School Mapping and Analysis of Educational Policy and Reforms

EME 206

University of Ibadan Distance Learning Centre
Open and Distance Learning Course Series Development

General Editor: Prof. Bayo Okunade

Vice-Chancellor's Message

The Distance Learning Centre is building on a solid tradition of over two decades of service in the provision of External Studies Programme and now Distance Learning Education in Nigeria and beyond. The Distance Learning mode to which we are committed is providing access to many deserving Nigerians in having access to higher education especially those who by the nature of their engagement do not have the luxury of full time education. Recently, it is contributing in no small measure to providing places for teeming Nigerian youths who for one reason or the other could not get admission into the conventional universities.

These course materials have been written by writers specially trained in ODL course delivery. The writers have made great efforts to provide up to date information, knowledge and skills in the different disciplines and ensure that the materials are user-friendly.

In addition to provision of course materials in print and e-format, a lot of Information Technology input has also gone into the deployment of course materials. Most of them can be downloaded from the DLC website and are available in audio format which you can also download into your mobile phones, IPod, MP3 among other devices to allow you listen to the audio study sessions. Some of the study session materials have been scripted and are being broadcast on the university's Diamond Radio FM 101.1, while others have been delivered and captured in audio-visual format in a classroom environment for use by our students. Detailed information on availability and access is available on the website. We will continue in our efforts to provide and review course materials for our courses.

However, for you to take advantage of these formats, you will need to improve on your I.T. skills and develop requisite distance learning Culture. It is well known that, for efficient and effective provision of Distance learning education, availability of appropriate and relevant course materials is a *sine qua non*. So also, is the availability of multiple plat form for the convenience of our students. It is in fulfilment of this, that series of course materials are being written to enable our students study at their own pace and convenience.

It is our hope that you will put these course materials to the best use.

Prof. Abel Idowu Olayinka

Vice-Chancellor

Foreword

As part of its vision of providing education for "Liberty and Development" for Nigerians and the International Community, the University of Ibadan, Distance Learning Centre has recently embarked on a vigorous repositioning agenda which aimed at embracing a holistic and all encompassing approach to the delivery of its Open Distance Learning (ODL) programmes. Thus we are committed to global best practices in distance learning provision. Apart from providing an efficient administrative and academic support for our students, we are committed to providing educational resource materials for the use of our students. We are convinced that, without an up-to-date, learner-friendly and distance learning compliant course materials, there cannot be any basis to lay claim to being a provider of distance learning education. Indeed, availability of appropriate course materials in multiple formats is the hub of any distance learning provision worldwide.

In view of the above, we are vigorously pursuing as a matter of priority, the provision of credible, learner-friendly and interactive course materials for all our courses. We commissioned the authoring of, and review of course materials to teams of experts and their outputs were subjected to rigorous peer review to ensure standard. The approach not only emphasizes cognitive knowledge, but also skills and humane values which are at the core of education, even in an ICT age.

The development of the materials which is on-going also had input from experienced editors and illustrators who have ensured that they are accurate, current and learner-friendly. They are specially written with distance learners in mind. This is very important because, distance learning involves non-residential students who can often feel isolated from the community of learners.

It is important to note that, for a distance learner to excel there is the need to source and read relevant materials apart from this course material. Therefore, adequate supplementary reading materials as well as other information sources are suggested in the course materials.
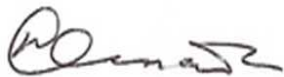
Apart from the responsibility for you to read this course material with others, you are also advised to seek assistance from your course facilitators especially academic advisors during your study even before the interactive session which is by design for revision. Your academic advisors will assist you using convenient technology including Google Hang Out, You Tube, Talk Fusion, etc. but you have to take advantage of these. It is also going to be of immense advantage if you complete assignments as at when due so as to have necessary feedbacks as a guide.

The implication of the above is that, a distance learner has a responsibility to develop requisite distance learning culture which includes diligent and disciplined self-study, seeking available administrative and academic support and acquisition of basic information technology skills. This is why you are encouraged to develop your computer skills by availing yourself the opportunity of training that the Centre's provide and put these into use.

In conclusion, it is envisaged that the course materials would also be useful for the regular students of tertiary institutions in Nigeria who are faced with a dearth of high quality textbooks. We are therefore, delighted to present these titles to both our distance learning students and the university's regular students. We are confident that the materials will be an invaluable resource to all.

We would like to thank all our authors, reviewers and production staff for the high quality of work.

Best wishes.

Professor Bayo Okunade

Director

Course Development Team

Content Authoring	Ayeni, A.O.,
Content Editor	Prof. Remi Raji-Oyelade
Production Editor	Ogundele Olumuyiwa Caleb
Learning Design/Assessment Authoring	SkulPortal Technology
Managing Editor	Ogunmefun Oladele Abiodun
General Editor	Prof. Bayo Okunade

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Study Session 1: Definition and Purpose of School Mapping

Introduction

This is an introductory session that examines in details, what school mapping is. This is necessary because of many students that are just offering this course for the first time.

In this study session, you will be introduced to map, what school mapping is in a simple sense. Also, the purposes of school mapping will be discussed.

Learning Outcomes for study session 1

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

1.1. Define a map

1.2. Explain school mapping

1.3. Discuss in details the purposes of school mapping

1.1 Definition of a Map

A map can be defined as a visual representation of a given area. It can also be said to be a symbolic depiction that highlights the relationship that exists between elements such as objects, themes and even regions.

A map is a symbolic depiction highlighting relationships between elements of some space, such as objects, regions, and themes. Many maps are static two-dimensional, geometrically accurate (or approximately accurate) representations of three-dimensional space, while others are dynamic or interactive, even three-dimensional.
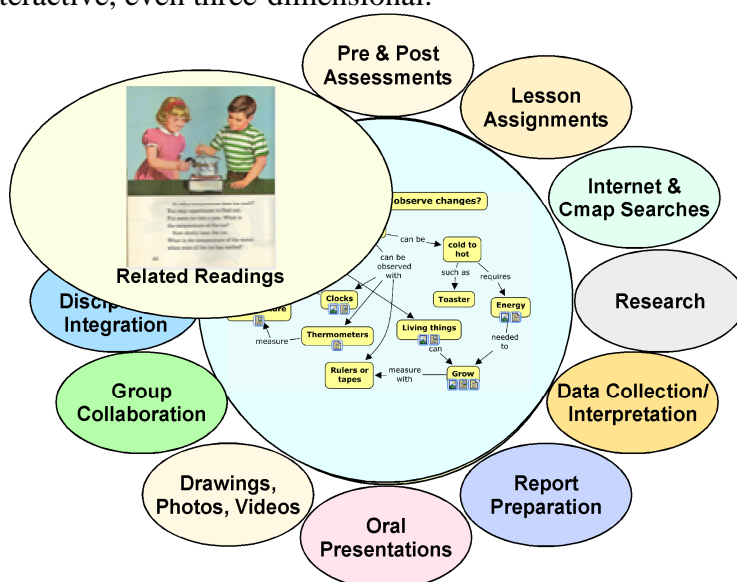
Figure 1.1: Educational Map
Source: http://cmap.ihmc.us/docs/images/Theory/Fig14ScienceBooks-large.png

Although most commonly used to depict geography, maps may represent any space, real or imagined, without regard to context or scale; e.g. brain mapping, DNA mapping and extra-terrestrial mapping.

Although the earliest maps known are of the heavens, geographic maps of territory have a very long tradition and exist from ancient times. The word "map" comes from the medieval Latin Mappa mundi, wherein mappa meant napkin or cloth and mundi the world.

Thus, "map" became the shortened term referring to a two-dimensional representation of the surface of the world.

A map is noted to be relevant in the social science subject of Geography, and it provides visual reference in the study of lands, distances and even natural resources. A map shows how states are positioned within a given country.

Maps are used to communicate information and **Schreiner (2012)** noted that maps are used as informational and navigational tools, and that some interactive map activities can be integrated into students' curriculum which will effectively equip students with map reading skills. The image of **Schreiner** shown in the figure 1.1 below

Figure 1.2: Schreiner (2012)
Source: https://i.vimeocdn.com/video/449517538_640.jpg

In-Text Question
Briefly defined map?

In-Text Answer
A map can be defined as a visual representation of a given area

1.2 School Mapping

School mapping according to the Advanced Learner's Dictionary is a map showing the location of education institution in a region of earth. An educational manager will define school mapping differently from the above definition and school mapping has been found to embrace more than the preparation of scale maps with conventional signs showing the location of educational institutions.

It involves applying skills and thought processes and analytic techniques to find out what additional facilities are required for education and what type of future a society may have. **Pandit (1978)** defined school mapping as the application of thought process and analytic techniques to foresee what educational situation has to be and what type of educational future a society will have by the terminal year of a medium or long term plan or even a date still farther off.
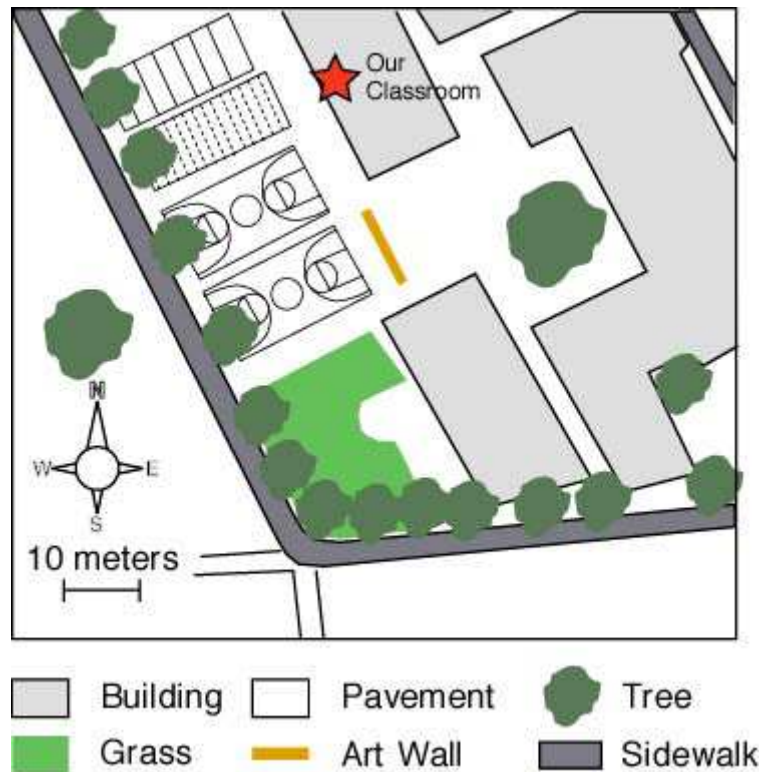
Figure 1.3: School Mapping
Source: http://education.usgs.gov/lessons/schoolyard/MapSketch.html

Obadan (1978) also defined school mapping as a dynamic process of identifying logically and systematically, the communities and sites where educational facilities are to be located under a plan period. According to **Owolabi (1990)**, school mapping is the dynamic process of diagnosing and estimating school requirements and identifying the communities and sites where new schools are to be located where additional education facilities are required.

Oluchukwu (1998) also defined school mapping as diagnosis stock-taking of educational system with a specific aim of determining what type and stock of resources and facilities that are needed in the future, and how best the existing facilities and infrastructures relate to school-going children and their teachers.

From the various definitions of school mapping, it could be inferred that school mapping is the location planning of educational institutions, the allocation as well as the optimal utilization of the required resources in these institutions.

In school mapping, an inventory of existing educational facilities is taken with a view to revealing the extent of adequate (optimal) or inadequate distribution, under-utilization or over-utilization of accessible facilities so that appropriate actions can be taken to ensure proper distribution and optimal utilization of such facilities.

In school mapping, the process of planning the location and spacing of educational institutions is normally taken into consideration while the demographic, environmental, institutional, educational factors e.t.c. are also taken into consideration.

In-Text Question

_____ also defined school mapping as a dynamic process of identifying logically and systematically, the communities and sites where educational facilities are to be located under a plan period.

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(A). Oluchukwu (1998) (B). Obadan (1978) (C). Owolabi (1990) (D) Pandit (1978)

In-Text Answer
(B) Obadan (1978)

1.3 Purpose of School Mapping

To expand facilities for education aimed at equalizing individual access to education throughout the country. Facilities in education include:
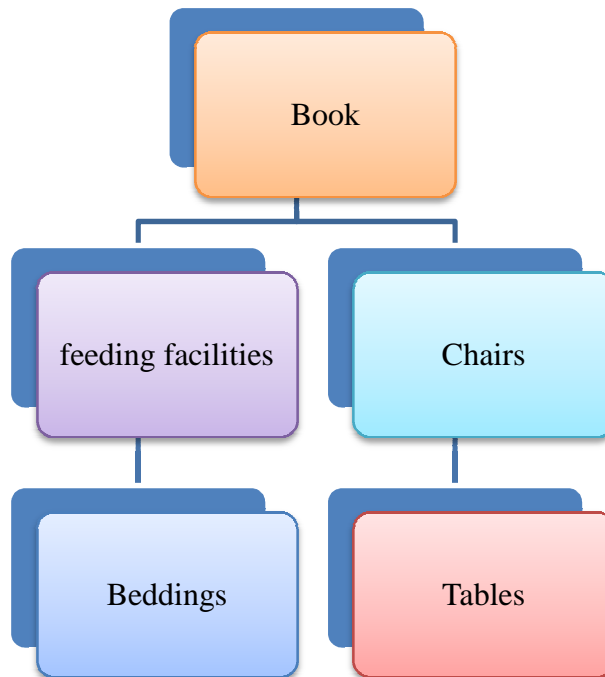
Figure 1.4: Facilities in education

School mapping as an exercise if properly conducted, will make known information on prospective students that should be in school(s).

Once the statistics has been known, it will be possible to provide the school facilities for those that are newly enrolled. This will however lead to expansion of facilities for education which will lead to equalizing of individual access to education throughout the country. To reform the content of general education to make it more responsive to the socio-economic needs of the country.

There is the need to ensure the reform and update of contents of general education so as to give room for relevance and currency. This will give room for its responsiveness to meeting urgent and current socio-economic needs of the given country.
 The socio-economic needs include that of the economy, society, environment, health, industrial and other needs. As much as the needs of the nation is unending, it varies from time to time, individual to individual, family to family, tribe to tribe region to region etc.
To consolidate and develop the nation's system of higher education in response to economic manpower need. Another purpose of school mapping is to consolidate and develop the nation's system of higher education so as to respond positively to the economic manpower need of the country.

In-Text Question
There is the need to ensure the reform and update of contents of general education so as to give room for relevance and currency. True/False

In-Text Answer
True

Manpower need of a country varies from variety of experts that are produced by different institutions of higher learning. These institutions vary from colleges of education to polytechnics and the universities. The colleges of education is however responsible for the production of teachers in the area of sciences, arts, social sciences, technical and so on.
While the polytechnic is responsible for the production of high level technical experts in the fields of engineering, accounting, estate management, quantity surveying and so on. The university is also saddled with the responsibility of production of high-level manpower in all fields of human endeavour.

So far it is known that some notable number of manpower are already engaged on the jobs in various fields, such engaged individuals will with time reach the peak of their career and thereafter retire from service.

It is then imperative that school mapping be carried out at the right time by the government of a country so as to be equipped with the information of the workers that will retire and then plan towards their being replaced with the new graduates from the different institutions of learning.

To this end, the manpower need of the different sectors will be met, and there will not be any vacuum in supply of the requisite manpower at any given time in the year. To streamline and strengthen the machinery of educational development in the country. There is a need to avoid as much as possible the duplication of efforts in various dimensions.
This, if properly done, will solidify the efforts that are being put into maximizing the utilization of the scarce resources that is available for usage. Machinery for educational development in a country includes available infrastructures, manpower (academic and non-academic), space, timing and so on.

School mapping efforts will help in streamlining and strengthening the available infrastructures so that wastages will as much as possible be prevented. To rationalize the finance of education with a view to making the educational system more adequate and efficient

Rationalization cannot be realized if adequate and up-to-date data is not available. Finance needs to be sufficiently made available in any educational enterprise, while it has to be judiciously utilized so as to realize the expected results. It needs be known that educational enterprise is more human capital intensive hence, the need to have adequate capital or finance to meeting the need of the manpower.

In-Text Question
_____efforts will help in streamlining and strengthening the available infrastructures so that wastages will as much as possible be prevented.
A. All of the answers B. Mapping C. School mapping D. Map

In-Text Answer
School mapping
There is an extent to which machine can explain issues to the recipients. It is the manpower that will make use of the machines to make meaning out of no meaning to the recipients or the students. To provide information on the learning needs of a society. The learning needs of one society differ from that of another society.

It is then imperative that each society should be able to determine what her learning needs are and therefore work towards the retrieval of the needed information of such society. There are current or new issues that should be added to the curriculum being run by the schools.
Examples are globalization, privatization of electricity, Boko Haram etc. These are new things that should be properly addressed by the need of the society, and the school mapping will be useful in such process.

To produce inventory of existing institutional facilities. School mapping is needed to be able to get the inventory (record/account/register) of the existing institutional facilities. These facilities include the classrooms, chalkboard, board pen, chairs, tables, vans, sporting facilities like balls, nets, etc.

An inventory of these institutional facilities is necessary so that the school will be harmed with the number of needed school facilities at any given time. Further, in situations where the school needs to procure additional facilities, the school mapping data will show at a glance the quantity of the school inventories that is needed.

To reveal the extent of underutilization or over utilization of existing educational facilities
School mapping data will reveal the number of students that are in each of the classes, number of times lessons are held in the classes, number of times the school laboratories are put into use.

If it is discovered from records that the extent of utilization of the educational facilities is "underutilized" which is at variance to the internationally acceptable standard, the school will find a means of ensuring that the facilities are optimally utilized.
If however the extent of utilization of the facilities is "over utilization", the school is saddled with the responsibilities of finding solutions to such a problem, probably by building more classes or expanding the existing facility (ies).

To provide guidelines for the re-organization of institutional facilities. Institutional facilities might be reorganized to probably accommodate most especially additional student population. School mapping data will guide better the school authority on what steps to take in order to effect the re-organisation as appropriate as possible and thereby meet the need of the increased student population.
On the other way round, there might be the need for re-organisation if the student population is on the decrease. This will give room for optimal use of the available school facilities. To supply information on where new facilities are to be erected and where they can be utilized to the best advantage.

Development takes place at various times in our environment. As at now, there are some places that are newly opened up for habitation and this will lead to development. By the time electricity and road construction is effected in the new area, this will quicken the expected development.

To this extent therefore, school mapping will help in making available necessary data and information for the newly developed areas. This is expedient because the available information will equip those at the helms of affairs to be aware of what new facilities should be provided for the new site(s).

To improve the quality of education. There had been various discussions on what makes up quality, but up till now, there has not been a worldwide acceptable standing rule of what quality is and therefore, it can be said that what someone agrees to be quality at one instance, will not be with another person.

In-Text Question
To produce inventory of existing institutional facilities _____ is needed to be able to get the inventory (record/account/register) of the existing institutional facilities.

In-Text Answer
School mapping

But from the education parlance, quality can be viewed from the external results of the students after their examinations, ability to speak properly, dress up properly, infrastructural facility composition within the school setting, etc. School mapping efforts try to improve the quality variables of the school. Be as it may, the respective portions or areas that their quality should be improved upon are easily detected through the school mapping data.

In summary, school mapping aims at identifying locations for the siting of schools and construction of classrooms, libraries and workshops e.t.c. evaluating the use efficiency of facilities, re-organizing and re-distribution facilities and optimizing the use of human and material resources in the educational sector.

Summary of Study Session 1
1. A map can be defined as a visual representation of a given area. It can also be said to be a symbolic depiction that highlights the relationship that exists between elements such as objects, themes and even regions.
2. A map is a symbolic depiction highlighting relationships between elements of some space, such as objects, regions, and themes.
3. School mapping according to the Advanced Learner's Dictionary is a map showing the location of education institution in a region of earth.
4. **Pandit (1978)** defined school mapping as the application of thought process and analytic techniques to foresee what educational situation has to be and what type of educational future a society will have by the terminal year of a medium or long term plan or even a date still farther off.
5. School mapping as an exercise if properly conducted, will make known information on prospective students that should be in school(s).
6. There is the need to ensure the reform and update of contents of general education so as to give room for relevance and currency.

Self-Assessment Questions (SAQs) for Study Session 1
Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ.1.1 (Testing Learning Outcome 1.1)
What is a map?
SAQ 1.2 (Testing Learning Outcome 1.2)
Explain in details what school mapping is
SAQ 1.3 (Test Learning Outcome 1.3)
Explain the purposes of school mapping

Notes on SAQS For study session 1
SAQ 1.1
A map can be defined as a visual representation of a given area. It can also be said to be a symbolic depiction that highlights the relationship that exists between elements such as objects, themes and even regions.
SAQ 1.2
School mapping according to the Advanced Learner's Dictionary is a map showing the location of education institution in a region of earth. An educational manager will define school mapping differently from the above definition and school mapping has been found to embrace more than the preparation of scale maps with conventional signs showing the location of educational institutions.
It involves applying skills and thought processes and analytic techniques to find out what additional facilities are required for education and what type of future a society may have.
SAQ 1.3
   i.   To expand facilities for education aimed at equalizing individual access to education throughout the country
  ii.   School mapping as an exercise if properly conducted, will make known information on prospective students that should be in school(s).
 iii.   To consolidate and develop the nation's system of higher education in response to economic manpower need. Another purpose of school mapping is to consolidate and develop the nation's system of higher education so as to respond positively to the economic manpower need of the country.

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Study Session 2: School Mapping and Varying Educational Situations

Introduction
School mapping is useful in all human educational endeavours. In fact the word "mapping" is applicable to all human activities, and it is against this that session two examines the varying educational situations that school mapping is applicable to. These situations will be better made known in session two.

In this study session, you will be introduced to how school mapping is applicable to educational backward areas, what way school mapping is applicable to educational advanced, how school mapping is applicable to areas undergoing structural reforms areas, ways by which school mapping is applicable to sparsely populated areas and how school mapping is applicable to densely populated areas.

Learning Outcomes for Study Session 2
At the end of this study session, you should be able to:

2.1. Explain how school mapping is applicable to educational backward areas

2.2. Discuss what way school mapping is applicable to educational advanced areas

2.3. Explain how school mapping is applicable to areas undergoing structural reforms

2.4. Discuss ways by which school mapping is applicable to sparsely populated areas

2.5. Explain how school mapping is applicable to densely populated areas

2.1 How school mapping is applicable to educational
School mapping is relevant under varying educational situations. **Fabunmi (2004)** considered five different educational situations and these are:

1. Educationally Backward Areas
2. Educationally Advanced Areas
3. Areas Undergoing Structural Reforms
4. Sparsely Populated Areas
5. Densely Populated Areas

Figure 2.1: *Fabunmi (2004)*
Source:*https://media.licdn.com/mpr/mpr/shrinknp_200_200/AAEAAQAAAAAAAL5AAAAJ DBlY2NlZGM2LWUwNWItNGE3OS04OGQ5LWJlOGU2NTIzZmY5Yw.jpg*

In-Text Question
The different educational discussed in this study include the following except
> A. Educationally Backward Areas
> B. Educationally Advanced Areas
> C. Flown Advanced Area
> D. Areas Undergoing Structural Reforms

In-Text Answer
C Flown Advanced Area

2.2 Educationally Backward Areas

Some areas are said to be educationally backward if they are with low participation rates or low enrolment figure. In such regions, school mapping is desirable because it is necessary in order to improve the student participation or enrolment rate, and to that extent, the educational facilities will have to be expanded, while at the same time, there will be recruitment of appropriate personnel.

Once the school mapping exercise is conducted in the educationally backward areas, it will reveal the resource needs of both the students and the concerned areas while also making appropriate recommendations.

In-Text Question
In educational backward regions, school mapping is desirable because it is necessary in order to improve the student participation or enrolment rate. True or False

In-Text Answer
True

2.3 Educationally Advanced Areas

Some areas are called educationally advanced areas if they satisfy the condition of very high participation rates or enrollment figures. In such places, school mapping exercise is still desirable.

Lopsidedness does occur in resource situations of schools located in the educationally advanced areas. Thus, it is only through school mapping exercise that such anomaly can be rectified. Re-organization and re-distribution of resource situation can be done through school mapping exercise.

In-Text Question
School mapping may not be necessary in regions with participation. True or False

In-Text Answer
False

2.4 Areas Undergoing Structural Reforms

The need to reform certain aspects of the educational system occurs from time to time and cannot be over stressed. In situations where there are structural defects in the educational system, mapping problems usually come up. Hence, the need for reforms, and thus, school mapping.

Decisions have to be taken on
  i.   The use of the old school network under the new dispensation,
  ii.   Physical facilities that should be provided at different stages of implementation
  iii.   Whether or not to set up new schools, and
  iv.   The financial implications of the educational reforms. School mapping is therefore essential in such areas undergoing structural reforms.

In-Text Question
Structural defects in the educational system can bring mapping problems. True or False

In-Text Answer
True

2.5 Sparsely Populated Areas
The sparsely populated areas are those areas that are thinly populated. School mapping is desirable in such places because it is required for the delimitation of school catchment areas, improvement of participation rate and adaptation of school programmes to client needs.

Figure 2.2: Sparsely Populated Area
Source:http://www.bunchofbackpackers.com/wp-content/uploads/2014/02/P1050867-1125x632.jpg

2.5 Densely Populated Areas
These are areas that are thickly populated. There is found the continuous concentration of the populace. In such places, school mapping is desirable, as there is the need to improve the participation rate and expand the educational system to cope with the needs of such communities.

Figure 2.3: Densely Populated Areas
Source: http://www.japanlovers.net/wp-content/uploads/2012/06/tokyos-little-houses-a-birds-eye-view.jpg

Summary of Study session 2

1. The educationally backward area is one of the areas that school mapping is applicable.
2. An area is said to be educationally backward if there is low educational participation rate. School mapping is important in order to improve the student participation or enrollment rate, and availability of school facilities and then later expansion.
3. School mapping is also useful in areas that are educationally advanced. This is because it will help to address some lopsidedness that need to be addressed especially in the area of resource situations that needs to be re-distributed.
4. School mapping is useful in areas that are undergoing structural reforms, and especially structural defects. School mapping is needed in determining (i) The use of the old school network under the new dispensation
    i. Physical facilities that should be provided at different stages of implementation
    ii. Whether or not to set up new schools, and
    iii. The financial implications of the educational reforms.
5. Additionally, school mapping is useful in sparsely populated area otherwise called a thinly populated area. School mapping helps in delimitation of school catchment areas, improvement of participation rate and adaptation of school programmes to client needs.
6. School mapping is further needed in densely populated area otherwise called thickly populated area.

Self-Assessment Questions (SAQs) for Study Session 2

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 2.1 (Testing Learning Outcome 2.1)
Explain in details how school mapping is applicable to educationally backward areas.

SAQ 2.2 (Testing Learning Outcome 2.2)
School mapping is applicable to educationally advanced area discuss how?

SAQ 2.3 (Test Learning Outcome 2.3)
School mapping is applicable to areas undergoing structural reforms, explain

SAQ 2.4 (Test Learning Outcome 2.4)
In what ways is school mapping applicable to sparsely populated areas?

SAQ 2.5 (Test Learning Outcome 2.5)
Explain how school mapping is applicable to densely populated

Notes on SAQS For study session 2

SAQ 2.1
Educationally backward it said to be occur if they are with low participation rates or low enrolment figure. In such regions, school mapping is desirable because it is necessary in order to improve the student participation or enrolment rate, and to that extent, the educational facilities will have to be expanded, while at the same time, there will be recruitment of appropriate personnel.

Once the school mapping exercise is conducted in the educationally backward areas, it will reveal the resource needs of both the students and the concerned areas while also making appropriate recommendations.

SAQ 2.2
Some areas are called educationally advanced areas if they satisfy the condition of very high participation rates or enrollment figures. In such places, school mapping exercise is still desirable.
Lopsidedness does occur in resource situations of schools located in the educationally advanced areas. Thus, it is only through school mapping exercise that such anomaly can be rectified. Re-organization and re-distribution of resource situation can be done through school mapping exercise.

SAQ 2.3
The need to reform certain aspects of the educational system occurs from time to time and cannot be over stressed. In situations where there are structural defects in the educational system, mapping problems usually come up. Hence, the need for reforms, and thus, school mapping.

SAQ 2.4
The sparsely populated areas are those areas that are thinly populated. School mapping is desirable in such places because it is required for the delimitation of school catchment areas, improvement of participation rate and adaptation of school programmes to client needs.

SAQ 2.5
These are areas that are thickly populated. There is found the continuous concentration of the populace. In such places, school mapping is desirable, as there is the need to improve the participation rate and expand the educational system to cope with the needs of such communities.

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Study Session 3: Phases of School Map Preparation

Introduction

School mapping has phases that must be followed in the course of its preparation. This study session will expose properly the various phases of the preparation of the school map.

In this session, you will be introduced to acceptance of school mapping as the first phase in the preparation of school map, establishment of administrative machinery as the second phase of preparation of school map, diagnosis of school systems as a phase of the preparation of school map and implementation as one of the phases of preparation of school map.

Learning Outcomes for study session 3

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

3.1 Explain acceptance of school mapping as the first phase in the preparation of school map

3.2. Elucidate on the establishment of administrative machinery as the second phase of preparation of school map

3.3. Discuss details of diagnosis of school systems as a phase of the preparation of school map

3.4. Explain implementation as one of the phases of preparation of school map

3.1 Acceptance of the School Mapping Exercise

This is the first phase in the preparation of school map, whereby the education authority has to accept the logic, reason and judgment of school mapping. It is very essential to get the political support for the school mapping exercise to materialize. If this is not made, the idea of school mapping might not be accepted by the incumbent government and therefore not see the light of the day.

One of the greatest challenges for educational planners and administrators has been to equalize educational opportunities for all, to provide easy access to educational facilities to all children. If all habitation / villages are to be provided with a school than the question of equality does not arise.

But in real life situations we locate schools in such villages so that other habitations and villages also benefit. How do we decide on the village/ habitations where schools are to be opened so as to ensure equality of educational opportunities? The answer of this question /issue is found at the centre of any discussion of SM, GIS and/or PPGIS that attempts an honest inclusion of decentralized participants at any scale.

3.1.1 School mapping Exercise as a planning tool

The term school mapping seemingly implies that the exercise is confined to location of schools. This is not true. School mapping is an exercise useful to rationally allocate educational facilities of any type related to any level of education.

According to available accounts, school mapping originated in **France in 1963 (Caillods, 1983; Da Graça, 1998; Galabawa, Agu, & Miyazawa, 2002; Govinda, 1999).** School mapping (SM) is a normative approach to the micro-planning of school locations. It is an essential planning tool to overcome possibilities of regional inequalities in the provision of educational facilities. It means that:

1. School mapping incorporates spatial and demographic dimensions into the educational planning process.
2. Location of educational facilities depends on the norms and standards prescribed by the authorities. SM is also used to investigate and ensure the efficient and equitable distribution of resources within and between school systems when large-scale reform or significant expansion of an educational system takes place **(Caillods, 1983).**

SM (particularly in developing countries) is most often used to facilitate one or more of six functions:
1. Create the necessary conditions for achieving universal primary and secondary education (UPE and USE)
2. Increase access for females and members of other traditionally under-represented socio-economic groups
3. Promote the equitable distribution of educational benefits within and between different regions and populations
4. Improve the quality of educational efforts
5. Optimise the efficient use of existing capital, human and financial resources and
6. Organise, coordinate and rationalise efforts at technical, vocational, and post-secondary education (**Caillods, 1983; Varghese, 1997**).

3.1.2 Major Objectives of school mapping Exercise

School mapping techniques help us to identify the most appropriate locations of schools or their alternatives so that maximum no of children can be benefited from the same level of investment and to reduce regional inequalities in the educational facilities. following are the major objectives of the school mapping .
- ✓ To identify most appropriate location (Habitation or Village) for opening of new/ upgraded Secondary School.
- ✓ To identified most appropriate location (Habitation or village) to open alternatives of new school.
- ✓ To identify the location for opening of alternatives to formal school.
- ✓ To level out existing disparities in the distribution of educational facilities.
- ✓ To create equality of educational opportunities.

Micro Planning and school mapping exercise

School mapping and micro planning are complimentary exercise but they are not the same. Objective of Micro Planning is
i. To mobilize the local community to prepare village level plan
ii. To provide support system to the school become functional
iii. To ensure that all eligible children from the locality attached the schools and thereby to ensure better and efficient utilization of resources already provided to a particular locality area or school. There are following differences in between micro planning exercise an school mapping exercise.

3.1.3 Methodology of school mapping

School mapping involves following steps below:
1. Specification of norms standards & catchment area.
2. Diagnosis of exiting educational facilities.
3. Projection of future child population.
4. Deciding the location of schools.
5. Education authorities.
6. Estimating financial resources requirement.

7. Prioritization of assessed requirement & facilities in the schools according to financial resources.

1. Specification of norms standards & catchment area.
- Norms for opening of new schools-
- Distance/Population/Difficult area
- Norms for teacher.

2. Diagnosis of exiting educational facilities.
- Assessment of existing educational facilities in selected area or region schools.
- Required information is useful to prepare school specific plan.
  i. Literacy Rate/ Enrolment Rate /Retention Rate/ Dropout Rate etc.
  ii. No of Teachers.
  iii. Teacher pupil ratio
  iv. Building and infrastructure facilities
  v. Blackboard, water, Toilet, electricity playground etc.

3. Projection of future child population.
- Assessment the number of children which is to be enrolled.
- It is based on projection of child population in the catchment area.
- Benefits
  i. To know No of New Schools to be opened or other alternatives to formal education.
  ii. To know No of Schools to be upgraded.
  iii. No of teachers required.

4. Deciding the location of schools.
- Based on Norms specified by the authority.
- SM exercise does not decide the site to construct schools. It only indicates the most appropriate habitations/ village where school are to be opened.
- Finding appropriate sites is to be done in consultation with villagers, engineers and

5. Education authorities.
Assessing the requirements or facilities in schools: - This implies:-
- Assessment of requirement of facilities in new school and in existing schools.
- This includes requirement of infrastructure facilities and teaching learning materials.

6. Estimating financial resources requirement.
- Based on the requirement of facilities cost estimates can be made and proposal can be made for funding.

7. Prioritization of assessed requirement & facilities in the schools according to financial resources.
- Based on the available budget for every year proposal can be made.

In-Text Question
The major objective of school mapping exercise include the following except
  A. To identify most appropriate location.
  B. To identify the location for opening of alternatives to formal school.
  C. To level out existing disparities in the distribution of educational facilities.
  D. To create sophisticated educational status.

In-Text Answer
D. To create sophisticated educational status

3.2 Establishment of Administrative Machinery

Consequent upon the adoption of school mapping method and idea, the authority needs to set up administrative machinery for affecting the plan. The officers that will be used will have to be trained, especially through the workshop(s) that is organized for the purpose. Consultative boards will have to be set up by the government with terms of reference prepared for them. The terms of reference should however indicate clearly the objectives of the school mapping exercise.

3.3 Diagnosis of School Systems

This is the third phase in the preparation of school map. Here, the prevailing conditions in the schools are diagnosed so as to be acquainted with the current position of the schools, especially in terms of their resource situations. The statistics generated from this can be used for discrepancy analysis of the "desired situation". Based on the discrepancy analysis that has been carried out, projections can be made. The projection may be for short, medium or long term.

Diagnosis of exiting educational facilities includes
- ✓ Assessment of existing educational facilities in selected area or region schools.
- ✓ Required information is useful to prepare school specific plan like:
  i. Literacy Rate/ Enrolment Rate /Retention Rate/ Dropout Rate etc.
  ii. No of Teachers.
  iii. Teacher pupil ratio
  iv. Building and infrastructure facilities
  v. Blackboard, water, Toilet, electricity playground etc.

3.3.1 Projection of future child population.
- ➢ Assessment of the number of children which is to be enrolled.
- ➢ It is based on projection of child population in the catchment area.

Benefits of Projection of future child population

The benefits are listed below:
  i. To know No of New Schools to be opened or other alternatives to formal education.
  ii. To know No of Schools to be upgraded.
  iii. No of teachers required.

Deciding the location of schools

This decision based on the following:
  i. Based on Norms specified by the authority.
  ii. SM exercise does not decide the site to construct schools. It only indicates the most appropriate habitations/ village where school are to be opened.
  iii. Finding appropriate sites is to be done in consultation with villagers, engineers and education authorities.

Assessing the requirements or facilities in schools

This implies:
- ➢ Assessment of requirement of facilities in new school and in existing schools.
- ➢ This includes requirement of infrastructure facilities and teaching learning materials.

Estimating financial resources requirement

- ➢ Based on the requirement of facilities cost estimates can be made and proposal can be made for funding.
- ➢ Prioritization of assessed requirement & facilities in the schools according to financial resources.
- ➢ Based on the available budget for every year proposal can be made.

3.4 Implementation of the phases of preparation of school map

This is a phase where the school mapping exercise can commence because the officers at the helms of affairs are already acquainted with the principle(s) of school mapping. Further, the implementation phase is achieved, provided there is adequate statistical information.

The appropriate authority (federal, state or local government) has to provide instructions and manuals for drafting school maps. There is the need to make available a diagram showing residential abodes of school age children for the school mapping exercise at the first level of education (primary level).

Based on this and some other factors, recommendations are made in a democratic way to the government, with the expectation that such government will make use of the recommendations. If these recommendations are approved by the government, implementation may follow.

It is becoming clear that implementation is a process that occurs in discernable stages and that there are common components (Drivers) of successfully implemented programs. Active implementation methods incorporate best practices related to the Stages of Implementation and Implementation Drivers.
Implementation best practices have been derived from concept mapping and nominal group meetings with those who have been implementing evidence-based programs successfully for several years **(Blase et al., 2005).**

Implementation Stages and Drivers were established as a result of an extensive review and synthesis of the implementation evaluation literature **(Fixsen et al., 2005; Wallace, Blase, Fixsen, and Naoom, 2008).** It should be noted that Stages and Drivers are not linear or separate; each is embedded in the other in interesting combinations. For present purposes, they will be outlined with the complexity removed.

The Stages of Implementation are
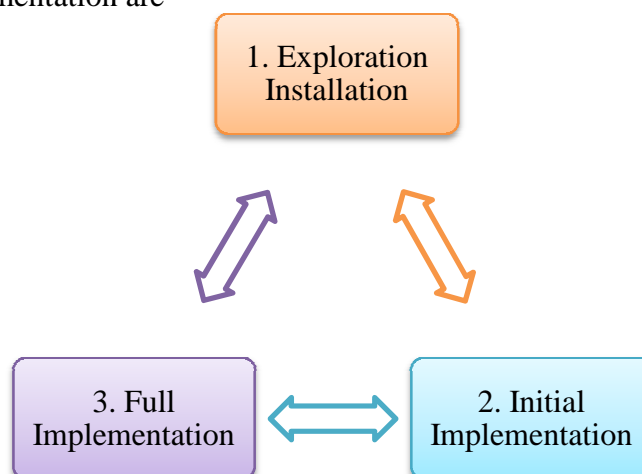
Figure 3.1: The Stages of Implementation

The Stages are dynamic within organizations such as schools and clinics, moving back and forth among Stages as personnel and circumstances change. Understanding Stages is important so the work of Implementation Teams can be matched to the Stage of the provider organization.

Exploration Stage: The functions of the Exploration Stage are a critical starting place for work with States, districts, and others. Taking the time for exploration saves time and money (Romney, 2011) and improves the chances for success (Saldana, Chamberlain, Wang, & Brown, 2011; Slavin, Madden, Chamberlain, & Cheung, 2010). During Exploration, readiness is assessed by an Implementation Team.

Initial Implementation: This is the time when the innovation is being used for the first time. During this Stage, practitioners and staff are attempting to use newly learned skills (e.g., the evidence-based program) in the context of a provider organization that is just learning how to change to accommodate and support the new ways of work.
This is the most fragile Stage where the awkwardness associated with trying new things and the difficulties associated with changing old ways of work are strong motivations for giving up and going back to comfortable routines (business as usual).

The Initial Implementation Stage is a real challenge. Establishing and sustaining changes to the point of integration into daily work is not likely unless there is external support for change at the practice level (support from coaches; Joyce & Showers, 2002), organization level (support from Implementation Teams; **Aladjem & Borman, 2006; Nord & Tucker, 1987),** and system level (support from Implementation Teams; **Schofield, 2004**).
Implementation Teams using the Implementation Drivers are essential to success (80% vs. 14%; **Fixsen, Blase, Timbers, & Wolf, 2001; Balas & Boren, 2000**) during the Initial Implementation Stage.

Implementation Teams help to develop the staff competencies required by the evidence-based program, help administrators adjust organization roles and functions to align with the program, and help leaders in the provider organization fully support the process of using the program and incorporating the necessary implementation supports.
Comparison of Intervention Effect with and Without an Implementation Team

IMPLEMENTATION

	Impl. Team	NO Impl. Team
Effective	(80%, 3 Yrs)	(14%, 17 Yrs)
	Effective use of Implementation Science & Practice	Letting it Happen Helping it Happen

INTERVENTION

Fixsen, Blase, Timbers, & Wolf, 2001   Balas & Boren, 2000

Substantial Return on Investment

Full Implementation

Full Implementation is reached when 50% or more of the intended practitioners, staff, or team members are using an effective innovation with fidelity and good outcomes. For example, if there are 10 practitioners who are attempting to use an innovative approach for Dialectical Behavior Therapy, 5 of the therapists would need to be using the innovation as intended as measured by a performance assessment.

Full Implementation is difficult to achieve and sustain without the necessary implementation supports described herein **(Fixsen, Blase, Timbers, & Wolf, 2001; U.S. Department of Education, 2011).**

In-Text Question

The following are stages of implementation of school map except_____
    A. Exploration Installation
    B. Initial Implementation
    C. Full Interrogation
    D. Full Implementation

In-Text Answer

C. Full Interrogation

Summary of study session 3

1   This is the first phase in the preparation of school map, whereby the education authority has to accept the logic, reason and judgment of school mapping. It is very essential to get the political support for the school mapping exercise to materialize.

2   The term school mapping seemingly implies that the exercise is confined to location of schools. This is not true.

3   School mapping techniques help us to identify the most appropriate locations of schools or their alternatives so that maximum no of children can be benefited from the same level of investment and to reduce regional inequalities in the educational facilities.

4   Consequent upon the adoption of school mapping method and idea, the authority needs to set up administrative machinery for affecting the plan.

5. This is the third phase in the preparation of school map. Here, the prevailing conditions in the schools are diagnosed so as to be acquainted with the current position of the schools, especially in terms of their resource situations.
6. This is a phase where the school mapping exercise can commence because the officers at the helms of affairs are already acquainted with the principle(s) of school mapping.

Self-Assessment Questions (SAQs) for Study Session 3
Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ.3.1 (Testing Learning Outcome 3.1)
Explain "acceptance of school mapping" as the first phase in the preparation of school map

SAQ 3.2 (Testing Learning Outcome 3.2)
Explain the "establishment of administrative machinery" as the second phase of preparation of school map

SAQ 3.3 (Test Learning Outcome 3.3)
Give details of "diagnosis of school systems" as a phase of the preparation of school map

SAQ 3.4 (Test Learning Outcome 3.4)
Explain fully "implementation of school mapping exercise" as one of the phases of preparation of school map

Notes on SAQS for study session 3
SAQ 3.1
This is the first phase in the preparation of school map, whereby the education authority has to accept the logic, reason and judgment of school mapping. It is very essential to get the political support for the school mapping exercise to materialize. If this is not made, the idea of school mapping might not be accepted by the incumbent government and therefore not see the light of the day.

The term school mapping seemingly implies that the exercise is confined to location of schools. This is not true. School mapping is an exercise useful to rationally allocate educational facilities of any type related to any level of education.

SAQ 3.2
Consequent upon the adoption of school mapping method and idea, the authority needs to set up administrative machinery for affecting the plan. The officers that will be used will have to be trained, especially through the workshop(s) that is organized for the purpose. Consultative boards will have to be set up by the government with terms of reference prepared for them. The terms of reference should however indicate clearly the objectives of the school mapping exercise.

SAQ 3.3

This is the third phase in the preparation of school map. Here, the prevailing conditions in the schools are diagnosed so as to be acquainted with the current position of the schools, especially in terms of their resource situations. The statistics generated from this can be used for discrepancy analysis of the "desired situation". Based on the discrepancy analysis that has been carried out, projections can be made. The projection may be for short, medium or long term.

Diagnosis of exiting educational facilities includes

➢ Assessment of existing educational facilities in selected area or region schools.
➢ Required information is useful to prepare school specific plan like:
    i.   Literacy Rate/ Enrolment Rate /Retention Rate/ Dropout Rate etc.
    ii.   No of Teachers.
    iii.   Teacher pupil ratio
    iv.   Building and infrastructure facilities
    v.   Blackboard, water, Toilet, electricity playground etc.

SAQ 3.4

This is a phase where the school mapping exercise can commence because the officers at the helms of affairs are already acquainted with the principle(s) of school mapping. Further, the implementation phase is achieved, provided there is adequate statistical information.

Full Implementation is reached when 50% or more of the intended practitioners, staff, or team members are using an effective innovation with fidelity and good outcomes. For example, if there are 10 practitioners who are attempting to use an innovative approach for Dialectical Behavior Therapy, 5 of the therapists would need to be using the innovation as intended as measured by a performance assessment.

Reference

Fabunmi, M.(2004). Perspectives in Educational Planning. Ibadan: Awemark Industrial Printers.

Study Session 4: Parameters and School Mapping I

Introduction

The conduct of school mapping exercise has lots of things to take into consideration among which are the environmental parameters that consist of location, aesthetics, topography and soil condition, freedom from danger and health hazards, space for future expansion and so on. Also, there are institutional parameters that consist of internal efficiency of the various levels of schooling, student flows, financial resources, costs, political factors, social factor and also external efficiency of the school system.

In this study session, you will be introduced to environmental parameter in school, space for expansion and social infrastructure" as a parameter of school mapping, and the various institutional parameters that contribute to school mapping.

Learning Outcomes for study session 4

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

4.1 Explain environmental parameter in school mapping

4.2 Explain the clarity of space for expansion and social infrastructure as a parameter of school mapping

4.3 Explain the various institutional parameters that contribute to school mapping.

4.1 Environmental Parameter in School Mapping

School mapping is to be anticipated and because of its necessity to prevent over localization or over-concentration of schools in certain (urban) areas while some other (rural) areas are not well served. **Ajayi (2007)** opined that school mapping aims at identifying locations for the site of schools and construction of classrooms, laboratories, libraries and workshops etc.

Figure 4.1: Ajayi (2007)
Source: http://socsc.ui.edu.ng/sites/default/files/Ajayi,%20Dickson.jpg

Evaluating the use efficiency of facilities, re-organising and re-distribution of facilities, and optimizing the use of human and material resources in the educational sector. Corroborating this view, **Fabunmi (2004)** defined school mapping as the dynamic process of diagnosing and estimating school requirements and identifying the communities or sites where new schools should be located and where additional educational resources are required.

Figure 4.2: Fabunmi (2004)
Source:https://media.licdn.com/mpr/mpr/shrinknp_200_200/AAEAAQAAAAAAAL5AA
AAJDBlY2NlZGM2LWUwNWItNGE3OS04OGQ5LWJlOGU2NTIzZmY5Yw.jpg

However, it is very important to consider a number of environmental parameters in selecting the site where a school will be established. Some of these parameters according to **Olutola (1981)** include location, aesthetics, topography and soil conditions, which are free from danger and health hazards, and there will be space for expansion

Figure 4.3: Olutola (1981)
Source: http://www.businesseyeng.com/images/Juneimage/Mobolurin.jpg

Environmental parameters in school mapping include the following listed below:
- ✓ Location
- ✓ Aesthetics
- ✓ Topography and
- ✓ Soil condition

Location: The location of the school site must be indicated in the master plan and such location must be accessible to both staff and students. It should not be too far away from the community and there must be adequate means of transportation to such location.

Care must be taken to ensure that the school site should not be located in a noisy environment so that students' attention to their studies will not be distracted from time to time. The location should not be too close to a busy street, market places, industrial areas, airport etc.

School site should be located in a noiseless environment where effective teaching and learning can be enhanced.

Aesthetics: The natural beauty of an environment must be considered in selecting a school site. The aesthetic features of the environment must be supportive in the beautification of the school site.

According to Olutola (1981), trees, shrubs, flower beds, brooks, closeness to majestic mountains, oceans and lakes do significantly beautify the landscape and enhance the image of the institution. In school plant planning, the natural features of the environment must be exploited by the school administrator to make the school attractive.

Topography and soil condition: The choice of the school site should be influenced by the topography (scenery/landscape) and the soil condition of the environment. The school's landscape should be low and plain. It should not be sloppy and hilly.

The school soil should be well or moderately drained and should not be marshy (muddy/swampy).Freedom from danger and health hazards School site should be located in an area free from danger and health hazards. School site should be far away from flight paths, major airways and rail lines to forestall danger from accidents.

The school site should not be close to industries such as oil refineries, paint and cigarette factories because of air pollution and offensive odours that could be disturbing and injurious to people's health.

In-Text Question
Environmental parameters in selecting the site where a school will be established include the following except _____
    A. Location
    B. Aesthetics
    C. Effecology
    D. Topography

In-Text Answer
C. Effecology

4.2 Space for Expansion and Social Infrastructure for School Mapping
The school site should be such that will give room for future expansion of both permanent and semi-permanent structures as much as possible. To this end, the school site should be spacious enough to accommodate the extension of school plants from time-to-time.
The minimum standard for school site's space should be strictly adhered to so that the opportunities for future expansion will not be jeopardized. Experience has shown that many schools do not have opportunity for expansion because of inadequate land space.
This is predominant more in some private schools. Where there is enough land space for future expansion of a school, such land space should be fenced to prevent encroachment as much as possible.

Social infrastructure
The availability of social infrastructures such as electricity and water must be considered in selecting the school site. The school requires adequate supply of electricity and water for its operations. It is therefore important to ensure that the school site is located where water and electricity can easily be provided to aid the school activities.

4.3 Institutional Parameters for School Mapping

School mapping produces inventory for existing institution facilities as well as providing guidelines for the re-organization of such school. Each institution should be guided and motivated to draft its own plan in respect of curricular, co-curricular, and developmental activities.

As school mapping and school plant is the space interpretation of the school curriculum, the school curriculum cannot be implemented if the physical facilities required for teaching and learning are not available.

The diagnosis of the existing institutional parameters can be classified into:

The internal efficiency of the different levels of schooling

The external efficiency of the school system
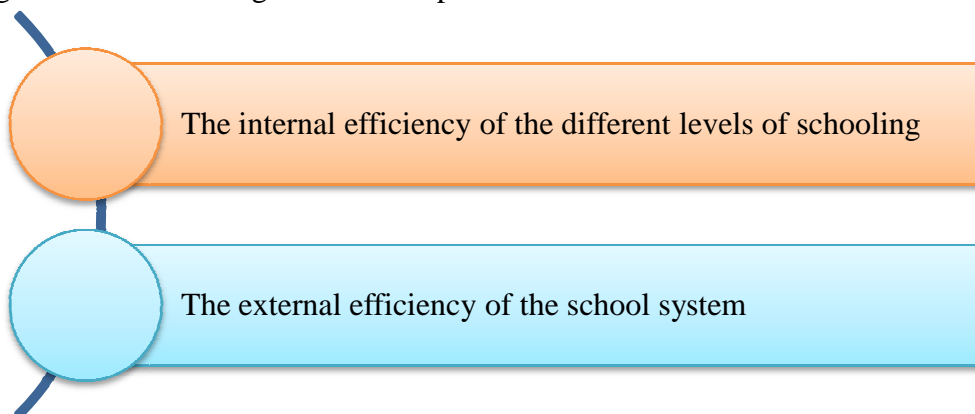
Figure 4.4: Institutional parameters for school mapping

The internal efficiency of the different levels of schooling
The internal efficiency of the school system is determined by the degree of wastage in the system. In school mapping, it is necessary to examine each level of school with a view to ascertaining the retention and dropout rates, the transition rates and the promotion rates. This will reveal the extent of wastage in the school system and how internally efficient the system is.

The internal efficiency includes the following
1. Student-flows
2. Financial resources
3. Costs
4. Political factors
5. Social factor

Student-flows: The student flow has to do with how students are admitted, promoted, repeated, dropped out and get graduated from the school system. It is therefore necessary to find out what happens to the students as they go in (enrollment/enrolled), through (processed) and out of the school system (graduation/graduated).

The Cohort analysis usually shows student flow within the school system. It also reflects the extent of wastage(s) in terms of repetition and dropout in the school system.

Financial resources: To achieve the aims and objectives of the school system, there must be availability of adequate financial resources to carry out the school activities. To this end, the school expended money on buildings, equipment, furniture and fittings (capital expenditure), teachers' salaries and consumables (recurrent expenditure) on regular basis. In school mapping, the financial resources available to the school system must be determined, so as to ensure a continuous flow of the fund as at when due.

Costs: The costs of education must be determined while the type(s) of such costs include: total cost, fixed and variable costs, direct and indirect costs, marginal and average costs, unit cost per student, unit cost per graduate and unit cost per level of education, etc which have to be computed appropriately.

Political factors: Schools have to be mapped to achieve the political objectives of the country. In pluralist societies, schools should be mapped in such a way that children of various ethnic groups are brought together so that they can share common experiences.
This will promote national unity and make the emerging national leaders to have enough empathy for people from outside their country homes or ethnic groups.

Social factor: The school map can be used to minimize social resistance to schooling. In developing country (ies), there is a great apathy towards education. For instance, in Eastern Nigeria, most male students opt out of schooling for trading, because they feel that it is easier to accumulate wealth via commerce.
But in Northern Nigeria, most of the female students drop out of the school system on account of early marriage and pregnancy. Mapping of schools will help to determine the figures of young school-aged children that are out of school as a result of opting for trading or involvement in early marriage, and thereby help to find solution to such problems.

The external efficiency of the school system
This refers to the "fit" between education and the needs of the society, especially the labour market. The school system is externally efficient if the graduates it turns out are what the society or the economy or higher levels of employment needs.
In school mapping, it is necessary to find out what happens to school leavers and graduates in terms of their ability to find the jobs they were trained for, taking into consideration the time lag between graduation and employment amongst others.

Summary of study session 4
1. Location is a parameter that affects school mapping. The location must be accessible to both staff and students and must not be too far away from the community, while there must be care for adequate transportation system
2. Aesthetics otherwise called natural beauty is another parameter that has its effect on mapping of schools.
3. School site must be located in area that is free from danger and health hazards. Also, school site must be free from oil refineries, paint and cigarette factories because of air pollution and offensive odours that could be disturbing and injurious to people's health.

4. School site must be such that it gives room for future expansion in all dimensions so that minimum standard for school site's space should be strictly adhered to so that the opportunities for future expansion will not be jeopardized.
5. Availability of social infrastructures like electricity is important for school success. It is then important that schools should be sited where there is water and electricity.
6. Internal efficiency of different school levels which determines the degree of wastages. Each school level helps to ascertain the retention and dropout rates, the transition rates and the promotion rates.
7. Student flows relate to the admission, promotion, repetition, dropout and graduation of students from the school system.
8. Financial Resources that examines the availability of adequate financial resources to carry out the school activities. There is need to ensure that there is adequate flow of finance to avoid a halt of school activities of any form.
9. Costs-There are costs incurred in the process of carrying out of school activities and the cost varies from total cost to unit cost, indirect cost and so on.
10. Political factors- These are taken into consideration to ensure that political objectives of nations are achieved and children of various ethnic groups are brought together so that they can share common experiences.
11. Social factor is used minimize social resistance to schooling. In Eastern part of Nigeria, males opt out of schooling for trading, while females opt for marriage in the Northern part of Nigeria. School mapping helps to find solutions to the problem identified.
12. The school is externally efficient if graduates it turns out are what the society or the economy or higher levels of employment needs.

Self-Assessment Questions (SAQs) for Study Session 4

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ.4.1 (Testing Learning Outcome 4.1)
Explain how "location and aesthetics contribute to effective school
SAQ 4.2 (Testing Learning Outcome 4.2)
Briefly explain Space for Expansion and Social Infrastructure for School Mapping
SAQ 4.3 (Test Learning Outcome 4.3)
Enumerate and explain the two existing institutional parameters

Notes on SAQS for study session 4
SAQ 4.1
The location of the school site must be indicated in the master plan and such location must be accessible to both staff and students. It should not be too far away from the community and there must be adequate means of transportation to such location.
Care must be taken to ensure that the school site should not be located in a noisy environment so that students' attention to their studies will not be distracted from time to time. The location should not be too close to a busy street, market places, industrial areas, airport etc. School site should be located in a noiseless environment where effective teaching and learning can be enhanced.

In **Aesthetics,** the natural beauty of an environment must be considered in selecting a school site. The aesthetic features of the environment must be supportive in the beautification of the school site.

SAQ 4.2
The school site should be such that will give room for future expansion of both permanent and semi-permanent structures as much as possible. To this end, the school site should be spacious enough to accommodate the extension of school plants from time-to-time.

The minimum standard for school site's space should be strictly adhered to so that the opportunities for future expansion will not be jeopardized. Experience has shown that many schools do not have opportunity for expansion because of inadequate land space.

Social infrastructure on the other hand is the availability of social infrastructures such as electricity and water must be considered in selecting the school site. The school requires adequate supply of electricity and water for its operations. It is therefore important to ensure that the school site is located where water and electricity can easily be provided to aid the school activities.

SAQ 4.3
The two institutional parameters of school mapping are:
   i.   The internal efficiency of the different levels of schooling
  ii.   The external efficiency of the school system

The internal efficiency of the school system: This is determined by the degree of wastage in the system. In school mapping, it is necessary to examine each level of school with a view to ascertaining the retention and dropout rates, the transition rates and the promotion rates.

The external efficiency of the school system: This refers to the "fit" between education and the needs of the society, especially the labour market. The school system is externally efficient if the graduates it turns out are what the society or the economy or higher levels of employment needs.

In school mapping, it is necessary to find out what happens to school leavers and graduates in terms of their ability to find the jobs they were trained for, taking into consideration the time lag between graduation and employment amongst others.

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Study Session 5: Parameters and School Mapping II

Introduction

This session examines other parameters which are: educational and demographic parameters. The last session (session 4) examined environmental and institutional parameters. The educational parameters consist of number of schools, classrooms, teachers and teacher training facilities. Others are availability of science laboratories, libraries, workshops, books, furniture and fittings in the schools.

School mapping helps to determine whether the available school facilities are adequate or not. Rural areas are usually affected by non-availability or inadequacy of the educational parameters and low student enrolment rates. Demographic parameter has to do with the population distribution features which are in terms of age, sex, and religion, population growth, population density, migration.

In this study session, you will be introduced to the various educational parameters help in mapping of schools; demographic parameters contribute positively to school mapping.

Learning Outcomes for study session 5

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

5.1 Explain how the various educational parameters help in mapping of schools.

5.2 Discuss how demographic parameters contribute positively to school mapping.

5.1 Educational Parameters for School Mapping

The educational parameters have to do with determination of the number of schools, classrooms, teachers and teacher-training facilities. The availability of science laboratories, libraries, workshops, books, furniture and fittings in the schools is also determined.

School mapping will reveal whether or not there are inadequacy and disparities in the distribution of educational facilities in a particular area and also facilitate the educational development of rural and urban areas. It has been observed that there are various problems that militate against the development of education in the rural areas.

Rural areas are however well-known to be characterized by low enrolment, high dropout rates and low transition rates. Hallak (1977) observed that the provision of education in rural areas is normally burdened with the following problems:

Figure 5.1: Hallak (1977)
Source:https://i1.rgstatic.net/ii/profile.image/AS%3A272442681720864@1441966805958_1

Some of the problems are:
1. Qualified teachers refuse appointment in remote villages
2. Villagers refuse to send their children to schools because they are dependent on them for help.
3. Parents hesitate to entrust their daughters to male teachers
4. Some villages have few inhabitants and consequently too few children enroll for primary school
5. Multi-grade classes are often poorly run and ineffective
6. Lack of roads or satisfactory means of communication which makes it difficult to get books and teaching materials to the schools.
7. Also, it is difficult to organize school transport services in such areas.

As a result of these problems, rural areas are usually educationally backward. School mapping can be used to expand educational facilities in the rural areas in order to facilitate educational development.

The urban areas are characterized by high participation rates, overcrowded classrooms, high transition rates and low dropout rates. To enhance educational development in the urban areas, school mapping can be used to correct old mistakes and rectify unfair distribution of facilities. School mapping is useful in all places.

It can be used to adapt school programmes to client needs, expand educational facilities, equalize educational opportunities, rectify unjust distribution of resources and adapt the old school network to the new system in places undergoing reforms.

In-Text Question
Some of the problems of provision of education in rural areas include the following except
      A. Qualified teachers refuse appointment in remote villages
      B. Villagers refuse to send their children to schools because they are dependent on them for help.
      C. Over exposure of pupils
      D. Parents hesitate to entrust their daughters to male teachers

In-Text Answer
C. Over exposure of pupils

5.2 Demographic Parameters for School Mapping

Education is a service, while the schools are expected to serve the population. It is therefore important to take into consideration the geographical spread and nature of the population that the schools will serve.

The focus here is to ascertain the population distribution in terms of age, sex and religion, population growth, population density, migration etc. with a view to determine the school age population growth, access to education, catchment areas, social demand for education, location of schools etc.

To this end, Fabunmi (2004) reiterated that demographic analysis is a necessary requirement for a good mapping of schools. The spatial distribution of population will provide clues as to how schools should be sited in different communities.

Figure 5.2: Fabunmi (2004)
Source:https://media.licdn.com/mpr/mpr/shrinknp_200_200/AAEAAQAAAAAAAL5AAAAJ
DBlY2NlZGM2LWUwNWItNGE3OS04OGQ5LWJlOGU2NTIzZmY5Yw.jpg

Demographic parameter analysis is confined to a study of the components of population variation and change. Population studies are concerned not only with population variables but also with the relationships between population changes and other variables social, economic, political, biological, genetic and geographical etc.

Whereas the theoretical demographic analysis tries to explain demographic facts and to seek the causes behind them, the descriptive approach limits oneself to a 'statistical description of populations'. In reality, however, the distinction is not as clear as this; population forecasts, for instance, cannot be made without a minimum of demographic analysis.

Whichever approach is adopted, demographers have two possible fields of study distinct from each other, both in objectives and in method. The first one is static demographic analysis which deals with the current situation of the population, their structure or composition.

The second one is the dynamic aspect of population analysis which aims at the trend of the population – also called movement of the population which depend on a number of factors, particularly on such demographic events as births, marriages and deaths.

Structure of the Population by Age and Sex

The simplest method of studying the population structure by age and by sex is to construct an 'age pyramid'. The age structure of the population is very important in demographic analysis because it provides a sort of summary of the demographic history of the nation, and also because, as it governs to some extent the future growth of the population.

The number of individuals at each age, or in each age group, depends on

    i.   The number of births in the generation, or generations, of which they were born

    ii.   The effect of mortality on that generation or those generations; and

    iii.   The size of migratory flows at various times, and the ages of the migrants.

Age Composition

The age structure of a population is the consequence of trends in fertility (birth), mortality (deaths) and migration over past periods with fertility trends having the dominant influence. The proportion of small children, for instance, reflects the recent birth rate as further affected by infant mortality.

Summary of study session 5

1. The educational parameters have to do with determination of the number of schools, classrooms, teachers and teacher-training facilities.
2. The availability of science laboratories, libraries, workshops, books, furniture and fittings in the schools is also determined.
3. School mapping will reveal whether or not there are inadequacy and disparities in the distribution of educational facilities in a particular area and also facilitate the educational development of rural and urban areas.
4. Education is a service, while the schools are expected to serve the population. It is therefore important to take into consideration the geographical spread and nature of the population that the schools will serve.
5. The focus here is to ascertain the population distribution in terms of age, sex and religion, population growth, population density, migration etc. with a view to determine the school age population growth, access to education, catchment areas, social demand for education, location of schools
6. Demographic parameter analysis is confined to a study of the components of population variation and change. Population studies are concerned not only with population variables but also with the relationships between population changes and other variables social, economic, political, biological, genetic and geographical.

Self-Assessment Questions (SAQs) for Study Session 5

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 5.1 (Testing Learning Outcome 5.1)

Explain how educational parameters such as science laboratories, libraries, workshops, books, furniture and fittings contribute to effective school mapping.

SAQ 5.2 (Testing Learning Outcome 5.2)

How will demographic parameters such as age, sex, and religion, population growth, population density, migration contribute to mapping of schools?

Notes on SAQS for study session 5

SAQ 5.1

The educational parameters have to do with determination of the number of schools, classrooms, teachers and teacher-training facilities. The availability of science laboratories, libraries, workshops, books, furniture and fittings in the schools is also determined.

School mapping will reveal whether or not there are inadequacy and disparities in the distribution of educational facilities in a particular area and also facilitate the educational development of rural and urban areas. It has been observed that there are various problems that militate against the development of education in the rural areas.

SAQ 5.2

The focus is to ascertain the population distribution in terms of age, sex and religion, population growth, population density, migration etc. with a view to determine the school age population growth, access to education, catchment areas, social demand for education, location of schools

The simplest method of studying the population structure by age and by sex is to construct an 'age pyramid'. The age structure of the population is very important in demographic analysis because it provides a sort of summary of the demographic history of the nation, and also because, as it governs to some extent the future growth of the population.

The number of individuals at each age, or in each age group, depends on

i. The number of births in the generation, or generations, of which they were born
ii. The effect of mortality on that generation or those generations; and
iii. The size of migratory flows at various times, and the ages of the migrants.

The age structure of a population is the consequence of trends in fertility (birth), mortality (deaths) and migration over past periods with fertility trends having the dominant influence. The proportion of small children, for instance, reflects the recent birth rate as further affected by infant mortality.

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Study Session 6: Diagnosis of Staffing, Enrolment and Facilities Conditions

Introduction

Education is more of human capital intensive and so from time to time, session to session needs staff (both academic and non-academic). Their services are needed for the success of various programmes run by the school for her students. It is then of importance that issues related to staffing be given the attention it deserves.

To this end, male and female staff are employed and work till retiring if he/she is not found wanting while on the job. Information pertaining to sex composition, age, educational qualification work experience of the staffs is compiled and it helps to determine whether there are adequate staff/ student ratio in the school system.

In this study session you will be introduced to staffing conditions in an educational institution, diagnosis of student enrolment and diagnosis of use of school facilities and conditions of school equipment.

Learning Outcomes for study session 6

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

6.1. Explain the staffing conditions in an educational institution

6.2. Give details of diagnosis of student enrolment, especially as it concerns student flow from one level to the other.

6.3. Discuss the diagnosis of use of school facilities and conditions of school equipment.

6.1 Diagnosis of Staffing Conditions

Staff, whether male or female are those that have been employed by the organization, put on probation and finally have their appointment confirmed till retiring age. Retiring age is relative according to the organization a staffer works with.

For example, in Nigerian University system, a lecturer who attains the rank of a Professor will retire at the age of 70 years, while those that do not attain such rank, will retire at the age of 65years. For Non-Academics, retiring condition is age 65years.

In Nigerian public service, conditions for retiring is either attainment of age 60 years or been in service for 35 years. It is important to have the statistics of staff that is employed so as to be harmed with necessary information that will aid planning for them and thereby meet their need to a large extent.

Against the already mentioned, there will be need for data of the staff nominal roll of staff that are academic and non-academic. This concerns the categorization of school staff according to Babalola (2012) by qualifications, working experience, discipline, age and gender vis-à-vis the staff needs of the school system at a particular time.

Figure 6.1: Babalola (2012)
Source: http://theeagleonline.com.ng/wp-content/uploads/2015/04/Afe-Babalola.jpg

You can determine the ratio of teacher demand to teacher supply and determine the shortfall or the excess(es),taken into consideration that there are available data on teacher-student ratios for various levels and an estimate of academic, non-academic staff ratio.

Information will be required on available and or required staff offices, staff quarters (number and capacity) and the percentages of staff that are accommodated on school campus. It may also be necessary to request information on staff training and re-training opportunities so far enjoyed while in the current employment.

In-Text Question
Retiring age is relative according to the organization a staffer works with. True or False

In-Text Answer
True

6.2 Diagnosis of Enrollment

This starts from student enrolment or population by cohort, classes, age, sex and whether they are day students or boarders. At the higher secondary levels, you may require student enrollment by subject specializations, namely:
   ✓ Arts
   ✓ Sciences
   ✓ Business
   ✓ Social sciences
   ✓ Technical specialties and
   ✓ The combination like Arts: Science ratio and so on.

Also required is information on student flow rates in terms of: promotion, repetition, dropouts, wastage and transition from one level to another. Information on the non-schooling gap will be required too as well as the performance level of students in internal and external examinations in the previous years.

All these will enhance adequate diagnostic analysis of past and present trends and will help the school to make reasonable resources projections for the future.

In-Text Question

Diagnosis of enrolment also requires information on student flow rates in terms of promotion, repetition, dropouts, wastage and transition from one level to another. This statement may be considered .

A. True

B False.

C. Partly True

D. Could not be classified

In-Text Answer

A. True

6.3 Diagnosis of Use of School Facilities and Conditions of School Equipment

An inventory of current facilities in use in schools is needed bearing in mind their present conditions, adequacy, especially vis-à-vis student population and frequency of use.

The following list is important while diagnosing the use of school facilities and the conditions of such school equipment. The list is comprised of:

Number of classrooms and average space per class

1. Lecture theatre capacity
2. Halls and auditorium capacity and present conditions
3. Recreational facilities – for sports and games
4. Dormitories number and capacity
5. Staff offices number, capacity and future need
6. Staff quarters number quality and capacity
7. Vehicle and plants: number and cooking conditions
8. Libraries, workshops, laboratories – their present capacity and conditions.
9. Available teaching and learning aids-their conditions, relevance and adequacy
10. Kitchen facilities where applicable
11. Welfare facilities, infirmary/sickbay, eateries, modern communication equipment like computers, internet and intercom facilities.

After initial diagnosis has been done on the facilities listed above, core areas of the school system (namely: staff, students and facilities), you now have sufficient information to project into the next five, ten, fifteen or twenty years as strategic development plans for the school system.

Summary of study session 6

1. Staff, whether male or female are those that have been employed by the organization, put on probation and finally have their appointment confirmed till retiring age. Retiring age is relative according to the organization a staffer works with.
2. Against the already mentioned, there will be need for data of the staff nominal roll of staff that are academic and non-academic.
3. Information will be required on available and or required staff offices, staff quarters (number and capacity) and the percentages of staff that are accommodated on school campus.
4. At the higher secondary levels, you may require student enrollment by subject specializations, namely:
   ✓ Arts

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- ✓ Sciences
- ✓ Business
- ✓ Social sciences
- ✓ Technical specialties and

The combination like Arts: Science ratio and so on.

5. An inventory of current facilities in use in schools is needed bearing in mind their present conditions, adequacy, especially vis-à-vis student population and frequency of use.

6 After initial diagnosis has been done on the facilities listed above, core areas of the school system (namely: staff, students and facilities), you now have sufficient information to project into the next five, ten, fifteen or twenty years as strategic development plans for the school system.

Self-Assessment Questions (SAQs) for Study Session 6

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 6.1 (Testing Learning Outcome 6.1)
Explain the staffing conditions in an educational institution.

SAQ 6.2 (Testing Learning Outcome 6.2)
Provide details of diagnosis of student enrolment, especially as it concerns student flow from one level to the other.

SAQ 6.3 (Testing Learning Outcome 6.3)
Elucidate on the diagnosis of use of school facilities and conditions of school equipment.

Notes on SAQS for study session 6
SAQ 6.1
Staff, whether male or female are those that have been employed by the organization, put on probation and finally have their appointment confirmed till retiring age. Retiring age is relative according to the organization a staffer works with.

For example, in Nigerian University system, a lecturer who attains the rank of a Professor will retire at the age of 70 years, while those that do not attain such rank, will retire at the age of 65years. For Non-Academics, retiring condition is age 65years.

In Nigerian public service, conditions for retiring is either attainment of age 60 years or been in service for 35 years. It is important to have the statistics of staff that is employed so as to be harmed with necessary information that will aid planning for them and thereby meet their need to a large extent.

Information will be required on available and or required staff offices, staff quarters (number and capacity) and the percentages of staff that are accommodated on school campus. It may also be necessary to request information on staff training and re-training opportunities so far enjoyed while in the current employment.

SAQ 6.2

This starts from student enrolment or population by cohort, classes, age, sex and whether they are day students or boarders. At the higher secondary levels, you may require student enrollment by subject specializations, namely:

- ✓ Arts
- ✓ Sciences
- ✓ Business
- ✓ Social sciences
- ✓ Technical specialties and
- ✓ The combination like Arts: Science ratio and so on.

Also required is information on student flow rates in terms of: promotion, repetition, dropouts, wastage and transition from one level to another. Information on the non-schooling gap will be required too as well as the performance level of students in internal and external examinations in the previous years.

All these will enhance adequate diagnostic analysis of past and present trends and will help the school to make reasonable resources projections for the future.

SAQ 6.3

The following list is important while diagnosing the use of school facilities and the conditions of such school equipment. The list is comprised the number of classrooms and average space per class which are listed below:

i. Lecture theatre capacity
ii. Halls and auditorium capacity and present conditions
iii. Recreational facilities – for sports and games
iv. Dormitories number and capacity
v. Staff offices number, capacity and future need
vi. Staff quarters number quality and capacity
vii. Vehicle and plants: number and cooking conditions
viii. Libraries, workshops, laboratories – their present capacity and conditions.
ix. Available teaching and learning aids-their conditions, relevance and adequacy
x. Kitchen facilities where applicable
xi. Welfare facilities, infirmary/sickbay, eateries, modern communication equipment like computers, internet and intercom facilities.

After initial diagnosis has been done on the facilities listed above, core areas of the school system (namely: staff, students and facilities), you now have sufficient information to project into the next five, ten, fifteen or twenty years as strategic development plans for the school system.

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Study Session 7: Meaning, Types and Advantages of School Plant

Introduction

One of the variables that a successful educational enterprise is hung on is the availability of adequate school plant. The school plants must be available for both the students and the teachers. The "school plant" includes the site, the building and the equipment.

The school plants if maintained facilitate the effectiveness of the school system. Types of school plants are considered, while the advantages of the school plants are also considered.

In this study session, you will be introduced to adequate school plants in various schools, types of school plants that are available and the advantages of availability of school plants

Learning Outcomes for study Session 7

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

7.1 Explain the adequate school plants in various schools.

7.2 Discuss types of school plants

7.3 Explain in details the advantages of availability of school plants.

7.1 Adequate School Plants

According to Kulbir (1996), school plant refers to the material provision of the school, which may be objects that are provided in bits and pieces. They are however provided with the main target of aiding teaching on the part of the teacher and learning on the part of the student. Availability of the school plant ensures attainment of success on the part of the school, teachers and the students as a whole.

But its non-provision might lead to failure and non-accomplishment of expected performance by the students, teachers and the school as a whole. You need to further observe that school plant is of great importance because of the positive impact it will have on the educational processes and programmes. There is need to view the plants as an integral part of the learning environment.

Figure 7.1: Kulbir (1996)
Source:https://media.licdn.com/mpr/mpr/shrinknp_200_200/AAEAAQAAAAAAAEjAAAAJG
VlMmFkYTFiLTc2YjgtNDg5Zi1iMzI0LTUxN2M1YjVkMjM0ZA.jpg

The term "school plant" includes the site, the building and the equipment. It embraces permanent and semi-permanent structure as well as items such as machine, laboratory equipment, the black/marker board and the cleaners' tools (Olutola, 1981).

Ajayi (2007) quoting Ojedele (1998) also defined school plant as school site and all the structures that have been put in place to aid effective teaching and learning in the school. Durosaro (2000) described school plant as the entire scope of physical infrastructural facilities which are provided in the school for the purpose of educating the child. School plant is the space interpretation of the school curriculum.

The school curriculum cannot be implemented if the physical facilities required for teaching and learning are not available. Without school plant, the school cannot exist. It therefore becomes necessary to ensure that school plant is properly planned and maintained to facilitate the effectiveness of the school system.

In-Text Question
The school curriculum may be implemented despite the absence of the physical facilities required for teaching and learning. True or False
In-Text Answer
False

7.2 Types of School Plants
The types of school plant are listed below:
1. School campus
2. Educational Building
3. Playground
4. Library
5. Laboratory
6. Classroom
7. Furniture
8. Equipment
9. Hostel
10. Common Room
11. Canteen

School campus: This can be said to be a field on which the various buildings of a university are situated. Further, it can be said to be the grounds that is made up of buildings in which academic and non-academic activities are carried out in a given institution.

Educational Building: This is a building designed for various activities in either a primary, secondary, or higher educational system and it often includes living areas for students, such as dormitories, and sometimes living houses for the teachers in such institutions e.t.c.

Playground: This is an area that is meant for outdoor plays or recreation for children. It contains playing tools like swings and slides. It is also a piece of land that is equipped with facilities for recreation for both the children and adults. 1794 was the first known use of playground according to this source http://www.merriam-webster.com/dictionary/playground. The playground consists of seesaw, merry-go round, swing set, slide, jungle gym, chin-up bars, sandbox, spring rider, monkey bars, overhead ladder, trapeze rings, playhouses and mazes. They primarily help children to develop physical coordination, strength and also flexibility, while they further provide enjoyment and recreation.

Figure 7.2: School playing ground
Source: http://www.adifunds4school.org.uk/userimages/swings%201%20bert.jpg

Library: A library is an organized collection of various sources of information which is accessible to a defined community for reference or for borrowing. Among the materials that can be physically, digitally or virtually accessed are books, periodicals, newspapers, manuscripts, databases, audio books, e-books, Blu-ray Discs, DVDs, Videotapes, cassettes, CDs, microform, documents, maps, prints and so on.

Library ranges in size from either a few shelves of books to several million items. The first libraries were made up of archives of the earliest forms of writing which is the clay tablets in cuneiform script and it was discovered in Sumer dating back to 2600 BC.

Figure 7.3: School library
Source: http://www.lociarchitecture.com/wp-content/uploads/2015/06/03_carroll_school_library.jpg

Laboratory: This is a facility that provides controlled conditions in which both scientific and technological research, experiments and measurement can be performed. Laboratories can be of various forms of experiments that is carried out based on the subjects on which experiments are being carried out.

The subjects vary from engineering to sciences and so on. Below is the Molecular Biology Technics Laboratory at Faculty of Biology of Adam Mickiewicz University of Poznan

Figure 7.4: Laboratory
Source: http://en.wikipedia.org/wiki/Laboratory

Classroom: It is a safe place where academic activities of teaching and learning takes place with little or no interruptions or distractions. Classrooms are found in educational institutions of various kinds which can be publicly or privately owned, or those owned by religious or humanitarian organizations.

Furniture: They are moveable items such as chairs, tables, so fa, wooden cabinet which are used to make a house, class or building a comfortable place to live in or study. Students are seated on chairs while listening to their teacher or tutor during the hours of lecture. Samples of furniture are presented below:

Figure 7.5: Furniture
Source: http://en.wikipedia.org/wiki/Furniture

Equipment: This is a tool or apparatus that is used in an operation or an activity. Samples include devices, machine tools or even vehicles.

Hostel: This is a room where guests can lodge overnight. There, guests do rent a bed otherwise called a bunk bed. The guests do share a bathroom, lounge and sometimes a kitchen. Rooms in the hostel can be for either mixed or single sex, while in some cases, there are privately preferred rooms.

In most cases, hostels are cheaper because of the limited period that occupants are expected to stay, and new occupants are brought in. There are staff that work in the hostel and they are in some cases on permanent appointment.

Hostel can sometimes be called dormitories in universities that offer residency for their students. The world's first hostel was established in 1912 at Altena Castle in Germany and it is shown below:

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Figure 7.6: Youth Hostel in Japan
Source: http://en.wikipedia.org/wiki/Hostel

Common Room-This is mostly found in dormitories and it is commonly shared among the occupants as found in the universities, colleges, hospitals, military bases, and so on. Below is a Sixth form Common Room

Figure 7.7: Common Room
Source: http://en.wikipedia.org/wiki/Common_room

Canteen: This is a place where snacks, drinks are sold either in a barracks, factory or in a given institution. This is done at a price that is lower than the common price. It can also be called a recreation area in an institution.

In-Text Question
The types of school plant include the following except
> A. School campus
> B. Educational Building
> C. Teachers' Forum
> D. Library

In-Text Answer
C. Teachers' Forum

7.2.1 Advantages of School Plant
The advantages/usefulness/value/worth of school plant in the accomplishment of the educational goals cannot be over-emphasized. To this end, the following advantages were found to be relevant as that of the availability of school plant.
- ✓ It aids the achievement of the goals and objective of education
- ✓ It facilitates teaching and learning.
- ✓ School buildings protect students and teachers from the sun, the rain, heat and cold.

- ✓ School physical facilities are useful for the community in terms of extra mural classes, adult education programme, meeting place, conduct of sporting activities and public ceremonies.
- ✓ School plants aid the academic performance of the students.

Summary of Study Session 7

1. This session examined the meaning of school plant, the types and the advantages of school plant.
2. School plant is the material provision of the school which aids teaching on the part of the teacher and learning on the part of the student.
3. Its availability ensures attainment of success on the part of the school, teachers and the students as a whole, while its non-provision might lead to failure and non-accomplishment of expected performance by the students, teachers and the school.
4. The types of school plant are school campus, building, playground, library, laboratories, classrooms, furniture, equipments, hostels, common room, canteen etc
5. Some of the advantages of school plant are: aiding the achievement of the goals and objective of education; facilitation of teaching and learning; protection of students and teachers from the sun, the rain, heat and cold; usefulness for the community in terms of extra mural classes, adult education programme, meeting place, conduct of sporting activities and public ceremonies.

Self-Assessment Questions (SAQs) for Study Session 7

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 7.1 (Testing Learning Outcome 7.1)
What do you understand by the term School plant?

SAQ 7.2 (Testing Learning Outcome 7.2)
Explain any three types of school plants

SAQ 7.3 (Testing Learning Outcome 7.2)
Explain in details the advantages of school plant to the school system.

Notes on SAQS for study session 7
SAQ 7.1

School plant refers to the material provision of the school, which may be objects that are provided in bits and pieces. They are however provided with the main target of aiding teaching on the part of the teacher and learning on the part of the student. Availability of the school plant ensures attainment of success on the part of the school, teachers and the students as a whole.

But its non-provision might lead to failure and non-accomplishment of expected performance by the students, teachers and the school as a whole. You need to further observe that school plant is of great importance because of the positive impact it will have on the educational

processes and programmes. There is need to view the plants as an integral part of the learning environment.

The term "school plant" includes the site, the building and the equipment. It embraces permanent and semi-permanent structure as well as items such as machine, laboratory equipment, the black/marker board and the cleaners' tools

SAQ 7.2
  i.   School campus
 ii.   Educational Building
iii.   Playground

School campus: This can be said to be a field on which the various buildings of a university are situated. Further, it can be said to be the grounds that is made up of buildings in which academic and non-academic activities are carried out in a given institution.

Educational Building: This is a building designed for various activities in either a primary, secondary, or higher educational system and it often includes living areas for students, such as dormitories, and sometimes living houses for the teachers in such institutions e.t.c.

Playground: This is an area that is meant for outdoor plays or recreation for children. It contains playing tools like swings and slides. It is also a piece of land that is equipped with facilities for recreation for both the children and adults. 1794 was the first known use of playground according to this source http://www.merriam-webster.com/dictionary/playground.

SAQ 7.3
The advantages of school plant to the school system are:
1. It aids the achievement of the goals and objective of education
2. It facilitates teaching and learning.
3. School buildings protect students and teachers from the sun, the rain, heat and cold.
4. School physical facilities are useful for the community in terms of extra mural classes, adult education programme, meeting place, conduct of sporting activities and public ceremonies.
5. School plants aid the academic performance of the students.

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Study Session 8: Maintenance of School Plant and Equipment

Introduction

This session looks at the different types of maintenance of school plant that are available. Having school plants is not enough like ensuring that the available school plants are properly maintained to ensure that the life spans of such plants are elongated.

In this study session, you will be introduced to what maintenance of school plant means, process of maintenance of school plant, types of school plant maintenance and advantages of school plant

Learning Outcomes for Study Session 8

At the end of this study session, you should be able to:
8.1 Explain what maintenance of school plant means.
8.2 Discuss the types of school plant maintenance

8.1 Definition of School Plant Maintenance

School plant maintenance refers to the keeping/care/charge of the school site, the buildings and the equipment in as near their original state of utility as possible (Olutola, 1981). School plant maintenance is concerned with keeping grounds, buildings and equipment in their original condition of completeness and efficiency (Ajayi, 2007).

Figure 8.1: Ajayi, (2007)
Source: http://socsc.ui.edu.ng/sites/default/files/Ajayi,%20Dickson.jpg

Olagboye (1998) also defined school plant maintenance as any work such as repairs, servicing, painting, e.t.c. carried out on any component of the plant with a view to keeping it in, or restoring it to, optimum working condition.

Figure 8.2: Olagboye (1998)
Source:http://img.b8cdn.com/images/uploads/user_photos/01/20021401_20131210122326.jpg

From these definitions, schools' plant maintenance could be defined as all activities embarked upon with a view to sustaining the initial use and value of the school plant. Such activities include sweeping of the floor and surroundings, dusting, mopping, scrubbing and washing school plant, mowing of the lawns, repairs of facilities, pest control, fire prevention and safety.

According to Ajayi (2007) he observed that the responsibility of the school administrator is to ensure that the school plant is properly maintained. He further emphasized that school administrator should supervise the staff in the school to make sure that: regular repairs and servicing of machines, equipment and vehicles are carried out.
The school compound should always be kept clean, while the school properties should be handled with care and be properly protected. There is the need to promote school plant maintenance culture among staff and students.

In-Text Question
_____ could be defined as all activities embarked upon with a view to sustaining the initial use and value of the school plant.

In-Text Answer
Schools plant maintenance

To this end, Kulbir (1996) observed that the following should be considered in the maintenance and repairs of schools plant and equipment.
1. Regular attention should be paid to the maintenance of the campus. With the help of plots, lawns, flower beds, flower pots and gardens, it should be made attractive and beautiful. It should be cleaned daily to keep it neat and tidy.
2. The building also needs annual repairs and white washing, while ensuring that there is no negligence of any sort in this respect.
3. Replacement and repair of the broken furniture should also be a regular process. The entire equipment under this category should be kept in serviceable condition.
4. Replacement, addition and upkeep of the books in library, apparatuses in the laboratories, games material and so on should also be a continuous process.
5. The water and electric fittings should also be kept in working order through constant check-up and needed repairs and replacement.

8.2 Types of School Plant Maintenance

Olagboye (1998) identified five types of school plant maintenance and these are:

○	Prevention and predictive maintenance
○	Corrective maintenance
○	Breakdown Maintenance
○	Running Maintenance
○	Shutdown maintenance
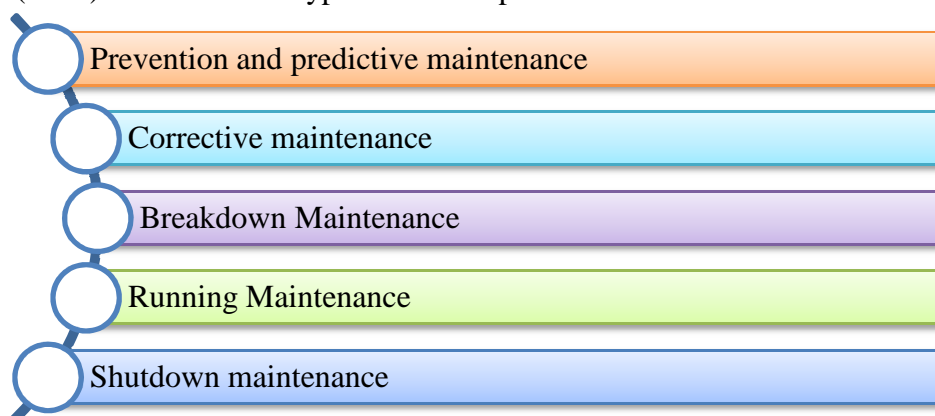
Figure 8.3: Types of school plant maintenance

Prevention and predictive maintenance: This refers to maintenance carried out for the purpose of preventing breakdowns or situations which can put part of the plant out of use. This includes regular serving of vehicles and generating sets as well as periodic re-painting of buildings.

Corrective maintenance: This is concerned with repairing of faults. Repairs of electrical faults in the school building and mechanical faults in generating sets and vehicles are examples of corrective maintenance.

Breakdown Maintenance: This is aimed at rectifying breakdowns in any component of the school plant. When preventive maintenance is not effective or efficient, it paves the way for breakdown maintenance. The overhauling of engine of a school bus falls under the breakdown maintenance.

Running Maintenance: This is the maintenance carried out while the school plant or a component of it is in use. For instance, lessons can continue in the classrooms during the day while the generating set or the school bus is being repaired or serviced.

Shutdown maintenance: This involves the shutting down of a school plant or part of it in order to carry out maintenance work. For example if a windstorm damaged a classroom block, it will be shut down until it is re-built or re-roofed.

In-Text Question

_____ refers to maintenance carried out for the purpose of preventing breakdowns or situations which can put part of the plant out of use.
A. Shutdown maintenance
B. Running Maintenance
C. Prevention and predictive maintenance
D. Breakdown Maintenance

In-Text Answer
C. Prevention and predictive maintenance

8.2.1 Advantages of School Plant Maintenance

The proper maintenance of school plant could be useful in a number of ways:

1. It enhances effective teaching and learning.
2. It promotes the beauty of the school environment.
3. It ensures the safety of staff and students who occupy the school building.
4. It inculcates the habits of cleanliness in the students.
5. It saves cost because the cost of replacing some of the school items is higher than the cost of maintenance.
6. It prolongs the lifespan of the plant.

Summary of study session 8

1. School plant maintenance refers to the keeping/care/charge of the school site, the buildings and the equipment in as near their original state of utility as possible. School plant maintenance is concerned with keeping grounds, buildings and equipment in their original condition of completeness and efficiency.
2. According to Ajayi (2007) he observed that the responsibility of the school administrator is to ensure that the school plant is properly maintained. He further emphasized that school administrator should supervise the staff in the school to make sure that: regular repairs and servicing of machines, equipment and vehicles are carried out.
3. Regular attention should be paid to the maintenance of the campus. With the help of plots, lawns, flower beds, flower pots and gardens, it should be made attractive and beautiful. It should be cleaned daily to keep it neat and tidy.
4. Types of school plant maintenance were considered in this session, and it includes: prevention and predictive, corrective and breakdown.
5. Advantages of maintenance of school plants were also made known in this session which are: It enhances effective teaching and learning, it promotes the beauty of the school environment, it ensures the safety of staff and students who occupy the school building etc.

Self-Assessment Questions (SAQs) for Study Session 8

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 8.1 (Testing Learning Outcome 8.1)
What do you understand by the term "School plant maintenance"?

SAQ 8.2 (Testing Learning Outcome 8.2)
Enumerate and explain the types of school plant maintenance know to you

SAQ 8.3 (Testing Learning Outcome 8.2)
Explain in details the advantages of school plant maintenance.

Notes on SAQS for study session 8
SAQ 8.1
School plant maintenance refers to the keeping/care/charge of the school site, the buildings and the equipment in as near their original state of utility as possible (Olutola, 1981). School plant maintenance is concerned with keeping grounds, buildings and equipment in their original condition of completeness and efficiency (Ajayi, 2007).

Olagboye (1998) also defined school plant maintenance as any work such as repairs, servicing, painting, e.t.c. carried out on any component of the plant with a view to keeping it in, or restoring it to, optimum working condition.

From these definitions, schools' plant maintenance could be defined as all activities embarked upon with a view to sustaining the initial use and value of the school plant. Such activities include sweeping of the floor and surroundings, dusting, mopping, scrubbing and washing school plant, mowing of the lawns, repairs of facilities, pest control, fire prevention and safety.

To this end, Kulbir (1996) observed that the following should be considered in the maintenance and repairs of schools plant and equipment.

1. Regular attention should be paid to the maintenance of the campus. With the help of plots, lawns, flower beds, flower pots and gardens, it should be made attractive and beautiful. It should be cleaned daily to keep it neat and tidy.
2. The building also needs annual repairs and white washing, while ensuring that there is no negligence of any sort in this respect.
3. Replacement and repair of the broken furniture should also be a regular process. The entire equipment under this category should be kept in serviceable condition.
4. Replacement, addition and upkeep of the books in library, apparatuses in the laboratories, games material and so on should also be a continuous process.
5. The water and electric fittings should also be kept in working order through constant check-up and needed repairs and replacement.

SAQ 8.2
   i.   Prevention and predictive maintenance
   ii. Corrective maintenance
   iii. Breakdown Maintenance

Prevention and predictive maintenance: This refers to maintenance carried out for the purpose of preventing breakdowns or situations which can put part of the plant out of use. This includes regular serving of vehicles and generating sets as well as periodic re-painting of buildings.

Corrective maintenance: This is concerned with repairing of faults. Repairs of electrical faults in the school building and mechanical faults in generating sets and vehicles are examples of corrective maintenance.

Breakdown Maintenance: This is aimed at rectifying breakdowns in any component of the school plant. When preventive maintenance is not effective or efficient, it paves the way for breakdown maintenance. The overhauling of engine of a school bus falls under the breakdown maintenance.

SAQ 8.3

The advantages of proper maintenance of school plant are:

  i. It enhances effective teaching and learning.
  ii. It promotes the beauty of the school environment.
  iii. It ensures the safety of staff and students who occupy the school building.
  iv. It inculcates the habits of cleanliness in the students.
  v. It saves cost because the cost of replacing some of the school items is higher than the cost of maintenance.
  vi. It prolongs the lifespan of the plant.

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Study Session 9: Indicators of Room Utilization

Introduction

Educational activity of teaching and learning is successfully carried out if there is a venue designated such as classroom(s) where both the teacher(s) and the student(s) can meet, interact and the teacher is able to pass across his/her information in a conducive venue, while the student also is able to receive information from the teacher in a conducive venue. The classroom needs to be optimally utilized in order to achieve our determined objectives.

Such objectives can be realized if the students are comfortably seated to receive instructions from the teacher in the classroom, while the teacher is also at ease to deliver his messages to the students. Care should be taken to ensure that the classrooms are not over utilized nor underutilized; rather they should be optimally utilized.

In this study session, you will be introduced to Time Utilization Rate, Space Utilization Rate, and the Global Utilization Rate.

Learning Outcomes for study session 9

At the end of this study session, you should be able to:
9.1 Explain what is meant by Time Utilization Rate
9.2 Explain what Space Utilization Rate is
9.3 Explain the Global Utilization Rate

9.1 Time Utilization Rate

Public buildings, including classroom buildings are sometimes grossly under-utilized (Abodunrin, 2011). Resources can be unnecessarily committed to putting up more buildings when the existing ones have not been put into maximum use. To know if there are additional buildings and to know how serious the need may be, the utilization of the existing building, in terms of space and time should always be diagnosed.

There are two dimensions of room utilization
- ✓ The time dimension considers the time proportion of the room space that is put into use
- ✓ The second dimension is related to mapping of groups and rooms

The time dimension considers the time proportion of the room space that is put into use. For what proportion of the working hours is a school plant put into use? The answers to such questions become necessary when one realizes that the more the buildings are not put into use, then, the better. The schools that tend to have more courses and programmes are likely to have greater time utilization of their rooms than the other schools **(Abodunrin, 2011).**

The second dimension is related to mapping of groups and rooms. How much of a room is occupied by a class when put into use? If rooms are built to accommodate large number of students, but it is being used by only small groups, then, space utilization is poor.

The microphone and the bud speaker will render the same service to the teacher and the students irrespective of the size of the audience. The use of chalk and chalkboard apparatus as well as the other audio visual aids put in room, therefore, the greater the space utilization of the room.

In the work of Famade (1997) he made use of three methods to calculate the utilization of school buildings (classrooms) in Ogun State, Nigeria. He used the following methods
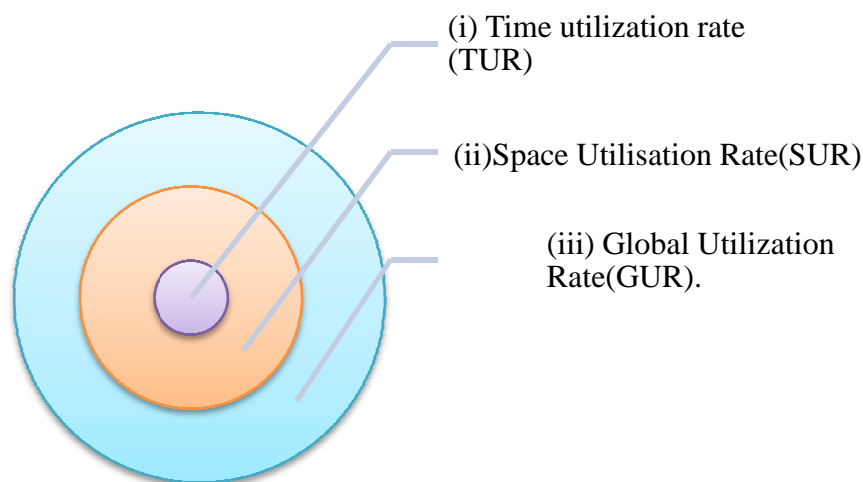
Figure 9.2: Three methods to calculate the utilization of school buildings

  i. Time utilization rate (TUR)
 ii. Space Utilisation Rate(SUR) and
iii. Global Utilization Rate(GUR).

Time Utilization Rate (TUR): Famade (1997) said that Time Utilization Rate is the ratio between the number of periods during which a classroom is used and the maximum number of periods available per week. Symbolically,

TUR =<u>Actual Time Used</u>   x <u>100</u>
              Ideal Time   1

It was discovered that in Ogun State, secondary school officials open for teaching-learning business between the hours of 8.00a.m and 2.00p.m daily for five days (Monday-Friday) in a week. The maximum number of hours that a classroom could be put into use is six hours in a day (every day) which makes up 30hours on a weekly basis.

The study found that classrooms are not used for the total of 30hours every week. This was due to the fact that students spend a minimum of 30 minutes while on the school assembly ground during the morning devotion every day. Another 30 minutes is spent on break, while the students further spend about 80 minutes for practical agriculture and/or physical and health education on a weekly basis.

In-Text Question
Mention three methods to calculate the utilization of school buildings
In-Text Answer

The three methods are:
(i) Time utilization rate (TUR)
 (ii)Space Utilisation Rate (SUR) and
 (iii) Global Utilization Rate (GUR).

Further, there are government declared public holidays which if calculated resulted to average of two hours loss to the students every week. So, a minimum of eight hours are lost every week, thereby leaving the students with 22 hours of actual academic work in the school.

Additionally, it was found that in Ogun State, almost all public schools are used for a minimum of three hours daily for the five days (total of 15 hours weekly) for private lessons which is outside the official school working hours. When provision is made for the unofficial hour, it was found that the actual time a publicly owned school used is 37 hours weekly, while the theoretical otherwise called the ideal time of use in school is 30 hours weekly.

Famade (1997) sampled 50 secondary schools and he found that the Time Utilization Rate for the sampled schools is given as:

TUR = <u>Actual Time Used</u>   x <u>100</u>
              Ideal Time   1
TUR = <u>1850</u> x <u>100</u>
             1500   1

TUR=123.33%
The above finding indicated that the Time Utilisation Rate of the classrooms is 123.33%, which implied that there is over-utilisation of the classrooms in Ogun State Secondary schools.

Famade (1997) made it known and clear that time utilization rate does not in actual fact indicate whether a classroom is used (or occupied to the full size) at full capacity or not. The

main reason for this is that time utilization rate will remain the same whether such a classroom is occupied either by one student or 1000 students.

9.2 Space Utilization Rate (SUR)

This is an index that is used to compare the actual size of a class room that is occupied by a section of students with the classroom's theoretical size (Famade,1997). It is calculated by dividing the actual number of students in a classroom (pupil enrolment) by the theoretical number of students multiplied by 100%.

Symbolically;

$$SUR = \frac{\text{Number of Students in a classroom}}{\text{Available space for the students}} \times \frac{100}{1}$$

In the process of calculating the Space Utilization Rate, it is of importance to take note that the Nigerian government in the National Policy of Education (NPE, 2004) stated that the teacher/student ratio at the first and second levels of education is 1:40. So, it implied that there should be one teacher to forty students in each of the classes in Nigerian primary and secondary schools.

Therefore, classes that should be constructed should be such that the floor space will accommodate 40 students at a time in the course of the teacher's lesson delivery.

Famade in his thesis in 1997 calculated the Space Utilization Rate in Ogun State Secondary Schools for years 1985-1994 and it is presented here below in table one.

Table 9.1: Space Utilization Rate in Ogun State Secondary Schools (1985- 1994)

ACADEMIC SESSION	STUDENT ENROLMENT	CLASSROOMS (AVAILABLE SPACES)	SPACE UTILISATION RATE(%)
1984/1985	26,470	37,960	70
1985/1986	38,607	38,080	101
1986/1987	40,736	39,240	104
1987/1988	43,049	40,600	106
1988/1989	45,497	42,520	107
1989/1990	56,079	43,760	128
1990/1991	58,350	44,800	130
1991/1992	60,495	45,640	133
1992/1993	64,530	46,080	140
1993/1994	73,850	46,320	159
TOTAL	507,663	425,000	

Source: Famade,1997

The study conducted by Famade (1997) showed that the students that occupied each of the classrooms are more than 40 students. A close look of table one above revealed that outside the session 1984/1985, other sessions have their space utilization rate to range between 101 percent and 159 percent, which is a clear indication of over-utilization of the Secondary school classrooms in Ogun State.

A limitation of the space utilization rate is that it cannot provide comprehensive details in respect of the utilization capacity of a given facility or resource.

In-Text Question

Who defined SUT as an index that is used to compare the actual size of a class room that is occupied by a section of students with the classroom's theoretical size

A. Abiodun (1997)

B. Famade, (1997)

C. Fagbemi (1987)

D. Famade (1987)

In-Text Answer

B. Famade, (1997)

9.3 Global Utilization Rate (GUR)

According to Famade (1997), the global utilization rate gives or provides a clear, better or total picture of the utilization capacity of a building, classroom or any facility. It is however calculated as:

Global Utilization Rate = $\dfrac{\text{Time Utilization Rate + Space Utilization Rate}}{2}$

Global Utilization Rate = $\dfrac{123.33 + 119.45}{2}$

Global Utilization Rate = $\dfrac{242.78}{2}$

Global Utilization Rate= 121.39%

The above value of the Global Utilization Rate is 121.39% and it showed that there is an over-utilization of the available secondary school classes in Ogun State. It then means an overuse of the classes, which will result in over-stretch of the concerned resources.

The over-utilization could be as a result of

  i.   Too many students making use of the available classrooms or resources at a given time

  ii. Commitment or engagement of the resource for a high number of hours than the conventionally or standard accepted number of hours approved or prescribed for its use.

In-Text Question

The over-utilization could be as a result of _____

In-Text Answer

It could be as a result of too many students making use of the available classrooms or resources at a given time

Summary of Study Session 9

1. Time Utilization Rate (TUR)- It is the ratio between the number of periods during which a classroom is used and the maximum number of periods available per week. Symbolically, it is

TUR = $\dfrac{\text{Actual Time Used}}{\text{Ideal Time}} \times \dfrac{100}{1}$

2. Space Utilization Rate (SUR)- It is an index that is used to compare the actual size of a classroom that is occupied by a section of students with the classroom's theoretical size. Symbolically,

SUR=Number of Students in a class x 100

Available space for students   1

3. Global Utilization Rate (GUR)-It gives or provides a clear, better or total picture of the utilization capacity of a building, classroom or any facility. Symbolically,

GUR=Time Utilisation Rate +Space Utilisation Rate

2

It should be noted that the time utilization rate, space utilization rate and the global utilization rate can be under- utilized, optimally utilized or over utilized, though depending on the results gotten after the calculation based on the data that is available for use.

Self-Assessment Questions (SAQs) for Study Session 9

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 9.1 (Testing Learning Outcome 9.1)
1. What do you understand by Time Utilisation Rate (TUR)?
2. Calculate the Time Utilisation Rate if the actual time used was 750 hours, while the ideal time is 1530hours and interpret your result.

SAQ 9.2 (Testing Learning Outcome 9.2)

What is Space Utilisation Rate (SUR)?
SAQ 9.3 (Testing Learning Outcome 9.3)
According to Famade (1997) simply defined Global Utilization

Notes on SAQS for study session 9
SAQ 9.1
1. **Time Utilization Rate (TUR):** Famade (1997) said that Time Utilization Rate is the ratio between the number of periods during which a classroom is used and the maximum number of periods available per week. Symbolically,

TUR =Actual Time Used   x   100

Ideal Time   1

Public buildings, including classroom buildings are sometimes grossly under-utilized (Abodunrin, 2011). Resources can be unnecessarily committed to putting up more buildings when the existing ones have not been put into maximum use. To know if there are additional buildings and to know how serious the need may be, the utilization of the existing building, in terms of space and time should always be diagnosed.

There are two dimensions of room utilization
- ✓ The time dimension considers the time proportion of the room space that is put into use

✓ The second dimension is related to mapping of groups and rooms

The time dimension considers the time proportion of the room space that is put into use. For what proportion of the working hours is a school plant put into use? The answers to such questions become necessary when one realizes that the more the buildings are not put into use, then, the better. The schools that tend to have more courses and programmes are likely to have greater time utilization of their rooms than the other schools.

The second dimension is related to mapping of groups and rooms. How much of a room is occupied by a class when put into use? If rooms are built to accommodate large number of students, but it is being used by only small groups, then, space utilization is poor.

The microphone and the bud speaker will render the same service to the teacher and the students irrespective of the size of the audience. The use of chalk and chalkboard apparatus as well as the other audio visual aids put in room, therefore, the greater the space utilization of the room.

2. Solution

Given: Actual Time Used = 750 hrs

Ideal Time = 1530 hrs

$$TUR = \frac{Actual\ Time\ Used}{Ideal\ Time} \times \frac{100}{1}$$

$$TUR = \frac{750}{1530} \times \frac{100}{1}$$

$$TUR = 49.02\%$$

The above finding indicated that the Time Utilisation Rate of the classrooms is 49.02%, which implied that there is normal-utilisation of the classrooms in Ogun State Secondary schools.

SAQ 9.2

Space Utilization rate is an index that is used to compare the actual size of a class room that is occupied by a section of students with the classroom's theoretical size (Famade,1997). It is calculated by dividing the actual number of students in a classroom (pupil enrolment) by the theoretical number of students multiplied by 100%.

Symbolically;

$$SUR = \frac{Number\ of\ Students\ in\ a\ classroom}{Available\ space\ for\ the\ students} \times \frac{100}{1}$$

SAQ 9.3

According to Famade (1997), the global utilization rate gives or provides a clear, better or total picture of the utilization capacity of a building, classroom or any facility. It is however calculated as:

$$Global\ Utilization\ Rate = \frac{Time\ Utilization\ Rate + Space\ Utilization\ Rate}{2}$$

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Study Session 10: Geographical Information System and School Mapping

Introduction

Mapping of schools has to do with determining how available spaces will be utilised to the fullest such that there will not be wastages, but optimal use of available resources. In those days, there were no modern tools such as maps and other geographical information devices to be used to find where schools are located, or to capture, store, manipulate, analyse and manage various forms of geographical data.

There was no such information available for school, community and human use. This lecture dwelt on Geographical Information System (GIS) and how it is applicable to the School Mapping exercise.

In this study session, you will be introduced to Geographical Information System(GIS), Geographical Information System as a device and how Geographical Information System (GIS) is used for school planning and mapping.

Learning Outcomes for Study Session 10

At the end of this study session, you should be able to:
10.1 Explain what is meant by Geographical Information System (GIS
10.2 Discuss Historical background of the Geographical Information System (GIS)
10.3 Explain the Geographical Information System as a device
10.4 Discuss How Geographical Information System (GIS) is used for school planning and mapping.

10.1 Definition of Geographical Information System

Geographical Information System otherwise acronym as GIS is a system that is planned to help in capturing, storing, manipulating, analysing, managing various forms of geographical data. Foote and Lynch (1995) made known that GIS can sometimes be called geographical information science or geospatial information studies which is an academic discipline that has to do with Geoinformatics.
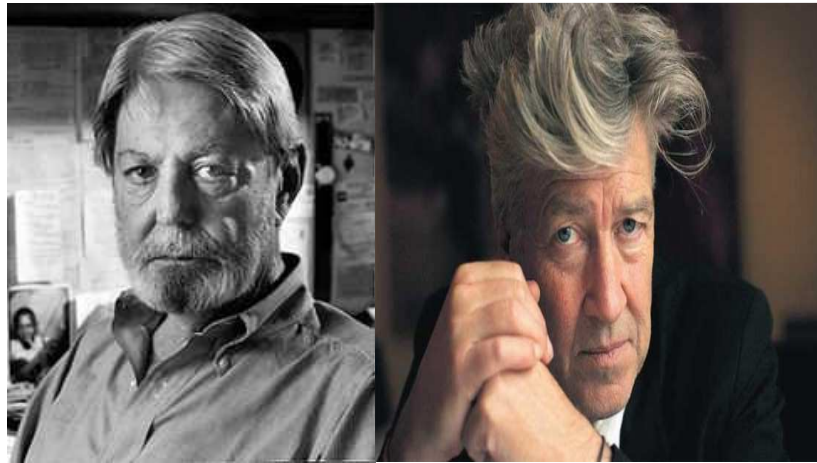
Figure 10.1: Foote and Lynch
Source:https://upload.wikimedia.org/wikipedia/en/thumb/8/82/Shelby_Foote.jpg/220px-Shelby_Foote.jpg and http://static.stereogum.com/uploads/2015/02/david-lynch-electropop-608x395.jpg

A GIS can be reflected as a system that provides spatial data or statistical entry, management, retrieval, analysis, and visualization or idea functions. The accomplishment of a GIS is often driven by jurisdictional (such as a city), rationale, or application requirements. On a general note, a GIS implementation may be custom-designed specifically for an organization.

Hence, a GIS operation that is developed for an application, jurisdiction, enterprise, or purpose may not be necessarily interoperable or compatible with a GIS that has been developed for some other application, jurisdiction, enterprise, or purpose.

GIS is in fact a system of hardware and software that is used for the following: storage, retrieval, mapping and analysis of geographic data or information and even statistics. Furthermore, GIS can be used for scientific investigations, resource management and development planning.

In-Text Question
What is Geographical Information System? otherwise acronym as GIS is a system that is planned to help in capturing, storing, manipulating, analysing, managing various forms of geographical data.

In-Text Answer
Geographical Information System otherwise acronym as GIS is a system that is planned to help in capturing, storing, manipulating, analysing, managing various forms of geographical data.

10.2 History of Geographical Information System (GIS)
Dr John Snow's work in the area of mapping of physical and social space is novel when in 1855 he put together a map of the Soho in London where there was cholera outbreak in 1854 as shown in the diagram below:

74
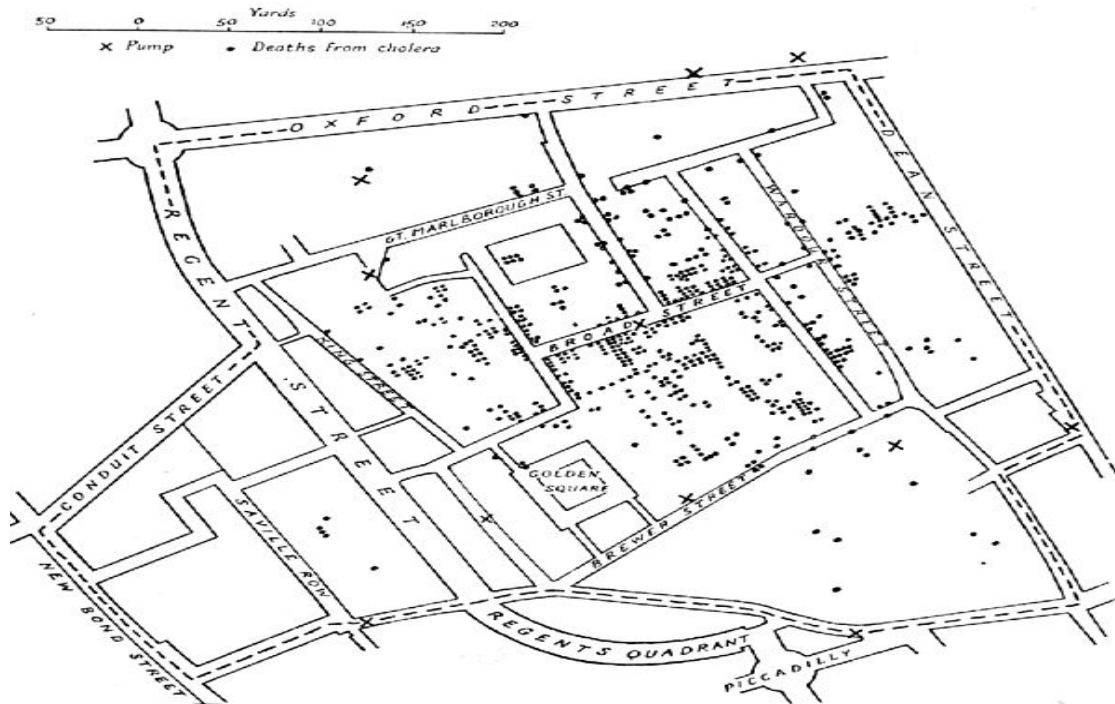
Figure 10.1: E. W. Gilbert's Version (1958) of John Snow's 1855 Soho Cholera
Source:http://commons.wikimedia.org/wiki/File:Snow-cholera-map.jpg

Hite (2008) made known that there were arguments about where really was the origin of GIS. But the early efforts of the Canadian Geographic Information System (CGIS) of circa in 1965 was regarded as the first. The earlier efforts were targeted at the planning of the urban transportation routes.

Good child (2006) made known that by the 1970's the real potential of digital computers to facilitate the analysis of geographic information was notable. Experts (Forseman, 1998; Maguire, Good child and Rhind,1991) confirmed that there was technological revolution in the middle 1970 but it however facilitated explosive emergence of truly sophisticated GIS solutions by virtue of rapid development of relational database management systems (RDMS) and the steep fall in the cost of computing power added with the introduction of mini and microcomputers by some companies such as IBM.

By late 1980's, GIS was found to be useful not only in the area of mechanical and computational performance, but also useful in the area of community–based decision-making. There is also the public participation GIS (PPGIS). GIS has been useful in the area of education, because it is extensively used in producing well-characterized, comprehensive and wide-ranging district and school maps.

In situations where the maps need to be upgraded, what will be done is to get a powerful server and some other equipment that can do the upgrading to a higher level.

In-Text Question
In what year? GIS was found to be useful not only in the area of mechanical and computational performance, but also useful in the area of community–based decision-making.

10.3 Geographic Information System as a Device

Hite (2008) records that GIS is typically used in most application fields as an advanced and technologically elegant tool and it has lots of benefits which makes it very significant. DeGrauwe (2002) expatiated on how GIS is useful at improving education which are

1. It helps to make presentation of information more attractive than traditional static maps.
2. Projecting tabular data onto maps helps in the recognition of unexpected situations which, can currently be noticed and therefore be given proper or appropriate attention.
3. By consideration of geographical (environmental, geological, spatial) issues, the analyses become improved and in fact more precise. This will have its impact on the ensuing final outcomes.

Figure 10.3: DeGrauwe (2002)
Source:http://portugalresident.com/sites/default/files/styles/node-detail/public/field/image/151113_IT_PAUL_DE_GRAUWE.jpg?itok=DyjHNiS8

A more flexible assistance can be provided at the various levels such as local, state or the national level.

Hite and Hite (2004) also added some reasons to those provided above as being the reason GIS is a useful tool for improving education:

Expanded "holistic" representation and exploration of the contexts of schooling through the direct and dynamic use of multiple sources of influential data such as those of census, transport, utilities, health care, land use and agricultural data bases which are not too easy to include in education planning and management.

Increased public appeal and utility

Extensive control of scale of complexity: extensive flexibility in how much data are displayed or explored at a given time, with changes in unit of analysis virtually immediately

Dynamic ability to facilitate "what if" analysis, exploratory inquiry, and creation of planning and management "scenarios".

In-Text Question
Expanded "holistic" representation and exploration of the contexts of schooling through the direct and dynamic use of multiple sources of influential data such as those of census, transport, utilities, health care, land use and agricultural data bases which are not too easy to include in education planning and management. True/false

In-Text Answer
True

10.4 GIS for School Planning and Mapping

Planning which can otherwise be called an arrangement or scheduling is known to be the effective and efficient utilization of scarce resources in such a way that there is no room for wastages. Geographical Information System helps for school planning, especially in terms of making and taking of effective and efficient decisions.

Be it as it may, School Headmasters, Principals, Provosts, Rectors, Vice-Chancellors take many decisions regarding the school activities. This is in form of communicating with parents, students, management board of the school, community where the school is situated about innovations, changes, improvements that the school is embarking on.

In-Text Question
Planning which can otherwise be called _____ and _____

In-Text Answer
Arrangement or scheduling

Some issues of concern are also communicated to those that are concerned by the respective school head. School heads help to further structure community thoughts and opinion, they carry out analysis of costs of service delivery of schools to the community; negotiate agreement; initiate various ideas; explore patterns and trends of use of land, housing and population issues which will be of benefit to both the school and the community as whole.

The GIS greatly helps the schools to create maps that are potent, and helpful to address these above-listed items in terms of simple illustration, explanation and effective communication of the proposed ideas. GIS is a prearranged gathering of computer hardware, software, geographic data, helps greatly to capture, accumulate, bring up to date, influence, analyse, and further display all forms of geographically referenced information.

GIS helps a school to plan about the attendance, boundary changes, finding out and determining future school sites, transportation routes, disaster recovery venues, places where additional classrooms can be constructed due to projected future enrollment, where students live cum where they attend school.
GIS can otherwise be called "smart mapping". This is so because the GIS users can find out many attributes or features of a given school on the map, by simply clicking the mouse attached to the computer.

Information that can be retrieved about the school includes: the name of the school, address of the school, school's phone number, hectares of land occupied by the school, the school's past and current enrollment according to class levels and according to the various academic sessions. School maps serve as effective tools of communication on the part of those that have access to it.

In-Text Question
GIS can otherwise be called _____
A. Smart mapping
B. Sharp mapping
C. Mapping
D All of the above

In-Text Answer
A. Smart mapping

However, it helps in the adjustment, adaptation, conversion of data, patterns, trends and other difficult issues to graphic images that will help to bring into clear and sharp focus, new understanding about how school district services and policies are connected to the homes and neighborhoods in the community.

This will help to bring to limelight how the school can be of benefit to the community and the community also to be of benefit to the school at large, while the household without mincing words will reap the fruits of the cemented relationship existing between the school and the community in the long run.

Additionally, on the school's website, the map can be made known or displayed, while it can be used to explain many issues at the meeting of the Parent Teachers' Association, at the meeting of the Board of the school, community groups, or in the process of the school's application for grants or funding opportunities. Further, some publicity (ies) can be made about the map either in the newspaper, newsletters or other promotional means.
The GIS map(s) will further be useful when there is an attempt to determine a new site for a new school building which might involve too many interest groups.

In-Text Question
Information that can be retrieved about the school includes _____ the name of the school, address of the school, school's phone number, hectares of land occupied by the school, the school's past and current enrollment according to class levels and according to the various academic sessions.

In-Text Answer
It include the name of the school, address of the school, school's phone number, hectares of land occupied by the school, the school's past and current enrollment according to class levels and according to the various academic sessions.

The process of negotiation of agreements and even resolution of conflicts with the affected parties will, to a great extent, require "picturing" tools which the GIS maps can provide.
 An example of the need for a new school location in which the school map was found useful is provided as found in the web: http://www.broward.k12.fl.us/dsa/GISinPlanning. Shtml "When Broward County Public School District decided to add a new high school, it had to figure out what the new boundaries would be.

A district wide School Board Boundary process was established allowing for parents to suggest boundary alignment options. With criteria identified in policy, District staff used GIS to create coloured maps depicting two options, which were then distributed to the Board and

community members. Other factors such as residential certificates of occupancy, student demographics and the boundaries of existing high schools were also mapped.

With these maps, School Board and community members analysed the advantages and disadvantages of each of the boundary options. A web-compatible map of each option was generated with GIS software and uploaded to the District's website, along with minutes of the discussions and community feedback.

In-Text Question
A district wide School Board Boundary process was established allowing for parents to suggest boundary alignment options. YES/NO

In-Text Answer
YES
Through the Internet and community meetings, parents could view the maps and follow the discussions, bringing them closer into the boundary change process resulting in over 2,300 community comments and over 40 community driven boundary recommendations."

Summary of study session 10
1. Geographical Information System-It is acronym as GIS and it helps to capture, store, manipulate, analyse, and manage various forms of geographical data. It also provides spatial data or statistical entry, management, retrieval, analysis, and visualization or idea functions.
2. Though there were arguments about where really was Geographical Information System originated from. But as at 1855 Dr John Snow's work in the area of mapping of physical and social space was novel when he put together map of the Soho in London where there was cholera outbreak in 1854. But the early efforts of the Canadian Geographic Information System (CGIS) of circa in 1965 was regarded as the first.
3. GIS as a device is typically used in most application fields as an advanced and technologically elegant tool and it has lots of benefits which makes it very significant. As a device, it helps to make presentation of information more attractive than traditional static maps
4. Geographical Information System is used for planning and mapping in the area of making and taking of effective and efficient decisions by school headmasters, provosts, Vice-Chancellors and so on. GIS greatly helps the schools to create maps that are potent in finding out plan about the attendance, boundary changes, finding out and determining future school sites, transportation routes, disaster recovery venues, places where additional classrooms can be constructed due to projected future enrolment, where students live cum where they attend school.

Self-Assessment Questions (SAQs) for Study Session 10
Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 10.1 (Testing Learning Outcome 10.1)
Provide full explanation on what is meant by Geographical Information System (GIS).

SAQ 10.2 (Testing Learning Outcome 10.2)
Historically, how did Geographical Information System (GIS) evolve?

SAQ 10.3 (Testing Learning Outcome 10.3)
Explain proper explanation of how Geographical Information System is a device.

SAQ 10.4 (Testing Learning Outcome 10.4)
Describe how Geographical Information System (GIS) is used for school planning and mapping

Notes on SAQS for study session 10
SAQ 10.1
Geographical Information System otherwise acronym as GIS is a system that is planned to help in capturing, storing, manipulating, analysing, managing various forms of geographical data. Foote and Lynch (1995) made known that GIS can sometimes be called geographical information science or geospatial information studies which is an academic discipline that has to do with Geoinformatics.

A GIS can be reflected as a system that provides spatial data or statistical entry, management, retrieval, analysis, and visualization or idea functions. The accomplishment of a GIS is often driven by jurisdictional (such as a city), rationale, or application requirements. On a general note, a GIS implementation may be custom-designed specifically for an organization.
Hence, a GIS operation that is developed for an application, jurisdiction, enterprise, or purpose may not be necessarily interoperable or compatible with a GIS that has been developed for some other application, jurisdiction, enterprise, or purpose.

SAQ 10.2
Dr John Snow's work in the area of mapping of physical and social space is novel when in 1855 he put together a map of the Soho in London where there was cholera outbreak in 1854. Hite (2008) made known that there were arguments about where really was the origin of GIS. But the early efforts of the Canadian Geographic Information System (CGIS) of circa in 1965 was regarded as the first. The earlier efforts were targeted at the planning of the urban transportation routes.

Good child (2006) made known that by the 1970's the real potential of digital computers to facilitate the analysis of geographic information was notable. Experts (Forseman, 1998; Maguire, Good child and Rhind,1991) confirmed that there was technological revolution in the middle 1970 but it however facilitated explosive emergence of truly sophisticated GIS solutions by virtue of rapid development of relational database management systems (RDMS) and the steep fall in the cost of computing power added with the introduction of mini and microcomputers by some companies such as IBM.
By late 1980's, GIS was found to be useful not only in the area of mechanical and computational performance, but also useful in the area of community–based decision-making. There is also the public participation GIS (PPGIS). GIS has been useful in the area of

education, because it is extensively used in producing well-characterized, comprehensive and wide-ranging district and school maps.

SAQ 10.3
Hite (2008) records that GIS is typically used in most application fields as an advanced and technologically elegant tool and it has lots of benefits which makes it very significant. DeGrauwe (2002) expatiated on how GIS is useful at improving education which are

1. It helps to make presentation of information more attractive than traditional static maps.
2. Projecting tabular data onto maps helps in the recognition of unexpected situations which, can currently be noticed and therefore be given proper or appropriate attention.
3. By consideration of geographical (environmental, geological, spatial) issues, the analyses become improved and in fact more precise. This will have its impact on the ensuing final outcomes.

A more flexible assistance can be provided at the various levels such as local, state or the national level.

Hite and Hite (2004) also added some reasons to those provided above as being the reason GIS is a useful tool for improving education:

Expanded "holistic" representation and exploration of the contexts of schooling through the direct and dynamic use of multiple sources of influential data such as those of census, transport, utilities, health care, land use and agricultural data bases which are not too easy to include in education planning and management.

Increased public appeal and utility
Extensive control of scale of complexity: extensive flexibility in how much data are displayed or explored at a given time, with changes in unit of analysis virtually immediately Dynamic ability to facilitate "what if" analysis, exploratory inquiry, and creation of planning and management "scenarios"

SAQ 10.4
Planning which can otherwise be called an arrangement or scheduling is known to be the effective and efficient utilization of scarce resources in such a way that there is no room for wastages. Geographical Information System helps for school planning, especially in terms of making and taking of effective and efficient decisions.

Be it as it may, School Headmasters, Principals, Provosts, Rectors, Vice-Chancellors take many decisions regarding the school activities. This is in form of communicating with parents, students, management board of the school, community where the school is situated about innovations, changes, improvements that the school is embarking on. Some issues of concern are also communicated to those that are concerned by the respective school head. School heads help to further structure community thoughts and opinion, they carry out analysis of costs of service delivery of schools to the community; negotiate agreement; initiate various ideas; explore patterns and trends of use of land, housing and population issues which will be of benefit to both the school and the community as whole.

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Study Session 11: Geographical Information System (GIS) – Based School Mapping

Introduction

Originally, there was the school mapping which was specifically targeted at mapping of schools in areas that do not have schools at all, areas with not enough schools and even in areas where there are schools but such schools need to be re-arranged.

But as a result of modernization, globalisation, internationalization and with the advent of information communication technology, geographical information system (GIS) came to the limelight, and is found applicable to education, especially location of schools.

Application of the GIS to education and specifically school mapping, makes location of school(s) current, relevant and up-to-date and not of a manual nature. It is also a diagnostic tool, planning tool and also managerial tool.

In this study session, you will be introduced to the objectives of geographical information system-based school mapping and the purposes of Geographical Information System School Mapping

Learning Outcomes for study session 11

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

11.1 Explain the objectives of geographical information system-based school mapping

11.2 Discuss the purposes of Geographical Information System School Mapping

11.1 Objectives of Geographical Information System (GIS) Based School Mapping

The geographical information system (GIS) – based school mapping has its objectives. Remember that as a student of the Faculty of Education, you are taught how to write your lesson note and you must have objective(s) of the lesson(s) you want to teach to your students.

This is important to let you find out if your students have grasped the information you passed across to them for the defined time frame. Under the GIS – Based School mapping, the following are some of the objectives that are targeted to be realized by the GIS – Based School Mapping as made known by **Babalola (2012)**

Figure 11.1: Babalola (2012)
Source: http://theeagleonline.com.ng/wp-content/uploads/2015/04/Afe-Babalola.jpg

Objectives of Geographical Information System (GIS) – Based School Mapping are as follow:
   a. Serves as port of public or community information system
   b. Management of the School.
   c. Planning of school development and improvement
   d. Facilitation of the construction of additional classrooms and establishment of new schools
   e. Need to computerise the prioritization of existing schools and municipalities for necessary repairs and improvement.

A. Serves as Port of Public or Community Information System: Information is said to be power and the role of availability of information to users alike cannot be overemphasized. A community needs information about the number of schools that are available readily within it's environ.

There is need to be equipped with the number of pre-primary, (nursery), primary, secondary, and colleges of education, polytechnic, university, special schools and all other schools that exist within the community. The number of teachers according to gender and number of students according to gender is also part of the information that the school must make available to the community.

Further, there is a need to know the ratio of teacher to students, so as to determine whether there is a short supply, over supply or optimal supply of a teacher to students or students to a teacher. If however, there is a short of or excess supply of students to teachers; solution to this problem can be sought.

But in the case where there is optimal supply of students to teachers, it is a balanced situation. In addition, there is a need to get information on the available infrastructural facilities in various schools. This is to help at ensuring that there is an adequate ratio of these facilities to requisite student number.

In-Text Question
Serves as port of public or community information system is one of the objectives of Geographical Information System (GIS) Based School mapping. TREUE/FALSE
In-Text Answer
TREUE

B. Management of the School
Management has to do with proper utilisation of scarce resources, thereby avoiding wastage. It should be realized that resource such as human, material, monetary, time etc are scarce. These resources are needed in the school and success; progress cannot be realized without the availability of these mentioned resources.

If these resources are available in schools, it is imperative that they should be properly managed, especially with the application of the geographical information system tool.

C. Planning of School Development and Improvement
The adage says what is permanent is change. For school(s) at whatever level, whether first, second or third to improve, there should be positive changes which will lead to development and improvement, which also will lead to change. This includes development and improvement in curriculum, content, admission criteria, time tabling, extracurricular activities, classroom outlook, school environment and lots more.

Advent of GIS will help a great deal at improving schools in all areas, while development will also be realized and this will lead to positive change and relevancy of the schools' activities. Facilitation of the Construction of Additional Classrooms and Establishment of New Schools.

D. Facilitation of the construction of more classrooms and the establishment of new schools.
Land space is one thing that humans benefit from God, and it is good if the available land space is properly utilised.

Construction of additional classrooms is essential once the number of current students is determined, to ensure that there is an optimal ratio of a teacher to the students. Schools that wish to inhabit new sites can also be established in virgin land areas and this gives room for further and future expansion and habitation and thereby reduces the population mass on the already inhabited sites.

Need to Computerise the Prioritisation of Existing Schools and Municipalities for Necessary Repairs and Improvement
Depreciation will always set in, no matter the human activity one is involved in. You need to know that once you start to embark on a house construction, such construction exercise has started to depreciate.

But it is important that in a given school setting, there should be an officer that will be responsible for finding out areas that need repairs and maintenance in various school resources. This officer can be tagged School Maintenance Officer (SMO).

The GIS will enable and help the SMO to find out from time to time within the school coverage, priority areas that call for repairs and maintenance. With such a discovery, the resource in need of repair will be tended without delay.

11.2 Purposes of GIS School Mapping

Geographical Information System has many purposes and also as earlier said above, its application to the educational setting makes it better and relevant.

The purposes are as follows, as provided by Babalola (2012):
A. Identify Suitable Site for Establishment of School
B. GIS Helps in Assessing Susceptibility of Schools or Sites to Hazards
C. Need for the modeling of the Mobilisation and Allocation of Scarce Resources
D. GIS as a Tool for Site Development Planning
E. Active Involvement of Community in School Activities
F. GIS Ensures Proper Mapping of School Activities with Education Policies or Mapping of Policies with School Activities

A. Identify Suitable Site for Establishment of School

The GIS as a tool should be used to help government or private school owner to determine where schools – first, second or third level should be established. As should be noted, schools should not be sited in areas that are commercial in nature or areas that are prone to noise.

It will be better that schools be sited in areas that are serene and where disruption to academic activities will be minimal. To this end, the geographic information system as a tool will help a great deal at ensuring that schools are sited in areas that are suitable for such schools

B. GIS Helps in Assessing Susceptibility of Schools or Sites to Hazards

Hazards can sometimes be called occurrences that are natural but in some instances might not be natural. Hazards can inform flood, hurricane, fire disaster, landslides and so on. Geographical Information System helps to find out and detect which school sites or areas are very likely to be susceptible to such hazards. This serves as prevention against siting schools in such hazard-detected areas and so, prevents exposure of students to being victims of such hazards.

Assessing Carrying Capacity and Catchment Areas of Schools Carrying capacity has to do with what capacity or number of students that school size can accommodate during each school session. As much as there are human settlements in various areas round the world, such areas of habitation serve as catchment areas for schools sited around such areas.

C. Need for the Modeling of the Mobilisation and Allocation of Scarce Resources

School or educational resources are varied and it ranges from human, material, time, monetary/financial to space resources. It is important that these resources be mobilised because they might be situated in varying areas, showing that they are scattered.

But in order to get them mobilised, there is a need to make use of the Geographical Information System as a tool of modeling such resource mobilisation. Upon successful mobilization of these said resources, the next step is to allocate the scarce resources to their various points of optimal usage.

In situations where fewer students are available in a school and there are surplus resources available, the school management must admit that it is a problem that requires solution. And the solution can be either to mobilise more or extra student enrolment into such school(s) or re-allocate the surplus resources to areas that are lacking if these resources can be re-allocated. It needs to be realized that whatever resource(s) that are available, they are scarce and so, wastages must be avoided, while proper (or optimal) resource utilisation must be encouraged.

D. GIS as a Tool for Site Development Planning

In whatever activity that humans is involved, it is essential that planning must be embraced. Planning ensures proper and adequate utilisation of available resources. To this end, GIS is a good tool that must be embraced in site development planning. The site development is to ensure proper allocation of school site for various activities.

It is against this that in school site, there are areas designated for academic activities, sporting activities, dormitories, clinics (sick bay), information communication centre, research and development, staff quarters and so on. There will not be room for wastage of land resources.

E. Active Involvement of Community in School Activities

As much as the school exists within the ambit of respective communities, the community has some duties to perform to the school by getting involved in the school activities. Students, you should realise that it is because the community allowed or permitted that the school should exist within it, that is why the school can exist.

If not, there will not be schools existing within the community. But inasmuch as the community had permitted or allowed the schools to be in existence, such community must contribute meaningfully to the schools' activities. Such contribution can be financial. Here, the community will provide financial resources for the schools' activities.

Another is a suggestion of what curriculum content to be taught to the students. There is a need for bi-directional relationship between the school and the community. This is because the students that are taught arose or are offspring of the community and after their schooling, return into the community, to make the community better and also contribute meaningfully to the community.

It is therefore imperative that the community make known to the school some course contents that are relevant to continuous existence of the community and which should be taught to the students who are offspring of the community and who will eventually go back into the community to make it better than they met it.

In-Text Question
Mention any two purposes of Geographical Information System
In-Text Answer
  i.   Identify Suitable Site for Establishment of School
  ii.   GIS Helps in Assessing Susceptibility of Schools or Sites to Hazards

F. GIS Ensures Proper Mapping of School Activities with Education Policies or Mapping of Policies with School Activities

One important purpose of Geographical Information System is the proper mapping of school activities with education policies or mapping of policies with school activities. Educational policies are directives from government with respect to education and schools are expected to abide by. Schools and their activities cannot operate outside the ambit of the stated education policies.

So, the policies guiding the activities cannot operate outside the ambit of the stated education policies. So, the policies guide the activities of the school and the operators and this prevents a derailment from expectations of the government about school activities.

In situations where there are no policies guiding educational activities, school activities will not be uniform, and will lead to disarray, whereby each and every one will be at liberty to do what he/she thinks is the best for the school and the students they are handling. But with uniform educational policies, there is a sense of direction from a single authority to every school operator and there is therefore a unique and common focus.

Summary of study session 11

1. Objectives of Geographical Information System (GIS) – Based School Mapping are as follow:
    a. Serves as port of public or community information system
    b. Management of the School.
    c. Planning of school development and improvement
    d. Facilitation of the construction of additional classrooms and establishment of new schools
    e. Need to computerise the prioritization of existing schools and municipalities for necessary repairs and improvement.
2. Purposes of Geographical Information System Mapping are:
    a. Identify Suitable Site for Establishment of School
    b. GIS Helps in Assessing Susceptibility of Schools or Sites to Hazards
    c. Assessing Carrying Capacity and Catchments Areas of Schools
    d. Need for the Modeling of the Mobilisation and Allocation of Scarce Resource
    e. GIS as a Tool for Site Development Planning
    f. Active Involvement of Community in School Activities
    g. GIS Ensures Proper Mapping of School Activities with Education Policies or Mapping of Policies with School Activities

Self-Assessment Questions (SAQs) for Study Session 10

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 11.1 (Testing Learning Outcome 11.1)

Explain comprehensively the objectives of geographical information system-based school mapping

SAQ 10.2 (Testing Learning Outcome 10.2)

Explain fully the purposes of Geographical Information System School Mapping

Notes on SAQS for study session 11
SAQ 11.1

Objectives of Geographical Information System (GIS) – Based School Mapping are as follow:
    a. Serves as port of public or community information system
    b. Management of the School.
    c. Planning of school development and improvement
    d. Facilitation of the construction of additional classrooms and establishment of new schools

e. Need to computerise the prioritization of existing schools and municipalities for necessary repairs and improvement.

A. Serves as Port of Public or Community Information System: Information is said to be power and the role of availability of information to users alike cannot be overemphasized. A community needs information about the number of schools that are available readily within its environ.

There is need to be equipped with the number of pre-primary, (nursery), primary, secondary, and colleges of education, polytechnic, university, special schools and all other schools that exist within the community. The number of teachers according to gender and number of students according to gender is also part of the information that the school must make available to the community.

B. Management of the School
Management has to do with proper utilisation of scarce resources, thereby avoiding wastage. It should be realized that resource such as human, material, monetary, time etc are scarce. These resources are needed in the school and success; progress cannot be realized without the availability of these mentioned resources.

C. Planning of School Development and Improvement
The adage says what is permanent is change. For school(s) at whatever level, whether first, second or third to improve, there should be positive changes which will lead to development and improvement, which also will lead to change. This includes development and improvement in curriculum, content, admission criteria, time tabling, extracurricular activities, classroom outlook, school environment and lots more.

SAQ 11.2
Geographical Information System has many purposes and also as earlier said above, its application to the educational setting makes it better and relevant.
The purposes are as follows, as provided by Babalola (2012):
  ➢ Identify Suitable Site for Establishment of School
  ➢ GIS Helps in Assessing Susceptibility of Schools or Sites to Hazards
  ➢ Need for the modeling of the Mobilisation and Allocation of Scarce Resources
  ➢ GIS as a Tool for Site Development Planning
  ➢ Active Involvement of Community in School Activities
  ➢ GIS Ensures Proper Mapping of School Activities with Education Policies or Mapping of Policies with School Activities

A. Identify Suitable Site for Establishment of School
The GIS as a tool should be used to help government or private school owner to determine where schools – first, second or third level should be established. As should be noted, schools should not be sited in areas that are commercial in nature or areas that are prone to noise.

B. GIS Helps in Assessing Susceptibility of Schools or Sites to Hazards
Hazards can sometimes be called occurrences that are natural but in some instances might not be natural. Hazards can inform flood, hurricane, fire disaster, landslides and so on. Geographical Information System helps to find out and detect which school sites or areas are very likely to be susceptible to such hazards. This serves as prevention against siting schools

in such hazard-detected areas and so, prevents exposure of students to being victims of such hazards.

C. Need for the Modeling of the Mobilisation and Allocation of Scarce Resources
School or educational resources are varied and it ranges from human, material, time, monetary/financial to space resources. It is important that these resources be mobilised because they might be situated in varying areas, showing that they are scattered.

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Study Session 12: National Policy on Education before and After Independence

Introduction

In all nations, it is expedient that such nations must have policies on her activities, and one of such is the policy on education. Such policies exist before independence or after independence. In this lecture, you will learn the educational policy that Nigeria operates since before her independence. Prior to the independence, Nigerian government set up a commission called Ashby Commission that investigated the manpower need of the Nigeria

In this study session, you will be introduced to findings of the Ashby's commission, recommendations of the commission, main thrust of the 1977 Nigerian National Policy on Education to 1981

Learning Outcomes for study session 12

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

12.1 Explain the findings of the Ashby's commission

12.2 Explain the main thrust of the 1977 Nigerian National Policy on Education to 1981

12.1 The findings of the Ashby's commission

National Policy on Education before Independence: Ashby Commission Report (1960)

In April 1959, the Federal Government of Nigeria constituted the Ashby Commission to investigate and report on Nigeria's manpower needs for a period of twenty years (1960-1980). The Commission was led by Sir Eric Ashby, and comprised of three Nigerians, three Americans and Britons. The Commission reported as follows that:

There was an imbalance between one level of education and the other

There was limited admission opportunities for primary school leavers

Only few school teachers were qualified and certificated

That the Nigerian education was parochial and

There was imbalance in the development of education between the North and South
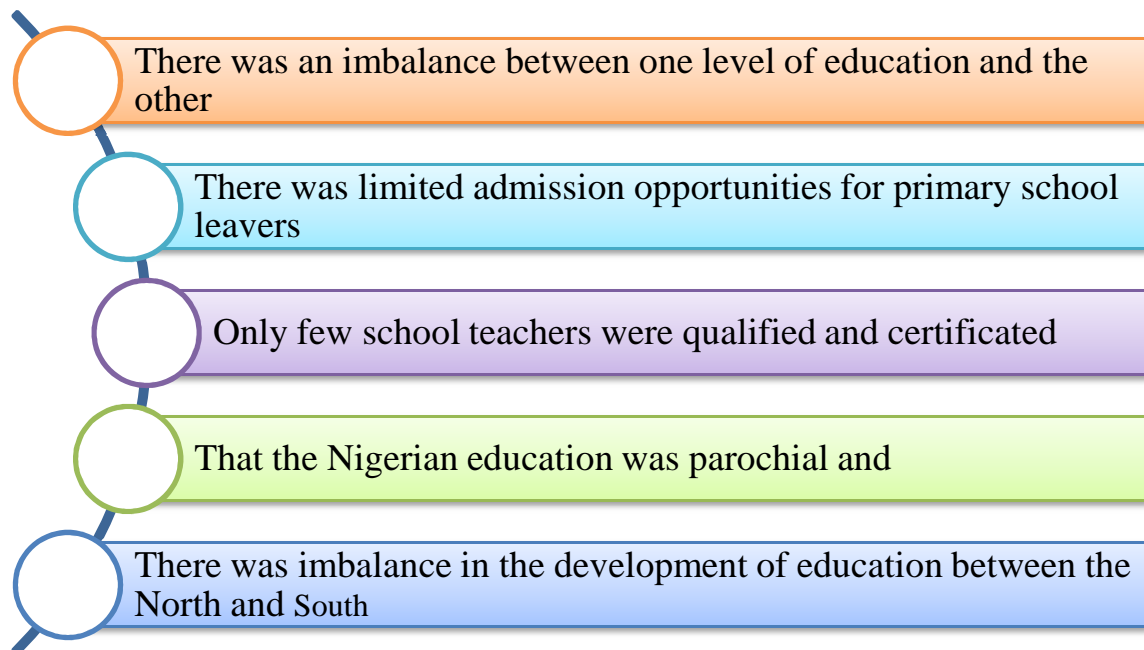
Figure 12.1: The Commission reported between (1960-1980)

The commission recommended the expansion and improvement of primary and secondary education, the upgrading the University College at Ibadan to a full-fledged university and the establishment of three other Universities at Nsukka, Ife and Zaria.

It also recommended the establishment of University Commission in Nigeria so that the universities will maintain a uniform academic standard. The post-secondary school system was to produce the post-independence high-level manpower needs of Nigeria

In-Text Question
In _____ the Federal Government of Nigeria constituted the Ashby Commission to investigate and report on Nigeria's manpower needs for a period of twenty years (1960-1980).

In-Text Answer
April 1959,

12.2 The National Policy on Education of 1977- 1981
The overall policy approach of government was geared towards the development of an educational blueprint that took into cognizance the hopes and aspirations of Nigerians. This culminated in the 1977 National Policy on Education which was first an indigenous educational policy (Imam, 2012).
The 1977 National Policy on Education was tailored towards addressing the problems of educational relevance to the needs and aspirations of Nigerians as well as promoting Nigeria's unity and laying the foundation for national integration.
Also, due to the high level of underdevelopment, the policy aimed at realizing a self-reliant and self-sufficient nation to meet the country's developmental needs. In order to achieve the objectives, the policy made education in Nigeria the Federal Government's responsibility in terms of centralised control and funding of education.
Such centralization was a departure from the colonial education policy of financing of education based on cost sharing between the proprietary bodies, local community, parents/guardians and the government (Ibadin, 2004).
Taiwo (1980) made reference to the ambitious nature of the National Policy on Education which was conceived during a period when Nigeria's national economy was at its zenith, but born in a period of economic decline.

In-Text Question
Due to the high level of _____ the policy aimed at realizing a self-reliant and self-sufficient nation to meet the country's developmental needs.
A No Answer
B Underdevelopment
C Overdevelopment
D Both under and over development

In-Text Answer
B Underdevelopment
The policy introduced the 6-3-3-4 educational system modelled after the American system of 6 years of primary education, 3 years of junior secondary school, 3 years of senior secondary school, and 4 years of university education (Nwagwu, 2007). Although, primary education was free, it was not compulsory and the policy sought to make universal primary education (UPE) free and compulsory for all children as soon as it is practicable.
In 1979, a new Constitution (Federal Republic of Nigeria, 1979) ushered in Nigeria's second attempt at democratic governance, the legal basis of education was provided and education was placed on the concurrent legislative list.

The Constitution shared the responsibility of education amongst the three tiers of government: Federal, State and Local Governments, while it gave the Federal Government more powers than the states in the areas of post primary, professional, technological and placed university education under its control.

In addition, it vested the Federal Government with the control of primary and post primary, and non-formal education within the States. Primary education was to be a joint venture between the states and local governments, with the local governments responsible for teachers' salaries.

This provision for education in the 1979 Constitution culminated in the first revised National Policy on Education and the 2nd edition (Federal Government of Nigeria, 1981). In the revised educational policy of 1981, it was again proposed that the government would make the UPE compulsory as soon as possible.

The UPE policy which eliminated school fees in 1976 aimed to have a comparatively limited impact on primary school enrollments in the educationally developed states, while having large effects in the educationally less developed states. However, while primary school enrollment levels increased in both groups of states, schooling increased faster in the less developed states but this trend was not commensurate with the population figures.

In the northern part of the country, the Qur'anic school system with its attendant problems of itinerant pupils continued to thrive and run parallel with the national educational system because even though the UPE made primary education free and universal, no attempt was made to make it compulsory for all children (Imam, 2003).

On the other hand, in the states of the south, where there was already in place a policy of universal primary education since the 1950s, pupils' enrollment in school was the norm and so classroom construction at the primary-school and teacher-training levels was less prevalent in these states (Osili, 2005).

However, the UPE ended in September 1981, due to the fact that the federal government in the revised policy shed the responsibility it undertook in the 1977 policy to finance primary education by transferring it to the States and local governments. Nwagwu (2011) reported a crisis of educational funding brought about by the oil glut in the world market in the early 1980s which led to a sudden decline in Nigeria's revenue from petroleum products that had accounted for approximately 80% of its income from exports.

The result was unpaid teacher salaries, degradation of education facilities at all levels and strikes in universities and schools resulting in declining literacy rates in the country (Odukoya, 2009).

In-Text Question
The _____ ended in September 1981, due to the fact that the federal government in the revised policy shed the responsibility it undertook in the 1977 policy to finance primary education by transferring it to the States and local governments.
A UPE
B ETF
C SUPEB
D All of the above

In-Text Answer
A UPE

Thus, with reduced funding for primary education, and re-introduction of school fees in the 1980s, primary school enrollment fell or stagnated in some states (Osili, 2005). Also, instead of the automatic promotion policy of the UPE, a combined method of evaluation of student performance and certification through continuous assessments and examinations was introduced.

However, this did not stop the emphasis on certification instead of skills acquisition. There was also recognition of the importance of language as a means of preserving the culture of the people and for forging national unity.
Consequently, the 1981 revised policy prescribed that each child be encouraged to learn one of the three major languages in the country: Hausa, Igbo and Yoruba, other than the mother tongue (Federal Republic of Nigeria, 1981).

Summary of study session 12
1. Federal Government of Nigeria constituted the Ashby Commission to investigate and report on Nigeria's manpower needs for a period of twenty years (1960-1980) and found many lapses with the Nigerian education system.
2. The 1977 policy was the first indigenous policy on education in Nigeria. It addressed the problems of educational relevance to the needs and aspirations of Nigerians as well as promoting Nigeria's unity and laying the foundation for national integration. The policy aimed at realizing a self-reliant and self-sufficient nation to meet the Nigeria's developmental needs.
3. 3.In the 1980's there was a sudden decline in Nigeria's revenue from petroleum products that had accounted for approximately 80% of its income from exports with its attendant consequences unpaid teacher salaries, degradation of education facilities at all levels and strikes in universities and schools resulting in declining literacy rates in the country.
4. There was reduced funding for primary education, and re-introduction of school fees in the 1980s, while primary school enrolment also fell or stagnated in some states.

Self-Assessment Questions (SAQs) for Study Session 12
Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.
SAQ 12.1 (Testing Learning Outcome 12.1)
Explain in details the findings of the Ashby's commission in the course of carrying out of its assignment
SAQ 12.2 (Testing Learning Outcome 12.2)
Fully describe the main thrust of the 1977 Nigerian National Policy on Education

Notes on SAQS for study session 12
SAQ 12.1
National Policy on Education before Independence: Ashby Commission Report (1960)
In April 1959, the Federal Government of Nigeria constituted the Ashby Commission to investigate and report on Nigeria's manpower needs for a period of twenty years (1960-

1980). The Commission was led by Sir Eric Ashby, and comprised of three Nigerians, three Americans and Britons. The Commission reported as follows that:
There was an imbalance between one level of education and the other
There was limited admission opportunities for primary school leavers
Only few school teachers were qualified and certificated
That the Nigerian education was parochial and
There was imbalance in the development of education between the North and South.

SAQ 12.2
The overall policy approach of government was geared towards the development of an educational blueprint that took into cognizance the hopes and aspirations of Nigerians. This culminated in the 1977 National Policy on Education which was first an indigenous educational policy (Imam, 2012).

The 1977 National Policy on Education was tailored towards addressing the problems of educational relevance to the needs and aspirations of Nigerians as well as promoting Nigeria's unity and laying the foundation for national integration.
Also, due to the high level of underdevelopment, the policy aimed at realizing a self-reliant and self-sufficient nation to meet the country's developmental needs. In order to achieve the objectives, the policy made education in Nigeria the Federal Government's responsibility in terms of centralised control and funding of education.

Such centralization was a departure from the colonial education policy of financing of education based on cost sharing between the proprietary bodies, local community, parents/guardians and the government (Ibadin, 2004).
Taiwo (1980) made reference to the ambitious nature of the National Policy on Education which was conceived during a period when Nigeria's national economy was at its zenith, but born in a period of economic decline.

The policy introduced the 6-3-3-4 educational system modelled after the American system of 6 years of primary education, 3 years of junior secondary school, 3 years of senior secondary school, and 4 years of university education (Nwagwu, 2007). Although, primary education was free, it was not compulsory and the policy sought to make universal primary education (UPE) free and compulsory for all children as soon as it is practicable.
In 1979, a new Constitution (Federal Republic of Nigeria, 1979) ushered in Nigeria's second attempt at democratic governance, the legal basis of education was provided and education was placed on the concurrent legislative list.

The Constitution shared the responsibility of education amongst the three tiers of government: Federal, State and Local Governments, while it gave the Federal Government more powers than the states in the areas of post primary, professional, technological and placed university education under its control.

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Study Session 13: Revision of the National Policy on Education I

Introduction

In as much as a policy is prepared and sees the light of the day, the next concern about how such policy is to be revised in order to meet the current challenges and thereby make a country's relevant sector relevant to the developed world.

In this study session, you will examine the National Policy on Education that has been revised, so as to find out the areas that were revised and the value added to the originally made policy.

Learning Outcomes for study session 13

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

13.1 Explain some of the provisions of the revised National Policy on Education

13.2 Discuss reasons why government determined that the least teaching qualification should be National Certificate of Education (NCE) and not the Teacher Grade II Certificate.

13.3 Explain fully what will be the benefit of Nigeria by using education as a tool for promoting national unity and for the total development of the individual as well as equipping the individual with knowledge and skills for adaptation into the larger society.

13.4 Discuss how various programmes can be used to transform all aspects of national life over time.

13.5. Explain why the policy failed to achieve its goals for higher education

13.6. State reasons why in Nigeria there is grossly underdevelopment of science and technology

13.1 The National Policy on Education

The National Policy on Education was again revised in 1998 and 2004 to make it relevant to the development needs of the country. Woolman (2001) opined that there is an observable relationship between education and national development in Africa, as education continues to be a question of critical concern in many of the countries just like it is in Nigeria.

Since education is an agent of cultural transmission as well as change, the constant revision of the National Policy on Education in Nigeria readily finds support in Woolman's (2001) prescription that education should also reflect the dynamic process of nation building that is continually being modified by new conditions.

Figure 13.1: Woolman (2001)
Source: http://www.memorialobituaries.com/memorials/photos/flint/33315_1.jpg

The revised National Policy on Education (Federal Republic of Nigeria (1998) prescribed a Universal Basic Education (UBE) programme, which was compulsory for all children in the country, given in the form of nine years continued education in the form of six years primary education and three years junior secondary schooling.

Consequently in 1999, the Federal Government of Nigeria flagged the UBE programme as a means of achieving equal educational opportunities and eradicating illiteracy.
However, even though policy prescribed a compulsory UBE, it was not enforced.

The Federal Government had adopted the National Policy on Education as 'an instrument par excellence for affecting national development' (Federal Republic of Nigeria, 1998). Thus, in the 3rd edition of the policy, the minimum standard for entry into the teaching profession was raised from Teacher Grade II Certificate to the National Certificate of Education (NCE).
This qualification is obtained after three years of senior secondary schooling and a Senior Secondary School Certificate Examination. The sources of Government's financing of education were diversified to include sources such as the Education Tax Fund (ETF) amongst others.

The Government hoped to use education as a tool for promoting national unity and for the total development of the individual as well as equipping the individual with knowledge and skills for adaptation into the larger society (Fafunwa, 2004).

Figure 13.2: Fafunwa, (2004)
Source:http://hallmarksoflabour.org/wp-content/uploads/2014/12/prof-babatunde-fafunwa.jpg

It was also the intention that the far-reaching provisions of the policy would transform all aspects of national life over time. Thus, various programmes like the Nomadic education, education of the migrant ethnic groups such as the nomadic education for Fulani cattle rearers and Ijaw fishermen were introduced (Federal Republic of Nigeria, 1998; Umar and Tahir, 2000).

Furthermore, the policy reiterated the government's stance in provision of secular education but with opportunities for religious instruction according to the faith of pupils' parents. However, the issue of giving basic education to children who are itinerant pupils attending local Qur'anic schools was not directly addressed by the government. This form of education continued to thrive in the north because of its sensitivity to local customs and religion (Imam, 2001).

The National Policy on Education has been revised to accommodate changes in the direction of education brought about by technological development (Nwagwu, 2007). To this end, the policy proposed that admissions into universities be based on 60 percent science based programmes and 40 per cent humanities. Nwagwu (2007) was emphatic that it was in the bid to launch Nigeria into a technological and industrialized nation that universities and institutes of technology were established by the government.

Figure 13.3: Nwagwu (2007)
Source:http://www.unn.edu.ng/internals/files/profile_images/2174_NWAGWU_EJIKEME.jpg

He supported his argument with the expressed belief in the National Policy on Education (2004) that 'education shall continue to be highly rated in the national development plans because education is the most important instrument of change. Any fundamental change in the intellectual and social outlook of any society has to be preceded by educational revolution'.

However, the policy failed to achieve its goals for higher education as the universities were unable to meet the prescribed science-humanities ratio, while admissions have been in favour of the humanities which continues to attract more candidates due to social demands. Also, according to Nwagwu (2007).

The Nigerian economy, science and technology are grossly underdeveloped because the educational system at all levels is not equipping beneficiaries with the needed skills necessary for national development. **Harbison (1973)** was emphatic that human resources constitute the ultimate basis of the wealth of nations because they are the active agents in the political, economic and social development of the nation.

Figure 13.4: Harbison (1973)
Source:https://www.google.com.ng/imgres?imgurl=http://www.osawatomiealumni.com/SENI
OR-PICTURES/1973/1973-harbison-
rex.jpg&imgrefurl=http://www.osawatomiealumni.com/SENIOR-
PICTURES/1973/1973Seniors.htm&h=300&w=212&tbnid=jBxg_YZ0KCdDsM:&docid=Rk
hQxWwnToU1LM&ei=7DPMVvjlBMK3UYPTqsgD&tbm=isch&ved=0ahUKEwj4i5Sa1o3L
AhXCWxQKHYOpCjkQMwgiKAgwCA

Therefore, graduates with little or no skills in self-reliance, have continued to rank with the unemployed **(Odukoya, 2009).** Further, **Buchmann and Hannum (2001)** have asserted that developing countries (such as Nigeria), may be able to signal mass educational opportunity by expounding the benefits of education, but may be too weak to create stable and effective educational institutions.

Thus **Buchmann and Hannum (2001)** have made reference to several studies that have examined the deleterious effects of state weakness in the education sector, including excessive demand for higher education, extreme regional disparities in school supply, and poor school quality (**Buchmann 1999,Fuller 1991, Post 1990**).

In-Text Question
The Federal Government had adopted the National Policy on Education as 'an instrument par excellence for affecting national development' (Federal Republic of Nigeria, 1998). Thus, in the 3rd edition of the policy, the minimum standard for entry into the teaching profession was raised from Teacher Grade II Certificate to the National Certificate of Education (NCE).
True/False

In-Text Answer
True

The unsatisfactory state of education in Nigeria is the resultant consequence of a lack of proper implementation of the National Education Policy and the funding crises. The findings of the educational sector analysis (Federal Ministry of Education, 2006) confirmed the poor state of education in Nigeria. Amongst the findings of the education sector analysis reported by **Igbuzor (2006)** are a national literacy rate of 57 per cent, 49 per cent unqualified teachers in the schools and acute shortages of infrastructure and facilities at all levels. Furthermore, access to basic education is inhibited by gender issues and socio-cultural beliefs and

practices, among other factors. There are wide disparities in educational standards and learning achievements at all levels of education, because the system emphasizes theoretical knowledge at the expense of skills acquisition.

In 1983, the National Policy on Education was again revised. However, this revision was aborted when the second democratic government was toppled by the Military. The Federal Military Government thereafter promulgated several decrees to guide and regulate the conduct of education. Notably amongst which was Decree No. 16 of 1985, which set the bench mark for National Minimum Standards and the establishment of schools.

Decree No. 26 of 1988, which proscribed and prohibited the Academic Staff Union of Universities (ASUU) from participating in trade union activities and Decree No. 36 of 1990, which revoked the proscription of ASUU and other decrees. This era witnessed a downturn in the economy which led to massive trade unions' unrest in the country and crises in the educational sector due to grossly inadequate funding of the sector.

In-Text Question
Amongst the findings of the education sector analysis reported by **Igbuzor (2006)** are a national literacy rate of _____ per cent unqualified teachers in the schools and acute shortages of infrastructure and facilities at all levels.
A 45-50 per cent B 50-60 per cent C 48-50 per cent D 49 -57 per cent,

In-Text Answer
D 49 -57 per cent

There was yet another revision of the policy in 1998, which culminated in the 2nd revised edition of the National Policy on Education (Federal Republic of Nigeria, 1998), the 1983 revised edition having been jettisoned.

This edition of the policy prescribed the First School leaving Certificate and the Universal Basic Education (UBE) programme the 9-3-4 system of education, comprising of nine years of universal compulsory schooling to be given as six years of primary education, and three years of junior secondary education.

At the end of the nine year UBE programme, all candidates are required to sit for an external examination and graduate with the Junior Secondary School Certificate. The educational system was designed to allow recipients to continue careers through apprenticeships and other vocational training programmes after the nine years of schooling (Olaniyan and Obadara, 2008). The 2nd edition of the policy also proposed the provision of UBE in a variety of forms, depending on the needs and possibilities for all citizens.

The 1998 revised National Policy on Education, came on the heels of the 1999 Constitution of the Federal republic of Nigeria, which ushered in the country's third attempt at democracy. Chapter 11, Section 18 of the Constitution re-affirms the objectives of education in Nigeria as contained in the 1979 Constitution of Nigeria and the National Policy on Education. The Constitution (Federal Republic of Nigeria, 1999, p. 29) gave impetus to ensuring the following:
➢ Equal and adequate educational opportunities for all at all levels of the educational system;
➢ Promotion of science and technology;
➢ Eradication of illiteracy through the provision of
➢ Free compulsory universal primary education, and

> ➤ Free university education, and
> ➤ Free adult literacy programme.

In 2004, the National Policy on Education was once more revised. This is the latest revised educational policy and 4th edition. Generally, the National Policy of Education in Nigeria is based on the dynamic model of formulating educational policies, which is adaptive to changes and most appropriate for a developing country and multi-ethnic nation like Nigeria. The policy has the following peculiarities:

1. It set specific objectives for the nation and its education;
2. It addressed the problem of unity and laid foundation for national integration.
3. It aimed at realizing a self-reliant and self-sufficient nation to meet the country's developmental needs.

In-Text Question

There was yet another revision of the policy in 1998, which culminated in the 2nd revised edition of the National Policy on Education (Federal Republic of Nigeria, 1998), the 1983 revised edition having been jettisoned. YES/NO

In-Text Answer

YES

It gave a comprehensive structure of educational system and laid the foundation for the 6-3-3-4 system of education in Nigeria (i.e. six years primary schooling, three years junior secondary education, three years senior secondary school and four years university education);

It made education in Nigeria the government's responsibility in terms of centralized control and funding of education;

It had a broad curriculum which aimed at creating learning opportunity for all children, irrespective of their sex, peculiar background or ability; and

It also specified the functions of adult education, non-formal education, special education and open and distance learning. (Federal Government of Nigeria, 1977 Revised 1981, 1998 and 2004)

Summary of study session 13

1. Education was agreed to be the agent of cultural transmission as well as change, and so need for the constant revision of the National Policy on Education
2. The policy prescribed that the Universal Basic Education (UBE) programme, be made compulsory for all children in the country
3. The minimum standard for entry into the teaching profession was raised from Teacher Grade II Certificate to the National Certificate of Education (NCE).
4. The sources of Government's financing of education were diversified to include sources such as the Education Tax Fund (ETF) amongst others
5. Education was agreed as a tool for promoting national unity and for the total development of the individual as well as equipping the individual with knowledge and skills for adaptation into the larger society
6. There was the introduction of programmes like the Nomadic education, education of the migrant ethnic groups such as the nomadic education for Fulani cattle rearers and Ijaw fishermen

7. The revised policy provided for secular education but with opportunities for religious instruction according to the faith of pupils' parents
8. The policy was revised to been revised to accommodate changes in the direction of education brought about by technological development. To this end, the policy proposed that admissions into universities be based on 60 percent science based programmes and 40 per cent humanities.
9. The revised National Policy on Education (2004) was hoped to target that 'education shall continue to be highly rated in the national development plans because education is the most important instrument of change.
10. It was found that universities were unable to meet the prescribed science-humanities ratio, while admissions have been in favour of the humanities which continued to attract more candidates due to social demands. So science and technology are grossly underdeveloped because the educational system at all levels is not equipping beneficiaries with the needed skills necessary for national development.
11. There was an unsatisfactory state of education in Nigeria which was as a consequence of a lack of proper implementation of the national education policy and the funding crises and other attendant problems

Self-Assessment Questions (SAQs) for Study Session 13

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 13.1 (Testing Learning Outcome 13.1)
What were some of the provisions of the revised National Policy on Education?

SAQ 13.2 (Testing Learning Outcome 13.2)
Explain reasons why you think Nigerian government in the revised policy decided that the least teaching qualification should be National Certificate of Education (NCE) and not Teacher Grade II Certificate.

Note on SAQs for study session 13
SAQ 13.1
1. Federal Republic of Nigeria (1998) prescribed a Universal Basic Education (UBE) programme, which was compulsory for all children in the country, given in the form of nine years continued education in the form of six years primary education and three years junior secondary schooling.
2. Consequently in 1999, the Federal Government of Nigeria flagged the UBE programme as a means of achieving equal educational opportunities and eradicating illiteracy.
3. However, even though policy prescribed a compulsory UBE, it was not enforced.
4. The Federal Government had adopted the National Policy on Education as 'an instrument par excellence for affecting national development' (Federal Republic of Nigeria, 1998). Thus, in the 3rd edition of the policy, the minimum standard for entry into the teaching profession was raised from Teacher Grade II Certificate to the National Certificate of Education (NCE).

SAQ 13.2

The reason is because the Government hoped to use education as a tool for promoting national unity and for the total development of the individual as well as equipping the individual with knowledge and skills for adaptation into the larger society

It was also the intention that the far-reaching provisions of the policy would transform all aspects of national life over time. Thus, various programmes like the Nomadic education, education of the migrant ethnic groups such as the nomadic education for Fulani cattle rearers and Ijaw fishermen were introduced (Federal Republic of Nigeria, 1998;

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Study Session 14: Revision of the National Policy on Education II

Introduction

This study session is a continuation of the last session that examined the revision of the Nigeria's National Policy on Education. This session will however examine the provision made for children with special needs, itinerant pupils, out of school children, implementation of the UBE programme and the 9-3-4 system of education, responsibility of curriculum design which rests with the federal government of Nigeria, use of mother tongue in the process of lesson delivery, Qur'anic education, adult education and open and distance education.

Learning Outcomes for study session 14

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

14.1 Explain how Nigerian government is committed to the implementation of the UBE programme and the 9-3-4 system of education

14.2 Explain the significance of the prevocational subjects that were added to list of curricula offerings

14.3 Explain why Qur'anic school does not provide a favourable environment for inculcation of the right kind of values for the survival of the individual in the larger Nigerian society.

14.4 Explain the educational opportunities provided for those who are unable to complete their education or benefit from further education through the regular channels as provided for in the policy.

14.1 How Nigerian government is committed to the implementation of the UBE programme and the 9-3-4 system of education

This 4th edition of the policy which is presently in operation prescribes an inclusive education to take care of children recognized as having special needs. It in addition addressed the needs of itinerant pupils through the prescription of the integrated Qur'anic school programme as well as programmes for out of school children.

The policy reiterates the Government's commitment to the implementation of the UBE programme and the 9-3-4 system of education. Basic education is given in the form of six years primary education after which pupils proceed to the junior secondary school where they spend three years. The policy saw the disarticulation of junior secondary school from the senior secondary to form basic education schools.

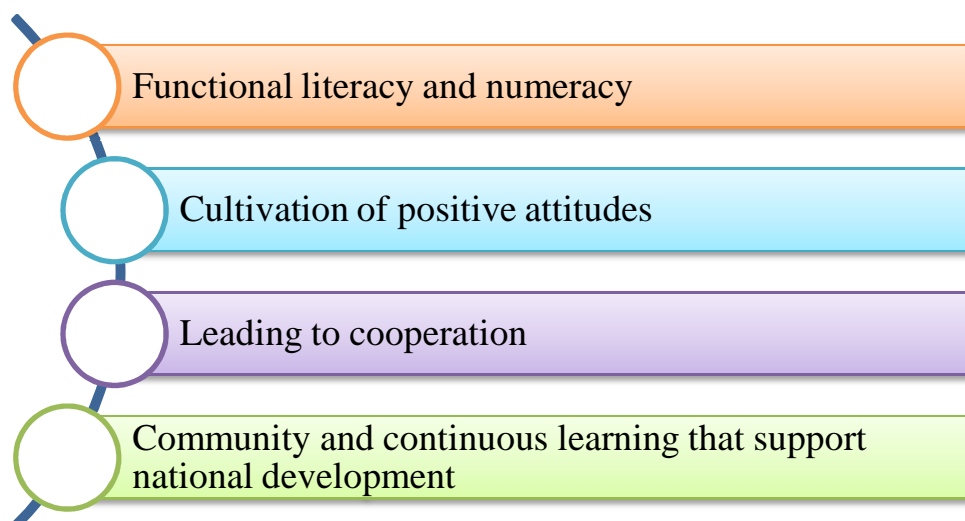The goals for primary education are the provision of:

Figure 14.1: The goals for primary education

The primary education is for children aged 6 to 11 years plus, while the junior secondary school is for those aged 12 years to 14 plus.

Basic education is managed by the states and local government with some financial input from the Federal Government which gives the direction for policy implementation. Both the primary and junior secondary schools are under the management of the States' Universal Basic Education Boards.

However, staff of the primary school are recruited by the local government authorities. Also, each school has its own respective administrative system under the leadership of a head teacher or school principal as may be applicable at the schools' levels. These persons are usually appointed from amongst experienced teachers in the school.

The senior secondary school is of three years duration, and is for adolescents aged between 15 and 18 years old. It is wholly financed and managed by the States' government through the Secondary education Management Board of the Ministries of Education. However, there are a few unity secondary schools financed and managed by the Federal Ministry of Education.

The school is headed by a principal who is charged with policy implementation at that level. People are appointed to a school leadership position based on experience and a quota policy which supports fair representation based on ethnic grouping.

In-Text Question
The following are the goals of primary education except
A Functional literacy and numeracy
B Cultivation of positive attitudes
C Functional and accuracy
D Leading to cooperation

In-Text Answer
C. Functional and accuracy

14.2 The significance of the prevocational subjects that were added to list of curricula offerings

In terms of the school curricula design, the responsibility for basic education and senior secondary school curricula rests with the Federal Government through its organ the Nigerian Educational Research and Development Council (NERDC). However, each locality is expected to adapt the implementation of the national policy to suit their local conditions based on the national curricula.

At the basic education level, the curricula comprises of English language, Mathematics, religious studies (depending on the faith of pupils' parents), academic subjects like Basic Science and Technology, and Social Studies.

The prevocational subjects offered include Cultural and Creative Arts, Computer Studies, Agriculture, Home Economics and Physical and Health Education. One major Nigeria language (Hausa, Igbo or Yoruba) has been added to the list of curricula offerings and where there are available teachers French or Arabic is offered, bringing a total of fourteen subjects.

At the end of the nine years basic education, in the final class of the junior secondary school, all pupils sit for an external examination and certification. The assessment is by a combination of 40 per cent continuous assessment and 60 per cent performance in the examination. Pupils' performance in the Junior Secondary School Certificate Examination (JSSCE) determines whether they go on to the senior secondary school level.

The senior secondary school is streamed into Arts and Social Science, Sciences and Vocational and Technical Education, and students at this level are placed in a stream based on their performance in the JSSCE and interests.

The curriculum at the SSS level comprise compulsory subjects which are English Language and Mathematics, one major Nigerian language, one vocational subject and a selection of three subjects from the subject area of interest in the Arts and Social Science, Sciences, Vocational studies or Technical Education.

All students sit for external examinations. The certification at this level is based on 40 per cent continuous assessment and 60 per cent examination and on successful completion students pass out with the Senior Secondary School Certificate/General Certificate of Education (O' levels). The emphasis is still on certification.

In Nigeria, English language is the medium of instruction; however, the national policy advocates the use of the mother tongue in teaching the lower levels of the primary school. But as Woolman (2001) has observed Nigeria has in all, over 270 indigenous Nigerian languages that may qualify as instructional tongues for early primary classrooms.

Many of the smaller languages have no written orthography, which makes materials production quite difficult. Woolman was emphatic that it is for this reason that English is still largely used and the language was adopted as the language of instruction since independence. Nonetheless, he observed that the content of textbooks was Africanized.

Figure: 14.2: Woolman (2001)
Source: http://www.memorialobituaries.com/memorials/photos/flint/33315_1.jpg

14.3 Why Qur'anic school does not provide a favourable environment for inculcation of the right kind of values for the survival of the individual in the larger Nigerian society.

In the Qur'anic schools, pupils learn in Arabic under a system of education that runs parallel with the nation's educational system. The curriculum in these schools is narrow and prepares them only for adaptation into their own communities alone, read the Qur'an and to be able to observe Muslim religious rites (Imam, 2003).

For now the integrated Qur'anic school policy is yet to be actualized. It is however, pertinent to note that the Qur'anic school and its itinerant pupil phenomenon is the greatest source of rural-urban drift that is threatening rural farming communities amongst the large Hausa population in the north of Nigeria (Imam, 2001).

This is because when many of the pupils complete their education they remain in the city where they end up on the bottom rung of society's ladder and take up menial labour like truck pushing. According to Imam (2001) the Qur'anic school does not provide a favourable environment for inculcation of the right kind of values for the survival of the individual in the larger Nigerian society.

Rather the Qur'anic school adapts pupils for their own immediate community and to practice the Islamic religious rites. The consequence of not being integrated or the feeling of not belonging to the larger society for national unity is enormous. If people are driven by their limited outlook, and by hunger and poverty, there is the potential for social instability and sectarian crises.

The National Policy on Education (Federal Republic of Nigeria, 2004) has proposed an integrated Qur'anic school policy to take care of the education of itinerant people in their own cultural setting. However, the implementation of the policy is fraught with problems. An

alternative basic education curriculum for the integrated Qur'anic school, adapted to local conditions is needed as well as the modality of implementation.

In-Text Question
The Qur'anic school adapts pupils for their own immediate community and to practice the Islamic religious rites. Yes/No

In-Text Answer
YES

14.4 The educational opportunities provided for those who are unable to complete their education or benefit from further education through the regular channels as provided for in the policy

The National Educational Policy provides educational opportunities for those who are unable to complete their education or benefit from further education through the regular channels, through adult education and open and distance education.

The objectives of secondary education (Federal Republic of Nigeria, 2004) are 'preparation for useful living in the society and for higher education'. There are high failure rates in the SSSCE and a clamour for higher education while those who are unable to proceed beyond the senior secondary school level are lacking in self-reliant skills in any vocation.

The objectives of secondary education 'preparation for useful living in the society and for higher education' are not being achieved. Many of the pupils do not go on to the senior secondary due to a lack of resources to pay the fees and other charges. Such young people are not equipped with adequate skills.

Also, young people would benefit from pathways from the Qur'anic school to secondary education beyond that of a basic education level for those who are able and willing and with the actualization of the integrated Qur'anic school. There is need for a revision of the 2004 National Policy on Education to make children stay in school until they complete the senior secondary school and turn eighteen years old.

This development is in agreement with British educational policy which evolved from the 1944 Education Act and allows for a universal free secondary education according to the interest of candidates (Gillard, 2011).

It is also in consonance with what operates in other advanced countries of the world like the United States from which Nigeria borrowed its new educational system. However, no matter how beautiful the National Policy on Education (Federal Republic of Nigeria, 2004) is on paper, the implementation is fraught with problems of political, economic and socio-cultural aspects which are not sensitive to the aspiration and needs of the people and country.

Summary of study session 14

1. The revised National Policy on Education had consideration for: people with special needs. In addition addressed the needs of itinerant pupils through the prescription of the integrated Qur'anic school programme as well as programmes for out of school children.
2. The policy reiterated the Government's commitment to the implementation of the UBE programme and the 9-3-4 system of education.
3. The goals for primary education was reiterated to include among others: provision of functional literacy and numeracy, cultivation of positive attitudes, leading to cooperation
4. Role of Nigerian Educational Research and Development Council in the area of school curricula design was made known.
5. Each locality is expected to adapt the implementation of the national policy to suit their local conditions based on the national curricula.
6. Students at the Junior Secondary level were expected to offer academic subjects and prevocational subjects while assessment is by a combination of 40 per cent continuous assessment and 60 per cent performance in the examination.
7. Students at the Senior Secondary School were streamed into Arts and Social Science, Sciences and Vocational and Technical Education, and students at this level are placed in a stream based on their performance in the JSSCE and interests.
8. Our policy advocated the use of the mother tongue in teaching the lower levels of the primary school. But it has been observed that Nigeria has in all, over 270 indigenous Nigerian languages that may qualify as instructional tongues for early primary classrooms. Many of the smaller languages have no written orthography, which

makes materials production quite difficult, and so English is still largely used and the language was adopted as the language of instruction.

9. For Qur'anic schools, pupils learn in Arabic under a system of education that runs parallel with the nation's educational system, the curriculum in these schools is narrow and prepares them only for adaptation into their own communities alone, read the Qur'an and to be able to observe Muslim religious rites.

10. National Educational Policy provides educational opportunities for those who are unable to complete their education or benefit from further education through the regular channels, through adult education and open and distance education.

11. The implementation of the revised policy is fraught with problems of political, economic and socio-cultural aspects which are not sensitive to the aspiration and needs of the people and country.

Self-Assessment Questions (SAQs) for Study Session 14

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 14.1 (Testing Learning Outcome 14.1)

Explain comprehensively how Nigerian government was committed to the implementation of the UBE programme and the 9-3-4 system of education

SAQ 14.2 (Testing Learning Outcome 14.2)

Explain fully the significance of the prevocational subjects that were added to list of curricula offerings

SAQ 14.3 (Testing Learning Outcome 14.3)

Explain properly why Qur'anic school does not provide a favourable environment for inculcation of the right kind of values for the survival of the individual in the larger Nigerian society.

SAQ 14.4 (Testing Learning Outcome 14.4)

What benefits do each locality stands to gain by adaptation of the implementation of the national policy to suit their local conditions based on the national curricula?

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Study Session 15: Blueprint and Government White Paper on the National Policy on Education (1978-1979)

Introduction

In as much as a policy has been brought to the limelight, the proper thing is to ensure that it is implemented. This is the reason for this study session, on the blue and white print of the National Policy on Education.

The Nigeria Federal Executive Council set up an implementation Committee for the National Policy on Education with the goal of developing a workable blueprint and to develop programmes for the implementation of the new educational policy.
In this study session, you will learn what the blueprint of the committee was composed of and their recommendations were in line with the National Policy on Education in Nigeria.

Learning Outcomes for study session 15

At the end of this study session, you should be able to:
15.1 Mention the main charges of the implementation Committee for the National Policy on Education
15.2 Explain the committee level on the junior secondary School
15.3 The views of the committee on Adult and Non-formal education

15.1 The main charges of the implementation Committee for the National Policy on Education

After the publication of the Government White Paper entitled "The National Policy on Education" in March 1977, the Nigeria Federal Executive Council set up an implementation Committee for the National Policy on Education in September of the same year. The committee was charged by the Federal Government to translate the new educational policy into a workable blueprint and to develop programmes for the implementation of the policy.

In addition, the committee was to co-ordinate and monitor the implementation of those programmes developed under the policy. Furthermore, the committee was to advise and assist the government in providing the infrastructure and other requirements for the implementation of the policy.

It was also to provide a continuous review and assessment of the aims, objectives and targets of the policy with a view to ensuring the adequacy and continued relevance of the policy to Nigerian national needs and aspirations and to propose modifications on any aspect as may be found necessary.

In-Text Question
In _____ the Nigeria Federal Executive Council set up an implementation Committee for the National Policy on Education
A March 1977 B March 1978 C March 1987 D March 1877

In-Text Answer
A. March 1977

As the work of the Committee progressed however, it decided to submit the blueprint in stages. This first part of the Implementation Committee blueprint was submitted to the Federal Minister for Education on Thursday 19th October, 1978.

The second part of the blueprint, which contains the guidelines on the implementation of the remaining sections of the National Policy not covered by part One, was submitted to the Federal Minister of Education on Thursday, 21st December, 1978.

Two supplementary reports were later handed over to the Federal Government by the Implementation Committee. For example, on 19th January 1979, the first supplement to parts one and two of the blueprint was submitted.

This was followed by the second supplement to parts one and two of the blueprint which was submitted of Friday, 9th February 1979. In the area of pre-primary education, the committee accepted that the government should make provision legally or otherwise for this level of education. The committee however agreed that it is the full responsibility of the parents to bring up their children from birth to the age of maturity.

It suggested that the government should make special provision for the early education of the handicapped. Each state government should encourage pre-primary education by providing relevant legislation and adequate guidelines governing the establishment, running and closure as well as supervision.

In-Text Question
The second part of the blueprint, which contains the guidelines on the implementation of the remaining sections of the National Policy not covered by part One, was submitted to the Federal Minister of Education on _____
A Thursday, 21st November, 1978.
B Wednesday, 21st December, 1978.
C Thursday, 21st December, 1978.
D Thursday, 21st December, 1988.

In-Text Answer
C. Thursday, 21st December, 1978.

The pre-primary school teachers should be registered by the State Ministries of Education like all other teachers in the school system while the head teacher of each pre-primary school should be a specialist in the field. The medium of instruction in the pre-primary schools should be the language of the immediate community but, English might be used in a multi-national school.

The curriculum at this level should be instruction in Religion, Moral Instruction and the Social Norms through stories. On primary education, the Committee recommended that the curriculum be organised under eight headings. These are: Language Arts, Mathematics, Social Studies, Elementary Science, Cultural-Arts, Health Education and Physical Training, Religions and Moral Instructions, Agriculture and Home Economics.

On evaluation, the Committee recommended that the National Teacher's Institute of Education and other Teacher Training Institutions include in their programme - 'Pre-Service Courses' in their Continuous Assessment.

On financing primary education, it was recommended that the Federal Government make grants available to the States for teachers' salaries. The State Government should be responsible for capital costs including building, furniture and fittings, school records, library books and entitlements of teachers including pensions.

While the Local Governments will be responsible for salaries of non-academic staff, provisions of staff quarters, maintenance of buildings and provision of toilets; providing teachers' textbooks and stationery.

In the area of secondary school curriculum, the committee agreed with the structure already worked out by the Sofolahan Committee which had been entrenched in the new policy for the junior secondary school.

In addition, it agreed with the policy in its entirety that the junior secondary school should be both pre-vocational and academic and should be devised to give suitable educational opportunities both to those for whom junior secondary education will become terminal and for those who will proceed to senior secondary education. It further recommended that further details of the structure of the curriculum for junior secondary schools be worked out by the curriculum committee of N.E.R.C.

In-Text Question
In the area of secondary school curriculum, the committee agreed with the structure already worked out by the Sofolahan committee which had been entrenched in the new policy for the junior secondary school. True/False

In-Text Answer
True

15.2 The committee on the junior secondary School
However, the committee recommended that the junior secondary school curriculum content as well as its distribution in time should be made flexible as to give certain freedom for local adaptations. On the pre-vocational content, the committee recommended two different approaches.

The first approach was the subject approach. In the subject approach, the pupils during the first two years would study different pre-vocational subject and in the third year and specialize in one. The second approach was integrated approach. The integrated approach would give the pupils very broad introduction in the pre-vocational subjects and coverage of a number of subjects would continue throughout the three years, thus the pupils would have a broad generalization rather than specialization.
According to Osokoya (1987), the committee recommended the following lines of actions for the training and re-training of teachers for the scheme.

Figure 15.1: Osokoya (1987)
Source:http://m.c.lnkd.licdn.com/mpr/mpr/AAEAAQAAAAAAAARJAAAAJDZmOGE5ZDIzLT
hkYzgtNDcyNy05NWYxLWJmYjRhNDFjNWQ1MQ.jpg

The committee recommended the following lines of actions for the training and re-training of teachers for the scheme.

1. That all Teacher Training Institutions producing N.C.E graduates should double their yearly intakes.
2. That Colleges of Technology be encouraged to have Departments of Education for the training of technical teachers.
3. That all Nigerian Universities be persuaded to organize technical teachers courses at the Degree level.
a. 4.That the two Technical Teachers Colleges at Yaba and Gombe, should arrange a one-year methodology course in technical courses for graduates of technical colleges and universities.
4. That the local artisans and other un-certificated but talented people be used to teach technical subjects until enough technical teachers are produced.
5. That native speakers of various Nigerian languages who are resident outside their own state of origin (including students and NYSC members) be employed to teach at least oral forms of Nigerian languages.

On the location of the junior secondary school, the committee recommended three alternatives which are:
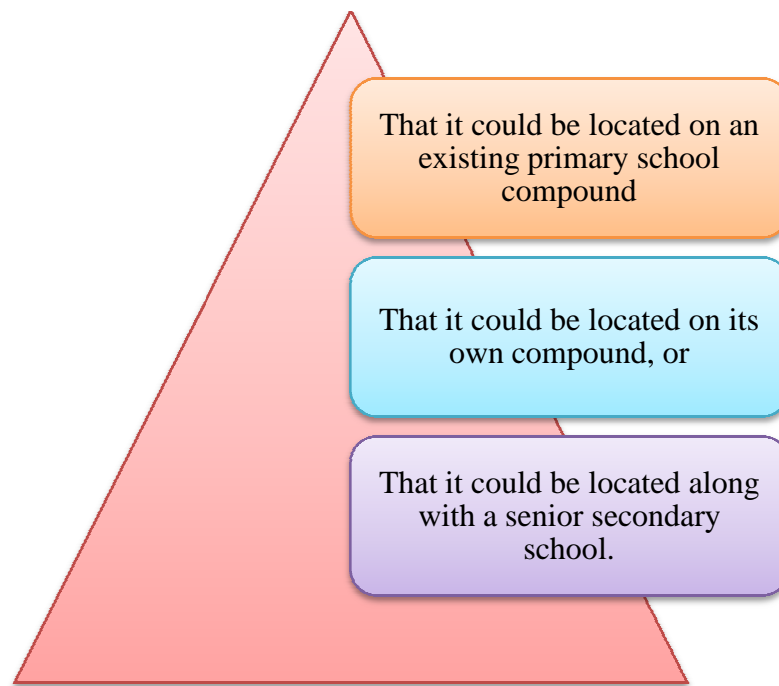
Figure 15.2: Three alternatives committee recommended for junior secondary school

The committee however remarked that none of these alternatives could be regarded, in general terms as superior to the others. The committee further recommended that the states, with the help of relevant expertise, set up several pilot Junior Secondary School where different designs can be tested and evaluated as from September, 1981.

On Teacher Education, the committee remarked that the training of teachers and the provision of facilities for the training should be a governmental responsibility (Osokoya, 1987). It therefore recommended the following measures.

1. That the Federal Government pays the capital costs of all teacher training colleges, that is, the buildings and equipment.
2. That the State Governments bear the costs of tuition, accommodation and all other recurrent costs.
3. That community contributions be accepted and encouraged
4. That State Governments encourage donations by individuals and groups as well as the establishment of endowment funds.
5. That the maximum enrolment at each Grade II Teachers' College be 1,000 students.

On the issue of methods of training, the committee recommended that the primary school teachers learn how to read and write one major Nigerian language. In addition, it recommended that all future Grade II trainees should complete the 3-years Junior Secondary School before entering a Teacher Training College.

Thus the new Grade II Teacher Certificate will be fitted into the 6-3-3-4 system. On the training of teachers at the Advanced Teachers Colleges, the committee recommended that conscious efforts be made by the State Government to expand training of technical vocational and commercial teachers, while there should be an appropriate Decree establishing the Teacher's Council to make teaching a profession.

In the area of University Education it was submitted that Nigerian Universities should intensify their efforts to achieve the proposed 60:40 ratio between science and non-science disciplines. In addition, those areas which have no existing universities should be given priority consideration in the sitting of new universities. Efforts should be made to ensure proper coordination between State Governments and the National Universities Commission so as to avoid wasteful duplication.

In addition, it was submitted that teaching facilities especially in the science and professional areas be improved so as to facilitate the implementation of reviews and recommendations of advisory groups and professional bodies.

It also recommended that universities should make their courses directly relevant to the requirements of each profession and to the needs of the society by emphasizing practical and field training, thereby equipping students properly for their chosen field of study. The committee also suggested that universities should embark upon cost-reducing and revenue-yielding measures.

In the area of technical education, the committee recommended that vocational centres should be established in every local government area to offer artisans training courses for post-primary children who will not be admitted into the junior secondary schools.

In addition, courses in the technical schools should be widened to include among others, plumbing, electrical installation, painting and decorating, carpentry and joinery, metal fabrication, mechanics, printing etc.

It suggested that new syllabuses which would be directly relevant to the present day needs of the country be drawn up. It further recommended that every state should have at least one institution running Advanced Craft Courses with emphasis on the training of technical teachers, while new technician courses should lay more emphasis on practical work than on theoretical training.

It further recommended that the length of the courses for the Nigerian National Diploma be reviewed when the new two-tier secondary system comes into operation. It submitted that opportunity should be provided for artisans, craftsmen and technicians to progress in their chosen field.

In the area of Adult and Non-Formal Education, the Committee recommended that within the next ten years, the nation should give top priority to the following formal and non-formal adult education programmes (Osokoya 1987).

Figure 15.2: Osokoya 1987
*Source:http://m.c.lnkd.licdn.com/mpr/mpr/AAEAAQAAAAAAARJAAAAJDZmOGE5ZDIzLT
hkYzgtNDcyNy05NWYxLWJmYjRhNDFjNWQ1MQ.jpg*

Literacy education which should be functional
Post – literacy education of two types:
Functional follow-up programme to literacy
Education equivalent to primary education, and which is accredited.
Post-primary education of two types:
Vocational and technical education for adults
Education equivalent to the secondary school programme and which is accredited.
Non-formal education geared towards improving basic health and family life.

It further suggested that civic education should not be treated as a separate programme, but should be incorporated in all other adult and non-formal education programmes. It recommended that the Federal Ministry of Education should be responsible for the following.

a. the determination of national policy on Adult and Non-formal Education, in order to ensure uniform standards and quality control.
b. co-ordination of Adult and Non-formal Education practices.
c. inspectorate services to improve and maintain standards
d. support services for Adult and Non-formal Education within the State, including curriculum development libraries and audio-visual materials.
e. coordination of the activities of Adult Education Committees.
f. organization of state in-service training of adult education personnel.

15.3 The views of the committee on Adult and Non-formal education

Each state should have a State Centre for Adult and Non formal Education to act as a resource centre for adult education programmes and to provide training for all state adult education personnel. It further suggested that the government should embark on administrative measures to motivate an illiterate to learn, including legislation fostering literacy, award of literacy certificates.

Wide publicity arrangement for competition and prizes. It submitted that correspondence education and education through the media be encouraged whilst the decree on correspondence education be implemented as early as possible.

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On special education, the committee suggested a three-tier organization to ensure the implementation of the programmes. These are:
  ➢ National Committee on Special Education at Federal Level
  ➢ State Committee on Special Education at State Level
  ➢ Sub-committee on special Education at Local Government Level.

It further suggested the inauguration of a panel of Nigerian Psychologists and Special Educators to work towards providing standardized tests relevant to the Nigerian situation for measuring out capabilities in children. It recommended the provision of appropriate staff, materials and equipment for the handicapped who gained admission into the secondary school.

It further called for the setting up of a sub-committee of the National Committee for Special Education to handle job placement of trained handicapped persons. The committee called for a census of the handicapped and that the regular primary school curriculum be modified to suit the needs of various handicapped children.

On Educational Services, the committee suggested seven units of an educational resource centre (Osokoya 1987).
  ➢ A library
  ➢ An audio-visual unit

A production unit to produce materials, among other things, which could be turned over to commercial concerns for mass production.
An education research unit to investigate design and develop teaching aids like a curriculum development unit, an educational information unit, a language development unit.

It recommended that the State and Federal Resource Centres be adequately funded, staffed and equipped to enable them function effectively. It suggested that broadcasts to schools be integrated into the school curricula.

The committee further recommended that the Guidance and Counselling Unit of the Federal Ministry of Education be expanded and should liaise with the State Ministries in their activities, on Guidance and counselling. Also, progressive in – service training be developed for full qualification of Education Officers or school teachers as guidance professionals at the Federal and State levels.

On Education Planning, Organization and Financing, the committee recommended the proper organization and equipment of the statistics unit of the planning section of the Federal Ministry of education. In addition, each stale ministry of education should have its own statistics unit. It called on the Federal Ministry of Education to conduct regular in-service training for statistical officers in the Ministries of Education.

After a careful study of the implementation Committee's blueprint, the Federal Government issued a white-paper titled "Government Views on the Implementation Committee's blueprint on the Federal Republic of Nigeria, National Policy on Education.
This seventy-one page white paper published in 1979 itemized the Federal Government's proclamations on each of the recommendations of the Committee as stated in the blueprint. Most of the recommendations dealing with the structure, planning and administrative

principles in line with governments laid down procedures were accepted fully whilst minor amendments to some suggestions were given in some areas.

However, the Federal Government totally rejected recommendations of the Committee that were not in line with the governments laid down procedures (Osokoya 1987). Examples of such recommendation rejected are:

Part I, item 5.1 (f) which suggests that the J.C.C be asked to recommend a name for the newly-structured Teachers' Colleges was unacceptable to the Federal Government because Grade II Teachers' Colleges are generally identified by location and that such practice should continue.

Part II, item 5.5 (b) which recommends that N.C.E. student teachers who wish to teach in a Grade II teachers Colleges should do their teaching practice in a Grade II Teacher Colleges and not in a secondary school was turned down because the Government felt that such a recommendation is neither practicable nor desirable since N.C.E. teachers are interchangeable between secondary schools and Grade II Teachers Colleges.

Part I, item 5.9 (c) which recommends that teachers should serve a one-year internship before they are awarded a teacher's Certificate was also turned down by the Government.

In-Text Question
Most of the recommendations dealing with the structure, planning and administrative principles in line with governments laid down procedures were accepted fully whilst minor amendments to some suggestions were given in some areas. True/False

In-Text Answer
True

Summary of study session 15
1. Nigeria Federal Executive Council set up an implementation Committee for the National Policy on Education and the committee was charged by the Federal Government to translate the new educational policy into a workable blueprint and to develop programmes for the implementation of the policy.
2. The committee co-ordinated and monitored the implementation of those programmes developed under the policy. Furthermore the committee advised and assisted the government in providing the infrastructure and other requirements for the implementation of the policy.
3. The Committee submitted the blueprint in stages and two supplementary reports.
4. It was agreed that it is the full responsibility of the parents to bring up their children from birth to the age of maturity, while government should make special provision for the early education of the handicapped
5. Pre-primary school teachers should be registered by the State Ministries of Education like all others teachers in the school system while the head teacher of each pre-primary school should be a specialist in the field and the language of the immediate community be the medium of instruction.
6. With respect to primary education, the Committee recommended that the curriculum should be organized under eight headings.
7. In the financing of primary education, the Federal Government should make grants available to the States for payment of teachers' salaries, while State Government should be responsible for capital costs

8. The junior secondary school should be both pre-vocational and academic, while its curriculum content as well as its distribution should be made flexible as to give certain freedom for local adaptations.
9. The committee made recommendations for the training and re-training of teachers, especially technical teachers.
10. There were recommendations on the location of the junior secondary schools by the committee
11. With respect to teacher education, the committee remarked that the training of teachers and the provision of facilities for the training should be a governmental responsibility.

Self-Assessment Questions (SAQs) for Study Session 15

Now, that you have completed this study session, you can assess how well you have achieved its learning outcomes by answering the following questions. Write your answers in your study diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this study session.

SAQ 15.1 (Testing Learning Outcome 15.1)
What are the main responsibilities of the implementation Committee of the National Policy on Education?

SAQ 15.2 (Testing Learning Outcome 15.2)
Explain comprehensively why there will be the need for continuous review and assessment of the aims, objectives and targets of the National Policy on Education.

SAQ 15.3 (Testing Learning Outcome 15.3)
What are the committee's stipulation for pre-primary education in Nigeria?

SAQ 15.4 (Testing Learning Outcome 15.4)
Give details of the views of the committee on university education

Reference
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