COMPUTERISATION OF DATA ON THE TEACHER'S IN THE NIGER STATE PRIMARY EDUCATION BOARD, A CASE STUDY OF PAIKORO LOCAL EDUCATION AUTHORITY, PAIKORO.

BY

GARBA DANLADI MOHAMMED

A PROJECT PRESENTED TO THE DEPARTMENT OF MATHEMATICS/COMPUTER SCIENCE, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE.

DECEMBER 1995.

C E R T I F I C A T I O N

I SATISFY THAT THIS STUDY WAS CARRIED OUT BY GARBA DANLADI MOHAMMED IN THE DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE, FEDERAL UNIVERSITY OF TECHNOLOGY MINNA.

SUPERVISOR

DR.K.R.ADEBOYE

DATE:.....

HEAD OF DEPARTMENT

R.K.R. ADEBOYE

DATE:.....

EXTERNAL EXAMINER

DATE:.....

1995.

DEDICATION:

THIS PROJECT IS DEDICATED TO MY SON AND DAUGHTER:

LUKMAN AND HAUWA MOHAMMED REPECTIVELY.

A C K N O W L E D G E M E N T

I ACKNOWLEDGE WITH PROFOUND GRATITUDE THE DEPARTMENT OF MATHEMATICS/COMPUTER SCIENCE OF THE FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA WITH EVERY SINCERITY. I THANK MY PROJECT SUPERVISOR DR.K.R.ADEBOYE WHOSE TIRELES EFFORT ENABLED THE COMPLETION OF THIS WORK. I AM GRATEFUL INDEED TO THE ENTIRE LECTURERS OF THIS GREAT DEPARTMENT FOR THEIR ENDLESS GUIDANCE THROUGHOUT THE COURSE OF MY STUDY IN THE UNIVERSITY.

I SPECIALLY WISH TO APPRECIATE THE EFFORT OF MY FARHER, ALHAJI GARBA LUKMAN DANGO, AND MOTHER HAJITA HALIMATU GARBA ON WHOSE FINANCIAL AND MORAL SUPPORT, I WAS ABLE TO COMPLETE THE COURSE.

I AM ALSO USING THIS OPPORTUNITY TO THANK THE FOLLOWING PEOPLE FOR THEIR CONTRIBUTIONS IN NO SMALL MEASURE TO MY EDUCATION. YHEY ARE: ALHAJI ISHAKUGARBA, ALHAJI TSOHO DOMA, MR. AKIN BUARI AND WIFE HAJIYA ZULAIHATU MOHAMMED PAIKO

I ALSO THANK THE PAIKORO LOCAL EDUCATION AUTHORITY MY SPONSOR.

FINALLY, MY GREATEST GRATITUDE GOES TO THE AL-MIGHTY-ALLAH WHO SUSTAINED MY LIFE THROUGHOUT THE COURSE OF MY STUDIES IN THE CAMPUS

A B S T R A C T

THE STUDY IS DESIGNED TO FIND AND ANALYSE HOW DATA ON TEACHERS CAN BE COMPUTERISED IN THE NIGER STATE PRIMARY EDUCATION BOARD, WITH PAIKORO LOCAL EDUCATION AUTHORITY AS A CASE STUDY.

THE PROGRAMME IS WRITTEN FOR THOSE WHO KNOW SOMETHING ABOUT COMPUTER PROGRAMMING. THE SOFTWARE USED IS THE DBASE III PLUS (A SOLUTION TO THE PROBLEM WE OFTEN ENCOUNTER WITH DATA MANAGEMENT AND ACCEDDIBILITY). THE PROGRAMME IS WRITTEN IN SUCH A WAY THAT IT COULD BE ADJUSTED TO MEET THE DYNAMIC NEED OF THE ORGANISED SYSTEM.

THE MRTHOD EMPLOYED IN THIS STUDY, IS THE SURVEY METHOD OF RESEARCH, WHICH INVOLVED THE USE OF INTERVIEW. THE RESU; TS WERE CAEFULLY ANALYSED AND INTERPRETED.

TABLES OF CONTENT

CHAPTER 3

FEASIBILITY STUDY

CHAPTER 4

BASIC SYSTEM DESIGNS

CHAPTER 5

SYSTEM IMPLEMENTATION

CHAPTER 1

PRELIMINARY

1.1 INTRODUCTION

Management has been viewed as activities involving the collection, organisation, storage and mobilisation of all human and material resources in a particular system for the achievement of identified goals and objectives in that organisation.

Development in Education has led to an increasing interest in the function involved in its management.

To this end, the computerisation of data and records on the teachers in the paikoro local Education Authority, concerns itself, with the collection, organisation, storage and processing of raw data on the teacher into a meaningful and timely information on the base that, major operation decisions at the top management level, encourages high quality and standard performance by the teachers in the schools, so that, the organised systems goals and objectives are achieved.

The file holding data in the computer, could be up-dated by running the programes for update on hourly, daily or even weekly basis to enhance urgent and effective decision making by the management.

1.2 PURPOSE OF THE STUDY

Data processing is a major societal activity, because, significant part of our personal and working time is spent recording, searching for and absorbing data as information before any meaningful goal is achieved.

The advent of electronic computer has greatly extended our data processing capabilities.

It has influenced organisations of all types and sizes, because of the power of the technology and the volume of data it can process.

The current challenge in data processing, is the use of the capability of computer to support knowledge of managerial activities and decision making process.

Today, the success of any enterprise depends largely on how the available resources are wisely used.

The Education industry, just like any other organisation is involved in effective management of its resources (human, material and time).

The Education enterprise expends the largest proportion of its annual budgets on the schools. The teachers as leaders in the schools, even though, they are not provide for the whole life their pupils, they are

expected to establish an environment that Carter's for their needs, whose fulfillment contributes to the achievement of school goals.

It is an indisputable fact, that, most educational operations to day require the handling and movement of large amount of data from input to output, which is particularly true in terms of reading, storing and printing out the require result.

As timely information, in not only essential for effectively performance, the management functions of planning organising, directing and controlling, but also, enables the achievement of both short, intermediate and long time goals, the problem there, is one of utilizing the fact and the most efficient procedure to handle these data

The realisation of the importance of data and record, in many activities in educational institutions particularly on teachers, has meant that, there is a need for proper management and control of such records as it affects the performance of teachers in the paikoro Local Education Authority.

1.3 THE SCOPE OF THE STUDY

In any educational organisation, data processing and management is one of its functions.

The basic aim of data base management is to supply the right material in the right quantity and quality at the right time as well as at the right place for processing.

This study is on computerising data on teachers in order to pave way for the time wasting involved in the manual operation.

Despite the data used, the structure of the program can be applied by any educational organisation that has the teachers at the back of its mind as its goal achiever.

In the Niger State Primary Education board, all their operations are manually conducted, particularly in the area of data management.

The main purpose of this study, which is the computerisation of data on teachers in the paikoro Local education authority, the system is being operated manually.

In any case, the data on the teachers in this organisation is a straight forward one, though, not yet computerised their system would not be very difficult to be computerised and could be applied to any other educational organisation.

1.4 THE COMPUTER:

The word "computer" arouses curiosity in most of us. Articles in popular magazine and News Papers, as well as TV shows heighten this curiosity, but such sources cannot be expected to present information in the carefully ordered sequence that is possible in the book.

The "computer" derived from a Latin word meaning "To reckon or compute" is an electronic device that is capable of accepting, storing, manipulating and producing information fastly accurately and efficiently

than human effort. Computer Science deals with people who have problems to solve.

1.5 CATEGORIES OF COMPUTER

The computer can be categories in several ways, but, for the purpose of this study, the computer can be classified into the following categories.

- Size or capacity
- Type of logic they use
- Purpose

SIZE AND CAPACITY

In term of size and capacity, the computer can be broadly classified into three (3) types.

(i) **Main frame computers:** This is the largest and the most expensive type of computer. It has a very large memory capacity and is used to solve highly sophisticated problems. It operates at a very high speed thereby crating a fair amount of heat requiring a cool system.

They are generally used in large business, governmental or academic organisations because they support multi-purpose users. They are generally not portable and require a special physical environment.

(ii) **Mini computers:** This is the type of computer that is next, in both size and memory capacity, to the main frame computer, It is not as flexible as the main frame computer

but more versatile than the micros. It is used for more extensive applications where greater speed, greater memory storage or more diverse control functions are required. It requires a special calling system.

(iii) The micro – computers: The personal computers, as they are sometimes called, are small one-user computer. They are relatively in expensive (costing about #30,000).

This type of computer does not require a special environment or knowledge to use it. It is portable as it can be moved from one office to another.

It is often used to perform a specific function and contains only the integrated circuit system (ICS) which is necessary for the specific tasks.

It has a better software, support and is easier in use as it generates less heat and consumes less power than mini computer.

However, it has small memory capacity and it is the slowest if all other categories.

TYPE OF LOGIC USED

In terms of type of logic used, the computer can be classified as follows:

(i) **Digital computer:** - This is a type of computer that has the ability to calculate, manipulate and compare discrete values using binary codes or digits, hence digital computer.

It is used for data processing because; it can handle alphanumeric characters with precision and speed. Digital computers are used for business, scientific and as well as process control processing?

The main frame and the personal computers are examples of a digital computer.

(ii) **Analog computer:** - This is essentially, a measuring device that operates on data in form of continuous variable, e.g. physical quantities, such as voltage and temperature. It measures and compares quantities in one operation. It has a high rate of speed, but however, has no memory store.

A common application of analog computer is in oil refinery where continued testing and checking of the manufacturing process is necessary.

(iii) **Hybrid computer:** - This is the type of computer that combined the accuracy of a digital computer with the high-speed capabilities of the Analog computer.

Hybrid computer is known to have found much application in control and feed back process.

Classification of computers

In terms of purpose, the computer is classified as either special purpose or general-purpose computer.

(i) Special purpose: - This is a type of computer that is designed for only one purpose. The computers used for guiding NASA's space shuttles are examples of a special purpose computer, which cannot be used for any other thing.

(ii) **General-purpose computer: -** It is a type of computer designed to be used for many purposes. It is not meant for a particular purpose. It can be used to play games, handle payroll computations, use graphics to design building or to solve complex mathematical problems.

CHAPTER 2

2.1 CURRENT OPERATION METHOD IN THE AUTHORITY

The teachers in paikoro Local Education Authority are directly under the schools department headed by the Education officer, schools (E.O. schools).

The current method of data collection and management is the old traditional manual system. Documents are passed through many hands down to the filling clerks.

Any request for form of data on the teacher, that is required by any of the functional units of the organisation to effect some management decision is always channeled through the school department.

The Education Officer, schools, then delegates the school supervisor who as a duty, goes to the respective school to collect the required data from the teacher, through the schools Headmaster. The method is bureau-critic and cumbersome.

2.2 THE DATA ON THE TEACHER

The records or details relating to an organisation`s personal in what we called data. The details relating to the teacher in the profession is called the data on the teacher.

Tiiese data can be classified into two.

(i) Personal data

(ii) Payroll data

2.2.1 PERSONAL DATA:-

The personal data are the records or professional and registrable records, which enable a teacher to be appointed to teach at any appropriate level of education in Nigeria. These forms of data tend to integrate the several phases of management in educational organisations.

The components of the personal data on the teacher include the following: -

(i) SUR-NAMES

(ii) OTHER NAME

(iii) SEX

(iv) AGE

(v) HIGHEST QUALIFICATION

(vi) SUBJECT AND SPECIALITIES

(vii) TEACHER`S CATEGORIES

(viii) FIRST APPOINTMENT

THE TEACHER`S CATEGORIES: - According to teacher's registrable qualifications, there are three categories of teachers. These are Professional Teacher I, Professional Teacher II, Professional Teacher III and Non-Professional Teachers.

(I) **Professional Teacher I** These teachers are Degree Holders with teaching Qualification.

(a) B.Ed/BA/BSC.ED, M.Ed.

(b) BA/B.SC plus either the N.C.E or postgraduate Certificate or Diploma in Education.

(c) Any Higher Degree plus teaching qualification as in `a` and `b` above.

(II) **Professional Teacher II**

(a) H.N.D plus teaching qualification

(b) N.C.E/N.C.E Technical or Equivalent

(c) Diploma of Yaba Higher College

(d) Advanced Craft/full Technological Certificate plus T.T.C.

(e) Advanced Commercial Certificate plus T.T.C.

(III) **Professional Teacher III**

(a) Diploma or Professional Certificate of Institute of Education.

(b) Associateship Certificate of Education.

(c) Grade I Teachers Certificate

(d) Grate II Teachers Certificate

(e) The Propel Teachers Certificate Grade II

(iii) **Non-professional Teachers**

These are teachers who have their Degrees and are Holders of Advanced and commercial Certificate without teaching qualifications. Sometimes they are referred to as Auxiliary Teachers.

2.2.2 **PAYROLL DATA:** - The payroll data are the details of records on the teacher, which integrates the various phases of accounting often required by the finance department. The ultimate goal of the payroll data is to help produce checks and earning statements such as wages and allowances.

It consists of the following elements: -

(i) EMPLOYEE`S NAME

(ii) EMPLOYEE`S NUMBER

(iii) DEPARTMENT

(iv) MONTHLY PAY

(v) TAX CODE

(vi) GLOSS PAY TO DATE

(vii) TAX TO-DATE

(viii) STANDARD DEDUCTION

(ix) EMPLOYEE`SBANK ACCONUT NUMBER

(x) EMPLOYEE`S BANK NAME AND ADDRESS

2.3 LITERATURE REVIEW

If the aim of education is to be achieved, it is desirable that teaching should be professionalism in order to enhance the role of

teachers in the formulation and implementation of educational policies in the country so that the status of the profession can be raised in the society.

In recent years, computer scientists on the computer capabilities and its areas of applications have carried out quite a lot of research.

Some articles have been written on computerising data on the teaches, because, pupils at the primary school levels, especially suffer in terms of poor performance due to lack of comprehensive and timely report on the teachers by the top-management to enhance effective and efficient decision making on the teachers welfare and this greatly affects their output in the school.

In preparation for the necessary action to professionals teaching, the National Teachers Institute (N.T.I) embarked on National Teachers Registration (N.T.I) exercise in 1989.

The institute received a total of 336,282 registration forms containing data on the primary school teachers in all the states of the Federation including Abuja.

As the data were urgently needed and because, of the very large number of forms involved, the following stages were among those of identified in the production and management of data.

(i) Coding of states for computer

(ii) Computer entry

(iii) Printing of Registration forms

- (Progress Report on Registration of Teachers (7/8/89(N.T.I)

The National Teachers' Institute has left the task of up-dating these registers containing the date on the Teachers to the National Primary Education Board, since, its statutory function includes to "Public Comprehensive list of Primary Schools in each state of the Federation and ensure regular personal audit". The institute produced the first set of Registers in 1988.

Copies of these registers including Data base tapes have been given to the National Primary Education board, because, it is her responsibility to collect fresh and up-date data on the qualified and unqualified teachers in the Primary Schools Nationwide.

On the use and the capabilities of the computer to ensure the success of task like this, deaden (1) has explored it with greater thoroughness.

Deaden (2) points out that, the digital computer is well suited to handling the kind of problem which requires:

- Many interacting variables
- Reasonable accurate value
- Speed
- Repetition
- Large number of records to process

- Accuracy all along the way

Similarly, on evaluation of the computer on timely information services, Axsmith list four 'Rode to computer profits'.

These are: -

- Incremental benefits
- Reduced working capital
- Improved use of resource capacity
- Improved decision taking

Several writers have listed the value of improved resource utilization resulting from computer output.

E. DASSU (1) claims that a Stockholm Hospital saved $800,000 a year by using a computer to speed up patient turn-around from 15-14 days. The improved speed of the information network allows an increased utilisation of a given factor of production.

CHAPTER 3

FEASIBILITY STUDY

3.1 PURPOSE OF FEASIBILITY STUDY

Feasibility study is the type of investigation carried out in order to determine the practicability of the proposal for computerisation of data on teachers.

The purpose of this chapter is to provide information in order to justified the use of a computer on technical, Economical and social grand's. It means that, any organisation seeking to acquire computers should do so, only after it has been ascertained that they are absolutely needed.

3.2 METHODS OF INVESTIGATION ADOPTED IN THE STUDY

The process of data collection employed in this study, is the fact-finding technique, which involves the use of interview and questionnaires.

Interview was used for collection of data from individual school supervisors and other functional heads of the organisation that are the current users of the traditional manual system.

Questionnaires were also used to collect data from the various school headmasters as regards the data on the teachers.

The questionnaires were in a written form with blank spaces following questions for responses.

3.3 BRIEF HISTORY OF THE PAIKORO LOCAL EDUCATION AUTHORITY

The Paikoro Local Education Authority (P.L.E.A) is one of the branches of Niger State Primary School Education Board. It is located at the Headquarters of Paikoro Local Government.

As an educational organisation, it is entrusted with the power to organise and oversee primary school education in the area.

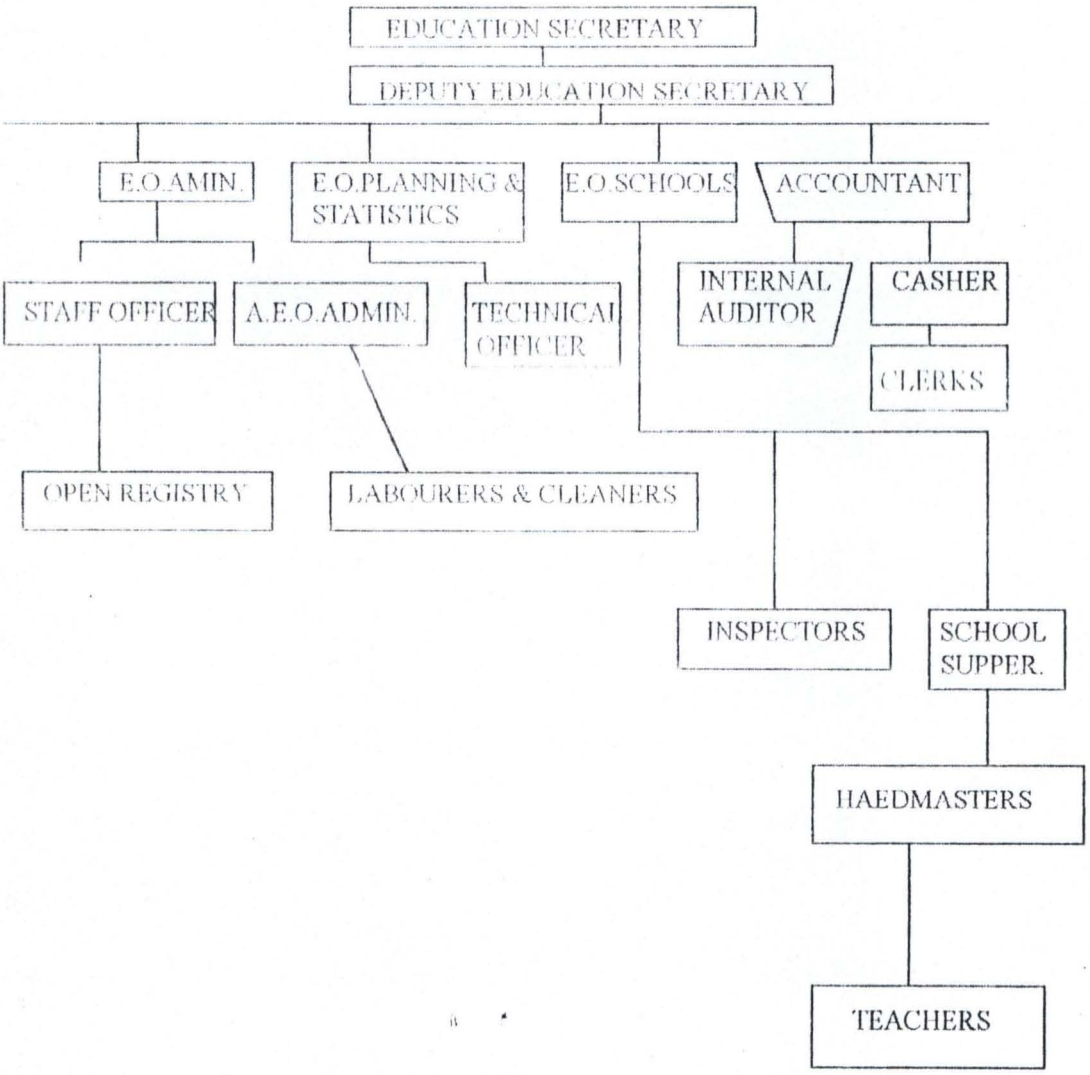
The authority controls over 80 primary schools with a total number of 800 teachers. At its helm of affairs, the authority has the education Secretary as the over-all head and the Deputy Education Secretary assists him.

There are four departments, namely: Administrative, Schools, Account and Planning and Statistics departments. Each department has its head that ensures the smooth running of the department. The department heads are answerable to the Deputy Education secretary.

The head of department in turn has subordinate personnel to whom responsibilities are delegated when the need arises. The teachers, upon whom the entire organisation depends to achieve its set out goals and objectives, are under the schools' department headed by the Education Officer, schools (E.O. SCHOOLS). The authority recruits the

teachers and when they get posted to their places of primary assignment (TEACHER) Assessments of their performance are done through the schools' supervisors and the Headmasters who are directly the head of the Teachers.

Below is the Authority's' organisation chart.



These teachers who are the field workers on the authority depends solely to achieve its aim are the hub of the organisation, because, it is upon their qualities, quantities and devotion to duty that the effectiveness of the authority is assessed.

3.4 PROBLEMS WITH THE PRESENT SYSTEM.

The sequential processing of data in the Paikoro Local Education Authority, under the traditional manual system, where documents are passed in bureaucratic manners, through many hands up to the filling clerks has the following short-comings.

The time between data regulation by the management and data submission is usually very long. A lot of time is wasted which, virtually affects decision making at the management level. The data is as a result of the fact that, most of the schools in the PLEA are in the villages far from the central authority. Before the information get to the school Headmasters, through the schools supervisors, it

- Lack of proper data management is also one of the greatest problems affecting the organisation. The same form of data is frequently requested for within short intervals by the management. This signified that, there is a problem of proper data management in the organisation system. This certainly

affects reference and data retrieval system, which serves as feedback to urgent decision processes.

- Waste of energy and funds on the part of the management. The school supervisors and the school monitoring officers are made as a duty to transport themselves using public transports system to travel to various village schools to collect the same forms of data on the teachers at short interval.

As a result of the long protocols involved in the data collections, submission and poor management, it sometimes, takes up to a month before the top-management can resolve some urgent issues that affects the welfare of their teachers.

3.5 THE COMPUTERISED SYSTEM:

A full-scale implementation of a computerised system will make much more than simple record keeping. For example, computer automated system is more likely to be consistent, logical and optimal than the manual system.

A more effective utilization of management time for planning, organisation, directing and controlling will be enhanced, because of availability of timely data and information.

It will improve promotional efforts to attract new teachers and retain the present ones. There will be greater ability to handle increased work- load at a small additional cost.

The computerised system will and only reduce staff requirement on a given project but will equally improve response time on projects with tight schedules.

Infact, the world of computer and communication is a rapidly changing one. A good deal of attention is currently being given to the system which direct communication within an organisation without human intervention.

In reality, computerised data processing is much the same as that done by manual system. The main difference is that the computer handles all the work with greater accuracy, speed and reliability at the operation.

3.6 PROBEMS WITH THE COMPUTERISED SYSTEM:

Although the above advantages may be seen as over-whelming in favour of computerised system, there era few limitations that cannot be ignored.

At the initial stage, the authority will be confronted with the following problems:

(i) The organisation will have to employ new staff such as the system analyst, a programmer who will work hand in hand to ensure the success of the data processing in the organises system.

(ii) Some staff of the authority, whose work is minor, will have to be laid for or received of their job to reduce redundancy.

(iii) Methods and procedures of operations in the organisation will also have to be changed as data input and output will have to take new specifications.

(iv) To cope with the new system, the management will have to look inward and select staff within the organisation. These staff members must undergo a carefully selected and adequate training program and must have the flair for catching up on the job.

3.7 COST VERSUS BENEFIT ANALYSIS:

By far, this phase is the most importance and difficult undertaking of the study to date.

Analysis of costs and benefits forms the basic of the exploratory survey-report to top management or the executive committee of the organisation.

This phase concerns itself with how cost effective the system will be, and, if the organisation is revenue generating, what will be the effect on its profit. But, in the case of Pakioro Local Education Authority, it is not revenue generating. So, what should be looked into is the initial total

cost of computerisation, the cost of maintenance per year and the effect on the budget of the organisation.

The output of the anticipated computer system should be used in determining the cost effectiveness of such a system.

To determine the anticipated savings and incremental cost for each alternative, estimated savings, sometimes referred to as vast displacement, are enumerated as follows:

- Reduction in number of personal-less salaries and wages
- Lower payroll taxes and fringe benefits with fewer people
- Sale or elimination of some equipment-depreciation and rent no longer applicable.
- Reduction in repairs, maintenance, insurance and personal property taxes.
- Lower space rental and utilities.
- Elimination or reduction in outside processing costs.

CHAPTER 4

BASIC SYSTEM DESIGN

4.1 PURPOSE OF SYSTEM DESIGN

Once a decision has been made to implement data processing system, the details of the system must be specified. Imagination and creativity are a must for this phase. Otherwise some of the basic weaknesses and related problems of the existing system will be duplicated unconsciously by the data processing group.

It is the creative act of inventing and development new inputs, file methods, procedures and output for processing data in conformity with the organisation objectives. This includes the clerical and computer procedures required in the new system, the writing coding of programs and the implementation of the system. The system designer is very much concerned about informational output required of the system and this requires a special skill and details.

4.2 NEW METHODS AND PROCEDURES

Now that the feasibility studies has been carried out, the systems designers attention is focused on new methods and procedures to produce the output needs.

This phase require intensive periods of creativity from the system analyst. It is essentially a process thinking logically and involved in

developing many systems design alternative for the specific areas. The new methods and procedures are tested for practicability, efficiency and low-cost.

It should always be borne I mind that, a good system design dictates that the number of methods and procedures be kept to a minimum for producing desired output.

The alternative methods and procedures are examined thoroughly for the best one under the existing conditions. Included in these inventive steps, is recognition that each functional area or activity is not isolated., but rather a part of the entire system. This, each related part must be considered in the final evaluation of the area under study.

In order for the systems analyst to perform the best job in designing new procedures, basic questions must be asked. These sets of questions are used to evaluate the validity of any procedure. Some of these questions used as follows: -

- Can the procedure be improved to realize more fully the firm's objective?
- Are all steps in the procedure necessary?
- Is it possible to simplify the procedure through modification of existing organisation policies, department structure, practice of other departments or similar considerations?

- Can the procedure be performed in a faster and a more economical manner? e.t.c.

4.3 RESOURCE PLANNING

There is the need to have a plan for the organisation to prepare the installation of the computer if management gives its approval. The time lag between the time of delivery and implementation of the installed system may be a period of 12-13 months for a medium- sized computer.

Management will have to take note of the following:

(a) The computer site where the computer centers itself will be located.

(b) The building or structure that will house the computer must be modified or built to suit the environment.

(c) The environment in which the computer stays is highly essential. It must be dust-free, with the right temperature and humidity. There must be a good and functioning cooling system.

(d) There must be uniteruptible power supply to the system.

(e) Ready maintenance people or standby equipment must be available in the event of the breakdown of one system.

(f) Staff-selection and training, apart from the specially trained people that can be recruited outside, the organisation can look in wards and select staff within the organisation. These staff

members however must undergo a carefully selected and adequate training program and must have the flair for catching up on the job.

(g) A budget must be drawn up for the computer department. A part from the cost of maintenance, the cost of running should include that of consumables such as continuos sheets, discpacks, magnetic tapes, Ribbons e.t.c.

(h) Good systems design dictates that internal control are made on integral part of the new system in order to handle fraud, inaccuracy, and comparable problems. The system analyst should make certain that his final design allows no person full responsibility over an entire operation. This is because; one person with complete responsibility can defraud the firm without the firm without too much difficulty.

4.4 INPUT AND OUTPUT SPECIFICATION

4.4.1 NPUT SPECIFICATION

Inputs must be planned carefully by systems designer because much time, effect and cost are involved in converting the data. They must be examined and evaluated from many viewpoints. Inputs may be handle in a more efficient manner on individual or group basis.

The accuracy requirements on the inputs and variations in varying methods. In some cases inputs can be processed on a random sequence

basis while, in others, there I need for a particular sequence before processing.

The element of time constraints on the inputs and variations in input volume are important considerations when beginning a new system.

Specific questions can be asked regarding how data are to be extracted from the source document.

- Will the data be key penched and key verified for a remote batch operation?
- Will the data be read directly into the computer by means of optical character recognition equipment?
- Will information be keyed directly into a real-time processing system by input/output terminal?

These questions can be answers by referring to the output, methods and procedures of the system designed.

The inputs should be compatible as much as possible with their final use and interrelating parts of the data processing system. In order to keep processing at a minimum for meaningful output, input must carefully be planned.

4.4.2 OUTPUT SPECIFICATION

Output specifications and needs cover more than report. They include listing, summary documents, up dated files, computer display

devices, and e.t.c. The output provides the needed link between the data processing system itself and its ultimate user.

The system designer must develop system output that meets the user's requirements. Information users or departmental managers and representative working with the system analyst will specify the format, detail desired, degree of accuracy wanted and the frequency of the report.

During the detail investigation phase, sample forms, documents designer and reports should be collected for review jointly by the systems designer and the departmental representative. This will enable them to appraise the validity of the present output and its relationship to the output needs of the new system.

Once the system designer has clearly defined the legitimate output need for a specify area, he is in a position to devise the method, procedures and input that will produce the output.

Actually, input, methods and procedures limit type of output. A data processing system cannot supply the output needs unless it has read and stored the necessary input data.

4.5 COMMON DATA PROCESSING LANGUAGE

One of the fundamentals of data processing is to capture data automatically in a common data processing language. These means that capture data are in an acceptable format, and are capable of being processed without human intervention.

When one thinks in terms of handling large amount of data in a fast and accurate manner only a common data processing language will permit that. The use of different processing language is not recommended since. it may be necessary to devise costly procedures for further processing.

The best method is to design a system where a language will be common to all parts of the orangisation.

Having explored the sources of data on the Teachers in the Paikoro Local Education Authority, I recommend that the d base III plus, a data processing language is necessary to produce the desired information on the Teachers for the oragisations functional areas. This language provides the interface between the users and the data in such away that it enables the users to record, organise, summerise, report and update data in order to meet timely information service of the organisation.

4.6 PROGRAMME SPECIFICATION

This is the time when the programmer set about writing the computer program based on the system specifications. The program specification tells the programmer in complete and precise detail he needs to know in order to write the program. It is a reference for the development of the program prepared by the system analyst.

4.7 WRITING THE PROGRAM

In writing the program, the programmer is expected to make use of an algorithm and the flow chart to design his program. This helps him to decide on how to manipulate the input data in order to produce the desired output.

The algorithm and the flow chart show a step by step approach in solving programming problem according to program specification. These distinct steps are linked together to form the desired program.

CHAPTER 5

5.1 PURPOSE OF SYSTEM IMPLEMENTATION

The task of system implementation is generally a major undertaking in the entire organisation structure. This result in a great need for implementation planning. Here knowledge of problems and exceptions is needed. This background permits the detailed planning of the various tasks that must be incorporated into a schedule with specific deadlines.

System implementation which designs after the formal signing of the equipment contract involves two steps – preparatory work and operation of new system with a provision for periodic review of systems improvement. Certain preparatory work such as scheduling the installation, as well as, acceptance of new equipment. Must be accomplished before the new system can operate on a day-to-day basis.

5.2 APPROACHES TO EQUIPMENT SELECTION

The data processing committee upon the completion of the basic systems design should undertake equipment selection. It is a very important task for a successful conclusion to the feasibility study.

There are two basic methods of selecting equipment:

- Recommended Approach: - The recommended approach is to submit flow charts and decision tables to each

manufacturer where the specific areas of the new system are outlined. General information on the company, its future processing plans, and list of new system specifications is to be forwarded to the competing manufacturers.

- Alternative Approach: - This approach is basically illogical since it disregards the data compiled by the feasibility study to date and requests that the equipment manufacturers start from scratch. The manufacturer bring in their own systems personal who will study the present system and devise a new tailored to their own equipment. The operations will be timed and cost saving will be calculated on this basis.

As a result of this generally different approaches by each equipment manufacturer result in making a final evaluation virtually impossible when placed on a common basis. Another problem is that, each manufacturer will direct their proposals to highlight the specific features of their own equipment over their competitions.

Thus, the first approach should be preferred such that specifications prepared by the data processing group are submitted to likely equipment candidates.

5.3 ACQUISITION OF PERSONNEL

The placement of the equipment order and scheduling its installation indicates the need for acquiring qualified personnel for

systems implementation and normal operations. Normally, the head of the data processing committee becomes or is the data processing manager who is given the authority and responsibility for staffing the organisations.

No matter what personnel are selected from with in or from without the data processing group, top management must reassure them the firm's commitment to the new data processing system is long range.

5.4 INSTALLATION OF THE COMPUTER

Installation is the process of physically placing the computer equipment on the site and making it operational.

The manufacturers or vendors engineers handle this. The engineers then hand over the equipment after it has been certified to be functioning. The manufacturer to ensure that the equipment is operating as desired performs several tests.

On installing the machine, space must be allocated for all personnel involved, systems designers, programmers, operators and technicians.

5.5 TESTING AND PERIODIC REVIEW FOR IMPROVEMENT

New data processing equipment should be accepted only after it has met the appropriate field service tests. The manufacturers field

service engineers must test it thoroughly before its acceptance by the user.

Long periods of operation without excessive down- time is an indication that the component parts are reliable for compiling and debugging programs.

Periodic review of the existing system for improvement includes keeping abreast of the latest development in equipment. This refers not only to computers, but also to all related equipments.

Just after the system is installed, the data process manager and his group should review the system benefits set forth in the exploratory survey report. The purpose of such review is to verify that these benefits are infact, being achieved. Benefits of customer services and more managerial information are open for constructive criticism.

The task of the data processing section, then, is to make the necessary adjustments to accomplish the quantitative and qualitative goals of the organisation.

This may take from several months up to one year to effect the changes, which include reprogramming the most frequently used programs.

Even though much time is allocated to other implementation areas, the task of programming and testing must be supervised effectively

by the processing manager in order to obtain best result as improvement over the former one.

5.6 CHANGE OVER TO A NEW SYSTEM

This is the process of converting from old system to new system, operations of the new system involves these areas:

- Parallel operations
- Conversion to new system
- Provision to make necessary changes
- Alternative plans in case of equipment failure

Parallel operation: This involves or consists of feeding both systems the same input data and comparing files and output results. During parallel operation, mistakes often found are not those of new system, but are the result of the old system. This difference should be reconciled as far as it is economically feasible.

Conversion to new system: After files have been converted and the new systems reliability has been proven for a functional area, daily processing can be shifted from the existing system to the new system. The old system can be dropped as soon as the data processing group is satisfied with the new systems performance.

Provision to make necessary changes: Before any parallel or conversion activities can start, operating procedures must be clearly spelt out for personnel in the functional area under-going changes. Brief meetings for changes taking place must beheld-in order to inform all operating employee.

Channels of communication should be open between the data processing section and all supervisory personnel so that necessary changes can be initiated as condition change.

Alternative Plans: - In case of equipment failure, alternative plans must be employed. It does not matter who or what caused it to happen. Priorities must be given to those jobs that are critical to the firm.

Documentation of alternative plans is the responsibility of the data processing manager and should be part of the organisation's systems and procedures manual.

5.7 MAINTAINANCE AND SECURITY

Maintenance: - Like automobiles and manufacturing equipment, Computer systems should be properly maintained. The maintenance of the equipment depends on the contract agreement between the manufacture and the organisation.

In both cases, they should ensure that there is availability of spare parts and that the equipment's is always functioning.

Ready Maintenance: - People or standby equipment of the must be available in the event of the breakdown of one system.

It is important to note that, the maintenance of the system is very crucial and cannot afford to have a breakdown without the availability of a ready and good maintenance service at its disposal.

Security: - One area of computerisation which is danger or poses problem, is security of information which leads to sabotage, infringement of privacy and fraud if not – properly handled.

Whenever data are collected on an individual and used without his consent, there has been a breach on his right of privacy. – Access to an organisation's data by unauthorised personnel can lead to a disaster.

Effort should therefore, be intensified about the security of a computer system particularly in areas of both physical and software protection of the computer system against unwanted g[illegible]

Data bank should be given maximum security so that no complete information on vital document or issue can be put – together in a single base.

Information should be distributed round the databases and each base must be given the top security available.

Personnel's of questionable characters should not be allowed access to computer rooms.

5.8 CONCLUSION

Advancement in computer utilisation does not occur in a vacuum, but is developed into a system that affects the individual, the group, management and organisation structure.

The system is designed to provide timely information so as to ensure effective management of resources in the Paikoro Local – Education Authority. The computer is capable of relieving boring and routine tasks. Proper use of computer, then, is essential for preserving the basic tenets of any educational organisation.

We do hope that the program will achieve its aim by using the data base 0files to keep track of data on teachers in the Niger – State Primary Education Board.

No user pass00word is used in this program to avoid difficulty in execution.

5.9 RECOMMENDATIONS

A good computer manager must exercise control over the personnel, equipment and resources. Everything has to be put in its right place. An orderly physical environment is required.

The personnel from the functional areas should attend intensive data courses given by computer manufacturers or consulting firms and establishments.

The management should provide adequate Security for a good rile exit in the event of fire outbreak and low noise level – should be maintained.

Finally, we wish to recommend that the organisation – should make haste to buy one 13M PC for the computerisation of data on Teachers and that a system analyst as well as a – Programmer be employed to manage the data processing department.

REFERENCES

1. BADAMOSI R: 1994: AN INTRODUCATION TO SYSTEM ANALYSIS AND DESIGN UN-PUBLISHED. F.U.T MINNA.

2. BRIAN L.MEEK.SIMON FAIRTHORNE: 1978: USING COMPUTER, ELLIS HORWOOD LIMITED. NEW YORK.

3. EDWARD J. LAURIE: 1979: COMPUTERS AUTOMATION AND SOCIETY, IRWIN-DORSEY LIMITED ONTARIO.

4. HENRY C. LUCAS JNR: 1988: THE ANALYSIS DESIGN AND IMPLEMENTATION OF INFORMATIN SYSTEM GROWHILL INTER-NATIONAL NEW YORK.

5. JIBRIL AMINU: 1988: NIGERIA TEACHERS SERVICE MANNUAL: AFRICAN LEARNER'S BOOK IKEJA LAGOS.

6. MCRAE T. W. 1979: COMPUTER AND ACCOUNTING, JOHN WILLEY AND SON INC. NEW YORK TORONTO.

7. ROBERT J. THIERAUF: 1978: DATA PROCESSING FOR BUSINESS AND MANAGEMENT. JOHN WILLEY AND SON INC. NEW YORK.

QUESTIONAIRE

Based on your experience, answer the following questions as brief as possible. Your response shall be treated as a confidential matter.

(1) Sex:..... (2) Age:..... (3) Rank:.....

(4) Are you a School Headmaster? Yes ☐ No ☐

(5) How far is your School from the Headmasters?.....
.....

(6) State the number of years of your services as a School Headmaster: .....
.....

(7) How many Teachers do you have serving under you: .....

(8) Which of the following data or records in Teachers do you maintain?

(a) Pay-roll data (b) Personal data

(c) Non of the above (d) All of the above

(9) How often are these records on the teachers been requested for by the top Management?

(10) In your opinion, state 3(three) reasons why the same form of data on the Teachers are frequently been demanded for by the top-management.

(i) .....
(ii) .....
(iii) .....

(11) How long does it take before then demand for such data get to you?

(a) One Day (b) Three days (c) One Week

(d) Two Weeks (e) More than 2 Weeks

(12) How long it take you to prepare such data in response to the demand?
.....

(13) How long does it take the prepared data or records to get to the top Management?

(a) One Day (b) Three Days

(c) One Week (d) More then one week

(14) Which of the following ways do you use in transmitting the information to the Authority?

(a) Directly by myself (b) Through the school supervisor

(c) All of the above

(15) Any other form of passing your information to the Authority?

Yes ☐ No ☐

(16) If the response in (15) above is Yes, state them: .....

.....

(17) Does these mode of passing information to the top-management affect urgent Decision making processes?

Yes ☐ No ☐

(18) If the response in (17) is yes, state how it affects the urgent decision making Process at the top-management level.....

.....

(19) Do you think there is the need to introduce a faster method of data processing?

Yes ☐ No ☐

(20) In your opinion, suggest how the situation can be improved using the Computer system.....

.....

Main menu Screen

NIGER STATE PRIMARY EDUCATION BOARD

TEACHERS STATISTIC IN PAIKO LOCAL EDUCATION AUTHORITY

M A I N M E N U 03/07/99

CODE	TASK
A	ADD RECORD
V	VIEW RECORD
E	EDIT RECORD
R	REPORTS
Q	QUIT

PLEASE ENTER YOUR CHOICE

Add record Screen

NIGER STATE PRIMARY EDUCATION BOARD TODAY'S DATE 03/07/99

----------> ADDING MENU <----------

file no: 0

Name ADAMU GARUBA

Qual.: BSC Sex: M AGE: 37

Date Appoint: 23/11/89 Subject: SOC-STUDIE

Certificate Type:

Enter (0000) To Quit

NIGER STATE PRIMARY EDUCATION BAORD TODAY'S DATE 03/01/97

----------> REPORT MENU <----------

S.NO	Name		Qual	Sex	Age	Appointed	Subject	Cert. Type:
1	ADAMU	BUBA	MSc	M	36	23/05/86	GEOGRAPHY	PROF. TEACHER II
2	GARBA	MOHAMMED	BA(ED)	M	57	16/02/85	HISTORY	PROF. TEACHER I
3	MUSTAPHA	HUSSAINE	NCE	M	34	09/10/90	GEOGRAPHY	PROF. TEACHER II
4	YARO	DANJUMA	NCE	M	52	11/06/80	ENGLISH	PROF. TEACHER II
5	YAHAYA	AMINA	BSC	F	30	20/07/86	PHYSICS	AUX. TEACHER
6	SHEHU	MOHAMMED	NCE	M	33	12/12/89	ARABIC	PROF. TEACHER II
7	MOHAMMED	ADO	HND	M	40	06/02/81	ENVRO-DESI	AUX. TEACHER
8	YUSUF	ABUBAKAR	HND	M	31	16/11/86	HISTORY	AUX. TEACHER
9	SANDA	HAUWA	WASC	F	23	10/11/87	NONE	AUX. TEACHER
10	SHAGI	MOHAMMED	DILOMA	M	25	11/01/85	MATHS	AUX. TEACHER
11	ISAIKU	JEMILA	B.TECH	M	32	21/08/79	PHARM	AUX. TEACHER
12	LUKMAN	MOHAMMED	BA	M	34	08/12/92	HAUSA	AUX. TEACHER
13	SAIDU	KANDE	BSC(ED)	M	43	23/12/78	CHEMISTRY	PROF. TEACHER I
14	MANU	MARY	HND	F	35	23/05/83	BIOLOGY	AUX. TEACHER
15	SARKI	PETER	NCE	M	34	21/09/78	BIOLOGY	PROF. TEACHER II
16	MAKU	AMINA	NCE	F	54	12/07/78	AGRI-SCI.	PROF. TEACHER II
17	SULE	RAPHEL	BSC	M	54	23/07/92	MATHS	AUX. TEACHER
18	UMAR	WILLIAMS	OND	M	35	12/08/75	BUS-ADMIN	AUX. TEACHER
19	GARBA	HAUWA	B.TECH	F	25	12/06/95	BOTANY	AUX. TEACHER
20	OTONDO	LAGUMO	DIPLOMA	M	46	12/07/64	STATISTICS	AUX. TEACHER

NIGER STATE PRIMARY EDUCATION BAORD TODAY'S DATE 03/01/97

----------> REPORT MENU <----------

S.NO	Name		Qual	Sex	Age	Appointed	Subject	Cert. Type:
1	ADAMU	BUBA	MSc	M	36	23/05/86	GEOGRAPHY	PROF. TEACHER II
2	GARBA	MOHAMMED	BA(ED)	M	57	16/02/85	HISTORY	PROF. TEACHER I
3	MUSTAPHA	HUSSAINE	NCE	M	34	09/10/90	GEOGRAPHY	PROF. TEACHER II
4	YARO	DANJUMA	NCE	M	52	11/06/80	ENGLISH	PROF. TEACHER II
5	YAHAYA	AMINA	BSC	F	30	20/07/86	PHYSICS	AUX. TEACHER
6	SHEHU	MOHAMMED	NCE	M	33	12/12/89	ARABIC	PROF. TEACHER II
7	MOHAMMED	ADO	HND	M	40	06/02/81	ENVRO-DESI	AUX. TEACHER
8	YUSUF	ABUBAKAR	HND	M	31	16/11/86	HISTORY	AUX. TEACHER
9	SANDA	HAUWA	WASC	F	23	10/11/87	NONE	AUX. TEACHER
10	SHAGI	MOHAMMED	DILOMA	M	25	11/01/85	MATHS	AUX. TEACHER
11	ISAIKU	JEMILA	B.TECH	M	32	21/08/79	PHARM	AUX. TEACHER
12	LUKMAN	MOHAMMED	BA	M	34	08/12/92	HAUSA	AUX. TEACHER
13	SAIDU	KANDE	BSC(ED)	M	43	23/12/78	CHEMISTRY	PROF. TEACHER I
14	MANU	MARY	HND	F	35	23/05/83	BIOLOGY	AUX. TEACHER
15	SARKI	PETER	NCE	M	34	21/09/78	BIOLOGY	PROF. TEACHER II
16	MAKU	AMINA	NCE	F	54	12/07/78	AGRI-SCI.	PROF. TEACHER II
17	SULE	RAPHEL	BSC	M	54	23/07/92	MATHS	AUX. TEACHER
18	UMAR	WILLIAMS	OND	M	35	12/08/75	BUS-ADMIN	AUX. TEACHER
19	GARBA	HAUWA	B.TECH	F	25	12/06/95	BOTANY	AUX. TEACHER
20	OTONDO	LAGUMO	DIPLOMA	M	46	12/07/64	STATISTICS	AUX. TEACHER

NIGER STATE PRIMARY EDUCATION BAORD TODAY'S DATE 03/07/99

----------> View Menu <----------

File No: 5

Name: YAHAYA AMINA

Qual.: BSC Sex: F AGE: 30

Date of Appointed:20/07/86 Subject: PHYSICS

Certificate Type:

Enter (0000) To Quit

NIGER STATE PRIMARY EDUCATION BAORD Today's Date 03/07/99

----------> Edit Menu <----------

File No: 0

Name: SHEHU MOHAMMED

Qual.: NCE Sex: M AGE: 33

Date Appointed: 12/12/89 Subject: ARABIC

Certificate Type:

Enter (0000) TO Quit :

continued here (2)

```
 if r=24
   exit
   return
 endif
Enddo
 close database
enddo
return
```

```
enddo
return



Clear
SET STATUS OFF
SET SCOREBOARD OFF
SET TALK OFF
SET SAFETY ON
SET DATE BRITISH
set device to screen
r=0
CLOSE ALL
DELETE FILE TYPE.DBF
USE TEACH
*
STORE 0 to PSN
store space(10) to FNAM
store space(10) to LNAM
store space(7) to QUAL
store space(1) to SEX
Store space(2) to age
store ctod ("  \  \  ") to DATEA
store space(10) to SSP
store space(5) to TCATE

*
SET COLOR TO /*W
@1,1 SAY "Sorting Please"
SET COLOR TO
Sort on PSN to type
CLEAR
use type
r=60
DO WHILE .T.
if r>50
CLEAR
use tYPe
@1,10 Say "NIGER STATE PRIMARY EDUCATION BAORD TODAY'S DATE          "
@2,10 Say "------------------>  REPORT  MENU    <---------------------"
@1,62 say date()
@4,1 say "S.NO"
@4,6 say "Name"
@4,30 Say "Qual"
@4,37 Say "Sex"
@4,41 Say "Age"
@4,45 Say "Appointed"
@4,55 Say "Subject"
@4,65 Say "Cert. Type:"
r=4
endif
*do while .not. eof()
do while r<24
r=r+1
@r,1 say psn
@r,6 say fnam+" "+lnam
@r,30 say qual
@r,38 say sex
@r,41 say age
@r,46 say datea
@r,55 say ssp
@r,67 say tcate
 skip
 * r=r+1
```

Teacher Prg
A Sub program
Report

Continued on (2)

Teach.V.prg
a Sub Progr
for View
Re

```
Set Date British
Set Status Off
Set Date British
set Status Off
Set Safety on
Set Scoreboard Off
Set Talk Off
STORE 0 TO MPSN

store space(12) to MFNAM
store space(12) to MLNAM
store space(7) to MQUAL
store space(2) to MAGE
store space(1) to MSEX
store ctod ("  \  \  ") to MDATEA
store space(10) to MSSP
store space(5) to MTCATE

use teach
Do while .T.
@1,1 To 23,78 Double
set color to g+r
@2,10 Say "NIGER STATE PRIMARY EDUCATION BAORD TODAY'S DATE           "
@3,10 Say "---------------------->    View Menu    <----------------------"
@2,62 say date()
@4,2 to 4,77
set color to
@5,5 say "File No:" get MPSN
      READ
      IF MPSN=0
         RETURN
      ENDIF
      LOCATE FOR PSN=MPSN
      IF FOUND()

CLEAR
@7,35 SAY "Name:"
@7,41 SAY FNAM +" "+ LNAM
@11,5 Say "Qual.:"
@11,12 SAY QUAL
@11,28 Say "Sex:"
@11,33 SAY  SEX
@11,45 say "AGE:"
@11,50 SAY age
@13,5 Say "Date of Appointed:"
@13,23 SAY datea
@13,45 say "Subject:"
@13,55 SAY SSP
@15,5 say "Certificate Type:"
@15,23 SAY TCATE
@21,19 SAY "Enter (0000) To Quit"
ELSE
CLEAR
SET COLOR TO W*
@10,10 say "No Such Number Exist"
SET COLOR TO
ENDIF

repl psn with mpsn
repl fnam with mfnam
repl lnam with mlnam
repl qual with mqual
repl sex with msex
repl age with mage
repl datea with mdatea
repl ssp with mssp
repl tcate with mtcate
```

```
return

*THIS IS A SUBPROGRAM THAT ADDS MORE RECORD TO THE FILE
*
set date british
set status off
set safety on
set scoreboard off
set talk off
clear all
*
do while .t.
use teach
STORE 0 to MPSN
store space(12) to MFNAM
store space(12) to MLNAM
store space(7) to MQUAL
store space(1) to MSEX
STORE SPACE(2) TO MAGE
store ctod ("  \  \  ") to MDATEA
store space(10) to MSSP
store space(5) to MTCATE
@1,1 to 23,78 double
set color to g+r
@2,10 say "NIGER STATE PRIMARY EDUCATION BOARD TODAY'S DATE            "
@3,10 say "---------------------->   ADDING MENU   <----------------------"
@2,62 say date()
@4,2 to 4,77
set color to
@5,5 say "file no:" get MPSN
          READ
*
         IF MPSN=0
             RETURN
          ENDIF
*
  LOCATE FOR PSN=MPSN
*
 IF FOUND()
  @21,15 say "Duplicate record is not permitted..."
  @22,15
  WAIT
  CLEAR
  LOOP
 ENDIF
*
@7,45 say "Name" Get MFNAM
@7,65 get MLNAM
@11,5 Say "Qual.:" Get Mqual
@11,28 Say "Sex:" Get Msex
@11,55 Say "AGE:" Get mage
@13,5  Say "Date Appoint:" Get Mdatea
@13,50 Say "Subject:" get mssp
@15,5  Say "Certificate Type:" Get mtcate
@21,19 SAY "Enter (0000) To Quit "
Read
Append Blank
repl psn with mpsn
REPL fnam with mfnam
REPL lnam with mlnam
repl qual with mqual
REPL sex with msex
REPL datea with mdatea
repl ssp with mssp
REPL tcate with mtcate
enddo
return
```

Teachp.prg
A Sub pr
for re
NB: full

```
Clear
SET STATUS OFF
SET SCOREBOARD OFF
SET TALK OFF
SET SAFETY ON
SET DATE BRITISH
set device to screen
r=0
CLOSE ALL
DELETE FILE TYPE.DBF
USE TEACH
*
STORE 0 to PSN
store space(10) to FNAM
store space(10) to LNAM
store space(7) to QUAL
store space(1) to SEX
Store space(2) to age
store ctod ("  \  \  ") to DATEA
store space(10) to SSP
store space(5) to TCATE

*
SET COLOR TO /*W
@1,1 SAY "Sorting Please"
SET COLOR TO
Sort on PSN to type
CLEAR
use type
r=60
DO WHILE .T.
if r>50
CLEAR
use tYPe
@1,10 Say "NIGER STATE PRIMARY EDUCATION BAORD TODAY'S DATE           "
@2,10 Say "------------------> REPORT MENU    <--------------------"
@1,62 say date()
@4,1 say "S.NO"
@4,6 say "Name"
@4,30 Say "Qual"
@4,37 Say "Sex"
@4,41 Say "Age"
@4,45 Say "Appointed"
@4,55 Say "Subject"
@4,65 Say "Cert. Type:"
r=4
endif
*do while .not. eof()
do while r<24
r=r+1
@r,1 say psn
@r,6 say fnam+" "+lnam
@r,30 say qual
@r,38 say sex
@r,41 say age
@r,46 say datea
@r,55 say ssp
@r,67 say tcate
 skip
* r=r+1
 if r=24
   exit
   return
 endif
Enddo
 close database
enddo
```

```
Clear
SET STATUS OFF
SET SCOREBOARD OFF
SET TALK OFF
SET SAFETY ON
SET DATE BRITISH
set device to screen
r=0
CLOSE ALL
DELETE FILE TYPE.DBF
USE TEACH
*
STORE 0 to PSN
store space(10) to FNAM
store space(10) to LNAM
store space(7) to QUAL
store space(1) to SEX
Store space(2) to age
store ctod ("  \  \  ") to DATEA
store space(10) to SSP
store space(5) to TCATE

*
SET COLOR TO /*W
@1,1 SAY "Sorting Please"
SET COLOR TO
Sort on PSN to type
CLEAR
use type
r=60
DO WHILE .T.
if r>50
CLEAR
use tYPe
@1,10 Say "NIGER STATE PRIMARY EDUCATION BAORD TODAY'S DATE           "
@2,10 Say "------------------> REPORT MENU    <---------------------"
@1,62 say date()
@4,1 say "S.NO"
@4,6 say "Name"
@4,30 Say "Qual"
@4,37 Say "Sex"
@4,41 Say "Age"
@4,45 Say "Appointed"
@4,55 Say "Subject"
@4,65 Say "Cert. Type:"
r=4
endif
*do while .not. eof()
do while r<24
r=r+1
@r,1 say psn
@r,6 say fnam+" "+lnam
@r,30 say qual
@r,38 say sex
@r,41 say age
@r,46 say datea
@r,55 say ssp
@r,67 say tcate
 skip
* r=r+1
 if r=24
   exit
   return
 endif
Enddo
 close database
enddo
return
```