was overthrown

b. The government was brought to he kneed

c. The government was displaced

d. The government was opposed

Identify the figure of speech in each of the following statement

39. Tokumbo is as tender as a baby

a. Pun

0 b. Alliteration

c. Simile

d. Metaphor

40. The cloud is heavily pregnant

a. Exaggeration

b. Simile

c. metaphor

d. personification

INTRODUCTION TO BUILDING CONSTRUCTION; OBJECTIVE QUESTION FOR SSIII DRAWN FROM NATIONAL TECHNICAL CERTIFICATE EXAMINATION (NABTEB)

INSTRUCTION ANSWER ALL QUESTIONS

Choose the correct answer in the four options A- D

Time: 1 hour.

1. All but one of the following is not a joint used in carcase construction
   a. Bult jointed
   b. Butt and nailed
   c. dove tail
   d. Tongued and grooved.
2. The capillary action in walls can be checked by
   a. Pointing the walls
   b. Using burnt bricks as facing
   c. Using damp proofing membrane
   d. Building cavity walls
3. Hawk is used for
   a. Carrying mortar
   b. Picking mortar
   c. Raning mortar
   d. Levelling mortar
4. Which of the following methods of setting out a building is unsuitable for large building?

a. 3:4:5 method

b. Site square

c. Theodolite

d. Builders square

5. Site preparatory procedures prior to setting out can be summarized as the jobs that

a. Need to be done before putting up a structure

b. Need not be done before putting up structure

c. Need not be done before putting up structure

d. Should be done when putting up a structure

d. Need be done offer putting up a structure

6. The vertical 50x50mm timber member used in the construction of door are called.

a. Rails

b. Rummers

c. Stiles

d. Ledges

7. Which of the following factors is irrelevant in the choice of a roof type?

a. The volume of air in the building

b. Type of building

c. Foundation conditions

d. Span to be covered

8. From which of the group of materials listed below is tewaszzo made?

   a. Cement, sand and stone mix

   b. Terra-cotta, marble chip and current mix

   c. Current and marble chip mix

   d. Granite chips and marble chips mix

9. A concrete mix of 1:2:4 by volume stands for a mix of

   a. Lime: cement : aggregate

   b. Cement: lime: aggregate

   c. Water: sand: aggregate

   d. Cement : sand : coarse aggregate

10. The materials used for treatment of expansion joints in a floor construction is called

   a. evostick felt

   b. Give felt

   c. Turpentine felt

   d. Bifuminous felt

11. A parallel step of stair way hassits nosing parallel to the

   a. Nosing of the step of landing next above

   b. Going and rise or landing next above it

   c. Pitch and going or landing next above it

   d. Going and coming next and above it

12. A well is termed a load bearing wall if it is

a. If the wall is external and bearing no load

b. If the wall is either external or internal and bears loads

c. Either internal or external and suspended

d. A partition or party of party wall and carries self load

13. The following must be avoided while using poisonious chemical on site

a. Habitable environment

b. Left over cans

c. Slippery floors

d. regular heats

14. A painter can best prolong the life of his brush by

a. Not using the brush often

b. Restricting the use of the brush

c. Using the brush on good quality paint only

d. Washing it clean after used

15. Provision of support to foundation of trenches becomes necessary only if the

a. Trenches are battered

b. Site is sloppy

c. Soil is liable to collapse

d. Soil is shallow

16. Metal door flames may be fixed into the wall by one of the following methods.

    a. Breeze blocks

    b. 150mm nails

    c. Metal pads

    d. Cramps

17. Given the going of a step as 230mm and the going plus twice the rise to be 550. Estimate the rise

    a. 320mm

    b. 230mm

    c. 160mm

    d. 106mm

18. Given the rise of a step to be 190mm and the going plus twice the rise to be 600mm. Calculate for the going

    a. 380mm

    b. 220mm

    c. 202mm

    d. 190mm

19. The choice of roof type depends on

    a. Size and shape of the building

    b. Materials to be used for the construction

    c. Non durability of the roofing material

d. Cost of the building

20. The following equipment are used for setting out a building EXCEPT

a. Theodolite level

b. Builders square

c. Optical level

d. Dumpy level

21. The factors influencing the choice of foundation does NOT include on of the following

a. Amount of back filling

b. Level of water table

c. Type of soil

d. loading

22. The first coat applied to hard board is termed

a. Coating

b. Scheming

c. Priming

d. Finishing

23. Pattern staining on ceiling is caused by

a. Uniform temperature changes

b. Deposition of dusts at cooler areas of ceiling

c. Deposition of dust at hotter areas of the ceiling

d. Deposition of pattern of varying rates

24. Building line is ascertained from

a. Survey plan

b. Layout plan

c. ground floor plan

d. Site plan

25. A device for opening a circuit by means of a conductor designed to melt when excessive current flow is termed.

a. Capacitor

b. Fuse

c. Conductor

d. Condenser

26. Which of the following is NOT part of a roof?

a. Fascia

b. struts

c. Lacing

d. King post

27. The process of sawing logs into smaller timber useful for carpenters and joiners is best known as

a. Conservation

b. Seasoning

c. Conversion

d. Felling

28. To ensure safety in scaffolds, standards shall

    a. Slightly lean away from the building

    b. Be fixed far apart to ensure maximum economy

    c. Be vertical and fixed sufficiently close together on a firm base

    d. Be as horizontal as possible and very securely fastened to the upright

29. Openings in walls serve some useful purposes BUT they:

    a. Support the building adequately

    b. Create obstacles for free flour of fresh air

    c. Create weakness in the overall walling

    d. Inconvenient the occupant of the space they enclose

30. Which of the following tools, equipment /machinery, is NOT necessary for site preparation

    a. Bulldozer

    b. Spade

    c. Crane and skip

    d. Pick axe

31. The name of the appliance used in cleaning the lower excretory organs by sitting astride the appliance is

    a. Wash basis

    b. Water closet

    c. Bowl urinal

d. Bidet

32. Shift accommodations constructed on the site as offices storage etc is called

a. Hoarding

b. Tents

c. Hutments

d. Batchers

33. Plywood is a type of

a. Soft wood

b. Hard board

c. Lumber

d. Glued laminated wood

34. Nails are pulled out of wood by the use of

a. Gorges

b. Pincer

c. Clamp

d. Rise

35. Which of the following is true about wood kept in water?

a. It will rust

b. Fungi will attack it

c. It does not decay

d. It will deteriorate

36. Wood preservation is specifically intended to

a. Render the wood impermeable to water

b. Prevent shrinkage of the wood

c. Prevent insects and fungi from consuming wood

d. Protect the wood from severe weather condition

37. Which of the following is not a factor to be considered in site investigation

a. The position and size of main services

b. Nature and condition of site boundaries

c. Nature and extent of preliminary work that will be needed.

d. Type and nature of building to be erected

38. On which of the following may the widths of the foundation trench and walls be marked?

a. Pegs

b. Corner block

c. Profile

d. Builder's square

39. In setting out, profiles are established at

a. Wall intersection

b. The middle of the wall

c. The beginning of the wall

d. Cornered

40. Large curves may be set out by which of the following way?

a. 3:4:5 method

b. Try square

c. Calculated ordinates

d. Radius rod.

MATHEMATICS OBJECTIVE QUESTIONS

FOR SS III. DRAWN FROM NATIONAL TECHNICAL CERTIFICATE EXAMINATION (NABTEB)

Instruction: answer all questions

Choose the correct answer in the four options a – d

Time: 1 ½ hour

1. Convert 592 base 10 to octal

   1200

   a. 1120

   b. 1112

   c. 1020

2. Simplify $(5\ ¾ + 3\ ¾) - (5\ ¾ - 3\ ¾)$

   9 ½

   a. 8 ½

   b. 7 ½

   c. 0

3. Evaluate $\frac{0.687 \times 10^4}{0.01 \times 10^1}$ leaving your answer in standard form.

   a. 9.678×10^4

   b. 9.678×10^1

c. 9.678×10^2

d. 9.678×10^3

4. The areas of a rectangle and a square are in ratio 2:3 if the area of the rectangle is $43m^2$ find the area of the square.

a. $16.8m^2$

b. $25.2m^2$

c. $280m^2$

d. $63.0m^2$

5. If $X^4 = (0.25)^2$ find X

a. 0.25

b. 0.5

c. 2

d. 5

6. Given that log 0.5 = 1.6990, evaluate log 0.25

a. $\overline{2}.7858$

b. $\overline{2}.3980$

c. $\overline{1}.3980$

d. 1.6990

7. What is the common ratio of the G.P. 7/3, 7/6, 7/12?

a. 2

b. 7/2

c. ½

d. – 7/6

8. The first and third term of a GP. Are 1 and 9 respectively. What is the second term?

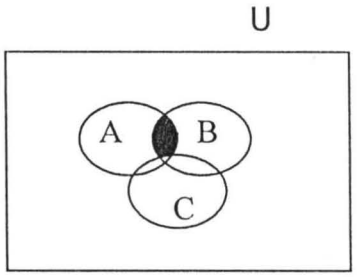
   a. 4

   b. 3

   c. 2

   d. 1/3

9. The diagram represent the set A, B, and C if U is the universal set, what is represented by the shaded region?



   a. $A \cap B \cap C$

   b. $A \cup B \cup C'$

   c. $A' \cap B' \cap C'$

   d. $A \cup B \cap C'$

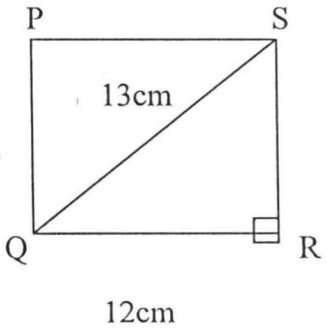
10. Find the area of the rectangle PQRS with /QR/ = 12cm and /QS/ = 13cm

   a. $34cm^2$

   b. $60cm^2$

   c. $65cm^2$

   d. $156cm^2$



11. How many lines of symmetric has a kite?

   a. 1

   b. 2

c. 3

d. 4

12. If three angles of a quadrilateral are 50^0, 100^0 and 150^0, find the fourth angle.

a. 300^0

b. 160^0

c. 90^0

d. 60^0

13. The diagonal of a rectangle is 1cm more than the length. If the length is 4cm, find the perimeter of the rectangle

a. 12cm

b. 14cm

c. 16cm

d. 24cm

14. Given the formula $V = a^2h$, find a when $V = 24$ and $h = 2$

a. 72

b. 36

c. 16

d. 6

15. When 5 is added to twice a number, the result is 13, find the number.

    a. 4

    b. 6.5

    c. 8

    d. 9

16. Given that $2x + 2y = 180^0$, then angle x and y are

    a. Complementary

    b. Supplementary

    c. Obtuse

    d. Reflex

17. How many exterior angles has a pentagon

    a. 5

    b. 10

    c. 15

    d. 20

18. The shape of the cross – sectional area of a cuboids is a

    a. Rectangle

    b. Square

    c. Rhombus

    d. Trapezium

19. The sum of the scores of 25 students in a test is 500, what is the mean score?

a. 2

b. 10

c. 20

d. 25

20. Find X and Y in the following equation

$2x + 5y = 8$

$3x - 5y = 12$

a. X = 0, Y = 4

b. X = 4, Y = 0

c. X = 2, Y = -1

d. X = 2, Y = 3

21. Solve the equation $3/m - 1 = 2/3$

a. 3

b. 4 ½

c. 1 4/5

d. – 9

22. Factorize m n + n x – m y – x y

a. (m + x) (n – y)

b. (m – x) (n – y)

c. (m + x) (n + y)

d. $(m - x)(n + y)$

23. What must be added to $X^2 + 2mx$ to make the expression a perfect square?

a. $\frac{m^2}{4}$

b. m^2

c. $4m^2$

d. 1

24. Factorize $UV - V^2 - UW + VW$

a. $(U - V)(V - W)$

b. $(U - V)(V + W)$

c. $(U + V)(U + W)$

d. $(U + V)(V - W)$

25. Write down the equation whose roots are the points of intersection of the graphs of $y = X^2 + X - 2$ and $Y = X + 1$

a. $X^2 + 3 = 0$

b. $X^2 - 3 = 0$

c. $X^2 - 1 = 0$

d. $X^2 + 2x - 3 = 0$

26. The value of $\tan 300^\circ$ is?

a. ½

b. $-1/\sqrt{3}$

c. $\sqrt{3}$

d. $-\sqrt{3}$

27. When two events A and B are disjoint, they are said to be.

a. Dependent

b. Independent

c. Mutually exclusive

d. Exhaustive

28. A coin and a dice are tossed up together once. What is the probability of the head showing up?

a. 1/12

b. 1/6

c. ½

d. 2/3

29. The probability of an event Q occurring is 2/7 and R occurring is 3/7. Find the probability of both events Q and R occurring together.

a. 6/49

b. 20/49

c. 5/7

d. 43/47

30. Solve the equation $(X - 3)^2 = 49$

a. X = - 1 or 4

b. X = - 4 or 10

c. X = 3 or 7

d. X = -7 or 7

31. Simplify 1/3 – ¼ of 4/3

a. - 1/9

b. 0

c. 1/9

d. 16/9

32. Express in standard form 0.003471

a. 3.48×10^{-3}

b. 3.48×10^{-2}

c. 3.47×10^{-3}

d. 3.47×10^{-2}

33. When a number is increased by 20%, the result is 186. find the number.

a. 124

b. 148.8

c. 155

d. 223.2

34. Simplify $\frac{53 \times 50}{25}$

a. 5

b. 3

c. 1

d. 0

35. Evaluate $\log_{10} 75 + 2\log_{10} 2 - \log_{10} 3$

a. 100

b. 10

c. 5

d. 2

36. The numbers 3, 6, 12.....15 (I) an AP (II) GP (III) a common ratio

a. I only

b. II only

c. I and II only

d. III only

37. If the 6^{th} term of an AP is II and the first term is I. Find the common difference.

a. 4

b. 3

c. 2

d. 1

38. Find the length of a rectangle whose perimeter is 32cm and breadth is 6cm.

a. 6cm

b. 8cm

c. 10cm

d. 12cm

39. Which of the following is not a regular polygon

a. Square

b. Rhombus

c. Rectangle

d. An equilateral triangle

40. Make X the subject of the formula if a $(x - 1) = bx$

a. $a/a - b$

b. $a - b/a$

c. $a/1 - b$

d. $a/a + b$