5

RESOURCES FOR SCHOOL LEARNING

Olugbenga G. Akindoju

The school requires a variety of Humans and Material resources to enable it carry out its function or achieve the objectives of its curriculum. These resources are discussed under three headings as follows

- ❑ **School Facilities**
- ❑ **Instructional Media**
- ❑ **The Teacher**

School Facilities

The school facilities comprised of the school site, the school buildings, various learning spaces, outdoor facilities, Equipment and other infrastructure

The school site

The school environment influence greatly the teaching - learning process therefore, care must be taken in siting a school. Apart from meeting required urban planning standard, the site must meet the following criteria

➢ The site should be large enough to accommodate adequately the necessary buildings and to provide ample space for outdoor instruction and recreation, for parking and for future expansion of buildings and play areas.

➢ It should be easily accessible to students and the community i.e. it must have road networks for easy vehicular and human movement.

- It should be well drained and solid enough to adequately support erected structures against environmental disasters such as earth quake, erosion, windstorm etc
- Proximity to provision of public utilities such as water, electricity, public recreational, educational and cultural facilities. This is important since many of the school equipment may require electricity, and generation of power for the school use or developing a water works might be too expensive for the school to embark upon.
- Attractive school grounds enhance opportunities for general cultural development and tend to cerate pride in the school and community. School site should therefore be attractive, lend itself to landscaping and provide a pleasant and beautiful natural environment (see pix on PP….)

The School Building

The school building includes the classroom blocks, Library, Laboratory, clinic, administrative block, dinning hall, hostels, etc.

It must be structurally sound and the occupants must be provided with acceptable conditions of comfort and well-being. It should be emphasized hat the built environment limit, to a greater or lesser extent, the scope of educational programmes and has the effect on the physical, mental and social welfare of the students

The provision of an educational facility of suitable quality is essential if the school building is not to stand between the students and their optimum development.

For examples:

- Prolong use of the eyes by pupils under poor lighting conditions may lead to sub-normal vision, hence it will be necessary to ensure adequate level of illumination so as to reduce eyes straining
- Sanitation is another important problem that must be take n care of in erecting school building particularly in rural areas where pipe water and sewage disposal are rarely available. Rural children are often at risk from impure water and lack of toilets. Since water plays a predominant role in the transmission of certain enteric, bacterial infections, the provision of safe water supplies and of sanitary toilet facilities in every school are important attributes of a good environment for learning
- Learning depends, among other things, on being able to hear the teacher. Yet many schools are subject to high levels of intrusive sound (see pix on PP…) Students may adapt to such conditions but this might lead to ineffectiveness of the instruction and rapid turnover of teachers

The planner of school buildings (both teaching and non-teaching spaces) must consider the following components
- Illumination and visual comfort
- Thermal comfort and ventilation
- Comfortable and convenient furniture
- Acoustics
- Health facilities
- Means of escape in case of accidents
- Accessibility

Fig. 5.1 Beautiful environment for learning
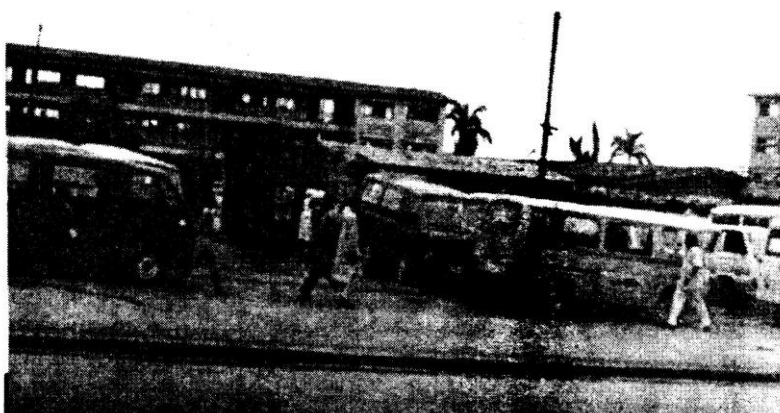
Classification of School spaces

Learning spaces are perhaps the most important areas in educational facility. They are the focal point of the educational facility's purpose, where the teaching-learning functions of a school occur.

It is in these spaces that students react to the various impulses in educational environment afforded by an expanding array of communication media, interact with other students and with teachers, and become actively involved in the process of directing their own learning.

Each space should be properly planned and adequately equipped to accommodate the number of learners, the users and the activities designated for it in the school curriculum.

Learning spaces can be classified into three-class viz.: generalized learning spaces, specialized learning spaces, and auxiliary spaces.

Generalized Learning Spaces

Traditional school programmes require a number of general learning spaces suitable for all three major types of learning activities (knowledge, attitude & skills), a common example is the classroom, which is expected to accommodate from 25 to 30 pupils.

Library is another example of a generalized learning space.

General learning spaces at all levels of education must be able to accommodate a variety of audiovisual equipment and learning materials.

Specialized Learning spaces

These are learning spaces meant for specialized areas of learning. They include the Laboratory, Art room, Gymnasium, Music room, botanical garden etc.

Auxiliary spaces

Auxiliary spaces in educational facilities are those, which support the instructional programme and accommodate out of classroom needs of both students and staffs. These include the following:
- Preparation and conference spaces for teachers
- Dining and lounge facilities for students and faculty
- Food services
- Auditoriums
- Rooms for administrative, counseling, and health services.

Instructional Materials (Media)

Let us consider the instructional process as a communication process whereby the channel of communication is the instructional medium. The teacher employs instructional media in making his message clearer to the learner and improving the learning process.

Instructional media permits a more productive relationship between teacher and student by allowing the former to become a manager of instruction rather than merely a dispenser of information, The teacher will have more time to diagnose and correct students' problems.

Advantages of Instructional Media.

Other advantages of instructional materials are enumerated below:

♦ The most common use of media is for illustrating the content of instructions, thereby making learning more concrete and less abstract. The psychologist *Jerome Bruner,* in developing a "theory of instruction" proposes that the instruction provided to a learner should proceed from direct experiences, through iconic representations of experience (pictures, films etc), through symbolic representations (words). He also stated that the "sequence in which learner encounters materials" has a direct effect on achievement of the task.

♦ Media provide variety in a classroom, reducing boredom and stimulating the interest of learners. Instructional media can help to promote the "discovery" or "inquiry" approach to learning and teaching. For example films may be used in the physical sciences to initiate students reasoning and inquisitiveness to discover the principles behind the visuals. Also, visual imagery seen on recorded video programmes can stimulate creative writing activities

♦ Media can be used to provide additional learning activities e.g. in dissecting real animals or drawing specimens

♦ Media like films provide experiences that are otherwise out of reach to the learners and thus saves time. For example; A motion picture depicting the

same experiences as a field trip will not only save time and risks involved in embarking on a field trip but also provide learning experience relatively high in concreteness with much less effort. Similarly, presenting a brief television documentary about "ghetto life" will provide to students, real life situation in ghetto communities.

♦ In providing closer experience to real situations, media enhances acquisition and retention of factual information. Instructional media not only provide the necessary concrete experiences but also help students integrate prior experiences. For example students have watched various aspects of road construction. However, they need to have all the experiences integrated into a generalized notion of road construction. A film that can show all of these process in relation to each other is an ideal way to integrate their various experiences into meaning

♦ Through media, individualized instruction is possible and learners working on programmed instruction can learn at their own pace.

♦ Transmission of instruction through media like Television, Radio and satellite extend the boundaries of the classroom and provide instruction for more learners at a time, reducing the cost of education.

Classification of Educational Media

Different people depending on what feature is employed at that particular time may classify educational media differently. Some of these classifications are presented as follows:

A. The first main classification of media is based on the senses they appeal to; they are classified into three classes namely; Audio, Visuals and audiovisuals.

Audio Media

These refer to teaching and learning materials that appeal to the sense of hearing only. Examples include the radio, tape recorder, telephone, public address system, microphone, talking drum, human voice etc.

Visual Media

These are instructional media that communicate through the eye or appeal to the sense of sight only.
Examples of visual media are
- i.   Chalkboard
- ii.   Magnetic board
- iii. Flannel board
- iv.   Bulletin board
- v.   Prepared drawings, maps, atlases, globes
- vi.   Wall sheets; charts, pictures, posters, etc.
- vii. Projectors; over head projector, slide projector, opaque projector (Episcope)
- viii. Model
- ix.   Camera
- x.   Computer

    Visual media may also be subdivided into; **projected visuals**, which require electricity to project materials such as films, slides, transparencies etc for instructional purpose and **Non projected visuals**, that is those that do not require light source such as maps, charts, pictures, *realia*, etc

    Audiovisual Media

These comprise of instructional materials that appeal to both senses of sight and hearing at the same time. Examples of this class include; Educational television, closed circuit television, Multimedia based computer programmes. Others include a combination of sound with any of the visual media such as Tape-slide programmes, Tape – films programmes, Radio-vision programmes etc or a combination of visuals with audio materials such as video-disc recordings, video + Tape recordings, etc.

B. Educational media may also be classified into two group namely; **Hardware** and **Software**

Hardware

These comprise of all equipment or machines being used in presenting educational information. Hardware are gadgets or tools the teacher need to convey their message to the learner e.g. the computer, the cine projector, tape recorder, video player, film projector etc

Software

Software are the message carrying materials, used with the hardware, software are the real carrier of information or instructional content, while the hardware is the "vehicle". These include the computer programmes videotapes, transparencies, slides, films etc

C. Other classification of educational media include whether they are **print** (such as textbooks, magazines, handouts, journals, manuals, workbook, etc) or **electronic** (such as Radio, television, video etc)**; two dimensional** (teaching materials with length and breadth only such as pictures drawings etc) or **three dimensional** (Materials with length, breadth and depth, such as real objects, models, specimen, mock-ups etc)**; Graphic materials** (charts, posters, maps, flash cards, flannel graph, etc)**; Mass media**(Newspapers, Educational radio, Instructional Television. Internet etc)**, pictorial**

(photographs, visual symbols, 8mm and 16mmfilms, etc) **and Community resources.**
For convenience a general classification of educational media is presented in table 5.1 below

General classification of Educational Media

Projected Visual	Non-Projected Visuals	Display Board	3-D Media	Audio Media	Audio Visuals
Films Filmstrips Slides Opaque-projection Overhead projection	Photographs Pictures Flash cards Posters Charts Diagrams Maps Graphs Cartoon Comics	Chalkboard Flannel board Bulletin board Magnetic board Peg board	Models Real objects Specimens Mocks-ups Diorama Puppets.	Telephone Radio T.V Recordings Disk Cassettes Tapes Reel-to-tapes	Video tapes Television Video disk Computer

Selection of Instructional materials

The term selection suggests choosing the most desired out of the many available options as enumerated above. Systematic selection of media for classroom instruction involves many interacting criteria which when viewed under certain principles will lead to the selection of most effective and efficient media. More importantly, the teacher must recognize the act that "no one medium is necessarily best for learning a particular subject" some of these guiding principles are as follows:

▪ **Instructional Objectives**

The objectives of an instruction must be considered in selecting medium (media) to be used for the instruction. For instance, if the objective borders on the affective or psychomotor domains of the learners, media with sound and pictures may be preferred. Questions like does the subject matter requires to teach factual information, Practical skills? Etc becomes useful guide. The nature of science for example require that the learner acquire not only scientific knowledge, but also practical skills and attitude, therefore real materials, equipment and objects will be preferred as sources of concrete information.

- **Learners Characteristics**
  This has to do with age, level, interest and background of the learner. These questions will guide the teacher in ascertaining his students' characteristics; Are the media and message appropriate to the age and level of the pupils? Would the pupils like the medium? Can they sense and decode the message?
- **Suitability of the instructional format**
  This involve finding out if the instructional objectives will be best accomplished by the medium, Is the medium suitable for small group, large group or individualized instructions? For example, Radio is suitable for a very large audience while television is best for the number that can view it at a particular time depending on the screen.
- **Availability and cost**
  The teacher need to find out how readily available is the medium and will the teacher be able to afford it always?

- **Technical Quality**

It is common knowledge that a wobbling audio cassette or blurred pictures will distort the teaching and learning of any content being convey through them, a medium to be selected must be of good technical quality.

- **Teacher's Competence**
  It is important that he teacher be capable of operating and manipulating efficiently any medium to be selected

- **Infrastructures Amenities/Operating Versatility**
  It will be wrong for a teacher in a school without electricity to select a medium that runs solely on electricity. For such a medium to be selected, it must have been observed that such medium could be operated either mechanically or with batteries.

- **Safety**
  The teacher must ensure that no part of the medium will harm users. Also the safety of he medium itself will be within the control of the teacher.

Utilization of Instructional materials
The following steps in addition to those enumerated above, serve as a guide for the teacher in employing media in their classes:

❑ **Self Preparation**
After considering the steps listed above in selecting the appropriate media, the teacher need to prepare himself by trying out the equipment to be used in class, preview, if it is a film, or listen to recorded programmes to ensure its quality and functionality.

❑ **Prepare the environment**

All necessary equipments for utilizing the selected medium must be put in place. The required condition must also be attainable e.g. a dark room will be required for using the opaque projector.

❑ **Prepare the class**

The teacher must prepare the mind of the students. Each item must be introduced and their attention drawn to what to look for during the presentation and what is expected of them after the presentation.
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❑ **Use in class**

It should be stressed however that, instructional materials should be brought out at the appropriate time during the lesson, and must be removed or switched off when through with them

❑ **Follow up**

This involves finding out how well the objectives of the lesson has been achieved. It could be through oral questions, written tests, demonstration of skills learnt from the presentation etc.

See Box 5.1 for a guide on utilization of audio visual media

The relationship of audio-visual media to problems of utilization (level of

Apparatus	Medium	Format	Type of production	Prod...
Record- player	Rigid or flexible records	Standardized	Mass-produced	Low
Tape recorder	Magnetic tapes Cassette	Standardized	Small-scale	Low
Cassette	or magazine	Different types	Mass-produced and small-scale	Low
Tape recorder	Slides, filmstrips			
Slide projector			Mass-produced and small-scale	Low
Overhead project	Transparencies	25 cm x 25 cm	Not produced	Low
Episcope	Opaque objects	30 cm x 45 cm		-
Synchronized	Slide + tapes; magnetic	Different types	Small – scale	Low

The Teacher

The teacher plays a very vital role in the achievement of Nations' educational goals right from the planning stages of the curriculum through its implementation and evaluation.

The teacher after all, the point of contact between the educational system and the pupil: the impact of any educational programme or innovation on the pupil

operates on the pupil's teachers. This fact is also recognized by the National policy on education (1998;revised) that; "no education system can rise above its teachers". Some of the roles of teachers are discussed as follows:

❑ **As a Leader**

Teachers are often remembered for the qualities of personality and character they portray than the lesson they teach. The main leadership qualities required of the teacher include; Authority, Competence, Decisiveness, Enthusiasm, Humility, Humour, Initiative, Integrity, Loyalty, Perseverance, Responsibilities, Self-control, Single mindedness, etc.

❑ **As a Counselor**

The teacher helps his pupils to develop as fully as possible all aspect of their potential; He is responsible for both the physical and emotional well-being as well as moral and spiritual well-being of the pupils.

❑ The teacher also act as career counselor to his pupils, he monitors their educational progress, and advises or assist the under-achievers. He must be knowledgeable about the job market so as to get pupils on the right track as early as possible. The teacher must be intimate with the pupils, gain their confidence, so that they can share their problems with him. The teacher must be able to supervise the pupils effectively to ensure good academic performance.

❑ **As a Tutor**

The role of the teacher as an instructor is a crucial one in the implementation of the school curriculum.

He utilizes the following professional skills and abilities in the classroom:

i.   Establishing set: providing an advance organizer, or determining their entry behaviour and providing framework for the new lesson

ii. Using variety: Varying classroom activities and use of materials are believed to increase student's motivation and learning.

iii. Optimizing instructional time: He must consider the time required for tasks, maintain momentum and ensure smooth transition between activities.

iv. Conducting interactive instruction: Effective teachers keep students actively involved throughout the lesson. He is skilled in questioning, in helping students come to clear understanding of the content, and in monitoring understanding.

v.   Providing clear instruction

vi. Monitoring students' progress

vii. Providing feedback and reinforcement.

❑ **As a Manager**

Management has to do with the control of resources and processes in a production operation. The teacher manages human and material resources in schools so that learning take place. He must be able to detect fault that could lead to inefficiency or breakdown of the system. He must know how to correct whatever is going wrong without disturbing the whole system. In carrying out his management function, the teacher makes use of the following skills:

i.   Planning the programme of learning and teaching

ii. Decision-making concerning resources, teaching strategies and discipline

iii. Organizing routine maters and pupils learning activities
iv. Coordinating learning in the classroom with learning from other sources
v. Communicating with pupils
vi. Influencing other teachers who share in the education of his pupils
vii. Evaluating the effectiveness of his work.

❑ **As a Team Member**
   The teacher must be able to work with members of the school community as a team. Since he cannot operate in isolation, he must take advantage of teamwork in teaching and tackling problems. He must be ready to learn from others and must recognize the fact that they are working for common goals.

❑ **As a Judge**
   The teacher is a judge who evaluates his pupils' learning by giving them marks or grades. He also settles disagreement between pupils' opinion and ideologies
❑ He is a role model of good behaviour and source of inspiration to his students
❑ He is a social engineer and a nation builder.
❑ He is a parent substitute
Teacher during the school period serves as guardian to their students. They encourage their problems and provide moral guidance for them not to go astray.
❑ He is a researcher
As a researcher, Teacher probes into student's problems in relation to the effectiveness and efficiency of the school

system. He makes amends where possible, based on his findings and provides necessary advice to appropriate organs for a review of the system.