



CHAPTER I INTRODUCTION

This chapter represents the introduction of the study. It contains the following inter-related sections.

- (1) Rationale
- (2) Background
- (3) Statement of the problem
- (4) Purpose of the study
- (5) Hypothesis
- (6) Organisation of study.

Rationale

Trends in Sierra Leone's educational development suggest that even though significant strides have been made in restructuring educational policies and practices, developments and improvement in education have been more quantitative rather than qualitative (Sengova, 1982; International Handbook of Education Systems, 1985; ILO/JASPA, 1990).¹ Changes in Sierra Leone education have often been made out of a desire to increase the number of educational facilities or the infrastructure. The policies and practices that tend to seek incremental gains as opposed to striving for improvement in the quality of services already in place tended to compete with an array of political considerations and experiences.

Innovations in Sierra Leone education, especially at the secondary level, have consistently been based on their compatibility with a diversity of political and social factors (Coleson, 1956; Gregg, 1969; Harding, 1971). One of the so many political considerations has been to expand the service-base of secondary education so as to reach the various communities of the populace. A good number of documents and studies (National Development Plan 1974/75 – 1978/99; Baker, 1963; Sierra Leone Education Review – Final Report, 1976) revealed that

politicians and educational planners have demonstrated a proclivity for interpreting educational growth in terms of infra-structural growth or expansion. This trend was evidenced in the Sierra Leone Education Review (1976), which has as one of its major recommendations a proposed increase of 50% in enrolment at the secondary level.

The UNDP – United Nations Development Program (1989) noted that quality improvement in the education process would be a necessity in developing countries. The paper suggested that the pervasive trend in which education expansion had not been infrequently identified, as a sacrosanct priority should be halted. In analysing the problems that were associated with training and manpower supply in developing nations, the paper argued that (a) “quality improvement has to take precedence over program expansion”, (b) “due to the failure to control quality, advocacy for expansion without explicit concern for quality improvement is misguided,” and (c) the actual return from expanding quantity of schooling at current levels will be much less than anticipated.” (p. 35)

Hage, Jerald, Garnier and Fuller (1988) argued that certain dynamics must be operative for mass schooling to contribute to economic growth and change in the labour as well as economic structure. One of these dynamics should engender a connection between the content of schooling and the socio-economics imperatives of the society served. The economic returns to schooling thus been heavily on the degree of relevance between the product of education and the economic exigencies of the society. This position is in line with the thrust of the World Bank’s new strategies agenda for Africa 1989 which claimed that the key to recovery in developing nations would be a greater and more appropriate investment in their human resources.² The report suggested that low productivity resulting from an inappropriately educated population has been at the heart of developing nations economic problems. Unemployment, which has also been directly linked to the content and quality of the educational process in a number of countries in Africa as a whole and in Sierra Leone in particular, is the problematic phenomenon among secondary school leavers.

According to the International Labor Organisation report (ILO-JASPA, 1980), the government of Sierra Leone (including two other former British Colonies included in the studies), has consistently the encouraged the conviction that the best way of producing quality manpower

has been through long, full-time schooling and study before entry into the work-force. The report indicated that educational policies and practices were often predicated on the old but highly popularized assumption that secondary education should opt for nothing more than pre-career scholastic attainment which would facilitate advancement to the tertiary level of the education system.

The ideological orientation has failed to perceive secondary education beyond gaining knowledge and academic credentials. This limited orientation to developing manpower, which has been often labelled the Paper Qualification Syndrome (PQS)³.... Is a problem of which the government was aware of but which the government has failed to counter-balance. The ILO-JASPA (1980) report made the following observations:-

This situation reflects the assumption, still strong in the four countries, that the most efficient and effective way to select and to form manpower which is at once skilled for immediate purposes and responsive to further training, is to put young people through long courses of schooling. For the governments' own purpose, a minimum of 11 years of schooling are required by the Gambia and Ghana and a minimum of 12 years by Liberia and Sierra Leone. (P. 2.) .

Again a penchant of quantity as opposed to quality in the process – product dimension of secondary education was evident. Longer duration of schooling has again been perceived as a necessary route to breeding an adequately trained and skilled work-force. Within this context, prolonged education would constitute a proxy for excellence and in itself deemed adequate training for productive employment. By the same token, the study contended that practices within government employment agencies, as well as within the education system, valued scholastic learning above other processes of manpower development.

Subsequently, such practices and predispositions have ensured the dominance and perpetuation of the PQS. In terms of national budgetary allocations, the government of Sierra Leone has been spending in excess of 25% of the allotted resources on general secondary education as opposed to 2% on vocational and technical education.⁴

Gray (1991) argued that an education system that would not make ample provision for students to acquire marketable occupational skills would seriously jeopardise the students' access to the labor force. Gray stated that by expanding the mission of secondary education to integrate academics and vocational/technical preparation, secondary schooling would yield significant pedagogical, economic and social benefits.

With the high rate of unemployment in the national economy⁵ the rapidly increasing number of high school drop-outs and non-graduate (students who do not pass the General Certificate Examination or the West African Senior School Certificate Examination in five or more subjects) from secondary schools throughout the country are ill-prepared to find gainful employment in the labor force. According to ILO-JASPA (1980), these students would be ineligible to advance within the education system which is examination and paper qualification oriented. With little or no skills to enter the work-force, and with inadequate paper qualification to advance through the various strater of the education system, the high school leavers constitute a population of untapped and under-utilized human resource. This waste in human resources can be limited if the secondary school curriculum incorporates provision for the acquisition of specialised skills that are in demand in the labor market (Lillis, 1984; Stern, Dayton, Paik & Weisberg, 1989; Rosenstock, 1991)

The Government of Sierra Leone thus became aware of the urgent need to produce people with technical/vocational skills for the job Market. As a result of this awareness, Government introduced several policies and programmes to achieve this end. The most recent one was that of 1993 when in its attempt to provide "education for all" irrespective of attitude, ability or educational aspirations of individuals designed the 6-3-3-4 system of education which has as one of its aims to provide middle level manpower for the country. It is therefore the aim of this paper to investigate whether this reform has indeed succeeded in providing the middle level manpower which other reforms failed to do in the past.

BACKGROUND

The system of education in Sierra Leone in the 60's or precisely before independence in 1961 was the British one. In this system there was more emphasis levied on academic work than vocational. The foundations of Sierra Leone formal education were laid at the end of the 18th century, when the new settlers in the Western Area were provided with a school by the Sierra Leone Company. After the British crown took over education was provided by missions and the government. The secondary education system began in 1845 when the Church Missionary Society (CMS) Grammar School opened with a western curriculum which included Greek, Latin, Astronomy and Music (Sierra Leone Government, 1980). With the foundation in 1904 of the Albert Academy (American orientation) which offered not only general academic instruction but also practical, industrial and commercial training, a tradition of vocational training began (Sierra Leone Government, 1980). Many other vocational secondary schools developed but were still based on the British system. The educational process was not productive judging from the needs of the country (Sierra Leone Government, 1980). A fundamental need in Sierra Leone is for people with secondary education training in specific vocational skills that are transferable to jobs in an African society (Sierra Leone, Government, National Development Plan. 1978-1979). More than 70 percent of the population is illiterate. Although education is limited for everyone, girls have fewer opportunities than boys in both education and employment hence boys seem to have a better understanding of the "world-of-work." Neither group, however, seems adequately prepared to enter the job market (NDP, 1978 – 1979).

There had been no specific attempt to systematically determine what competencies ought to be taught students and there is no competency-based vocational education program in the entire country (Sierra Leone).

Politicians, educational planners, curriculum specialists and others concerned with education in the "Third World" nations (UNESCO 1978) are becoming increasingly aware that investment in traditional education, as inherited from the colonial masters, have failed to yield the

anticipated or even long term results. The developing countries are in no position financially nor do they have the other necessary resources to furnish their rapidly growing populations with formal education or instruction.

The problem of devising a suitable and appropriate system of education for Sierra Leone has been the concern of educationalists and educational administrators since independence. The nature of the academic curricular, emphasizing the rate of recall rather than mastering of practical skills, has changed very little since independence. There is also a growing concern that the highly academic nature of the educational system only prepares school leavers to take “white collar” jobs rather than “blue collar” jobs or self employment.

However, since Independence in 1961, significant changes in Sierra Leone’s national educational system have been rare and far between. There has been quite a lot of talk, policies and programmes for change. Between 1958 and the present day one could cite at least fourteen such studies and programmes: -

1. The White Paper on Educational Development of 1958
2. The Report of the Educational Planning Group 1961
3. The ten-year Plan of Economic and Social Development 1962/63 – 1971/72
4. The Development Programme in Education 1964 – 1970
5. The Sleight Report
6. The White Paper on Educational Policy of 1970
7. The Five-Year National Development Plan 1974/75 – 1978/79
8. The Sierra Leone Educational Review of 1976
9. The Education Sector study of 1979
10. The Task Force Report on Examination for Secondary Schools in Sierra Leone, 1999
11. Report of the Advisory Committee on Management of Schools (1991)
12. The National Education Plan (1994)
13. The National Education Policy of Sierra Leone (1995)
14. The Education Master Plan (2004).

The Sleight Report, the Education Review and the Task Force Report are more on the improvement of the National Education System. The Education Review was done by some of the best international brains for the country and was organised by Dr. Arthur Porter the Vice Chancellor of the University of Sierra Leone, over a year. This Review dilated on some of the key facts, which led to the new system e.g. six years primary school curriculum, importance of guidance and counselling etc. These ideas however gathered dust on shelves of the Ministry of Education while other ex-colonial countries in British West-Africa reviewed their own systems. This was necessitated by their independence from colonialism. The reforms started first in Nigeria, then came Ghana. These countries abolished the “O” and “A” Levels exams as they were unsuitable for the new educational system. The next two small West African countries which followed suit were Sierra Leone and The Gambia. This order seems a wise move as the first two countries have the bulk of the examiners, therefore cost is being saved and the cumulative benefits can be shared by all. Later on Liberia joined in as it was one of the partners in the West African Examination Council, which controls school external examinations in the Region.

The system of education inherited by Sierra Leone before independence (1961) was unsuitable for the following reasons:-

It was based on the British System and not particularly relevant to Sierra Leone (a developing country with a high (80%) illiteracy rate;

It puts too much emphasis on the grammar school type of education and very little on skills training, vocational technical education, which are important for the development of a poor Third World Country.

Mathematics and science were poorly taught and the system turned out too few graduates in these key areas. No attempt was made to teach the national languages as a result many of those who dropped out of school after only a little knowledge of English, reverted to illiteracy.

There was no system of guidance and counselling in the schools, pupils therefore took courses in higher classes not suitable to their ability and aptitude, hence there were many drop-outs and wastage.

The system turned out a few highly qualified and trained professional but a derisory number of supporting middle-level manpower and technicians, necessary for the development of the

country. The major challenge facing Government in Primary education is the strengthening of the administrative and supervisory capability of the Ministry of Education (MOE) Improving the quality and efficiency of instruction, and expanding access while reducing regional and gender imbalances.

In Sierra Leone primary education is the sub-sector of education with the highest rate of returns in investment and one that makes the greatest impact in raising the quality of life of the rural population by providing more citizens with basic skills in literacy and numeracy. Its effectiveness is, however, hampered by a weak administrative and instructional supervision system. It is one of the sub sectors with a high proportion of unqualified teachers, high drop out rate (estimated at about 30%) high number of repeaters, wastage associated with the duplication of efforts in the development of separate curricula and instructional materials, shortage of basic school supplies and the lack of internal quality control for assessing the attainment of objectives specified in the teaching syllabuses.

Transition from primary to secondary education deserves great improvement. In particular, the quality of the Selective Entrance Examination, which has been replaced by the National Primary School Examination (NPSE), and the education of pupils who leave the primary education sub-system are poor. It is pertinent to observe that the Selective Entrance Examination is not a pass/fail examination. This largely implies that decisions on who gets selected depend on criteria determined by the Ministry of Education and the Principals of Secondary Schools. According to the 1979 Education sector study, available figures for this examination show that between 1973/74 and 1976/77 the pass rate ranged between 84.6% and 55.3%. This indicates a sharp decline from 84.5% and 56.7% registered between 1973/74 and 1974/75, a significant drop of 27.9% in just a year. However the 6-3-3-4 education system has ushered in some positive changes as in the NPSE 2002/2003 79.2% pupils passed [N.P.S.E. results published by the West African Examinations Council July, 2003].

The problems encountered in the administration and supervision of secondary education are rather similar to those of primary schools. These could be summarised as follows: -

- a. An under-staffed, office-bound inspectorate service, plagued by logistical problems and therefore unable to discharge its main function of monitoring the school system for compliance with regulations and prescribed standards.
- b. Absence of an adequate data-management system to help the planning and decision-making.
- c. Lack of effective institutional capability in planning and administration and
- d. An administration unable to respond to local needs largely due to lack of transportation and other logistical problems associated with the present economic constraints facing the system.

The structure of Secondary Education gives cause for concern. Students move inexorably up to form V, where most of them take the General Certificate Examination at ordinary level. In the first place, this examination is unsuitable for the majority of students, who fail it disastrously; some schools even collect year after year the lowest grade (i.e. 8's and 9's) in nearly all subjects offered by their pupils. Some deficiencies of secondary education before the introduction of the new system (6-3-3-4):-

- The narrow grammar school type of curriculum
- The lack of skills training and the playing down of literacy
- The deficiency of science education
- Low leader morale
- The large drop-out rate and wastage
- The high cost (including opportunity cost) for parents

It is obvious that many of the students who were entered for this examination could not pass it at any respectable level. (The G.C.E. ordinary level was meant for the top 25% of English Secondary School students.

TECHNICAL/VOCATIONAL ARM

Technical and vocational education started as far back as in 1787, when the first set of Settlers arrived in Sierra Leone.

The native in the hinterland were predominantly engaged in agriculture (fishing, hunting, animal husbandry), woodcarving, housekeeping etc. It was largely informal and every adult was a teacher. The training of a more specialised native came from the elders and some members of sacred shrine and institutes.

In 1808, Sierra Leone became a British Crown Colony. The British Missionaries introduced the western type of education that aimed at some level of proficiency in the three Rs (Reading, Writing and Arithmetic)

No significant efforts were made at formalising technical and vocational education throughout the 19th century. In 1904 when the Albert Academy was established, it offered not only general academic subjects but also practical, industrial and commercial training, a tradition of vocational training began (Sierra Leone Government, 1980). In 1916, the new education code made teaching of industrial subjects optional and in 1922, they were made obligatory. Many other vocational secondary schools developed but were still based on the British system. The concern of the Director of Education for Technical Education in the country led to the establishment of the Freetown Technical Institute in 1953 and the Technical Institute, Kenema, in 1956 to train both boys and girls. These institutes were set up by Government to train technicians and craftsmen for employment in government service, commerce and industry. The St. Mary's Technical and Vocational Institute, Bo, was established in 1954 to train women and girls in the areas of technical and vocational skills. The Young Women's Christian Association Vocational Institute was established in Freetown in 1961 to train girls and young women in skills such as Home Economics and Commercial Studies in preparation for employment. Trade Centre was established in Magburaka and Kissy (Freetown) for both boys

and girls in 1962 and 1964 respectively and the Forestry Training School, Bambammo, Kenema in 1965 for boys.

Students in these institutions and those in the vocational streams of Secondary Schools were regarded as “slow learners” or “low achievers”. In the view of staff, parents, students and pupils, the entry into technical and vocational education was almost synonymous with mediocrity. Therefore this aspect of education did not gain its momentum. The educational system was just not productive judging from the manpower needs of the country.

When the country became independent in 1961 and educational policy became the responsibility of the Ministry of Education, several educational developments, have been guided by reports and educational policies which have been mentioned earlier in this paper.

The educational system of the country which was handed over by the colonial masters, were termed as ‘bookish’ and did not cater for those individuals wishing to enter one trade or the other, but apprenticeship system followed after leaving school. A fundamental need was for people with secondary training in specific vocational skills that are transferable to jobs in an agrarian society (Sierra Leone Government, National Development plan, 1978-1991)

Politician, educational planners, curriculum specialists and other concerned with education in the “Third World” nations (UNESCO, 1978) became more aware that the investment in traditional education, as inherited from the colonial master did not yield the anticipated or even long term results. To overcome these obstacles alternatives were sought. Through the initiative of Dr. Arthur Porter, the Vice Chancellor, two areas of concern in the educational system were addressed. There were the analysis of the best long-term pattern for educational development of the country and the redefinition of the University’s role as an instrument of national development.

According to the Educational Review “All Our Future”, the group concluded that the education provided must focus on the following themes:-

➤ Relevance

- Interdependence
- Need for balanced growth
- Self reliance
- Accountability
- Practicality

Living in a dynamic society with the technological boom, the British system of education did not meet the needs of the country in a rapidly changing world. Despite the high rate of “drop outs”, those who went through the educational process were unable to fit themselves into the society because their education was irrelevant. This state of affairs posed a socio-economic problem that hindered national development because it catered only for white-collar jobs, when personnel in the industries, commercial and vocational areas were drawn from those students who have completed secondary education or had attained the “Third Form.”

The fundamental need in Sierra Leone then tended to be an element for people with secondary education training who were capable of becoming managers, administrators, technical personnel e.g. nurses, agricultural assistants, food science technologists, business personnel, tradesmen & craftsmen and for marketing sales personnel. As a result of this critical shortage and the inadequacies of the educational system in meeting the manpower needs of the country, the emphasis of Government shifted to science, technical and vocational training and agricultural activities.

The Review Committee among other things reported that the curriculum in schools did not provide education that would meet the needs of the individual and society. According to their report, “The curriculum must meet the needs of the individual, the society in which he lives and his socio-cultural heritage.”

There was thus an urgent need for a significant increase in the amount of technical and vocational education with the following objectives: -

- The Technical and Vocational education should exist as part of a system of life long education adopted to the developmental need of the country and guided also by the aspirations of the individual.
- Technical and Vocational institutions should concentrate on occupational training, which should be available for various grades and levels of students.
- Technical and vocational education should be part of everyone's general education from the earliest stage so that it:
 - May be freely chosen as the means by which one develops talents, interests and skills leading to an occupation in a technical field.
 - Can interest students at all levels to transfer into this field from other types of study.
 - Is readily available for all types of specialisation within and outside formal education system and in conjunction with on-the-job training in order to promote career advancement and job mobility.
 - Is available on an equal basis to women as well as men. (The Education Review "All Our Future" 1976) Chap 4. P 32.

To achieve the above objectives, the Review Committee recommended that

"The Milton Margai Teacher's College (now the Milton Margai College of Education and Technology) undertakes the training of Technical and Vocational teachers for both Secondary Schools and Trade Centres together with the preparation of Higher Teachers Certificate qualifying teachers in the usual range of subjects. Teaching staff in vocational and technical institutions should have to follow a full-time or in-service training course for instructors' (The Education Review, 1976).

The Milton Margai Teachers College established in 1963 with a well structured teacher education curriculum which included: (Home Science, Home Economics, Arts and Crafts, (Creative Practical Arts) and Rural Science/Agricultural Science as vocational studies. With the recommendations of the Review Committee in 1978, the Overseas Development Agencies (ODA), provided funds for the establishment of the Technical and Commercial Department.

Since then, technical and vocational teachers have been trained to teach at the various levels of the technical and vocational education either in the formal or non-formal sectors.

The General Assembly of the United Nations in November 1989 adopted the “Rights of the Child” and the World Conference at Jomtien, Thailand in March 1990, adopted a policy on Education For All By The Year 2000. It is from these documents that the strategies for basic education in Sierra Leone were obtained. Statistics produced by Prof. Newman Smart revealed a drop out rate of over 50% at the primary level and almost the same at the early stages of secondary schooling.

In 1993, The Government of Sierra Leone, in its attempt to provide “Education For All”, irrespective of attitude, ability or educational aspirations of individuals designed the 6-3-3-4 system of education.

This new education policy spells out the major objectives of the 6-3-3-4 system. These include:

- the development of a broad-based education.
- Increased access to basic education
- Improving the quality and relevance of education
- Expansion and upgrading of technical/vocational education
- Promoting literacy and numeracy in adult and non-formal as well as formal education.
- Developing relevant attitudes, skills and values in children

At least four of these objectives are arguably directly relevant to technical/vocational education. “Additionally, the policy states,” The new 6-3-3-4 system is much more biased towards technical and vocational education than the one it is replacing. (Technical and Vocational Handbook for Sierra Leone By A.C.T. Dupigny, 1978). The need to move away from a predominantly academic programme to a more broad-base programme which gives

greater weighting to science, technology and technical/vocational education influenced the content of the 6-3-3-4 curriculum.

In the objectives of technical/vocational education in the 6-3-3-4 system of education which had been stated earlier in this paper, emphasis is on the development of middle level manpower and this has caused many people to have still wrongly assumed that technical and vocational education is inferior and only for the less able. That this assumption is false, and is clearly indicated by: -

- (i) The fact that the entry requirements for technical and vocational schools have been made identical with those for Senior Secondary Schools which also offer many technical and vocational subjects. Infact a compulsory requirement of this school is Agricultural Science or a Technical and Vocational subject. Additionally, three of the six elective options at the Senior Secondary School level are Technical/Vocational in nature and
- (ii) The fact that Polytechnics have been established, where among other things, courses up to Higher National Diploma (HND) level and later perhaps even above, would be on offer.

(Additional to (I) and (ii) above is the fact that lateral movement between the proposed universities and polytechnics would be possible. A further point not made in the above is the fact that technical and vocational education is also provided in Senior Secondary Schools and the University. For example, the Engineering Courses offered at Fourah Bay College and the Home Economics course offered at Njala University College both have a great deal of technical and vocational content, whilst four of the six elective options of the Senior Secondary Schools are technical/vocational options.

In order to achieve the wide ranging objective detailed above and inorder to cater for the large number and different ability groups seeking access to technical and vocational education, a number of different strategies have had to be adopted. These include, among other things, the collaboration with governmental and non-governmental organisation indicated in the strategies spelt out in the Education Policy. These strategies include: -

- (i) The creation of different levels and categories of institutions to enable individuals with different educational backgrounds and ability level to pursue courses at an appropriate level in one of them.

The different levels of institutions in ascending order are:-

1. Community Education Centres (Lowest)
2. Technical and Vocational Centres
3. Technical and Vocational Institutes
4. Polytechnics (Highest)

Certificates are awarded according to the type/nature and level of course.

- (2) Formation of the National Council for Technical and Vocational Education (NCTVE), to help ensure the achievement of the earlier stated objectives.
- (3) The Ministries of Education, Science and Technology, Labour and Trade & Industry still through the NCTVE
 - provide linkages for those leaving on the job to upgrade their skills through short courses
 - provide opportunities for work placements which will enhance the practical experience of trainees.
- (4) Provide as directed by the Ministry of Education, Science & Technology crash in-service training programmes for technical/vocational teachers and technicians.
- (5) The various institutions, working together with representatives from business and industry, shall provide opportunities for work placement of trainees.
- (6) In order for technical/vocational institutions to operate successfully the Ministry of Education shall with the assistance of external funding agencies, seek to provide supplies of equipment, tools and training materials.
- (7) The Ministry of Education shall work towards the establishment of at least one technical/vocational institute in each district

- (8) In order to assist able individual unable to meet the cost of studying at technical/vocational institutions, the Ministry of Education shall set up a bursary system for disadvantaged students.
- (9) Government shall encourage the production of locally made tools and farming implements using the Kissy Trade Centre as 'lead' institution.

A Committee set up by Government to review the University Act of 1972 and The Teachers Colleges Act of 1982 recommended the establishment of Polytechnics through merger and rationalisation of tertiary teachers and technical/vocational institutions and courses on the following grounds:-

- (i) The tertiary education system was incapable of providing adequately for the necessary manpower to take Sierra Leone into the technological world in the 21st century.
- (ii) According to the National Education Action Plan (NEA p), "Technical and Vocational training is not remotely capable of meeting the country" demand for skilled labour and middle-level technicians." Tertiary education at the non degree level mainly involves six Teacher Training Colleges: Milton Margai College of Education (MMCE), Port Loko Teachers College (PLTC), Makeni Teachers College (MTC), Bo Teachers College (BTC), Bunumbu Teachers College (BTC) and Freetown Teachers College (FTC). With the exception of MMCE, where some vocational courses are been offered the other Teaching Training College have not included Technical and Vocational courses in their curriculum. Almost all the existing Tertiary Technical and Vocational Institutes lack the capacity, pedagogy and personnel to produce appropriate personnel for the new education system.
- (iii) The success of the new education system depends to a great extent on the tertiary education not only to complete the scope of the system but to also provide qualified technical teachers and specialist, manpower both in quality and quantity to support over 61 subjects and 46 specialist courses of the system. Trained and qualified teachers are urgently required to effect the teaching of these courses.

- (iv) There is every logic to advocate the pooling of materials, technical and intellectual resources such purely technical skills are fused with appropriate pedagogical competencies to create viable and usable capabilities and knowledge.
- (v) The creation of composite or multi-purpose institutions ensure not only economy of scale but also that less qualified staff grow within the system and maximize their intellectual and professional potentials.
- (vi) The merger of institutions would involve review of courses and programmes for maximum and efficient use of time, personnel and scarce resources
- (vii) The merger of institution of purely technical/vocational nature with that of traditional pedagogical and humanistic disciplines increase the choice for prospective trainees and reduces the negative attitude towards certain discipline
- (viii) The merger of small institution with relatively larger ones would facilitate their growth, enhance their capacity, prevent wastage and increase the access to the populace.

The then existing Teachers Training College cannot produce the required technical teachers while the existing technical and vocational institutes cannot produce technicians with pedagogical background for effective teaching.

The Committee concluded that many of the trained and qualified administrators, specialists and teachers produced by the pre 6-3-3-4 system may not be performing their primary function for which they are trained but may be discharging functions which would have been normally done by middle level manpower if people specially trained for such functions. (1990)

It was also mentioned by the Carney Commission on Higher Education in Sierra Leone, that what Sierra Leone need then was “a high performance cadre of people who can lead in Agriculture, Science, Technology, Management, Teaching and Administration and who by training productively in their immediate area, can also import it to other areas.” (Report on

Carney Commission on Higher Education in Sierra Leone 1990). The present tertiary system does not seem to be able to help in this direction.

Five Polytechnics were established by an Act of Parliament. They are

- (i) Milton Margai College of Education & Technology
- (ii) Freetown Polytechnic
- (iii) Bunumbu Polytechnic
- (iv) Makeni Polytechnic
- (v) Port Loko Polytechnic

These Polytechnics would offer courses leading to the following levels: TC, HTC, ONC, OND, HND and Bachelor degrees. Non degree programmes in the Polytechnics are to be validated by the NCTVA while degree programmes should be validated by one or other of the universities.

STATEMENT OF THE PROBLEM

Since the first educational institution was founded in Freetown, the wheels of education in Sierra Leone have continued to turn in the same direction throughout the 19th and, to a great extent, the 20th century (Coleson, 1956, Harding 1971).

Traditional education in Sierra Leone has been indicative of an education system with a propensity for the establishment and maintenance of an elitist approach to education (Anderson & Baker, 1969; Sengova 1982⁶).

Though experts in the field of education and other concerned citizens have questioned the traditional practices in education, little has been done in identifying and analysing the imbalance within the system. Attempts have been made to rectify the anomalies and eventually structure an educational system which bears relevance to the nation's manpower needs. The emphasis is on expanding vocational and technical training. The fundamental need, therefore in Sierra Leone is to train people with secondary education in specific vocational skills that are transferable to jobs in an agrarian society.

To achieve this goal, Sierra Leone has undergone a transition of various educational systems which led to the introduction of the 6-3-3-4 system, with the hope that this system would above all else cater for the middle level manpower needs of the country. A study of the present education system revealed that technical and vocational education is being acquired at the primary, secondary, and tertiary levels and in the non-formal sector through adult literacy programmes. This means that every child and adult is exposed to some form of technical and vocational education.

The study will try to find answers to questions like: -

Are the curricula used in the 6-3-3-4 system relevant to the manpower needs of the country?

Are the intended curricula in line with the operational curricula?

Is the Government providing the input that is necessary for the system to achieve its aims?

Is the funding coming from NGO and overseas fund bodies?

Are there trained lecturers and teachers for the new courses introduced?

Are the conditions of service for lecturers & teachers favourable so that they would give up their best?

Are the teacher training colleges equipped to train the required human resources?

PURPOSE OF THE STUDY

The purpose of this study is to assess the 6-3-3-4 education system in Sierra Leone to find out whether or not it is providing the country with quality middle level manpower and also education for self reliance. This means the researcher will have to examine mainly the secondary school curriculum, which will include those of the Technical and Vocation centres and institutions.

The study is designed to address the following specific questions

1. What is the philosophical framework of secondary education in Sierra Leone?
2. Is the 6-3-3-4 system of education providing the country with quality middle level manpower the country needs?
3. Does the 6-3-3-4 system of education makes provision to train entrepreneurs so that people will become self-reliant?

The study is intended to help focus the attention of scholars, school administrators, politicians and society at large to the areas in the system where modifications or adjustment need to be made in the present school system.

A study of the kind will also help the nation's planners to become aware of areas of priority and weakness in the educational system in general and the secondary school curriculum in particular. The study can provide an opportunity for the nation to maximize her human and natural resources by identifying relevance between her aspirations and the education process at the secondary and tertiary levels.

HYPOTHESES

The research hypotheses based on the questions of the study were:

HO₁ – The 6-3-3-4 system of education provides the country with quality middle level manpower.

HO₂ – The 6-3-3-4 system of education provides the country with education for “self reliance”.

HO₃ – That an educational system which does not reflect the perceived needs of a nation within which it operates is a failure and can be of no use to realistic constructive development of that nation.

ORGANISATION OF STUDY

The study consists of six chapters, a list of references, appendices and other items used in the execution of the study.

Chapter one presents the rationale, problems, its context and background. This chapter establishes the need for the research by presenting the hypotheses tested. Chapter two provides a review of related literature and examines study related to this research and also provides theoretical and conceptual framework of the study. Chapter three presents a description of the structure, of the 6-3-3-4 education system in Sierra Leone. Chapter four presents a description of the research methodology and procedure with specific focus on the instrumentation, data collection and data analysis and interpretation. Chapter five details the findings of the study based on the analysis and evaluation of the data collected. Chapter six summarises the conclusion of the study and brings out some recommendations.

CHAPTER II

LITERATURE REVIEW

In this chapter related literature is reviewed under the sub headings:-

- (1) Sierra Leone Secondary School Curricula Trends:- Ideology, Practice and Implications.
- (2) Manpower Needs Assessment: - Implication For Secondary School Curricula
- (3) Curriculum Evaluation: - Theory And Practice

Secondary School Curricula Trends: Ideology and Practice

The literature on curriculum development in Sierra Leone revealed four major trends and orientations within three well-defined chronologies: (a) The Early Period (1845 – 1959), (b) The Independence Era (1960 – 1969), and (c) The Post – Independence Era (1970 – present).

Sumner (1963) indicated that the secondary school curriculum content during the Early Period exclusively emphasized the three Rs (Reading, Arithmetic and Writing), Greek, Latin, Bible Studies and Astronomy. The principal objective of secondary education was “to introduce civilization among the natives, and to cultivate the soil by means of free labour” (p. 6). Literacy was a central criterion for establishing class distinction, and it constituted a requirement for acceptance into the church.

Sumner suggested that the content of the curriculum during this period was determined by the needs and aspirations of the Church Missionary Society. The limited focus on secondary schooling, as evinced in the policies of the British administration and its ancillary missionary activities, provided a justification for assigning manual labor to the illiterate sector of society. The other members of society who could read and write enjoyed the least physically demanding work. The inclusion of agriculture in the secondary curriculum was to provide cheap labor for the parishioners, and was not intended to respond to the subsistence needs of

the community. The impetus to learning was correspondingly generated by the desire of the governed to forestall the “degradation” and “distaste” for manual labor.⁷ Schooling thus provided an assurance for advancement to supervisory or clerical positions.

Within the same framework, schooling (which was then synonymous with literacy) was perceived by the learner as an end in itself, and not as a nexus to social progress. The motive in learning did not stem from the learner’s desire to create or produce goods and services for society as a whole. Rather, learning was sought in an effort to escape the burden of manual work, and subsequently to gain acceptance from, and access to the perceived elite fold of the Sierra Leone society. Schooling, thus constituted an egocentric and self-fulfilling exercise for the learner on the one hand, and a measure to reinforce the self-aggrandizing mission of the colonialist as pedagogue, on the other hand.

Sumner also attested that generally, the students were not encouraged to work with their hands. Rather, the educational objectives of the Church Missionary Society were to train African missionaries for missionary work, and to bring up children in Christian principles. Sumner’s analysis revealed that the denominational rivalry to establish schools paid no regard to educational planning, continuity or relevance.

Gregg (1966) also suggested that the demand for inexpensive labor was instrumental in cultivating the disposition to include the arts, crafts and agriculture in the school curriculum. The social, political, and economic needs of the clientele factored the least in qualifying the educational program at the secondary level.

Anderson and Baker (1969) disclosed that in spite of the report of the Education Commission in 1954 advocating the establishment of the modern secondary school, the traditional grammar school orientation to secondary education enjoyed an unqualified monopoly. Their studies revealed that grammar schools were never a “second stage” but a highly specialized form of education designed to give foundation for both general and professional knowledge necessary for the acquisition of superior social status.⁸

Both Sumner (1963) and Anderson and Baker (1969) concluded that despite the recommendations of various studies and commissions (such as the Executive Council's, the Nichol's, Madden, Phelps-Stokes) which advocated a more relevant curriculum content and process, the secondary curriculum, up to the end of the colonial era (1787 – 1960) mirrored the orientations of the British grammar school. The Civil Service Exam and the Cambridge School Certificate Exam dictated, to a great extent, the curriculum content and processes in secondary schools throughout the country.

The second curricula trend or orientation - - that of the Independence Era (1960 – 1969) - - was qualified by the expansion of existing facilities and the construction of new schools. Buck (1975) identified a phenomenal increase in secondary educational facilities and services following the nation's attainment of independence in 1961. His study, however, revealed a substantial mismatch between educational expansion, and teacher training and production. Buck claimed that during that period the government began to realize that the educational ideologies and practices that had been transplanted from England were not responsive to the newly independent nation's aspirations.

The study also indicated that attempts to "Africanise" the secondary school curriculum content were aborted because politicians failed to demonstrate the will to alter the traditional emphasis on secondary education. Buck suggested that the educational system that was inherited from the colonial regime resulted in (a) high failure rates, (b) inadequate curriculum, and (c) a need for more agriculture, vocational and trade schools. Buck concluded that from a qualitative standpoint, no significant changes were either envisioned or effected during this period. The secondary school curriculum continued to embody its colonial past and at the same time bore little relevance to the economic and social contexts of the Sierra Leone society.

The period 1970 to the present marked the evolution of the third chronology of curriculum development at the secondary level. Harding (1971), Sengova (1982) and Timity (1983) depicted this orientation as one that would reflect a quest for making education more relevant and practical so as to satisfy the nation's development needs and local conditions.

Equally, the Sierra Leone Government White Paper on Educational Policy (1970) indicated that the main curricular thrust at the secondary level was in the area of technical, commercial and agricultural subjects:

Under an IDA Project, the content of secondary education is to be diversified so as to provide more technical, commercial and agricultural subjects in 11 secondary schools scattered throughout the country. At the same time a curriculum revision unit, using the report of a proposed manpower survey team as a guide, will revise the primary and secondary school curricula in four key subjects: Science, Mathematics, English and Social Studies. These 11 schools will be extended and re-equipped to enable them to meet the manpower needs of Sierra Leone not only at the professional and sub professional levels (by continuing to produce an adequate flow of students for the University), but also at the middle-level— a level at which the shortage is even more acute, in both the public and private sectors.

The policy statement, as divulged in the White Paper (1970), reflected a pronounced tilt toward revising the secondary curricula in Science, Mathematics, English and Social Studies. While affirming that technical, vocational, agricultural and commercial education deserved highest priority in a developing nation, the policy did not include adequate provision for either the inclusion of these orientations in the secondary school curriculum or the expansion of specialized vocational institutions, facilities and services.

The government also admitted that the nation's rigorous exam policies which determined post-secondary point of entry into the work force, and which often victimized the non-academic majority of students should be altered:

The list of subjects and the content of the syllabuses for such an examination, government believes, should be decided only after the closest consultation with employers in both the private and public sectors in all the countries the council serves.

The policy statements indicated that the government envisaged instituting major changes in the secondary level examination systems in order to ensure that both the secondary school

curriculum and the examinations which were supposedly meant to assess mastery of its content were relevant to the nation's needs and aspirations.

The Conference of Ministers of Education of African Member States, Education in Africa: Evolution, reforms, prospects (1976), in which Sierra Leone was a participant, adopted resolutions which mapped out national priorities, objectives and reform strategies. Resolution II (Regional Priorities and Objectives) stated that:

... during the second phase of the Plan, the Addis Abba target's be maintained as general objectives, and that the qualitative improvement of primary and secondary education be stressed; and that Member States, while keeping those objectives in mind, bring them into line with national development plans. (p. 8)

The Conference also resolved that educational growth should seek to attain greater relevance: relevance in regard to securing both better use of resources through increased profitability and greater efficiency of educational system; relevance to the needs of development, the structure of the economy and the nature of employment; and the relevance to culture... (p. 14)

The idea of relevance, linked to that of qualitative improvement and increased efficiency constituted a common denominator in the deliberations and policy orientation of the Member States. The final report indicated that a review of some recent educational developments in Africa suggested that there was a need to divorce educational practices and curricula from their traditional orientation. Some of the reasons given were: (a) Current school systems in many instances were not pertinent to real social, and employment needs of the individual and the community, and (b) many school systems in Africa too often follow imported models which do not integrate well with African customs and modes of life.

The policy positions assumed in the White Paper and the African Conference of Ministers of Education suggest an inclination to decelerate expansion, and make the quality of education more consistent with the nation's development needs. The policy preference, thus revealed was in accordance with the observations of Coleson (1956), Gregg (1969) and Harding (1971)

which demonstrated that educational development at the secondary level in Sierra Leone had been disproportionately quantitative, and was begging for substantial qualitative changes.

The new educational policy for Sierra Leone (1995) had as two of its major objectives of education in Sierra Leone:

- (a) To improve the quality and relevance of education through improve curricula, teachers effectiveness, school facilities, environment, developing a new structured teacher education programmes for pre and in-service teacher education and also to provide a significant number of teaching/learning materials.
- (b) To increase opportunities for the acquisition of literacy, numeracy, technical and vocational skills within the formal and non-formal sectors of education.

In summary, though the ideological or philosophical basis for secondary education had changed over the years, there had been little significant change in the secondary curriculum, until the institution of the 6-3-3-4 system of education. Trends suggested that the ideological or philosophical foundations of secondary education had experienced different phases: (1) the first phase was characterized by Christian missionary activities. The ideological emphasis was on education for evangelism as well as for the espousal of Western values; (2) Independence Era marked the second phase. The ideological emphasis was on education for self-awareness and self-expression within the African cultural, economic and social contexts, and (3) the third phase, which corresponded to the present times. This period was characterized by an emphasis on educational accountability, relevance and efficiency. Sierra Leone viewed her economic and political fate to be closely linked to the rest of the worlds. Her participation in international conferences in search of common solutions to local problems was suggestive of her aspiring toward the establishment and maintenance of viable economic and educational institutions. Educational institutions, including the secondary school/technical vocational schools, were considered to be essential for economic and social progress. The period ushered the movement toward critical assessment of what education was designed to be; what it had been, and what it should be, based on current national needs.

MANPOWER NEEDS ASSESSMENT: The Implications for the secondary school curriculum

Timity (1983) conducted a needs assessment of Sierra Leone education systems which revealed that the secondary school students lacked the fundamental orientation for the “world of work.”⁹ The study confirmed the findings of Sengova (1982) at the elementary level of the education system. Sengova’s study indicated that the quality of educational outcomes had not received equal prominence. His ‘Illuminative Evaluation’ of the elementary school curriculum discovered a significant imbalance between curriculum prescriptions and educational practices within the educational system.

Timity concluded that the education system as a whole was too inflexible, and that it demonstrated a tendency to perpetuate the familiar and maintain the status quo. The study examined and analysed the vocational needs of secondary school students as perceived by the students themselves, the teachers and the administrators. The study made use of stratified population sample, which was drawn from schools within certain communities. It utilized the Career Education Cognitive Questionnaire to identify the nature and quality of the perceptions of the subjects – - students, teachers and administrators - - relative to vocational career and training. Computations using the SPSS/PC+ software were made. A Z – test, a two-tailed t-test and one-way analysis of variance ANOVA revealed a significant statistical difference in the mean scores of the subjects. The statistical variance suggested a significant discrepancy in the subjects’ perceptions of, and orientations to career and vocational preparedness. Timity advocated the espousal of Competency-based Vocational Education (CBVE) and a performance or skill-oriented curriculum.

By the same token, the International Labour Office (ILO-JASPA, 1980) reported that the government of Sierra Leone had been inclined to espouse an ideology for secondary education, which aligns its objectives with long, full-time schooling and study before entry to the work force. The ILO study, The paper qualification syndrome (PQS) and the unemployment of

school leavers, was a comparative sub-regional investigation of four West African countries - - The Gambia, Ghana, Liberia and Sierra Leone. The investigation carried out a content analysis of school examination papers.

Among the major findings of the study was the observation that the curricula of schools were far too academic, and that the examination systems provided the basis for an excessively strict selection process. The study also disclosed that the West African Examination Council (WAEC) which was charged with conducting national exams had relentlessly given inadequate weight to skills of manual manipulation, or even to careful observations, discrimination, deduction and creative approaches to learning and problem-solving. It also claimed that the very nature of these tests had greatly contributed to reinforcing the Paper Qualification Syndrome (PQS). The study advisedly affirmed that WAEC could be of greater service if it could invite member states to compare their educational objectives, assess the extent to which the current pattern of examinations would serve both these objectives and the majority of students. It also recommended the formulation of innovative policies on the development of manpower for livelihood and employment, as well as on scholastic education.

In addition to identifying the undue rigidity of the examination system, the study discovered a mismatch between prescribed policies and educational practices. The ILO report identified a substantial inadequacy in the time-on-task appropriated to vocational, technical and agricultural education at the secondary level. (According to ILO-JASPA) (1980).

Only a few of the 130 secondary schools offer technical or vocational courses, "...in spite of the massive efforts made under the first and second IDA projects for the diversification of education." (SLG-IDA, 37). The question has to be asked: to what extent is education for rural development irrelevant to the less stressed but more powerful function of identifying the academically more able to be groomed for an MSE which cannot at present use them.

The authors claimed that since selection for secondary education and post-secondary education had been so rigid and competitive, very few students succeeded in staying the course. The majority of students leaving secondary school constituted a population that would be

unemployed and under-employed. That, in turn, would represent an unjustifiable wastage in the nation's human resources.

In summary, Sengova's study (1982) revealed a mismatch between curriculum prescriptions and instructional practices at the elementary. Her study also revealed some inadequacy in the curriculum content at the elementary level. Sengova's findings provoked the suspicion that a similar inadequacy could be present at the secondary level.

Likewise, Timity's (1983) needs assessment of the Sierra Leone education system revealed a significant discrepancy between the perceptions of students, teachers and administrators as related to work, on one hand, and students' readiness for the work-force, on the other hand. Though Timity's study did not point directly to the secondary curriculum, it exposed an inadequacy in both educational policies and practices that begged for some inquiry.

Equally, the findings of the study prompted questions such as: Were the inadequacies and discrepancies discovered a result of the quality of institution; students' inability to master the content-area, or an inadequate or inappropriate curriculum content?

Timity's study also suggested that there was a tendency in Sierra Leone to espouse the familiar and maintain the status quo. This disposition, as evinced by Timity, would lead one to wonder whether educational policies and practices were being predicated on similar assumptions or predispositions. It would also prompt questions such as: Is there an ideological or philosophical framework for secondary education in Sierra Leone? If so, is it inadequate or out-dated? The available literature suggested that there were several unanswered questions pertaining to secondary education in general, and the secondary school curriculum in particular. The question of secondary school curriculum relevance was one such domain, which required a comprehensive evaluation.

Curriculum Evaluation – Theory and Practice

Various labels had been used to identify and describe educational programs, and various models had been prescribed for evaluating them (Borg & Gall, 1989; Eisner, 1985).¹⁰ Borg

and Gall (1989) identified two global research traditions in evaluation research—the positivistic or quantitative tradition, and the post positivistic or qualitative tradition. Borg and Gall indicated that though quantitative models have proven useful in objectives-based evaluations, these models would not always adequately address the socio-political and cultural dimensions of evaluation.

On the other hand, they asserted that qualitatively oriented models would be more comprehensive in accounting for the values and perspectives of a program's participants. The theoretical framework of Denzin (1989), Herman (1988), Aoki (1985), Eisner (1985), Bryk (1983), Adelma and Alexander (1982) advocated a similar perspective with significant emphasis on the social context within which the participants operate.

Adelma and Alexander (1982) made a clear distinction among three types of educational evaluation: (a) Validation: judgement of the quality and appropriateness of program objectives and content, (b) Assessment: juxtaposition of students' performance and intended learning outcomes, (c) Curriculum evaluation: evaluation of program content, content organization, learning environment, teaching and learning outcomes. Stufflebeam and Welch (1986) made a similar distinction.

Eisner (1985) identified five basic orientations to curriculum development and evaluation - - cognitive development, academic rationalism, technological, personnel relevance, and social adaptation and construction. Eisner claimed that any form of educational evaluation would be predicated on one or more of these orientations. Eisner's analysis provided a more expansive framework for educational evaluation based on the perceived functions of schooling:

(a) agnostic or prescriptive (a typology which assesses student's strengths and weaknesses within a learning context). (b) comparative evaluation, comparison of elements within the organisational culture of schooling - - teaching, learning environment, human roles and relationships, (c) curriculum revision (program improvement and modification between the time-frame of program conception and program dissemination, (d) needs assessment (typifies an assessment of educational needs based on data collected within a community or school population in order to identify appropriate educational goals. Eisner, liker Adelma and

Alexander (1982) identified three major criteria for educational evaluation - - the curriculum, the learner and the learning outcomes.

Tyler's (1949) model which was formulated on three main sources - - the student, the society, and the subject matter – and two goal screens (a psychology of learning and a philosophy of education) has been pivotal in curriculum evaluation (Eisner, 1985). According to Eisner, Tyler's analysis heralded the shift from evaluating the individual to evaluating the curriculum. Tyler established a link of inter-relationship between learning outcomes and the curriculum.

Tyler's (1949) evaluation model gave eminence to the assessment of students' performance in clearly defined and stated behavioural objectives.¹¹ Like Tyler, Thorndike's (1910) orientation to evaluation was operational in terms of its emphasis on measurable behavioural changes in the student.

Tyler, however, stressed that there was more to program evaluation than the limited assessment done through paper and pencil devices. He claimed that educational objectives such as social adaptation and reconstruction were not often amenable to paper-and-pencil assessment. He suggested that they could be more validly appraised through observation of the processes involved in the attainment of the objectives. In addition, he recommended the use of interviews, questionnaires, educational artefacts and records to garner evidence so as to make a determination on the extent to which program goals have been achieved. He concluded that program evaluation should not be limited to the use of simple appraisal method, but should incorporate a set of multi-faceted procedures, which would probe into the processes, and practices that would qualify a program.

Unlike Thorndike's behaviourist psychology and operationalist philosophy, Cassirer's (1953) orientation advocated a two-prong complementary approach to curriculum evaluation. Cassirer emphasized that evaluation should be conducted based on measurable behavioural objectives as well as logical criteria. Logical criteria, he claimed, would allow the investigator to determine consistency between the goals set on the one hand, and the processes involved in the attainment of those goals, on the other hand.

An identical advocacy for a multi-dimensional investigative procedure in curriculum evaluation was echoed by Cooley and Bickel (1986). Cooley and Bickel advocated the use of eclectic methodology in decision-oriented inquiry in education. They used case histories in their attempt to provide an analysis of the experiences of participants in various school settings throughout a school district.

Ted Aoki's (1985) model for curriculum evaluation was developed in an effort to transcend the dominant traditions of logical positivism. Aoki claimed that the multiple perspective approach, as utilized in his study, constituted an adequate response to the risk of reductionism of evaluation, which would be inherent in the scientific approach. Aoki's orientation was grounded on a concrete evaluation experience in the assessment of British Columbia Public School Social Studies Program.

Data for the study were collected through the use of questionnaires, interviews and observations that sought to identify, among other things, the points of view of students, parents, teachers and administrators. Aoki identified three inter-related orientations to curriculum evaluation:

- (1) *Ends-Means (Technical) Evaluation Orientation,*
- (2) *Situational Interpretive Evaluation Orientation,*
- (3) *Critical Theoretical Evaluation Orientation.*

Aoki indicated that evaluation based on the ends-means orientation would represent the fundamental principles of Tyler's rationale. He noted that such an orientation would seek to address concerns such as: (a) efficiency of the means in achieving curricula goals and objectives, (b) effectiveness of means in predicting targeted outcomes, (c) congruency between and among intended outcomes, content, and teaching, (d) comparison of effectiveness of different curricula in achieving intended goals. Based on Tyler's (1949) rationale, Aoki mentioned four steps at this level of evaluation:

Step 1 – What educational purpose should the school seek to attain?

Step 2 – How can learning experiences be selected which are likely to be useful in attaining these objectives?

Step 3 – How can learn experiences be organised for effective instruction?

Step 4 – How can the effectiveness of learning experiences be evaluated?

According to Aoki, the situational interpretive orientation would have as its central function an analysis of the perceptions of various groups – students, parents, teachers and administrators – on the curriculum. At this level of evaluation, the evaluator would seek to identify and analyse the meanings, which the social actors would ascribe to the curriculum. Aoki emphasised that the major thrust would be on striking a harmonious chord by clarifying motives, authentic experiences, and common meanings.

Aoki's critical evaluation orientation would represent a set of evaluation concerns such as:

- 1) *The perspectives on a given curriculum – the “root assumptions, root interests, and root approaches”.*
- 2) *The implied views of the students and teachers that were inherent in curriculum planning,*
- 3) *The functions and benefits of a given curriculum,*
- 4) *The assumptions of the curriculum implementor or evaluator,*
- 5) *The biases and preferences implied in curriculum materials and resources.*

Aoki concluded that the means-ends interpretation, the situational interpretation, and the critical interpretation are three ways of making sense of the school curriculum. He claimed that each orientation would assume varying roles in judging the worth of programs, the relationship between the evaluator and program personnel, and the approaches to program improvement. He affirmed that an evaluator with a multi-perspective orientation would gain enormous depth in program evaluation.

Chapter III

THE 6-3-3-4 EDUCATIONAL STRUCTURE – A DESCRIPTION

This chapter presents the description of the 6-3-3-4 educational structure. The chapter has been arranged under eight major headings.

1. General aim and objectives of the 6-3-3-4 system.
2. Primary Education.
3. Secondary Education: JSS, SSS, TVS.
4. Other Vocational Institutions.
5. Tertiary/Higher Education.
6. Continuous Assessment and Guidance Counselling.
7. Summary of the change.
8. Benefit of the system.

The present structure (6-3-3-4), which has replaced the old one, is a courageous attempt to transform our educational system. It is also being referred to as the Basic Educational System and its advantage lies in the fact that it goes beyond the boundaries of the formal system into the non-formal and informal systems. Sierra Leone has had a long history of formal education when missionaries established educational institutions. Today, there are partners who are implementing Basic Education in the non-formal sector. The main partners are United Nations International Children's Educational Fund (UNICEF), the Sierra Leone Adult Education Association (SLADEA), the People's Education Association (PEA) and the Adult Education Unit of the Ministry of Education.

General Aim and Objectives of the 6-3-3-4 System

The general aim of the education policy is to provide every child with an education which takes fully into account: -

- (a) The character development
- (b) His interest, abilities and aptitude
- (c) The manpower needs of the country, and

- (d) The economic resources of the state, so that his education can be of use to the country and at the same time provide opportunities for him to be successful in life.

To eliminate the source of illiteracy and the lack of basic education by: -

- (1) increasing enrolment
- (2) stemming regression and drop-out rates
- (3) providing opportunities for those who did not receive basic education as well as those who dropped out of the formal system. To achieve basic education for the above mentioned groups in 10years, priority will be given to:-
 - i. Children in primary schools
 - ii. Women and girls
 - iii. Out of school youths
 - iv. Rural population
 - v. Illiterates in public and private sectors

To help those who achieve basic education to retain it and continue to use it in their personal, social and national lives for further development of themselves, their communities and their country. The overall aim is to give Basic Education to not only pupils in schools but also adults and children out of school, thus raising the literacy rate significantly by the year 2000.

Objectives

The objectives of the new Educational System are:-

- (a) Literacy in one or more languages, eventually to include literacy in at least one Sierra Leonean language and in the official language, English.
- (b) Numeracy i.e. computational skills in arithmetic, understanding of certain basic mathematical principles and ability to judge the quantitative results of certain decisions and actions.

- (c) A rational approach to natural and social events through observing and understanding the environments in which students live.
- (d) Occupational skills at elementary level;
- (e) Positive attitudes towards themselves and their cultural background, towards work and the process of community and national development.
- (f) Positive traits of character and ethical values.

The new structure means 6 years in primary school, 3 years in junior secondary, 3 years in Senior Secondary and a minimum of 4 years at the tertiary level. It is a model of the American comprehensive system, which caters for all and has a broad-based curriculum.

This new structure of schooling can be divided into two or three phases, depending on the purpose of the analysis. The two-tier system is a block of nine years of basic education consisting of:

- (i) Six years of primary schooling automatically followed by three years of junior secondary (JSS) education and a further block of
- (ii) Three years of senior secondary schooling (SSS)

The three-tier system consists of:

- (i) Six years of primary education then
- (ii) Three years of junior secondary schooling and finally
- (iii) Three years of senior secondary schooling

In brief it is 9-3 or 6-3-3-4. The latter description is generally followed. The first 6 is for the primary education, the next 3 for JSS, the other 3 is for SSS, and the last 4 for the four years of university education for a first degree. Higher education takes various forms. For a university first degree the new structure entails at least four years of university education, hence the last 4.

The New Educational Structure

It caters for the following positions:

Principal	Senior Teachers
Vice Principal	Teachers
Head of Dept.	Non-Teaching Staff
Guidance Counselling	

The new system is geared towards the individual needs and interests of the child and hopes to eliminate wastage (drop-out and illiteracy).

PRIMARY EDUCATION

The goal of primary education is “To provide a six-year broadly-based education that will enable pupils to acquire the required skills, ability and aptitude for second stage educational opportunities”. (White Paper On Education, 1984)

With this goal in view, the following recommendations were made:

1. That the minimum entry age into primary school should be 6 years.
2. That the number of years to be spent at this level should be 6 years so that the majority of pupils will complete their primary education at the age of 12 years.
3. That completion of the primary sector should, as far as is possible, lead to the junior secondary level.
4. That the scope of the then Selective Entrance Examination should be broadened so that pupils would acquire the required skills, aptitude and ability for the second stage of education.
5. That the broadly based curriculum produced by the Institute of Education be fully tested at the end of the primary cycle in place of the narrow Selective Entrance, which has been replaced by the National Primary School Examination (NPSE).

Curriculum

The primary curriculum has been modified to include indigenous languages (Mende, Temne, Limba and Krio) together with the following, some of which already were part of it:-

Creative Arts (e.g. Music, Drama, Art, Local Crafts);

Pre-Vocational subjects (e.g. Home Economics, Agriculture and Business Studies, Mathematics, Social Studies, Health and Physical Education and Religious Education)

The objective is to teach the children to develop practical skills that could be useful to them and their community. Progress and certification are based on continuous assessment by headteachers and teachers as well as terminal and yearly examination.

Unlike the old system, primary education is not terminal at class 6, but is continuous for a further three years to attain basic education (Junior Secondary). At the end of the primary education, pupils will take the National Primary School Examination (NPSE).

However, the NPSE is not meant to be a barrier to be cleared for entry into the junior secondary school as the years of compulsory basic education continue beyond the years of primary schooling. The NPSE is a broad-based examination involving papers in Mathematics and Numerical Reasoning. Language Arts and General Studies. The NPSE score has a continuous assessment input.

SECONDARY EDUCATION

Bearing in mind the main goal for secondary education, it was recommended as follows:-

1. That there should be a Junior Secondary School that would offer a general basic education with technical, vocational and agricultural aims.
2. That this stage would be terminal for those who wish to enter the world of work but would also provide a route by which the senior secondary school can be entered.

3. Since many pupils are ready to leave school at this stage, the course of study should be so structured that teachers, during the course of teaching, should be able to bring out the skills and aptitude of all pupils at this level.
4. There should be an external examination at the end of junior secondary education.

Pupils who finish primary school and sit the primary level completion examination (i.e. NPSE) are provided with JSS places. Pupils are not designated as having ‘failed’ the NPSE and therefore as being unworthy of a JSS place. This system has been implemented in order to ensure that all pupils have the opportunity of receiving nine (6+3) years of formal basic education. The new system encourages every student to pass successfully through nine years of basic education. In this sense, therefore, primary and junior secondary education is one continuous process.

Junior Secondary School

JSS education is divided into three years:-

- (i) JSS I
- (ii) JSS II
- (iii) JSS III

The Task Force Report, (1989) on the recommendation of which the 6-3-3-4 structure is based, says of the Junior Secondary School:

- 1) That it should offer a general basic education with a technical, vocational and agricultural bias
- 2) That this staged would be terminal for those who wish to enter the world of work but would also provide a route by which the Senior Secondary School can be entered.
- 3) That since many pupils are ready to leave school at this stage, the course of study should be so structured that teachers, during the course of teaching, should be able to bring out the skills and aptitude of all pupils at this level.

- 4) That there should be an external examination at the end of Junior Secondary education (p. 24)

In the new system, each student's progress is monitored by a Guidance Counsellor, and continuously and systematically assessed. Monitoring and assessment are important because the grade they produce:

- (i) form part of the student's BECE marks,
- (ii) help the Head of the school (Principal) to place him in the next level of education or
- (iii) guide the students in choosing the kind of employment most appropriate for them.

Aims and Objectives of the JSS

The general aims and objectives of the Junior Secondary School are:-

- (i) The provision of opportunities for the continued acquisition of basic skills and knowledge as basic education is to encompass the first three years of secondary schooling as well as the six years of primary.
- (ii) The introduction of subjects encouraging the development of nationally desired and saleable skills
- (iii) The full utilisation of each individual's ability, aptitude and interest.
- (iv) Preparation for the next level of formal education
- (v) The postponing of too early specialisation and providing an opportunity for more informed and appropriate counselling and placement advice
- (vi) The acquisition of abilities appropriate and necessary for entry into modes of employment or self-employment not requiring prior training in specialist skills
- (vii) The development of character and personality in a manner that would help cultivate desirable attitudes for the good of the individual and to help further in development of the nation.

Curriculum

The JSS curriculum is general and broad-based paying full attention to the whole range of knowledge, attitude and skills in the cognitive, affective and psychomotor domains. The

content of the Junior Secondary School curriculum has been designed with a deliberate attempt to avoid irrelevancy and an over academic bias. This has been achieved by introducing new pre-vocational subjects and Sierra Leone languages into the curriculum and by ensuring that the newly produced syllabuses have contents that are in line with the earlier stated aims and objectives of the JSS.

Subjects offered at this level are classified as being either 'core' or 'elective'. The division is an attempt to distinguish between those subjects which are regarded as the foundation stones of a literate and numerate individual in Sierra Leone (core subjects), and those subjects (electives) which build on this foundation. Both sets are essentials for achieving desired educational goals.

The curriculum is therefore a diversified one with nine (main) subjects which must be offered by all JSS schools, and several electives (subjects to be selected from) chosen according to the policy of the school, the needs and interest of the students.

The nine core subjects at JSS are as follows:-

- (i) Agriculture
- (ii) French
- (iii) Integrated Science
- (iv) Language Arts
- (v) Mathematics
- (vi) Physical and Health Education
- (vii) Religious and Moral Education
- (viii) One (1) Sierra Leone language (from Krio, Limba, Mende, Temne),
- (ix) Social Studies

The electives are sub-divided into (i) Pre-vocational and (ii) Non-vocational

The pre-vocational electives include (i) Introductory Technology (e.g. Technical Drawing, Construction Technology, Electrical

- (iii) Electronics (e.g. Computer Science etc)
- (iv) Local crafts (e.g. woodwork, metalwork and Joinery, Block Laying)
- (v) Home Economics (e.g. Foods and Nutrition, Catering, Home Management etc)
- (vi) Business Studies (e.g. Commerce, Book-Keeping, Office Practice etc)

The non-vocational electives include the following subjects:-

- (i) Arabic
- (ii) Creative Arts (e.g. Music, Art and Design, Drama, Painting etc)

In each of the three years at Junior Secondary Schooling, as well as the nine core subjects, each pupil must study three elective, two of which must be chosen from the pre-vocational group.

Promotion

Movement from JSS I through JSS III depends on the conditions for promotion set by the schools. These conditions varied from school to school. One condition, which is common to all school, is that pupils must maintain an annual average attendance of seventy-five percent or better to be considered for promotion to a class.

The assessment of each pupil at the end of the school year takes into consideration marks scored in each subject at the end year internal examination and continuous assessment marks for each subject during the year. The continuous assessment marks comprise of assignment, class work, class participation and end of term examination marks scored. The end of year internal examination accounts for eighty percent of the total marks scored in each subject offered whilst continuous assessment marks account for twenty percent.

Basic Education Certificate Examination (BECE)

At the end of the JSS course, all graduating students should sit for the Basic Education Certificate Examination (BECE) which is a national, external examination conducted by the Sierra Leone office of the West African Examinations Council (WAEC) for the Ministry of Education, Science and Technology.

Students attempting the examination must offer Integrated Science, Language Arts, Mathematics and Social Studies and any other four subjects, two of which must be chosen from the other core subjects and one each from the pre-vocational and non-vocational groups.

Methods of assessment

There are four methods of assessment: -

- (i) Continuous Assessment
- (ii) Written Examination
- (iii) Practical Examination
- (iv) Oral Examination

Four modes of assessment are being used with a combination of the four ways above. These modes are:

Mode A

- (i) one written paper of two parts incorporating multiple choice objective items and short answer/structured questions or calculations;
- (ii) continuous assessment of theory and projects.

Subjects to be examined using Mode A are:

Business Studies

Mathematics

Religious and Moral Education

Social Studies

Mode B

- (i) one written paper of two parts incorporating multiple choice objective items and short/structured questions or calculations;
- (ii) continuous assessment of theory and practical work.

Subjects to be examined using Mode B are:

Agriculture

Creative Arts

Electronics

Home Economics

Integrated Science

Introductory Technology

Local Crafts

Physical and Health Education

Mode C

- (i) one written paper of two parts incorporating multiple choice objective items and short answer/structured questions or calculations;
- (ii) one written paper containing essay/continuous writing questions;
- (iii) Oral assessment;
- (iv) Continuous assessment in theory and projects.

Subjects to be examined using Mode C are:

Arabic

English Language Arts

French

Sierra Leone Languages - Krio, Limba, Mende and Temne

Competence in written and spoken English is to contribute to the final continuous assessment score for each subject as appropriate.

Grading of Performance

The performance of each candidate for every subject offered is

1	-	Excellent
2	-	Very Good
3	-	Good
4	-	Credit
5	-	Credit
6	-	Pass
7	-	Below criteria.

Final examination (BECE) in each subject, accounts for eighty percent of the total marks. The remaining twenty percent comes from continuous assessment during the three-year period, that is JSS I, II and III.

Marks for continuous assessment for each year include internal examination, assignments, class participation and practical, if necessary.

The twenty percent is made up as follow:-

JSS I marks (ie continuous assessment total score and end of year examination score), account for a maximum of five percent of the twenty percent total;

JSS II marks account for the maximum of five percent of the twenty percent total;

JSS III marks account for a maximum of ten percent of the twenty percent total.

The first Basic Education Certificate Examination was taken in May/June 1996. One hundred and twenty-two school entered twelve thousand and five students for the exam. Out of this

number, eleven thousand, nine hundred and fifty two students attempted it and only four thousand, eight hundred and seventy-two passed in four subjects and above, thus qualifying them to enter Senior Secondary Schools. Another one thousand three hundred students who sat BECE with the aim of going to Technical /Vocational Schools, only twenty-four passed in four subjects and above thus qualifying them to enter Technical/Vocation school (The New Era Newsletter – January 2001)

Those JSS pupils who do not enter Senior Secondary School but want to further their formal education can enter a range of technical, vocational and commercial institutions.

Senior Secondary School

The second stage of secondary schooling is a two-pronged. It is pursued in a senior secondary school or a technical vocational school. Those students not wishing to attend a technical/vocational school can pursue the same or equivalent courses in technical/vocational centres. The first cohort of students from junior secondary school entered senior secondary school, technical/vocational schools and technical/vocational centres in December 1996.

The senior secondary/technical vocational school is meant for children who are able and willing to have complete six years of secondary education.

Whilst the broad aims of secondary education are:

- (i) To make junior leavers employable (for useful living within the society).
- (ii) To make senior school leavers eligible for higher education

The general aims and objectives of the Senior Secondary Schooling are:-

- (i) the provision of opportunities for personal fulfilment as well as national development, through stimulation of the varied potentials of the students, by making available a rich diversified curriculum and opportunities.

- (ii) The continuation of education through the further development and strengthening of knowledge, skills and attitudes acquired at the Junior Secondary School level.
- (iii) The provision of individuals equipped with skills in line with the nation's manpower needs and with the ability to effectively contribute to the achievement of national goals thus becoming useful members of society.
- (iv) The fostering of those qualities of the individual which make possible appreciation of the virtues and values of the labour of others and our cultural heritage.
- (v) The development of a human resource base for national development through a new emphasis on the sciences, technology, technical and vocational education.
- (vi) Preparation for further and higher education
- (vii) The promotion of international consciousness in the light of increasing global inter-dependence.

The above objectives accentuate the importance of the Senior Secondary School to the 6-3-3-4 educational system.

Admission into the Senior Secondary School is based exclusively on the performance of pupils in the Basic Education Certificate Examination (BECE). In order to qualify for admission into a senior secondary school a student must possess at least five subjects at BECE including English and or Mathematics with a grade six or better in each subject.

The Curriculum

The syllabuses in the curriculum are all designed to take three years to complete. At the end of the three-year programme, students sit the West African Senior School Certificate Examination (WASSCE).

The subjects in the curriculum are divided into 'core' (compulsory) subjects and elective (optional) subjects. Each SSS student is required to study five core subjects and three or four electives chosen from one of the options, which I have later stated.

Core Subjects

The core subjects which all students are required to take compulsorily are:

- 1) English Language
- 2) Mathematics
- 3) Biology or Chemistry or Health Science or Physics or Science
- 4) Agricultural Science or a Vocational subject or a Technical subject
- 5) Sierra Leone Studies or History or Geography or Literature in English

Under Vocational subjects in (4) above are included: Agricultural Economics and Extension, Agricultural Science, Business Management, Clerical Office Duties, Clothing and Textile, Commerce, Financial Accounting, Food and Nutrition, French, Home Management, Management in Living, Principles of Cost Accounting, Shorthand and Typewriting.

Under Technical subjects in (4) above are included:- Applied Electricity, Auto Mechanics, Building Construction, Electronics, Engineering Science, Farm Mechanisation, Metalwork, Technical Drawing and Woodwork.

It must however be noted that as a result of lack of teachers for Sierra Leone Studies it has never been offered by any Senior Secondary School since the inception of the 6-3-3-4 system of education in 1993.

Elective Subjects

No school is expected to offer all the electives available at the Senior Secondary level, individual subjects have therefore been grouped into 'Option' reflective of the areas of specialisation/bias of schools at this level. Each school may offer subjects grouped under a minimum of two and maximum of three options. Students are encouraged to ensure that all their electives subjects are chosen from the same option. Additionally, schools should ensure that apart from indicating the option they should also state the subjects.

Table 1**OPTIONS**

<p><u>ART OPTION</u></p> <p>Arabic Christian Religious Knowledge Economics French Geography Government History Islamic Studies Literature Music Visual Arts</p>	<p><u>SCIENCE OPTION</u></p> <p>Agricultural Science Biology Chemistry Further Maths (Elective) Geography Physics Electronics Engineering Science Health Science French Physical Education Technical Drawing</p>
<p><u>TECHNOLOGY OPTION</u></p> <p>Applied Electricity Auto-Mechanics Building Construction Electronics Engineering Science French Further Maths (Elective) Metal Work Technical Drawing Woodwork</p>	<p><u>AGRICULTURAL OPTION</u></p> <p>Agric Economics & Extension Agricultural Science Biology Chemistry Economics Farm Mechanisation French Horticulture</p>

TABLE 1 (CONTINUED)	
<u>BUSINESS STUDIES OPTION</u>	<u>HOME ECONOMICS OPTION</u>
Business Management	Business Management
Clerical Office Duties	Chemistry
Commerce	Clothing & Textiles
Economics	Food & Nutrition
Financial Accounting	French
French	Health Science/Biology
Further Maths (Elective)	Home Management
Geography	Horticulture
Principles of Cost Accounting	Management – In - Living
Shorthand	
Typewriting	

Promotion

Movement from SSS I through SSS III depends on the conditions for promotion sets by the schools. These conditions like those of the JSS vary from school to school. One condition, which is common to all the schools, is that pupils must maintain an annual average attendance of seventy five percent or better to be considered for promotion.

The assessment of each pupil at the end of each school year takes into consideration marks scored in each subject at the end of year internal examination and continuous assessment marks for each subject during the year. The continuous assessment marks for each subject is made up of assignments, class work, class participation and end of term examination mark scored. The end of year internal examination accounts for seventy percent of the total marks scored in each subject offered whilst continuous assessment marks account for 30 percent.

Conditions for the Award of a Certificate

The West African Senior Secondary School Certificate (WASSCE) is awarded to a candidate who enters and sits for all the core subjects and two or three elective subjects. Certificates are awarded on the basis of subjects offered.

The results issued show the results in the examination as a whole and also indicate the standard reach in each subject taken. There are six grades in order of merit from A to F. Grade A being the highest and Grade F the lowest. The first five Grades designated A, B,C,D,E represent the Pass Grades. The Sixth grade represents a failure.

The interpretation of the various grades are shown as follows:-

A1	-	Excellent
B2	-	Very Good
B3	-	Good
C4	-	Credit
C5	-	Credit
C6	-	Credit
D7	-	Pass
E8	-	Pass
F9	-	Fail

Continuous Assessment contributes 30% towards the maximum examination score obtainable in each subject. The 30% is distributed over the three years of Senior Secondary Schooling. The scores are weighted as follows SSS 1 = 5%, SSS 2 = 10% and SSS 3 = 15%.

The repeat year CASS scores of pupils who repeat in SSS Class are to be utilised in the computerisation of the overall Continuous Assessment (CASS) marks. The CASS scores of the 'fail' year should not be used.

Affective and Psychomotor Domains

During the three years period at the SSS, students are not only assessed in the cognitive domain but also in the affective and psychomotor domain.

With regards to assessment of the affective and the psychomotor the following points should be noted:-

- (1) ratings are not marks out of 5. They represent an attempt to quantify that, which is largely qualitative in nature.
- (2) All ratings are to be based on actual personal observation. This means that no attempt is to be made to rate that which has not been observed.
- (3) The rating of each affective or psychomotor aspect for each pupil should be carried out by a maximum of five and a minimum of three teachers.
- (4) The statements corresponding to each rating are the main focus of attention and must be clearly understood by parents, teachers and the students.

The following are assessed under the affective domain

- 1 Class Participation
- 2 Sociability
- 3 Helpfulness
- 4 Honesty
- 5 Effort
- 6 Initiative
- 7 Self-Discipline
- 8 Demeanor
- 9 Sportsmanship
- 10 Dependability/Reliability
- 11 Punctuality/Regularity
- 12 School and Community Involvement

In the Psychomotor domain the following are assessed:

- 1 Physical Dexterity
- 2 Stamina
- 3 Physical Agility
- 4a Individual Sporting Prowess in Ball Games
- 4a (ii) Ability to function as a team player in ball games
5. Drawing/Painting (artistic) skill;
6. Handwriting
7. Physical Co-ordination (in dance)
8. Voice control (in talking and singing)
9. Musical instrument playing skill
10. Bodily control/sense of balance.

Affective and Psychomotor Ratings

- 5 Great/Excellent/Exceptional/Always
- 4 Good/Often
- 3 Some/Sometimes/Fair/Reasonable
- 2 Little/Rarely/Poor
- 1 Negligible/Never/Very Little/Very Poor

Technical /Vocational Schools

The Technical/Vocational Schools under the present system continue to improve the student's general basic education but with an increased emphasis on skill acquisition and practical work.

Movement to Technical Vocational School is not automatic. The entry requirement was originally set at five BECE passes obtained in a single sitting. As a result of the low number of students who opt every year for the Technical Vocational Schools the requirement was reviewed and is now four BECE passes obtained in a single sitting with passes in Language

Arts and/or Mathematics. Even with this, Technical Vocational Schools are not popular for reasons which I have stated in my findings.

Curriculum Offerings

The curricula for Technical Vocational Institutions are many and varied. They are as follows:

<u>Technical</u>	<u>Vocational/Commercial</u>	<u>Agriculture</u>
Blacksmithery	Accounting	Animal Husbandry
Building and Construction	Business Administration	Crop Husbandry
Carpentry and Joinery/Woodwork	Catering	Agricultural Survey
Handicraft	Computer Studies	General Agriculture
Metal Work and Welding	Dressmaking & Designing	
Mechanical Engineering	Shorthand	
Motor Mechanic	Typewriting	
Auto Electrician	Business Studies	
Plumbing	Book Keeping	
Printing	Hotel Management	
Maintenance & Installation	Soap Making	
Of Computer	Gara Dyeing	
Telecommunication	Practical Arts	
Surveying		
Refrigeration		
Marine Engineering		

In addition to the above mentioned subjects each student at a Technical/Vocational institution must offer the foundation courses stated below:

English Language

Mathematics

Book keeping/Basic Accounting

Physics/Chemistry/Biology/General Science

The foundation courses are supposed to be the foundation upon which the trades/vocations are built. For example, instructions on instruments tend to be written in English. Similarly, books and other materials used in Sierra Leone by individuals employed in the technical/vocational field are usually written in English, as also are examinations. The foregoing being the case, one of the foundation courses has to be English Language. Mathematics is necessary because numeracy is a must for all involved in work requiring measurement and calculation. Some knowledge of book keeping or accounting is necessary as many graduates of technical/Vocational Institutions will be self employed or involved in small business and need to be able to keep proper account. Mathematics and English Language are both examined at all levels but for the other foundation courses it would depend on the course of study being followed by the student.

The curricula of the Technical/Vocational Institutions were carefully and deliberately drawn up so that the aims and objectives of technical and vocational education as stated in the present educational policy can be achieved.

Aim

- the encouragement of self-reliance and self-actualisation in individuals and the progressive development of society and the economy of the country through Technical and Vocational training, especially in the Agricultural, Industrial and Commercial sectors.

Objectives

- fill the Technical/Vocational manpower need gap by substantially increasing the number of indigenous skilled lower middle level 'blue collar' workers;
- produce a more literate, numerate and enterprising lower middle level Technical/Vocational workforce and thus speed up National development;

- encourage women and girls to participate in National development through the acquisition of Technical and Vocational skills;
- correct the geographical imbalance in distribution of Technical and Vocational resources;
- develop appreciation and understanding of the increasing complexity of science and technology;
- provide training for Technical and Vocational instructors, teachers and lecturers;
- develop an appreciation of cultural and aesthetic values in productive work.
- create the enabling environment for the development of appropriate indigenous technology

The National Vocational Qualification (NVQ) are the major courses which are offered at Technical/Vocational Schools. In addition to the continuous assessment, NVQ courses are examined internally at the end of years 1 and 2. The final examination at the end of year three is external and is conducted by the West African Examination Council. Practical work forms part of the final examination.

In Technical/Vocational Schools (TVSs), movement through the classes are the same as for senior secondary school (SSSs) that is one repeat of a class between TVS 1 and TVS 3. Additionally one in-school repetition of the National Vocational Qualification Stage III (NVQ 3), examination is allowed. This does not prevent a student from attempting the NVQ 3 examination as a private candidate as many times as he/she sees fit.

Except it be for disciplinary reasons, as spelt out in the Education Act and policy documents from the Ministry of Education, Science & Technology, a pupil who starts the TVS programme should be encouraged to complete it. Authenticated transfer from a Technical/Vocational

School (TVS) to a Senior Secondary School (SSS) is permitted as long as the BECE grades of the transfer candidate is not below the least accepted for entry into the SSS at the time he/she sat the examination. Transfer from a TVs to a Technical/Vocational Centre (TVC) and vice-versa is also permitted provided that each transferee is able to meet the entry requirement for the course to which he/she wishes to transfer. Movement from a TVS to a Technical Vocational Institute (TV1) depends on the success of the pupil in the NVQ3 examination and the ministry approved requirements for entry to the course to be pursued.

Although not Technical/Vocational Institutes, Senior Secondary Schools offer many technical/vocational subjects, infact a compulsory requirement of these schools is Agricultural Science or a technical subject or a vocational subject. Additionally three of the six elective subjects at the senior secondary school level are technical/vocational in nature as can be seen in table 2.

Table 2
Options-Technical/Vocational

TECHNOLOGY OPTION	BUSINESS STUDIES OPTION	HOME ECONOMICS OPTION
Applied Electricity	Business Management	Business Management
Auto-Mechanics	Clerical Office Duties	Chemistry
Building Construction	Commerce	Clothing & Textiles
Electronics	Economics	Food & Nutrition
Engineering Science	Financial Accounting	French
French	French	Health Science/Biology
Further Maths (Elective)	Further Maths (Elective)	Home Management
Metal Work	Geography	Horticulture
Physics	Principles of Cost Accounting	Management – In – Living
Technical Drawing	Shorthand	
Woodwork	Typewriting	

Other Technical/Vocational Institutions.

Apart from the Technical/Vocational Schools and the Senior Secondary Schools which offer compulsory Technical/Vocational subjects there are other government registered Technical and Vocational Institutions which have been placed in one of the three categories given below:

- A. Community Education/Animation Centers
- B. Technical/Vocational Centers (TVC)
- C. Technical/Vocational Institutes (TVI)

A fourth category, the Polytechnic which has been discussed at the Tertiary level was later added.

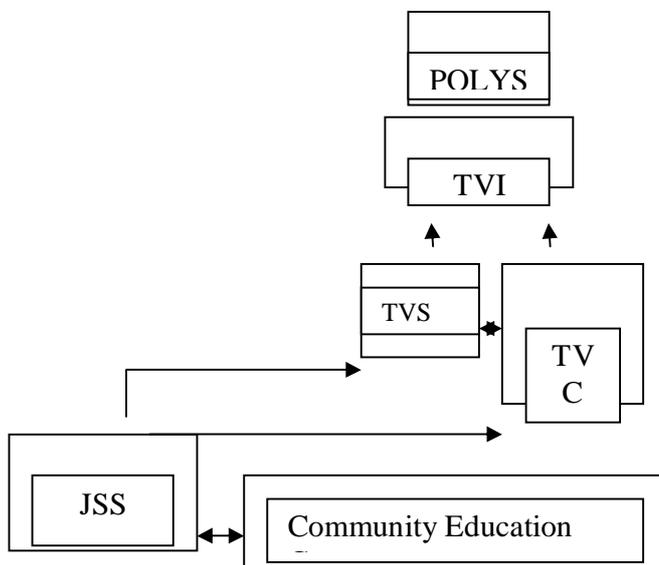


Fig. 1

Figure 1 shows the hierarchical nature of the Technical/Vocational part of the system and the overlaps between the different levels and type of institutes. It can be seen that Technical/Vocational Centres offer courses that may start at the upper Community Education Centre level and end at the lower Technical/Vocational Institute level. Similarly the Technical/Vocational Institutes may offer courses that start at the upper Technical/Vocational Centre level and end at the lower Polytechnic level, whilst Polytechnics may offer Technical Institute courses in addition to their higher level courses.

It is worth noting from the diagram that movement from non-formal system into formal technical/vocational education is possible through Community Education Centres, which offer both low-level formal and non-formal education programmes. The lateral relationships are also worth noting but it should be borne in mind that not all lateral movement possibilities are shown.

The category/level into which each institution falls has been determined by

- i. the philosophy/guiding principles under which the institutes operate;
- ii. the plans/potential of the institution;
- iii. the present standard of the institution in terms of courses, administration and staffing;
- iv. the student population
- v. the institution's facilities and programme of development;
- vi. the geographical location/catchments area of the institution and local demand especially with regard to population density;
- vii. the fit of the institution into the developmental plans of the nation

As a result of the above, the Ministry of Education, Science and Technology arrived at the following:-

A. Community Education/Animation Centre

Since these centres are level I institutions and they operate low level formal and non-formal programmes, the entry requirements for the courses they offer vary from no formal education to basic formal education, that is completion of Junior Secondary School (JSS). These centres are to follow the harmonise curriculum for community education centre in addition to literacy, numeracy and moral education and basic book-keeping. They also offer courses, which would qualify early school leavers to enter into trade/vocational centres. They train students in garadyeing, soap-making, sewing, hair-dressing, printing etc.

The duration of their training is between six months and twenty-four months and at the end of which successful students are given certificates of proficiency/participation. A newly

established Community Education Centre is required to serve a probationary period of two years as a private or unregistered centre under the close supervision of the Ministry of Education, Science and Technology and if at the end of that period the Ministry is satisfied with the performance of the centre, that centre will become a recognised centre thereby qualify for government assistance. This recognition is reviewed every two years. Other criteria for Ministry's recognition are:

- i. there must be a teaching staff of between five and twenty and must be qualified.
- ii. must have a reasonable and congenial building suitable for educational activities and sited satisfactorily for an educational institution
- iii. the minimum student population should be forty
- iv. at least two optional skills/trades must be offered

B. Technical/Vocational Centres

These are level II institutions. They operate programmes that may start at the Junior Secondary School level but extend to the post Junior Secondary School level. The main entry requirement is the number and standard of passes in BECE stipulated by the Ministry of Education, Science and Technology for entry into the centres. Ministry of Education, Science and Technology certified 'satisfactory performance' in the access course for girls and other Ministry approved TVC entry courses conducted in Community Education Centres are also acceptable. Satisfactory performance is as defined by the National Council for Technical and Vocational Education (NCTVE) or, in its absence the committee made up of the Director of the Educational Programme (chairperson), Deputy Director Technical/Vocational and Science, Deputy Director Secondary or Tertiary Division, Representative of Council of Heads of Technical and Vocational Institutions, Representative of Conference of Principals of Secondary Schools, Representative of Sierra Leone Teachers Union or appropriate union, and two others nominated by the Ministry of Education, Science and Technology.

For a Technical/Vocational Centre to be recognised by the Ministry of Education, Science and Technology thus becoming qualify for government assistance, the under mentioned criteria must be satisfied:

- a. there should be at least fifty students per session
- b. there should be adequate accommodation for the students
- c. should get a minimum of five qualified teachers to satisfactorily cover the discipline/trade.
- d. should have been in existence for three years and have served a probationary period of a minimum of one year under the supervision of the Ministry of Education, Science and Technology.
- e. availability of adequate basic equipment relevant to the course

Recognition is reviewed every three years.

The duration of the courses run by these Technical Vocational Centres ranges from one to three years leading to certificate and National Vocational Qualification (NVQ) up to stage III.

C. Technical/Vocational Institutes

These institutes offer a minimum of four disciplines/trades. These are level III institutions. They operate programmes that may start at the upper Technical/Vocational Centre level but extend beyond that level to tertiary level.

The main entry requirements are National Vocational Qualification (NVQ III) passes in the subject/discipline studied. Relevant passes in the West African Senior School Certificate Examination (WASSCE) are also acceptable.

For OND courses, the entry requirements are; identical or equivalent to those for entry into the 'technical' faculties/departments of the university and other tertiary level institutions.

For a Technical/Vocational Institute to be recognised by the Ministry of Education, Science and Technology, thereby qualifying for government's assistance, the following criteria must be met;

- a. there should be a minimum of two hundred students
- b. adequate accommodation to take two hundred students. The building should be suitable for educational activities and sited satisfactorily for an educational institution.
- c. a minimum of ten lecturers qualified for post secondary level;
- d. should have been in existence for at least five years and has been monitored by the Ministry of Education, Science and Technology;
- e. availability of essential equipment.

The recognition is reviewed every three years.

The duration of courses run by a Technical/Vocational Institutes ranges from one to two years leading to Ordinary Technician Diploma (OTD), Ordinary National Certificate (ONC), Ordinary National Diploma (OND) and the Higher National Diploma (HND) for students already with OND. The examinations are moderated, standardised and validated by the National Council for Technical, Vocational, and other Academic Award (NCTVA).

One note worthy development in this system as regard Technical/Vocational Institutes is in terms of weighting where theory is given more weight in junior and secondary schools than in Technical/Vocational Institutions. In the Technical/Vocational Institution the preferred theory: practical weighting are shown below:

- | | | |
|-----|-----------------------------|-----------|
| 1. | Community Education Centre | |
| | 20 – 30% | Theory |
| | 70 – 80% | Practical |
| 2a. | Technical/Vocational School | |
| | 50 – 60% | Theory |
| | 40 – 50% | Practical |
| 2b. | Technical/Vocational Centre | |
| | 30-50% | Theory |

	50 – 70%	Practical
3.	Technical/Vocational Institutes	
	30 – 50%	Theory
	50 – 70%	Practical

The purely Technical and/Vocational Institution has a broader curriculum that offers professional courses at different levels.

- Level I – Technical and/or Vocational or Trade Centre
- Level II – Technical and/ or Vocational Institutes
- Level III – Polytechnic

The courses offered in the various levels are related but at a different level which ranges from levels one to three. The following courses shown below are offered in institutions in levels I and II.

Agricultural Science

Crop Production

Agricultural Science

Home Economics

Catering

Foods and Nutrition

Clothing and Textile

Home Management

Creative Practical Arts

Printing

Decorating

Business Studies

Business Management

Business Administration

Commerce

Accounting

Computer Studies

Communication

Auditing

Secretarial Studies

Secretarial Duties

Shorthand

Clerical & Office Duties

Communication

Technical Studies

Mechanical Engineering

Electrical Installation

Motor Vehicle Mechanism

Carpentry and Joinery

Block Laying & Concreting

Auto Electrician

Air Conditioning

Refrigerator

Electronics & Electrical Engineering

Masonry

Metal Work and Welding

Marine Engineering

Plumbing & Sheet Steel Metal Work

Students in Technical/Vocational Institutes, Centres and Community Education Centres enter the world of employment after their training. The curriculum has therefore made provision for work exposure for every student in the formal level of Technical/Vocation training. Every institution is tasked with the responsibility of providing three months of training in the form of work experience for every trainee. The exact time of work experience is left with the institution to determine as long as the three months are achieved. The work experience must be monitored by the institution and reflected in the examination and certification process for each trainee.

In the Technical and Vocational arm of the 6-3-3-4 system of education, continuous assessment (CASS) is also important. It contributes forty to fifty percent towards the maximum score obtainable in each subject. The forty to fifty percent weighting of CASS is the same irrespective of the duration of the course programme. This means that whatever the course or subject the weighting of CASS score to examination score is 2:3 / 1:1.

For courses having duration greater than a year, the final year CASS is to have double the weighting of the earlier years. For example, for a two year course the weighting of the first year CASS to the second year CASS is 1:2; for a three year course the weighting is to be 1:1:2. For the modular course the CASS and the examination scores are combined using the approved weightings to give the module score. This means that for modular courses CASS and examination scores are combined during the course (i.e. at the end of each module) and not at the end of the course. The repeat year, CASS scores of students who repeat a class are to be utilized in the computation of their overall CASS marks. The CASS scores of the 'fail' year should be used.

Different weightings can be given to different components/areas of the syllabus by varying the totals obtainable for each area. For example, one area can be scored out of a maximum of ten, other in maximum of twenty and so on. The different weightings of practical work, relative to theory have already been given. Although for examination purposes the emphasis is on the assessment of cognitive domain, students assessment also covers the affective and psychomotor domains.

To help ensure the achievement of the Technical/Vocational education objectives and structures, government established a National Council for Technical and Vocational Education (NCTVE). This body among other things

- i. ensure, with the assistance of the National Curriculum Development Centre (NCDC) the development of a harmonised curriculum in all Technical/Vocational subjects at all levels. As a precursor to the production of the harmonised curriculum and syllabuses, a training needs survey covering industry and the rest of the employment market shall be conducted. The findings obtained shall serve as a parameter for the preparation of the National syllabuses which are to be phased in starting in the 1996/97 academic year. The harmonised curriculum and syllabuses are to help facilitate linkages between the various levels of learning and skills acquisition;

- ii. ensure, at the request of the Department of Education, the establishment of a National examination body for Technical/Vocational studies at the three levels of certification given above;
- iii. encourage networking and information flow between Technical/Vocational institutions;
- iv. encourage the development and exchange of teaching and learning materials at all levels;
- v. encourage the participation of Technical/Vocational trainees in rural development;
- vi. encourage and support a National apprenticeship scheme to enable trainees to become employable.
- vii. ensure the inclusion of aspects of entrepreneurship in the curriculum of all Technical and Vocational institutions;
- viii. set up an incentive scheme to attract more individuals to train as Technical/Vocational teachers;
- ix. in conjunction with the Department of Education, organise regular workshops to upgrade the knowledge and skills of staff members of Technical and Vocational institutions;
- x. sensitise the public, and in particular women's organisations, about the need for more women to take up Technical/Vocational education at the Formal or Non-Formal level (New Educational Policy For Sierra Leone, 1995).

The then Department of Education, Labour, Trade and Industry shall through the NCTVE:

- provide linkages for those learning on the job to upgrade their skills through short courses;
- provide opportunities for work placements which will enhance the practical experiences of trainees.

The NCTVE was later dissolved and was replaced by the NCTVA in 2001. The need for the NCTVA arose as a result the variety of courses being offered by the Technical/Vocational Centres and Technical/Vocational Institutes and the many certificates and diplomas awards from overseas examining bodies and differing standards. The National Council for Technical/Vocational and other Awards (NCTVA) is an independent body, which has also succeeded the Institute of Education, with equitable standards of assessment of performance and evaluation of courses and programmes. Among the justification for the establishment of the NCTVA are the following:

1. It will ensure that awards having the same name are of the same quality and standard.
2. It will ensure that awards offered by institutions overseas are properly validated.
3. It will standardise the proliferation of awards on offer
4. It will bring about much needed prestige and acceptability for certificates awarded by technical and vocational institutions.

The main function of the NCTVA is validation and certification based on reviewed principles, processes and regulations of the former Institute of Education. The NCTVA provides national and international validation service for a complete range of educational institutions – Technical/Vocational and other Awards

The NCTVA validates awards such as the;

1. Teachers Certificate
2. Higher Teacher's Certificate
3. Certificate in Technical Studies
4. Ordinary Technical Diploma/Ordinary National Diploma
5. Higher National Diploma/Higher Technical/Technicians Diploma and
6. Any other Relevant Qualifications.

The NCTVA sets its own examinations for Technical/Vocational awards up to the HND level. B.Ed. and other degree programmes offered by the polytechnics receive certification and validation through and by a university.

TERTIARY/HIGHER EDUCATION

Tertiary/Higher education is post-secondary education given in any of the following institutions:

- (i) A Polytechnic
- (ii) A College of Education
- (iii) An Advanced Teacher's College
- (iv) A School of Agriculture
- (v) A School of Forestry
- (vi) A Nursing School
- (vii) A Correspondence College
- (viii) A University/University College

The new education policy for Sierra Leone defines tertiary/higher education in Sierra Leone thus:

“Tertiary/Higher Education consists of all formal education received after the completion of secondary schooling in institutions demanding entry qualifications not

lower than a number of General Certificate Ordinary level/or Advanced Level or West African Senior School Certificate or NVQ 3 or their equivalent (P. 63)

The General Aims and Objectives of Higher Education are: -

The Students

- continuation, widening and deepening of the education gained in school;
- specialisation in one or more discipline of knowledge and skills for which the student has the aptitude and in which he/she has been given appropriate preparation in school;
- helping the student to gain the knowledge, skills and attitudes required for self-enchantment and to earn a living;
- continued development of the student in all facets of knowledge (affective, cognitive and psycho-motor);
- giving the student opportunities for enhancing creativity, originality, empathy, good work habits, and inculcating positive moral values, and self-reliance;
- helping the student have positive values towards Sierra Leone and other Sierra Leoneans, especially those of other ethnic groups;
- fostering in the student a consciousness that he/she lives in an increasingly interdependent world;
- fostering in the student a desire to continue his/her education after the course he/she is engaged in, and to pursue life-long education.

The Staffs and Institutions

- the teaching of knowledge, skills and fostering attitudes that are relevant to Sierra Leone as a developing country, and constantly up-dating the content and methodology of this teaching;
- examining students using the best and most appropriate methods and techniques for the subject, disciplines and levels and aims of the course;
- guiding the student to make full use of their aptitudes, abilities and interests and helping them to solve problems that militate against their full positive growth;
- doing research, especially in areas relevant to the socio-economic and other needs of the country and into problems peculiar to Sierra Leone;
- publishing and disseminating knowledge, especially new ones and those of value to Sierra Leone;
- contributing to the accelerated enhancement of literacy and the widening of educational opportunities in the country.

The New Educational Policy (1995) contains several underlying principles and considerations for this Policy on Higher Education. The most important of these are: -

- i) provision for highly qualified and specialised trained manpower for the machinery of the Nation. Higher Education must adjust to and help to bring about the aims and objectives of the 6-3-3-4 Reform. This system has as its primary goals:
 - the rapid enhancement of literacy in Sierra Leone and the improvement of the educational opportunities for women and girls, of those living in the rural areas and those now disadvantaged in the acquiring of formal education;

- the acquisition of knowledge and skills valuable and relevant for employment and self-employment;
 - the improvement and expansion of the teaching of mathematics, the natural sciences and technology;
 - a vast expansion of facilities and programmes to teach Technical and Vocational subjects;
 - the inclusion in the educational system of new subjects which will give and enhance a proper and positive understanding of Sierra Leone – such subjects as Indigenous Languages and Sierra Leone Studies;
 - the introduction of new and more appropriate methods of examining students to complement or replace the present methods;
 - the education of the whole student instead of a concentration on only his/her cognitive education.
- ii) Higher Education must pay greater attention to the provision of personnel and programmes to improve and expand Non-Formal and Adult education so that more quality administrators and tutors for these programmes could be turned out;
- iii) The Higher education system must be rationalised to avoid unnecessary duplication of courses and minimise wastage of resources and the time students take to qualify. This will be done in several ways including:
- the setting up of a system of accreditation whereby courses across institutions can be stringently evaluated and graded so that a student can be given ‘credits’ which/he could carry across levels, of programmes and institutions;

- the transfer of courses that are not economically or efficiently run from one institution to another where the course could be absorbed or added, to give greater value to the students and the Nation;
 - the merging of departments and units that are not viable or are wasteful (in terms of the staff/student ratio and the use of resources) with a similar but viable department or unit.
- iv) The system must minimise failures, repetition or the dropping out of students. This could be effected by better teaching, better structured curricula and syllabuses, remedial course and improved pastoral care. Investigations should be undertaken into more efficient ways of teaching and examining, and pedagogical methods should be continuously improved. All tutors and lecturers, who do not have teaching qualifications, should be given short courses to improve their teaching;
- v) The system must maximise the use of its expensive and scarce resources in personnel and equipment at a time when the whole system of education is expanding in the country beset as it is with economic difficulties. Teaching must be intensified and, whenever possible, courses made accessible to part-time students. More team research must be encouraged.

At present the components of Tertiary/Higher Education are:

- The University of Sierra Leone with its constituent colleges and institutes
 - Technical/Vocational Institutes/Colleges
 - Professional School outside the University (e.g. the Law School and the School of Nursing)
 - The Five Polytechnics: -
- (i) The Milton Margai College of Education and Technology comprising: -
- (a) Milton Margai College of Education, which is affiliated to the University of Sierra Leone.

- (b) The Technical Institute, Congo Cross
 - (c) The Hotel and Tourism Training Centre (HTTC), Brookfields
- (ii) Freetown Polytechnic comprising
- (a) Freetown Teachers College
 - (b) Government Trade Centre, Kissy
 - (c) Young Women Christian Association
- (iii) Bunumbu Polytechnic comprising:
- (a) Bunumbu Teachers College
 - (b) Government Technical Institute, Kenema
- (iv) Makeni Polytechnic comprising:
- (a) Makeni Teachers College
 - (b) Government Trade Centre, Magburaka
 - (c) Teko Veterinary Institute
- (v) Port Loko Polytechnic comprising:
- (a) Port Loko Teachers College
 - (b) St. Josephs Vocational Institute, Freetown

These five polytechnics were established between 2001 and 2002 in order to provide technical/vocational education of a standard above the existing Technical/Vocational Institutes. The rationale for the establishment of the polytechnics include the following: -

1. There were too many small tertiary institutions with separate full-scale administrative components. Large administrative and logistical support overheads in relatively small institutions imply dispersal of facilities and resources, poor economy of rent, lack of shared services, and therefore gross inefficiency and wastage. It is logical to pool of material, technical and intellectual resources such that purely technical skills are fused with appropriate pedagogical competencies to create viable and usable capabilities and knowledge.

2. The merger of institutions of purely technical/vocational nature with those of traditional pedagogical and humanistic disciplines increases the choice for prospective trainees and reduces the negative attitude towards certain disciplines.
3. The mergers of institutions involve review of courses and programmes for maximum and efficient use of time, personnel and scarce resources.
4. The merger of institutions makes it possible for polytechnics to offer a variety of courses otherwise not possible under a single institution.
5. The merger of teacher colleges and technical and vocational institutes improve the standard and quality of the skilled middle-level workforce. It results in the provision of better quality technical education as well as, hopefully, the availability of more well-trained, efficient and effective teaching personnel especially for subjects such as Mathematics, Integrated Science, Physics, Biology, Practical Arts and Electronics.

The Polytechnic Areas of Study and Specialization

1. Milton Margai College of Education and Technology

(a) Faculty of Education

- Language Arts
- Education
- Performing Arts/Practical Arts
- Physical & Health Education
- Technical & Vocational Education
- Teacher Education
- Community Development
- Home Economics
- Nursery & Infant Studies
- Sierra Leonean Indigenous Languages
- Religious Education

b. Faculty of Technology

- Construction and Civil Engineering
- Mechanical Engineering
- Automobile Engineering
- Electrical & Electronic Engineering
- Computer Studies
- Business/Accounting
- Community Development Studies

(c) Faculty of Science

- Mathematics
- Home Economics

- Agricultural Science
 - Basic Science
- (d) Faculty of Business Studies
- Secretarial Studies
 - Catering
 - Hotel Management
- II. Freetown Polytechnic
- a. Faculty of Education
- Language Education
 - Education
 - Social Studies Education
 - Agriculture & Marine Studies
 - Home Economics
 - Performing Arts
 - Physical Health Education
- b. Faculty of Technology & Vocational Studies
- Mechanical Engineering
 - Electrical Engineering
 - Construction & Civil Engineering
 - Community Development Studies
 - Clothing & Crafts
 - Hotel and Catering
 - Business Studies
 - Secretarial Studies
 - Computer Studies

c. Faculty of Science

- Mathematics
- Home Economics
- Agricultural Science
- Basic Sciences
- Social Studies

III. Bunumbu Polytechnic

a. Faculty of Education

- Language Arts
- Indigenous Languages
- Social Studies
- Pre-Vocational Studies
- Teacher Education
- Practical Arts & Performing Arts
- Physical Health Education

b. Faculty of Technical & Vocational Studies

- Basic Sciences
- Mathematics
- Agriculture
- Mechanical Engineering
- Religious Education
- Secretarial Studies
- Forestry
- Building Engineering Construction
- Electrical, Electronics & Telecomm Engineering
- Automobile Engineering
- Environmental Studies
- Community Development Studies

IV. Makeni Polytechnic

(a) Faculty of Education

- Language Arts
- Community Development
- Social Studies
- Teacher Education
- Technical & Vocational Education
- Religious Education
- Practical Arts & Performing Arts
- Physical Health Education

b. Faculty of Technical & Vocational Studies

- Mathematics
- Basic Sciences
- Mechanical Engineering
- Construction Engineering
- Electrical Engineering
- Automobile Engineering
- Business Studies
- Carpentry
- Agriculture
- Painting & Decorating
- Plumbing
- Block laying & Concreting
- Carpentry & Joinery
- Community Development Studies

- V. Port Loko Polytechnic
 - a. Faculty of Education
 - Teacher Education
 - Language Arts
 - Nursery & Infant Studies
 - Social Studies
 - Religious Studies
 - Home Economics
 - Physical Health Education
 - b. Faculty of Technology & Vocational Studies
 - Mathematics
 - Basic Sciences
 - Mechanical Engineering
 - Construction Engineering
 - Electrical & Electronics Engineering
 - Community Development Studies

The University

It caters for the production of high calibre top-level manpower needs of the nation. Unfortunately in terms of the quality of its processes and products university education has declined significantly. Failure and drop out rates have become disturbingly high and the numbers of graduates produced by some department have been called into question. As an example, it is worthy to note that for the year 2000 and 2001, only four students graduated from the Engineering Department at Fourah Bay College (the New Era Newsletter 2003 p. 4).

There is also a significant disparity between enrolment into the Arts and Humanities courses relative to enrolment in the Science, Technical and Engineering courses. Without a population literate in science and technology our development/growth will forever remain stunted. This

being the case various initiatives have been taken to attract more students to the study of science and technology. The initiatives include: the introduction of modular courses, access courses for the Engineering and Science Departments of Fourah Bay College and some areas too at Njala University College and the MMCET, positive discrimination in favour of science and engineering students in the award of scholarship and grants-in-aid, the rehabilitation and refurbishing of laboratories in schools and colleges, the purchasing and supply of large quantities of science equipment and reagents to schools and colleges and the production of science practical manuals for schools. (“The New Era Newsletter” February 2003. Page 24”)

Despite this, Fourah Bay College continues with its role in providing education in Pure and Applied Sciences with special emphasis on professional career development in Engineering, Technology, Law, Art and Behavioural Sciences. Whilst Njala University College continues to play its traditional role in promoting the sciences and teaching of Agriculture, Home Economics and Environment.

Admission Requirement At Tertiary Level

All of the components of the tertiary level demand a variety of entry and matriculation requirements for students proceeding from the secondary level. The West African Senior School Certificate Examination (WASSCE) is the terminal public examination of the senior secondary school. The terminal examination for technical/vocational schools (TVs) and technical/Vocational Centers is the National Vocational Qualification Stage 3 (NVQ 3). Both WASSCE and the NVQ3 are used for entry into tertiary/higher institution.

SSS, TVS and TVC students should contact the particular institution they intend to enter for specific matriculation requirements before they choose the combination of subjects they want to offer in the WASSCE and the NVQ3. Their Guidance Counsellors should also advise them on the issue.

(i) **The University Of Sierra Leone**

Under graduates/degree courses, normally last for at least four years for candidates entering straight from SSSs, TVSS or TVCs. Such students are to possess not fewer than five subjects (including English Language) at credit grade or better. Most faculties also require a credit in mathematics. Other subjects should be chosen to meet the specific requirements of both the faculty and the relevant department. Students entering from Technical/Vocational Institutes with ONDs will enter the relevant “Technical Faculty or Department at Year II depending on the class of diploma/number of credit point earned”. Students entering for the Polytechnics with HNDs, will enter the relevant “Technical Faculty or Department at Honours I depending on the class of diploma/number of credit points earned”. For Certificate/Diploma courses the entry requirements are not normally as stringent as those for a degree.

The Institute of Public Administration and Management (IPAM) though part of the university, is a special case, as it also offers courses for examination set by external overseas bodies. Such bodies have their own entry requirements and these must be met. The NCTVAA have communicated with these bodies so that the technical qualifications mentioned above are considered for inclusion as requirements for candidates from Sierra Leone.

(ii) **The Milton Margai College of Education and Technology (MMCET)**

Milton Margai College of Education and Technology which is affiliated to the University of Sierra Leone for its Bachelor of Education Degree, offers a three year programme in mainly technical and commercial subjects, guidance and counselling and administration which are important areas needed for the successful operation of both the Junior Secondary School and Senior Secondary School classes. Entry requirement for this degree is at present a combination of a professional educational qualification, especially the Higher Teachers Certificates (HTC) and a number of years of authenticated classroom experience. In the near future prospective students will be allowed to enter the degree programme in technical subject with OND and HND as well as with WASSCE and NVQ Stage III. Those with good OND and sufficient credits will be required to complete two years of further study for the degree whilst HND holders with sufficient credits will be required to complete a year of further study for the

degree. Degree holders with sufficiently good classes of degree can move on to post-graduate studies.

MMCET is a polytechnic and as such entry requirements are designed to allow movement between its teacher training and technical arms.

(iii) **Polytechnics**

The Higher Technicians Diploma (HTD) and Higher National Certificate (HNC) and Higher National Diploma (HND) shall be the main external examinations on offer at the Polytechnics. The examinations shall be conducted by the Polytechnics themselves having satisfied the National Council for Technical, Vocational and other Academic Awards (NCTVA) about the quality of the syllabuses and the standard of the papers. As indicated in the preceding section, the National Council for Technical, Vocational and other Academic Awards (NCTVA) shall be responsible for validating the examinations and granting certificates and diplomas at the polytechnic level.

For the HTC course, the entry requirements are similar to those of the teachers colleges, which are at least four subjects with credit or better at WASSCE that should include English Language, or NVQ3 passes in relevant subjects.

For work done in a review of the tertiary level came recommendations that have led to the establishment of a Tertiary Education Commission (TEC). The TEC has as part of its duties and functions:

- a. Considering estimates and expenditure (budgeting) of each tertiary institution in the country.
- b. Monitoring the academic programmes of each tertiary institution with a view to ensuring that their respective programmes are not at variance with the overall socio-economic aims and aspirations of the country.

- c. Acting as a depository of all academic and non-academic programmes of every Tertiary Institution in Sierra Leone.
- d. Advising and recommend when necessary on any detected lapses in the performance of any Tertiary Institution.
- e. Ensuring that there is no discrimination or undue influence in the recruitment of students or the recruitment and promotion of staff.
- f. Advising, monitoring and ensuring parity in the terms of conditions for appointment and promotion of staff for the Universities and Polytechnics.
- g. Acting as a depository of all rules and regulations binding the conduct of students and staff of each Institution.
- h. Recommending to Government any punitive measures against any infractions by any Institution within its jurisdiction including withholding of its support.
- i. Approving the establishment of New Universities, Polytechnics, or New Campuses, subject to the concurrence of the Ministry of Education, Science and Technology.

Among the justifications for the establishment of the TEC were the following: -

- (i) It will ensure relevance of tertiary education to our national needs
- (ii) It will make tertiary education more responsive and answerable/accountable to the Sierra Leonean public
- (iii) Ensure parity in the quality and standard of products in the various institutions at the tertiary level.

- (iv) There will exist a structure for direct discussions and negotiations with government and other sponsoring bodies on behalf of all tertiary institutions.

The above are just the forerunners of the changes planned for tertiary education. For this country to meet the challenges of the 21st century, just a single university with a unitary structure will not suffice. Changes have to be made that will better enable the country to meet its manpower needs both in quality and quantity and hence meet the demands of government, industry and the general populace. It is with this in mind that two universities have been proposed – the University of Sierra Leone – South, and the University of Sierra Leone – West.

The University of Sierra Leone – South is to comprise of:

- (i) Njala University College,
- (ii) Bo Teachers' College
- (iii) Paramedical School, Bo
- (iv) School of Hygiene, Bo
- (v) Affiliate – Bonthe Technical College.

The University of Sierra Leone – West is to comprise of:

- (i) Fourah Bay College
- (ii) College of Medicine and Allied Health Sciences
- (iii) Institute of Public Administration and Management,
- (iv) Affiliate – School of Nursing.

Relationship/Linkage Between Technical/Vocational Institutes, Teacher Colleges and the University

1. Lateral movement between Tech/Voc Centres (TVCs), Tech/Voc Schools (TVSs) and Senior Secondary Schools (SSSs) is possible for students possessing the requirements for entry. Because of differences in the curriculum etc. at this level, lateral movement cannot take place into the final year of another institution.

2. Students from TVCs, TVSSs and SSSs can enter any tertiary institution provided that they possess the entry requirements.
3. Lateral movement between tertiary level institutions is possible for students possessing the requirements for entry. Lateral movement into the same year (including final year) of another institution is possible provided that the institution is satisfied that the curriculum and the regulations make this possible and the institution is satisfied that the student can cope.
4. The OND year, HTC year and Year II of the University are taken as equivalent. The entry requirements for these courses are to be equivalent. OND and HTC holders moving to the University should enter in Year II unless their numbers of credits/class of certificate suggest that it would be to the student's advantage to enter Year I.
5. Lateral movement at Sub-Level II of tertiary education is possible. HND and B.Ed. holders as well as B. Eng. (Hons) holders with the required number of credits/high enough class of degree or diploma can apply for postgraduate study places at the university. HND and B. Ed. (Tech) holders wishing to do the B. Eng (Hons) degree qualify for admission to the Hons. I year of the degree depending on the number of credits/class of qualification they possess.
6. All movements not specifically explained above are as indicated on the diagram. [See Appendix A].

The 6-3-3-4 system of education introduces a number of innovative ideas, which are designed to enhance national and individual educational goals and aspirations. Continuous Assessment (CASS) and Guidance and Counselling are too such innovation.

Continuous Assessment and Guidance and Counselling

Continuous Assessment

Continuous Assessment is a method/system of educational evaluation in which an individual's achievement and/or progress is regularly monitored with the intention of achieving the aim and objective of CASS.

The guiding definition is that given in Howarth, R.E. (1991) that is “a formative evaluation procedure which finds out in a systematic manner the level of mastery that a pupil has attained in knowledge, skills and attitude after a given set of learning experience”.

Continuous Assessment as planned, is hence:

- (i) Systematic – that is planned and carried out at specific intervals
- (ii) Comprehensive – i.e. (a) focuses on the whole person (the cognitive, affective and social, and psychomotor); (b) involves a variety of methods of testing/assessment.
- (iii) Cumulative – i.e. allows the summation and utilization of scores obtained over a period of time.
- (iv) Guidance – oriented i.e. allows progress checks and provides records that can be used for guidance and counselling purposes.

As a result of the guidance-oriented nature of continuous assessment, the Guidance Counsellor and the teacher designated to be in charge of continuous assessment must of necessity work very closely together.

Continuous Assessment is however not new in Sierra Leone, it is practiced to varying extent in many Schools, Colleges and the University of Sierra Leone as these institutions used weekly tests, monthly/quarterly, end-of-year exams in determining the educational progress of each student, employed a form of continuous assessment.

The systems of continuous assessment that is now being practiced in the 6-3-3-4 system is different in that for each given level, it is the same for all schools all over the country and its use is more frequent, rigorous and systematic.

Continuous Assessment, is a formative evaluation procedure which is now employed at all levels of the educational system, is used to guide the progress of each student and contributes to the scores used to determine NPSE, BECE, WASSCE, NVQ and Sierra Leone OTD, ONC, OND, HTD, HNC, HND etc.

Aims and Objectives of CASS

The main aim of continuous assessment is the production of an objective profile of the educational learnings, capabilities and aptitude of an individual, with regard to a particular range of subjects/curriculum and teaching/learning situations, over a specified period of time. For the profile to be complete, assessment has to encompass the affective and psychomotor as well as the cognitive domain.

The objective is to obtain a reliable picture of what an individual can do, and is likely to be able to do, in specific areas of endeavour. Greater reliability means that more confidence can be had when using the continuous assessment scores in placing an individual, and in making recommendations for further study and/or work.

When properly carried out, continuous assessment is able to give an objective picture of the attitude, conduct, behaviour, physical capabilities, educational learnings, intellectual strengths and weakness and aptitude of an individual during and over a period of his/her educational life. Continuous assessment therefore helps to bring about positive change in the individual and thus helps him/her realise his/her potential more fully and helps develop the society.

In order for the teacher co-ordinating CASS activities to function effectively, not only must he/she work closely with the Guidance Counsellor to monitor and help students deal with problems affecting their learning but also the teacher should form a CASS committee.

Continuous Assessment should be objective, positive, uniform (in standard of marking etc) and fair. In order to ensure that this is the case, teachers are trained in its use. In-service trainings are provided for practising teachers, whilst teachers in training have a greater and more relevant emphasis placed on continuous assessment in their courses, in measurement and evaluation, and educational administration. With this training, together with occasional workshop, teachers are adequately prepared for the job of CASS.

Successful implementation of continuous assessment is not only dependent on the expertise possessed by the teachers, but also on their integrity. Malpractices could result in a misleading profile of a student being obtained and subsequently wrong guidance and advice being provided. The result of this may well be frustration and failure on the part of the student, and a waste of finances and resources on the part of parent/guardian, school and state.

The use of continuous assessment has made it possible for the system to produce more accurate and objective picture of a student's strengths and weaknesses. Such a position has made it possible for teachers to better place the students and advice them correctly. This has helped to reduce the number of individual leaving the educational system as 'failures' and cut down on educational wastage.

Guidance And Counselling

When one examines an educational practice one finds that it has a two-fold significance. On one hand, it involves concern for the welfare of the child as a person – a psychological organism with wants, needs, motivations and ambitions that are peculiarly his own; on the other hand, the child lives in a social milieu which shapes and demands things of him. The school/institution is expected to help shape the course of the child's development – especially assisting students/pupils in developing their intellectual, social and vocational competencies.

Sometimes, these two concerns create problems in determining what is best for the child because not all social demands are easily adjusted to the inherent nature of the child. No matter how effective an educational programme might appear to be, its true value can only be measured in terms of the extent to which it reaches the individual child and helps him/her to

grow positively. Counselling for positive growth requires knowledge and understanding of the strengths and weaknesses of the individual that can only come through informed and careful study. CASS is able to provide some of the required information but needs a guidance counsellor to interpret the information provided and give good advice and guidance to the child. It is for this reason that one of the most important services that a good educational institution in Sierra Leone can provide its student population is that of guidance counselling. In fact “the New Educational Policy for Sierra Leone” made it mandatory for each school to establish a Guidance and Counselling Department with two of its main members of staff being the Guidance and Counsellor and the Class Teacher. The Head of Department must be either the Guidance Counsellor or the Class Teacher. Every teacher in the system is an Assistant Guidance Counsellor or Assistant Class Teacher in his/her own right. He/she must therefore be familiar with all class procedures and requirements not only to improve his/her own work but also to better help his/her students and their parents/guardians.

The difference between the terms Guidance and Counselling has been a subject of debate even among specialists. Some assert that guidance is a broad term usually applied to a total school/institution programmes of activities and services aimed at assisting pupils/students to make and carry out adequate plans and to achieve satisfactory adjustment in life.

Counselling on the other hand is usually viewed as one part of guidance services. It focuses on a communication process to help individuals overcome obstacles to their personal growth.

Guidance & Counselling is therefore centred to the success of the 6-3-3-4 system of education. It helps teachers to make the curriculum more relevant to the student and also helps each educational institution to achieve its goals.

Aim

The overall aim of Guidance and Counselling is to provide systematic approach for a more effective education through the active involvement of the child in the educational process. Guidance is focused on the child as a learner in the educational setting of the institutions.

Objectives

- i) To help the young adolescents understand themselves and the world.
- ii) To guide them in assessing their environment as a basis for decision-making.
- iii) To ensure that the institution provides experience to support the child's progress toward becoming an adequate and integrated person.

Duties of the Guidance Counsellor

- (i) The school Counsellor must assume leadership in organising and implementing all aspects of the Guidance and Counselling programme of the school. He/she must be available to both students and teachers to provide a variety of services.
- (ii) In the new educational structure all children who complete the primary school proceed to JSS thereby given a hundred percent (100%) transition rate. The school Counsellor should conduct a comprehensive orientation programme in order to enable children from widely varied backgrounds to get a sense of belonging to the school. This holds true for pupils leaving JSS for SSS and for those leaving SSS for tertiary level.
- (iii) There will be different ability groups in each class, from slow learners to high flyers. Therefore the counsellor should administer a number of psychological tests and combine these with the records of the children's continuous assessment from the other schools/institutions. Students can then be grouped into fairly homogenous ability groups. The groups so constituted can proceed at different rates within the same class thereby ensuring a greater measure of success.
- (iv) The school Counsellor would be invaluable in providing educational guidance throughout the period he/she spends in the institution. Children need help with their study habits and examination techniques. Many will be in the process of deciding their vocational goals especially in readiness to proceed to institution at higher levels. The Counsellor should be able to direct students to specialise in subjects

consonant with their natural aptitudes and abilities and resolve dilemmas in which students are asked to do courses that neither correspond to their aptitude nor to their interests.

- (v) The counsellor should advise and encourage students on how to deal with the challenges they encounter in their lives.

The 6-3-3-4 reform calls for integral development of the child. All four major development areas of the student should be equally addressed. The Guidance Counselling Department is therefore the institution's mechanism, which should ensure that no one area lags behind at any stage during the student's programme. They include:

- i. The Psychomotor or Physical Development
- ii. Cognitive or Intellectual Development
- iii. Affective or Emotional Development
- iv. Socio-Moral Development

Guidance and counselling is an integral part of the total educational process. Because it is concerned with the development needs of the child, a number of individual or groups, apart from those already mentioned, have direct responsibilities for its functioning. They are:

- a. School Administrators
- b. Parents and Guardians
- c. Other Students
- d. Curriculum Development Personnel
- e. The Local Community
- f. Officials of the Ministry of Education, Science and Technology
- g. Referral Agencies

SUMMARY OF THE CHANGES IN SECONDARY EDUCATION BROUGHT ABOUT
BY THE NEW SYSTEM

- i. The Secondary School is now divided into two sections, Junior Secondary School and Senior Secondary School, comprising JSS I – III and SSS I – III.
- ii. Each section has as an end point and external examination, the BECE and the WASSCE, the former a national examination, and the latter an international one. The West African Examination Council administers both sets.
- iii. The Ordinary Level and Advanced Level General Certificate of Education Examination, have been abolished.
- iv. The grades for BECE and WASSCE are complemented by the marks obtained by continuous assessment for the whole period of secondary schooling.
- v. The curriculum offerings are comprehensive with special emphasis put on Mathematics, the Sciences, Vocational and Technical subjects and less on the humanities.
- vi. Sierra Leone Languages are being systematically studied and offered as subjects in BECE but not in WASSCE because of lack of trained teachers.
- vii. Guidance and counselling is now an integral part of every school and pupils are guided as to the best choice of subjects according to their ability and interests and the kind of employment they are best suited to do.
- viii. JSS forms part of the basic education of every pupil and measures have been taken to give every child in the relevant age range a complete programme of basic education.

- ix. Sierra Leone, its history, culture, geography, problems and opportunities are now being studied seriously in Social Studies at JSS and Sierra Leone Studies at SSS, to develop patriotism.
- x. Most secondary schools have become only Junior Secondary Schools; about fifty have become both Junior and Senior Secondary Schools; and a few specialist Senior Secondary School
- xi. Majority of the JSS graduates are being encouraged to enter vocational, technical and agricultural schools whilst the cream are continuing along the purely academic ladder to Senior Secondary Schools.
- xii. Wastage and repetition are now being minimised as much as possible.

Benefits of the 6-3-3-4 System

The advocates for the 6-3-3-4 reform have argued that according to the new structure the under mentioned advantages will be derived:

- i. It will teach students about the land and its importance to our economy, by giving students training in the rudiments of Agriculture and encouraging a two-way communication between those in the urban and rural areas, in the national languages. The 6-3-3-4 curriculum will also help them to understand and appreciate the diverse rich cultures of Sierra Leone, which are best manifested in the rural areas.
- ii. The 6-3-3-4 system will develop in students the beginnings of the skills required by our much needed middle-level manpower.
- iii. The 6-3-3-4 system, as it caters for the technical, commercial and vocational interests of pupils, will facilitate the movement from school to meaningful employment.

- iv. The 6-3-3-4 system will make our students “realise their own, recognise their own, and patronise their own”. For too long, following the trauma of colonization, they have marginalised the country, centering the positions on Europe and the West. The result has been the inculcation, in our youths, of a massive inferiority complex, destroying their self-image.

CHAPTER IV

METHODOLOGY AND DESIGN

This chapter describes: (a) the research perspective of the investigation, (b) the research design and subjects, (c) the procedure, and (d) the limitations of the study. The chapter has been arranged under the headings mentioned above.

Research Perspective

The research method, which was fundamentally qualitative, was modelled after the orientation of “Interpretive Interactionism” as prescribed by Denzin (1989). The interactionist mode of enquiry was predicated on, but not limited to, the following assumptions as Jacobs (1987) acknowledged:

- 1) Human actions are goal-oriented, and these actions are relative to the meaning given to the object or situation (Blumer, 1969).
- 2) Human beings derive and establish meanings from situations through interaction with their physical and social ecology. Meanings to object or situations are, therefore, socially extracted, externalised or divulged. “The meaning of a thing for a person grows out of the ways in which other persons act toward the person with regard to the thing. Thus meanings are seen as social products” (Jacobs, 1987, p. 27).
- 3) Though meanings are formed through social interaction, individuals constantly alter and transform meanings based on the nature of the situation. Interpretation is, therefore, perceived as a formative process during which meaning is constantly utilized and altered to qualify actions.
- 4) The individual and his/her environment are two inseparable entities. In order to understand one completely, the other must be adequately understood. “It is the social process in group life that creates the rule, not the rules that create and uphold the group” (Blumer, 1969, p. 19).

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Since the purpose of this study was to define, analyse and evaluate the relevance of the secondary school and Technical/Vocational Institutes curricula in terms of the middle level manpower needs of the country, the “Interpretive Evaluation” perspective was brought to bear on the investigation. The focus of the investigation was analytic rather than prescriptive, according to Denzin (1989).

Interpretive Interactionism speaks to this inter-relationship between private lives and public response to personal troubles....

At the applied level, the interpretive approach can contribute to evaluation research in the following ways (see Becker, 1967, p. 23). First, it can help identify different definitions of the problem and the program being evaluated. (pp. 10 – 11).

The interactionist tradition, therefore, focuses on behaviour that reflects the participant’s point of view, with a view to understanding the processes by which individuals orient their actions, develop options and give meanings to situations and human actions. Within this vein, interpretive Interactionism considers every human situation as unique, novel, emergent and characterised by a multiplicity of meanings and interpretations. Consequently, the researcher cannot completely divorce himself/herself from the problem under investigation (Denzin, 1989; Gadamer, 1975; Silverman, 1975; Becker, 1976; Heidegger, 1962).

Value-free interpretive research is impossible. This is the case because every researcher brings pre-conceptions and interpretations to the problem being studied (Heidegger, 1962; Gadamer, 1975)... All scholars are caught in the circle of interpretation. They can never be free of the hermeneutical situation. (Denzin, 1989, p.23)

Accordingly, interpretive Interactionism is deeply rooted in the quest for the interpretation and expression of subjective human experiences. The interpretive researcher is not only an interpreter of human situations, but also a participant in the social world who constitutes and embodies part of its meanings (Denzin, 1989).

In this study, the researcher endeavoured to utilise this orientation in an attempt to enter the social context in question, actively observe and give meaning to the curriculum processes at the secondary level. The strategy has been in line with Mills' (1959) assertion:

The most admirable thinkers within the scholarly community.... do not split their work from their lives.... What this means is that you must learn to use your life experiences in your intellectual work.... they want to use each for the enrichment of the other. (p. 195)

The function of the qualitative methodology was to uncover or unfold the essential qualities of the curricula in use; to interpret the significance of those qualities and to provide a reasoned evaluative judgement relative to the national development needs of the country (Sherman & Webb, 1986).

Design and Subjects

In an effort to integrate multiple perspective analyses, and to provide adequate complementary data, the framework for collecting data in the study was triangular. The procedure for collecting data was structured to incorporate:

- a) Participant observation,
- b) Semi-structured interviews with predetermined participants,
- c) Surveys in the form of questionnaires to schools, institutes/colleges and examination of pertinent primary documents.

Participant Observation

In carrying out this observational research, the researcher took the following into consideration:

- (i) That the observational method if used properly, overcomes the limitations of the other methods with their reliance on self-reports in which respondents often bias the information they offer about themselves. Sechrest, for example has argued that

social attitudes such as prejudice, should be studied by means of naturalistic observation, since self-reports of these attitudes are often biased by the set to give a socially desirable response¹². Even when bias is not present in self-report data, the observational method usually yields more accurate quantitative data than could be obtained by self-report. For example, many educators have noted that in classroom discussions the teachers dominate the talk at the expense of student participation. But what are the actual percentages of teacher and student talk in these discussions? It is unlikely that teachers or students could provide accurate information on this question. However, an observational study in which an audio tape or video tape recorder was used could yield precise quantitative data.

- (ii) There would be need for the researcher to determine the degree to which the presence of the researcher would change the situation being observed. It is likely that for example in a classroom situation the behaviour of both teachers and students would change as soon as the researcher enters the classroom. If the researcher can observe very well from any other position or room without entering the classroom, that would be fine. If not it may be necessary for the researcher to visit the classroom a number of times before recording any observational data so that the class would become accustomed to his presence and will react normally when the research data are actually collected.
- (iii) It is not uncommon in observational studies to find the experimenter attempting to study complex behaviour pattern but finding that the more straightforward behaviours, which can be objectively observed and recorded, are only slightly related to the complex behaviours he wishes to study. Thus he is faced with the choice of getting objective data that is of little value because of its limited relationship to a complex behaviour of getting data more closely related to the complex behaviour he is studying but finding it of limited value because of its objectivity. Obtaining data related to complex behaviour that is objectively observable and yet pertinent to the problem requires careful planning.
- (iv) That there are descriptive, inferential and evaluative observational variables and that descriptive variables have the advantage in that they require little inference on the part of the observer and therefore they generally yield reliable data. Other

observational variables require the observer to make an inference before the variable is scored.

- (v) The confidence, uncertainty, confusion and anxiety are not behaviours, but rather are inference made from behaviour and that it is much harder to collect reliable data when observers are asked to make inferences from behaviour. To increase the chances of getting reliable data, the researcher/observer should get several examples of each variable.

The investigator carried out observation in four Secondary Schools, one Technical/Vocational Institute and a Polytechnic in Sierra Leone. Burns (1987). “Activity Structure of Lessons Segment” constituted the framework of classroom observation. The observation specifically looked for the curriculum processes as they were perceived and interpreted by the practitioners within the context of the classroom and other related educational settings. Since, generally, human behaviour is culturally patterned (Sapir, 1963), the investigator attempted to: -

- i) identify patterns that revealed relationships among instructional events, and the physical and social environments so as to facilitate in-depth understanding of events within the context of the educational processes and practices at the secondary/tertiary levels,
- ii) develop thick descriptions of social events (Geertz, 1973),
- iii) identify relationships between pedagogical events and external factors and considerations, such as textbooks use vis-à-vis classroom processes and ecology.

Since primarily, “persons in everyday life take actions together in terms of both the official and unofficial definitions of status and role” and secondly, “classrooms like all settings in formal organisations are places in which formal and informal systems continually intertwine” (Erickson, 1986, p. 128), the investigation attempted to identify disparity and incongruity between the official curriculum as prescribed, and the teacher’s ability or inclination to implement such directives.

The teacher-generated classroom events were appraised from two perspectives – intrinsic and extrinsic (McCutcheon, 1979). The intrinsic appraisal sought to assess the degree of relevance

between learning outcomes and the stated behavioural objectives of the teacher and the lesson, whereas the extrinsic appraisal sought to determine the extent to which the objectives of instruction were consistent with curricula prescriptions on the other hand and the (middle-level manpower) development needs of the country on the other.

Semi-structured Interviews

Interview as a research method is unique in that it involves the collection of data through direct verbal interaction between individuals. Why semi-structured interview?

The researcher's decision to use semi-structured interview and not the others that is highly structured and unstructured is based on the fact that it provides a desirable combination of objectivity and depth, and often permits gathering of valuable data that could not be successfully obtained by any other approach. Apart from its objectivity it also permits a more thorough understanding of the respondent's opinions and the reasons behind them.

To ensure that the data collected using this method is correct and meaningful, the researcher took the following into consideration before and during the interview: -

- i. that adaptability gained by the interpersonal situation lead to subjectivity and possible bias
- ii. random sampling should be used in selecting sample of respondents and to avoid using small sample in order to avoid the dangers of a biased sample.
- iii. every effort should be made to obtain cooperation of all individuals who will be initially selected, bearing in mind that if any of them refuses to cooperate, it will certainly lead to some biasing of the research result.
- iv. the interviewer must be conversant with the interview procedure set and the procedure should be rehearsed.
- v. the number of subjects to be interviewed should depend on the time set aside for the process.
- vi. that the interactions between the respondents and the interviewer are subject to bias from many sources. Eagerness of the respondent to please the interviewer, a vague

antagonism that sometimes arises between the interviewer and the respondent, or the tendency of the interviewer to seek out answers that support his preconceived notions are but a few factors that may contribute to biasing of data obtained from the interview.

- vii. to develop a tentative guide which is to be used during the interview. This guide makes it possible to obtain the data required to meet the specific objective of the study and to standardise the situation to some degree. The form that the question should take depends on the level of structure of the interview i.e. the amount of direction and restriction imposed by the interview situation.
- viii. that each person is a product of an environment that is unique. Words recall different experiences and have different shades of meaning for each one. Unless the interviewer establishes a common ground for communication – a common frame of reference – these differences can seriously interfere with the communication process. If the respondent's frame of reference is different from that of the interviewer, his replies are likely to be misinterpreted.
- ix. that this technique is a highly subjective one and therefore the researcher must use all possible controls and safeguards if he expects to obtain reasonably objective and unbiased data.
- x. that before the formal interview begins, the interviewer should engage the respondent in a few minutes of small talk to help him relax and to establish rapport. The interviewer should also assure the respondent that all his statements will be held in the strictest confidence and be used for research purposes only.
- xi. that a pilot study should be carried out with specific objectives in mind and the subjects interviewed in the pilot study should be taken from the same population as the main study sample whenever possible and from a very similar population when research design does not permit drawing from the main study population. From the result of the pilot study the researcher will be able to determine whether the planned procedures actually produce the data desired. During the pilot study the researcher should also carefully assess the methods he has planned to use for quantifying and analysing his interview data.

Semi-structured interviews were conducted with officials in the following offices and institutions:

- i) The Ministry of Education, Science and Technology
- ii) The Director General's Office (Education) – Ministry of Education, Science and Technology.
- iii) The Deputy Director's Office (Secondary) - Ministry of Education, Science & Technology
- iv) Director of NCTVA
- v) Office of the Chairman Basic Education Secretariat
- vi) Office of the Coordinator of Milton Margai College of Education & Technology Polytechnic.
- vii) Principals and Teachers in six Secondary Schools selected from three regions.
- viii) Principals, Teachers and Students from Technical/Vocational Institutes

Informal interviews and discussions were held with students, teachers or/and principals from over twelve Secondary Schools and Technical/Vocational Institute and Centers. The investigator also interacted with members of the community at various stages and in varying degrees during the course of study. Employers who were participating in the job training exercise for students were also interviewed.

Survey and Document Examination

A survey was conducted through the use of questionnaires. Each item on the questionnaire was developed to measure a specific aspect of my hypotheses/objectives. Questions used were mainly closed so that quantification and analysis of the results can be carried out efficiently. The researcher tried to avoid asking questions that may in some way be psychologically

threatening to the person answering, and also to avoid leading questions, bearing in mind that if the subject is given hints as to the type of answers the researcher will prefer, there will be the tendency for him to give the researcher what he wishes. This tendency is especially strong when someone whom the subject is eager to please has signed the letter of transmittal that accompanies the questionnaire.

Pre-test exercise was carried out as a kind of preliminary check on the investigator's questions in order to locate ambiguities. A sample of individual was selected from a population similar to that from which the investigator selected his research subjects. The pre-test form of the questionnaire provided space for the respondents to make comments about the questionnaire itself. The technique employed to administer the questionnaire during the pretest was essentially the same used for the main study. The main exercise was carried out only after the researcher has checked the results of the pretest exercise, and was satisfied with the results as he received over 80% replies, some with comments, and necessary adjustments made.

Two hundred questionnaires, together with covering letters were sent to Teachers and Principals of fifteen (from a total of about two hundred and twenty) randomly selected secondary schools within regional categories with the exception of the Northern Region where serious schooling was not taking place. One hundred and seventy-two questionnaires were returned (representing 86% of the total sent). The researcher used structural corroboration to develop an insight to, explain and interpret educational processes as they emerged (McCutchem, 1979, Eisner, 1979).

Additionally, an examination of some government documents, policy statements, reports, recommendation and materials relevant to the educational policies and practices, at the secondary and tertiary level was effected. Documents studied were procured from the under mentioned sources:-

- i) The Ministry of Education, Science and Technology
- ii) The NCTVA
- iii) Educational artifacts such as test papers, Teachers' Plan Books and Official Memoranda

- iv) West Africa Examination Council
- v) Milton Margai College of Education and Technology

In addition, an analysis of data relative to the labour market, as reflected in both the government and private sectors was done. Materials were procured for this analysis from the Ministry of Development and Economic Planning, the Ministry of Labour, the Central Statistics Office and the West Africa Examination Council.

Procedure

The aim of this study is to ascertain whether or not according to the curricula of Secondary School and Technical/Vocational arm of the 6-3-3-4 educational system, the system is providing the country with quality middle level manpower and education for self reliance as they are two the of the aims of the system.

The researcher's main focus therefore is on the curricula of Secondary School and Technical/Vocational Institutes, which he believes is as significant as the strategies used in implementing them within the institutional setting. A multiple focus analysis was, therefore, used to assist in providing explanation for the content and process of curriculum implementation and evaluation at secondary level in Sierra Leone. (Secondary School should be interpreted to include Technical/Vocational Institutes).

The assessment involved five major phases: -

Phase I: This phase aimed at an analysis of government and related documents, national plans and reports that evinced the official policies on the secondary education in general and the secondary school curriculum in particular. At this level, the researcher conducted semi-structured interviews with curriculum developers and policy-makers at the secondary level of education in Sierra Leone. The investigator did not use structured interviews, based on the judgement that they have a potential for imposing unnecessary restrictions on the investigations.

On the other hand, semi-structured interviews would adequately provide for a combination of objectivity, flexibility and depth (Denzin, 1989). Based on that rationale, the following questions served as guide to the researcher during these interviews:

- i) How is policy conceived, articulated and promulgated?
- ii) What kind of changes relevant to the secondary school curriculum are proposed, and why?
- iii) What is the present policy direction of the Ministry of Education Science and technology relative to the secondary school curriculum?
- iv) What are the key policy recommendations, and how feasible are they?
- v) What approach or philosophy of development is divulged in policy statements?
- vi) What cultural, political and economic interests do these statements reflect?
- vii) How do the recommendations represent the middle level manpower needs of the nation?
- viii) What is the level of congruity or incongruity between policy as prescribed, and practical goals as identified?

Phase II: The activity included an analysis of the formally prescribed secondary school curriculum, specifically involving a detailed examination of the official syllabi, their goals and objectives and instructional context.

Phase III: The phase, at this level, incorporated an examination of the curriculum in use, curriculum content, and pedagogical practices. This phase was primarily achieved through classroom observation in three schools and one Technical/Vocational Institutes. The aim at this stage, was to provide an explanation for 'how curriculum policies were interpreted and the level of implementation' and to determine the nature and type of relationship between policy and practice. The data were primarily collected through observation in three schools and one Technical/Vocational Institute within a twelve-week period: two schools from the urban area and one school and one institute from the rural area.

These institutions were randomly selected within predetermined regional clusters. A selection process based on regional differentiation was used because of the wide variety of demographic

and economic differences between rural and urban lifestyle in Sierra Leone; differences which in turn would influence curriculum implementation and content relevance.

The observation was centered on three specific classes – JSS III, and SSS II and III whilst at the institute, second year students were observed. These classes were selected primarily because (a) JSS III represents the end of basic education whilst SSS II accounts for the highest drop-out-rate within the education system. (Sierra Leone Commission on Higher Education, 1998). Second year students were selected in the institute because they were getting ready to go into the world of work, either as employee or self-employed.

Both the observations and the interviews had as their focus a means of providing answers to questions such as:

- i) What deviation from, or modification to, the official syllabus was present at the classroom level?
- ii) How were the official curriculum policies translated into practical instructional devices in different classroom situations?
- iii) What curriculum controls or safety valves were placed on administrators and practitioners?
- iv) What were the major constraints that reduced or impeded compliance with set policies?

The procedure for recording and storing observational data was predicated on that of the narrative system of observation (Everston and Green, 1986). Plans to use a combination of the narrative and technological systems (Everston and Green, 1986) were abandoned because of the social conditions that prevailed during the course of the study.

Phase IV : The researcher examined the two most recent national development & development plans within a ten-year period and other related documents in order to identify not only the sequence but also elements of consistency and trends in economic planning which would have bearing on secondary education. Since economic and development planning was done in phases, a five-year development plan by itself would not reveal the trend in economic

projection or planning. By closely examining two five-years development plans, the researcher could identify the basic middle level manpower needs of the nation. The investigator further observed the general life style of Sierra Leoneans with particular focus on: health, basic consumer needs, commerce and industry.

In an effort to investigate manpower needs assessment within the framework of national development, the study used the following questions as guide in each of the previously mentioned categories:

- i) In what areas do critical needs in human resources exist?
- ii) How are these needs currently met?
- iii) How is training, if any, provided at the secondary level to initiate an offset in the imbalance between actual needs and available skills?
- iv) In what areas do excesses in human resources needs exist?
- v) How does the excess factor in unproductivity and unemployment?
- vi) How are these critical-need areas reflected in the National Development and Economic Plan?
- vii) How are these critical-need areas reflected in the secondary school curriculum?

Data collection was based and sequenced as shown in Table 3.

Table 3
SEGMENT OF INVESTIGATION

SEGMENT I	SEGMENT II	SEGMENT III	SEGMENT IV
Initial visits to secondary school/institute Informal interviews with school/institute administration and teachers/lecturers.	Final determination of school/institute selection for observation.	Interviews with heads of selected schools/technical vocational institute	Examination of relevant documents, and statistical data on economic/development planning.
Examination of relevant curriculum materials.	School observations.	Interviews with teachers/lectures.	Initial contact with economic/development planners
Primary examination of policy statements on secondary school curriculum	Follow-up meetings with key-officials associated with curriculum planning and implementation.	Further secondary school/institute observations.	Preliminary review and analysis of economic/development objectives
Initial meeting with officials relative to information on the secondary school/institute curriculum	Re-examination of curriculum policy documents at the secondary level.	Examination of educational artifacts.	Informal observation of business activities.
Informal conversations and interviews with curriculum specialists.	Examination of syllabi and available current artifacts.	Interviews with selected educational planners.	Interviews and conversations with economic planners and Labor Department officials.

The segments of the investigation described earlier, were not necessarily super-imposed or of inviolable rigidity. They were mere guidelines for a systematic approach to carrying out the study. The context within which the researcher operated, the realities of the time and environment impacted on both the sequence and intensity of the prescribed activities. However, the researcher strove for conformity to the guidelines as described.

Phase V: The investigator carried out an analysis and comparative evaluation of the results of phases I, II, III, on the one hand, and phase IV on the other hand. The three orientations to curriculum evaluation (Aoki, 1985) provided the strategic framework in which the study advanced at this level. This guide provided a strategy to identify, explain and interpret educational processes and their relationships. In an attempt to transcend the one-sided, traditionally dominant focus on curriculum evaluation, the study was bolstered by the tripodic paradigms postulated by Aoki:

- i) Ends-means (Technical) Evaluation Orientation,
- ii) Situational Interpretive (Phenomenological) Orientation,
- iii) Critical (Theoretical) Evaluation Orientation

Analysis of data was done based on “the six steps” of the interpretive process (Denzin, 1989): (a) Framing (b) Deconstructing, (c) Capturing, (d) Bracketing, (e) Constructing and (f) Contextualising. These six steps were built into the investigative process in order to bring the phenomenon under investigation into sharper focus, and to provide for the identification and analysis of material and furnished a foundation for profound understanding and valid interpretation of actions and situations.

The general assumption of the investigation was that education would be a central factor in the socio-economic development of a nation, and that a knowledge as well as skill-oriented curriculum at the secondary school level would invariably constitute a driving force and a determining factor in the educational policy and programmes of a developing nation.

Limitations

Some relevant information and statistical data were not readily available as they were destroyed during the ten-years of rebel war. In cases where they existed, they were not up-to-date. The researcher therefore attempted to make reasonable projections based on the most recent trends. Documents pertaining to statistics and studies relevant to manpower management were not on the shelves. The researcher therefore endeavoured to use modified versions of theoretical framework and projections used in identical or similar studies pertaining to the subject under investigation.

Generally, information that was for some reasons considered politically sensitive or embarrassing was treated and divulged with unusual caution and under implied oath of confidentiality. In fact some of the sensitive information the researcher managed to obtain through informal conversation with officials of government.

The researcher also experienced financial constraints in carrying out this research.

The movement of the researcher from one place to another was restricted as a result of poor transport facilities in the country.

CHAPTER V

FINDINGS

This chapter presents the findings of the investigation under the under-mentioned headings:

- (1) An overview of the Sierra Leone education system: Socio-economic context.
- (2) Sierra Leone manpower needs
- (3) The Secondary education philosophy and intended curriculum
- (4) The operational curriculum and pedagogical practices.

An Overview of the Education System

Socio-Economic Context

‘Sierra Leone which became a sovereign state within the British Commonwealth on April 27th 1961 lies on the West Coast of Africa. Its 210-mile seacoast extends from the border of the Republic of Guinea to the border of the Republic of Liberia. Inland, it has common frontiers with both countries. It covers total area of 27,925 square miles of which its capital, Freetown accounts for 256 squares miles and the provinces for 27, 669 square miles. The provinces are made up of the Northern Province, which accounts for 13, 925 square miles, the Southern Province, which accounts for 7868 square miles and the Eastern Province, which accounts for 5876 square miles. [See Appendix B] The total population is about 4.2 million out of which 53% is female and 47% male (based on 1994 estimates) with a projected yearly increase of 2.6%. Out of this, there is an illiteracy rate of about 80% and still higher for rural areas and among women (UNDP, 1998). This is on the high side and recognising the fact that no country can develop above the literacy level of its population and that the only route to literacy is through education, the government has made efforts to attack illiteracy. Adult literacy rate was only 20% and female literacy at 11% was the second lowest in the world. (“The New Era Newsletter”: 2003, p. 13).

From an administrative standpoint, Sierra Leone is a highly centralised bureaucracy with the primary legislative, judiciary and executive headquarters in Freetown and three regional sub-

headquarters in the Northern, Eastern and Southern Provinces. Move has been made to decentralise the system as Local Government Elections were held in May, 2004 and each area would be administered by its Local Government.

Before the rebel war in March 1991, the economy of the nation rests squarely on three major industries – Agriculture which includes Forestry and Fishing, Commerce and Mining. The mining of bauxite, diamond, gold and rutile, together with the cultivation of cocoa, coffee and tobacco accounted for the nation major export earnings. In 1993/94, agriculture accounted for 26% of Gross Domestic Product (GDP) followed by wholesale and retail trade with 18% and communication with 9% (Sierra Leone Gazette vol. ii 1999, p. 9). The government used to spend an average of a little over 20% of the total revenue on education during the period 1986 to 1988. During and after the rebel war the situation changed as the nations bread baskets (sources of revenue) were destroyed during the war. The country therefore depends on donors for about 80% of her revenue (Sierra Leone Gazette vol. ii 1999, p. 11). Between 1999 and 2000 government spent 59 Billion Leones on education. This shows an increase of 42 Billion Leones over that spent on education during the 1995 and 1996 school year. (Financing Technical/Vocational Education, D.B. Kargbo, 2001).

Sierra Leone has 2220 primary schools with a total pupil population of 937,270 and a teaching staff of 23,432, 235 secondary schools (Junior and Senior) with a total student population of 114, 078 and a teaching staff of 4,074 (“The New Era Newsletter”, 2003, p.13). From a mere four Technical/Vocational Institutes at Independence in 1961, the number increased to 61 in 1996 and 132 in the year 2000, with the regional distribution as shown in Table 4a.

Table 4A
TECHNICAL AND/OR VOCATIONAL INSTITUTIONS
IN SIERRA LEONE

THE NUMBER OF TECHNICAL AND VOCATIONAL INSTITUTIONS IN SIERRA
LEONE 1990 – 1996

Institutions	West	East	North	South	Total
Technical and/or Vocational Institutes	6	1	3	1	11
Trade, Technical and/or Vocational Centres	14	1	8	7	30
Community Education Centre	10	2	1	7	20
Total	30	4	14	15	61

Table 4B
THE NUMBER OF TECHNICAL AND VOCATIONAL INSTITUTIONS IN SIERRA
LEONE 1996 – 2000

Institutions	West	East	North	South	Total
Technical and/or Vocational Institutes	8	1	2	2	13
Trade, Technical and/or Vocational Centres	19	5	7	7	38
Technical and Vocational Schools	12	10	12	11	45
Community Education Centre	21	5	3	7	36
Total	60	21	24	27	132

The 132 Technical/Vocational Institutes has a population of 47, 375 students supported by 2369 lectures. According to data examined in the Ministry of Education Science and Technology, the increase in the number of Technical/Vocational Institutions is attributed to the inception of the 6-3-3-4-education system, which necessitated the establishment of Technical/Vocational Schools and Centers. [Report on the 6-3-3-4 system of education. (MESAT), 2000].

Formal education in Sierra Leone is characterised by six years of Primary education, three years of Junior Secondary education, three years of Senior Secondary education, hence six years of secondary education to be rounded off by at least four years of university education leading to a first degree, hence 6-3-3-4. There are other options for students who may want to continue their formal education outside of university. Primary education starts at the age of six and ends with the National Primary School Examination (NPSE) at the end of the sixth year. It is a broad based examination involving papers in Mathematics, Numeracy, Reasoning, Language Arts and General Studies. The West African Examination Council conducts the NPSE, which is a national examination. On successful completion of the examination pupils are sent to the Junior Secondary School of their choice to complete their basic education.

Formal education at the secondary level consists of two phases: (a) the Junior Secondary School phase which lasts for three years (JSS I – JSS III), and (b) the Senior Secondary School phase which has a three year duration, (i.e. SSS I – SSS III). The JSS, which is the final part of Basic Education, continues the educational development of the pupil started in the Primary School. It is for pupils between the ages of 12 and 15 years, approximately, who are given a broad-based, general education in preparation for Senior Secondary schooling, Technical and Vocational education or the world of employment. A Basic Education Certificate Examination (BECE) conducted by the West African Examination Council on behalf of the Department of Education, Science and Technology in conformity with the approved syllabuses and regulations rounds off the JSS course. Pupils who complete the BECE and obtain the required grades move to Senior Secondary School and Technical/Vocational School. The Senior Secondary School continues and improves the student's general basic education, which contains an element of specialisation, enabling the student to further his/her education at a

university or a professional school. At the end of SSS III, students attempt the West African Senior Secondary School Certificate Examination (WASSCE). Successful students at that examination generally stand a better chance of gaining admission to tertiary institutions in Sierra Leone as well as in foreign countries where they will pursue a four year degree programme. Students who may not get the minimum requirement to enter tertiary institutions are absorbed into an “access programme” in those institutions and if at the end of the year they pass the final examination organised by the institution they are allowed to start their actual programme but if they fail, they are asked out of the institution. Students may quit the formal education system at any point without being subjected to legal sanctions or reprisals.

Apart from a few secondary schools that are under the direct jurisdiction of the Ministry of Education, Science and Technology of the Sierra Leone Government, the majority of secondary schools are categorised as Government assisted schools. The government pays the bulk of the teachers’ salaries to both government and government-assisted schools. Each secondary school has its own complete administration structure headed by a Principal under whom there are Vice-Principal, Heads of Departments, at least a Guidance Counsellor, Senior Teachers, Teachers and Non-Teaching Staff. Also each secondary school is being controlled by a Board of Governors of twelve members, five of whom represent the Proprietors and the remaining seven are appointed by the Minister of Education, Science and Technology. The Principal is answerable to the Board of Governors.

National education policies are formulated, promulgated and implemented by the Ministry of Education, Science and Technology. The Minister of Education, Science and Technology, is the political head of the Ministry. The Director General of Education (Administration) is the administrative head whilst the Director General (Education) is the professional head.

The school year comprises of three terms. The first term begins in September and ends in December, the second term begins in January and ends in April whilst the third term is from April to July.

Sierra Leone's Manpower Needs

In an effort to identify the manpower needs of Sierra Leone, the investigator undertook an analysis of the policy positions and recommendations of the Ministry of Development and Economic Planning, Ministry of Labour and the International Labour Organisation Jobs and Skills Programme for Africa (ILO/JASPA). In addition, interviews were conducted with officials of the Ministry of Labour and Ministry of Development and Economic Planning.

Agreement was evident between the product of the interviews with officials from both the Ministries of Labour and Development and Economic Planning and the recommendation and positions of both ILO/JASPA (1990) and the National Development Plan 1981/82 - 1986/87 of Sierra Leone Government. Four senior officials interviewed at the Ministry of Labour disclosed that the ILO mission's report which was endorsed by the Sierra Leone Government should constitute the blue print for policy formulation and implementation in manpower assessment, development and management.

The ILO/JASPA (1990) – Alleviating Unemployment and Poverty Under Adjustment: Issues & Strategies for Sierra Leone - identified the basic national needs and development in the various sectors of the society and economy. In addition, the ILO provided an analysis of varied macro-economic issues, which would have bearings on external trade, rural and urban migration, labour – intensive public works programme and education. The project focused on identifying trends, and making provisions for satisfying the employment needs of Sierra Leone as well as alleviating poverty. Substantial inadequacies in the available manpower pool were revealed.

The Ministry of Development and Economic Planning traced a path for economic development with particular attention to manpower development. In a document published by ILO in 1990, it was clearly stated that a major internal factor that contributed to economic stagnation and its concomitant catalysts to the under-development of Sierra Leone has been the “backwardness of agricultural technology, the low education and nutritional status of the rural labour force. The

factors mentioned above hold true for the present economic situation, which has been made worse by the ten-year rebel war.

Reliable data necessary for a systematic analysis of employment needs in Sierra Leone are not readily available. The ILO and the Ministry of Labour officials admitted that the available data on population and employment were based on estimations. Also the ILO report indicated that the policymaking and policy implementation process in manpower management had been woefully lacking and copiously erratic. The ILO, therefore, recommended 'comprehensiveness, consistency and transparency.

As part of government's overall poverty alleviation strategy and in order to prevent cost of examination preventing students making the transition from one level of schooling to the next, government has made it a policy to pay examination fees of all school candidates attempting the NPSE, BECE and WASSCE. Amounts paid for the year 2000 examination were as follows; NPSE Le544,626,240; BECE Le980,860,800 and WASSCE Le619,800,000 ("The New Era Newsletter", Jan. 2003, P. 20).

In an interview, an official of the Ministry of Labour disclosed that the Sierra Leone government did not have any policy for either alleviating youth unemployment or for tailoring the skills and knowledge acquired through formal education to the knowledge and skill that would be in demand in the labour market. The interviews also revealed that government had not embarked on a comprehensive analysis of the skills provided through formal education viz a viz the skills in the labour force. The official interviewed conjectured that unless a comprehensive and consistent policy was designed, the future of unemployed youths would continue to be bleak. The official further indicated that even if such a policy were in place, it would require a moral commitment by politicians, and their willingness to appropriate the economic resources necessary for its implementation and subsequent monitoring. It was however disclosed by the Vice President of the Republic of Sierra Leone, Mr Solomon Berewa in an interview with Radio Democracy FM 98.1D, on Sunday 18th April, 2004 that the government was in the process of putting together the "Poverty Reduction Strategy Paper" (PRSP) which would address mainly poverty and youth unemployment. He further stated that a broad-based committee had been formed to prepare the paper, and that the paper which

should be accepted by the World Bank should be submitted to it against the end of July 2004, failing which financial contributions from Donor countries would be discontinued. He also said that it was because of the concern for the youth that was why His Excellency The President of the Republic of Sierra Leone, Dr. Alhaji Ahmed Tejan-Kabbah thought it fit to establish separate Ministry of Youth and Sports which has as its main focus the youth.

Other measures taken by the government to address the problem of youth unemployment included:

- a) A Youth Enterprise Development Project supported by the Government with 46million Leones for twenty youth groups in the Western Area was developed to benefit over twenty-five thousand youth.
- b) A Youth in Crisis Project was implemented by Action Aid and including the construction of Brima Attouga Mini Stadium, for about fifteen thousand youth.
- c) The Government of Sierra Leone introduced the Micro Credit Scheme involving about One Hundred Million Leones for youth groups nationwide. Two Hundred and Fifty Thousand youth benefited. [The “New Era Newsletter” Jan, 2003 p.8].

Even though there is not a laid down policy on alleviating youth unemployment, the Ministry of Education, Science and Technology has taken certain measures in that direction. That quality of our education is still to a certain extent like the proverbial ‘vicar’s egg’ – good in some parts – much to be desired in others. One area that still leaves something to be desired is Technical/Vocational education. Realising that the problem lies in the dearth of trained and qualified teachers, equipment and a negative perception, the Ministry of Education, Science and Technology has through the ADB, the Chinese government and Sierra Leone governments’ own resource brought in significant amounts of equipment that have been distributed to Technical/Vocational institutes, schools and centres. (“The New Era Newsletter,” May 2003, p. 10)

Additionally, under the REBEP Project, approximately US\$7million was spent on rehabilitation and reconstruction of Community Education Centres and Technical/Vocational Centres countrywide. At the same time, a UNESCO expert came to restructure and streamline

Technical/Vocational education in the country. In an interview with the officials of the Ministry of Education, Science and Technology the investigator was told that all these measures stated above were taken because it appeared that if a recurrence of the ten year rebel war was to be avoided then a massive programme had to be started to provide skills training for youths. This also forced the government of Sierra Leone in collaboration with multi-lateral and bilateral funding agencies to start a programme for the training and re-integration of ex-combatants in the Disarmament, Demobilisation and Reintegration (DDR) programme. This programme was carried out alongside project undertaken by UNICEF and Action Aid called the Youth in Crisis Project, complemented by the US Government sponsored – World Vision Organisation which caters for the training of 60,000 youth nation wide.

The broadening of the curriculum at school level was an acknowledgement of the fact that not many are suited to the Grammar School type of education. Infact the Task Force Report that led to the introduction of the 6-3-3-4 indicated that, based on performance in the West African Examination Council examinations over the years only about 40% benefited from the grammar school type of education. In order to cater for the learning needs of all young people and adult, alternative education to serve all needs must be provided. Hence increased attention is now being given to Technical/Vocational education as manifested in the ADB II education programme through which equipment are to be provided for schools, Community Education Centers and Technical/Vocational Centers.

Statistics disclosed by officials of the Ministry of Labour revealed that there was an obvious shortage of manpower in the agricultural sector as well as in the technical field. The officials also remarked that under the old system of education, very few schools provided vocational and technical training, the emphasis then at secondary school level was on academic exercise and as a result of that the country has excesses in clerical and white-collar human resources skills. With the introduction of the 6-3-3-4 system of education with its emphasis on technical/vocational areas, the official continued, one had expected that by this time there would have been a substantial increase in the labour market with people with technical/vocational skills. The most recent statistics collected revealed that there are still excesses in clerical and white-collar human resource skill, with only an insignificant increase of technical/vocational human resource skills, the official concluded.

The remarks of the officials of the Ministry of Labour were found to be consistent with the response of teachers and administrators to item number 20 of the questionnaire, “the time student spent acquiring skills (as opposed to knowledge) is adequate”. 58% percent of the respondents disagreed while 30% strongly disagreed. Inversely, when asked, “the time student spend acquiring knowledge (as opposed to skills) in my ‘subject area is adequate’ (item 22) about 40% of the respondent “disagree” 6% strongly disagree”, 38% “agree”, 3% “strongly agree” and 13% “not sure”.

The response to (item number 22) was not as supportive of the observation of the official of the Ministry of Labour. It should however be noted that teachers were almost evenly divided on the adequacy of the time students spend acquiring knowledge. On the other hand, over 75% of the respondents refuted the proposition that the time students spend acquiring skills as opposed to knowledge was adequate. During the observation exercise, the investigator found out that the problem with the time given for the acquisition of skills as opposed to that of knowledge was that all of the institutions observed, were without equipment and materials needed for the effective teaching of technical/vocational subjects and as such the time which should have been spent in using those materials and equipments in acquisition of skills etc, was use in the acquisition of knowledge. Assuming that the equipment, materials and other logistics for the effective teaching of technical/vocational subjects were available, the time allotted would have been adequate.

The response to item number 2 of the questionnaire: “The present curriculum is fundamentally skill-oriented” (42% ‘strongly agree’, 35% ‘agree’, 15% ‘not sure’, 7% ‘disagree’ and 1% ‘strongly disagree’). The response to item number 2 would suggest that the majority of teachers believed that the present curriculum was fundamentally skill oriented. At the same time over 70% of the teachers agreed or strongly agreed with the statement that, “The present curriculum is adequate in providing vocational skills” (item number 10 of the questionnaire) by responding 48% ‘strongly agree’ and 34% ‘agree’. Teachers were united in their response to item number 16: “The present curriculum is relevant to the nation’s development needs”. 41% ‘strongly agree’, 34% ‘agree’, 5% ‘strongly disagree’, 8% ‘disagree’ and 12% ‘not sure’.

The largest group of respondents believed that the present curriculum was fundamentally skill-oriented. In brief, the claim could be made that the teachers and administrators generally believed that: a) the 6-3-3-4 curriculum was somehow adequate, (b) it was fundamentally skill-oriented, (c) it was adequate in providing vocational skills and (d) it was relevant to the nations development needs, one of which is to provide the country with middle-level manpower.

It was also noted that there was shortage of labour in the agriculture industry in rural areas. This shortage became acute during and after the rebel war, as those who fled from the rural areas to the big cities during the war have refused to return to their villages. This exodus from the rural to the urban areas has increased the unemployment rate among urban youths (15 – 24). According to the National Development Plan and the ILO recommendations, the trend could be halted if aggressive manpower development strategies were instituted, especially in the formal/private sector.

ILO/JASPA (1990) indicated that the private sector would be a dominant source of employment in the nation. As of now the government is the major employer in the country but steps have already been taken to reverse this situation. The move to ‘Privatisation’ is one such step as the government has been forced to privatise some of its business ventures. Government is also encouraging both citizens and foreigners to establish businesses so that they could employ people. The findings suggested that there would be a remarkable exodus of manpower from the public to the private sector. Data from the ILO survey revealed that the private sector employed over 60% of the urban work force, and about 20% of the national labour force.

The ILO assessment noted that inspite of Sierra Leone’s abundant land resources, the Sierra Leonean people suffered from food shortages and at the same time were greatly dependent on large quantities of imported foodstuff. The findings also suggested that agricultural production in Sierra Leone was stifled by its subsistence orientation. In supporting the assessment of ILO, an official of the Ministry of Labour attributed the persistence of such an orientation to:-

- a) a lack of the basic skills and technologies needed for agricultural production
- b) inadequate training facilities
- c) stiff loan facilities and
- d) exodus of people from the rural to the urban areas.

Before the rebel war, the nation depended on its mining industries for its revenue even though the closure of the Marampa iron-ore mines in 1975 has sent a clear message to the Government of the potential weakness and unpredictable nature of the mining industry. With this questionable dependability of the mining industry, agriculture continued to be the primary employer of human resources in Sierra Leone. A year or two after the commencement of the rebel war the mining industry totally collapsed and the agricultural output decreased drastically. The ILO/JASPA in 1990 made the following observations which are still valid today: -

There is an urgent need to increase agricultural productivity to generate productive employment and income. This would make agriculture an attractive occupation for new entrants to the labour force and some of those who may have been retrenched or retired from the civil service. (p. 8)

The available statistics on distribution of population by occupation are shown below in Table 5.

Table 5
Population By Occupation

Activity	% of Total
Agriculture	85.1
Trader	3.7
Artisan	0.7
Tailor	0.8
Hunter	0.6
Fishermen	2.6
Others	6.5
Total	100

Source: ILO/JASPA (1990) p. 96

As a result of the rebel war, population drifted from the rural to urban area thereby causing a marked decrease in the figure for agriculture and a marked increase in the figure for trading commented one official of the Ministry of Labour.

The Government has indicated that agriculture was salient to the security and national development needs of Sierra Leone. It was also noted that the nation's quest for attaining self-sufficiency in the production of the primary staple food (rice) and other vital food crops such as cassava, millet, maize, cocoa-yam and groundnut was paramount. His Excellency the President, Alhaji Dr. Ahmed Tejan-Kabbah in his inaugural address informed the country that his government would make agriculture a priority area and would ensure that by the year 2007 nobody would go to bed hungry. This may be possible, but the researcher wishes to note that between December 2003 – March 2004 an alarming trend was evident. The principal staple foodstuff (rice) became scarce in the market and therefore its cost increased considerably, (from Le30, 000 to 60,000 per bag) an increase of 100%. The scarcity of this vital commodity and other agricultural produce though caused mainly by the drift of people from rural to urban areas was also caused by inadequate skilled manpower and technology in agriculture as well as a myriad of socio-economic and political problems. Observation of farming practices revealed that the traditional labour-intensive agricultural practices still persisted, as the majority of those who are working in the agriculture industry cannot afford to buy modern equipment. Seasonal unemployment resulting from long period of fallow, inappropriate technology, untrained and unskilled manpower were some of the impediment to increased employment and high agricultural output. Base on ILO assessment the solution to the unemployment problem in Sierra Leone could be largely determined by the development of agriculture in both the public and private sector. This view was supported by the President of the Republic of Sierra Leone, Alhaji Dr. Ahmed Tejan-Kabbah in a goodwill message to the nation over SLBS TV on Easter Day April 12, 2004, when he said that his government could not do it alone, he needed the cooperation of everybody if by the year 2007 nobody should go to bed hungry.

Apart from agriculture, there are other areas, which can absorb labour and lead to economic development. These areas were (a) commercial activities such as transportation and trading, (b) small scale industries as well as manufacturing, (c) tourism/arts and craft, all artisan

activities such as technical repair services, fabrication of farm tools, carpentry, masonry, house construction, metal-work, tailoring and mining. These areas were identified in the ILO/JASPA (1990). It must again be noted that as diamond was one of the main causes of the ten-year rebel war, the Government had downplayed the importance of the mining industry in the area of employment.

An official of the Ministry of Labour disclosed that apart from the lack of appropriate skill, another problem identified in each of the areas mentioned above was the inappropriate attitude towards work. Based on the informal sector survey one of the major problems associated with the initial establishment of a business venture in Sierra Leone was lack of the necessary technical skills and training, which I hope will be solved by the 6-3-3-4 system of education. One of the areas of the 6-3-3-4 system of education was to equipped pupils/students with the necessary training and skills that would help them to become self employed and therefore self-reliant. Thus it has been found out that apart from getting the necessary training and skills needed to establish one's own business, there are other obstacles as shown in the table 6 below:

Table 6

Problems In Establishing Business

Type of Problem	%
Lack of capital/finance	39.9
Suitable Premises	29.3
Technical know-how	20.5
Govt. Regulations	10.3
Total	100.00

Source: ILO/JASPA (1990, p. 131)

An official of the Ministry of Labour cautioned that the above statistics might have changed with the advent of the 6-3-3-4 system of education. He suggested that the percentage for technical know-how might have decreased whilst that for lack of capital may have increased.

During the course of study, the researcher observed a number of incidents involving work habits and attitudes that could be described as undesirable and counter-productive to national development. Such attitudes ranged from chronic tardiness to bribery and allied activities. Scheduled appointment for interview was frequently casually dismissed without notices or regard for the parties concerned. The observer also witnessed law enforcement officers accepting bribes instead of seeking prosecution for traffic offences and other violations. A government official admitted that poor work habits and inappropriate work ethics and attitudes were plagues, which have to be addressed if economic growth and productivity were to be increased.

The vocational orientation and preparation of the entrepreneur would impact greatly not only on the quality of the resultant product and services but also on productivity. The ability to absorb managerial and technical information and understand official regulations and their impact on the activities all have important bearing on the educational background of the entrepreneurs. Infact, their ability to impart training to either the unpaid family workers or apprentices is a function of the level of education.

It was observed during the investigation that even though there were so many technical/vocational institutes and trade centres to provide students/pupils with vocational skills and training, the majority of people were still getting such skills and training through apprenticeship. The traditional modes of operation that were identified in farming practices were also evident in commerce, home construction, technical repairs and other facets of life in Sierra Leone. The over reliance on the traditional system of apprenticeship would serve to ensure the propagation of customary (and sometimes archaic) practices. The table 7 illustrates the critical role played by business persons with only some secondary education.

Table 7**HIGHEST LEVEL OF EDUCATION OF ENTREPRENEURS**

<u>LEVEL ATTAINED</u>	<u>% OF ENTREPRENEURS</u>
No Schooling	42.5
Primary	10.5
Secondary	29.8
Technical/Institute	9.2
College	8.0
Total	100

Source: Daily Mail, Year Book (1996 P 100).

Innovation and training would constitute an inevitable channel through which modern practices and techniques could be siphoned into the national system. This could be made possible through the use of the present educational system, which is bias in favour of technical/vocational areas, and which caters for effective training of individuals.

The ILO survey in 1990 revealed that the highest level of education attained by about 70% entrepreneurs with some formal education was at the secondary level. According to statistics published by the “Daily Mail” of 5th June 1996, p.4, the highest level of education attained by about 50% entrepreneurs with some formal education was still at secondary level, even though the percentage has decreased. Great potentials for developing appropriate attitude toward work, and for orientating student’s occupational goals toward areas of national needs could exist at the secondary level. An ILO official disclosed that over 40% Entrepreneur has no schooling at all.

In summarising the findings pertinent to manpower needs of Sierra Leone, five major issues and problems were identified in the study:

- (1) a lack of vocational/technical orientation and requisite skilled manpower to accommodate growth in essential industries, (a) agriculture and fishing, (b) mining, (c) commerce; (d) small industries and manufacturing (e) tourism/arts and craft,

- (2) the absence of a comprehensive and consistent mechanism for identifying and satisfying manpower needs,
- (3) an over abundance of manpower in the clerical field,
- (4) widespread inefficiency, poor work habits and attitudes,
- (5) an absence of effective institution or mechanism for assessing and monitoring manpower needs relative to formal educational output.

The Secondary Education Philosophy And The Intended Curriculum

The secondary education philosophy was determined and analysed within the context of the official policy of the Ministry of Education, Science and Technology. The perceptions of the school principals (charged with the task of ensuring quality control and compliance) as well as those of the teachers (charged with implementing policies at the classroom level) were included in the analysis. Paramount in the analysis were: (a) The Sierra Leone Education Review, (1976), (b) The National Teaching Syllabus for Secondary Schools (National Curriculum Development Centre, 1985), and (c) The White Paper on Education Policy (1970) in which the most recent and comprehensive philosophy and policy on education in Sierra Leone have been divulged. The data analysed were garnered through:

- 1) examination of primary documents pertinent to secondary education,
- 2) interviews with policy-makers, educational planners, administrators and teachers,
- 3) questionnaires sent to school teachers and administrators.

According to the Sierra Leone Government White Paper on Educational Policy (1970), the present philosophy of education was officially espoused in August 1970 as a derivative of Article 26 of the United Nation's Universal Declaration of Human Rights. The Declaration, to which Sierra Leone subscribed, espoused inter alia, two fundamental principles: (a) Universal entitlement and access to education, and (b) education for the full development of the human personality.

Operationalising the underlying principles of this philosophy would entail a progressive modification (qualitative as well as quantitative) to the capacity of formal education. A

corresponding implication is that formal education has to be dynamic in terms of (a) responding to demographic expansion (in an attempt to provide access for all), and (b) responding to the dynamics – social, political, economic, etc. – of society (in an attempt to develop and attune man’s interactive capacities to the exigencies of his/her environment).

In the White Paper (1970) policy statement, the Sierra Leone Government admitted that embarking on a diversified curriculum would involve more government expenditure:

... a diversified secondary system will be more expensive than an academic secondary school system, since the equipment necessary for the effective teaching of technical commercial and agricultural subjects is much more expensive.... However, without such diversification it will be impossible for Sierra Leone to develop its economy and man the various services required by a modern state. (p. 4)

Three normative elements evolved from the analysis of this philosophical orientation:

- 1) The individual (whose access to education should be guaranteed),
- 2) The quality of education provided to the individual should ensure the full development of the human personality,
- 3) The type of education should be such that it would aid in developing respect for human rights, fundamental freedoms, etc.

This three-tiered philosophical encapsulation is indicative of a three-fold mission of formal education in Sierra Leone: (a) Guaranteed access to education so that the individual can (b) develop “self” with a view to (c) developing society at large. Within this framework, the philosophical foundations bear remarkable semblance to the Human Capital Theory (Fagerland & Saha, 1983). The theory postulates that the most efficient means of achieving national development in a society is through the systematic and consistent improvement of its human capital. In the same vein, the ideology shares a commonality with the social adaptation-reconstructionist orientation to curriculum design and development (Eisner, 1985). This orientation adheres to the notion that formal education would seek to facilitate the process of

adaptation, and at the same time enable students to acquire the skills and knowledge necessary for improving society.

The fundamental principles mentioned in the policy statement were further amplified within the context of the “General Aim” of formal education (ie, formal education was designed to provide opportunities for):

- (a) character development;
 - (b) the student’s interests, ability and aptitude;
 - (c) the manpower needs of the country: and
 - (d) the economic resources of the state, so that his education can be of use to the country and at the same time provide opportunities for him to be successful in life.
- (p. 2)

In brief, the philosophical base for formal education thus depicted would constitute the medium and instrument necessary for its product to be an integral part of society, harmoniously blending with his/her environment, and at the same time productively participating in it. Examined within the parameters of secondary education, the policy direction as stipulated, indicated a bent in favour of :

- (a) diversifying the secondary school curriculum in four subject areas – English, Math, Social Studies, and Science,
- (b) an accelerated expansion of formal educational institutions, and
- (c) establishing a Secondary School Inspectorate as a measure to ensure quality control.

Juxtaposing the policy directives with the perceptions of teachers and administrators, however, revealed some interesting discordance. In their reaction to the statement “Secondary School drop-out is now a national problem” (item number 27 on the questionnaire), 40% of the teachers and administrators ‘strongly agree’, 42% ‘agree’, 6 ‘strongly disagree’, and 4% disagree. Also, 10% of teachers and administrators responding to item number 30 (“the present secondary school curriculum contributes to school drop-out”) 10% “agree”, 2% ‘strongly agreed’, 50% ‘disagree’ and 38% ‘strongly disagree’. While also admitting that

“unemployment is now a serious socio-economic problem” – item number 21 on the questionnaire --- (75% ‘strongly agree’, 21% ‘agree’), teachers and administrators rejected the notion that “job-training should begin after secondary school”, (item number 28 on the questionnaire) --- 51% ‘disagree’, 20% ‘strongly disagree’, as opposed to 12% ‘agree’, and 9% ‘strongly agree’. Equally, teachers and administrators rejected the notion by ten to one that “secondary education should provide only liberal education” (item number 3 on the questionnaire).

At the same time, when asked to comment on the statement “The college-bound student should benefit most from secondary education” (item number 23 on the questionnaire), over 68% agreed or strongly agreed (41% ‘agreed’ 32% ‘strongly agreed’, 7% ‘disagreed, 20% ‘strongly disagreed’). It must be noted, however, that on the average less than 30% of secondary school enrolment would benefit from college education. (projected figure from Sierra Leone Statistical Digest, 1996). It would be logical to deduce from the analysis that administrators and teachers expected less than 30% of their students to benefit the most from the education, which they would provide at the secondary level.

At this point, a serious logical inconsistency emerged. It should be noted that there was no tangible evidence to justify the assumption that the teachers’ responses were less than genuine. On the one hand, the stated policy of the Ministry of Education, Science and Technology indicated that the Government would ensure quality education for all; an education which would aim at the total development of the individual. The perception of teachers and administrators, on the contrary, suggested that only a small fraction of students should benefit from secondary education. The position of the teachers and administrators in this regard could be interpreted as being antithetic to the policy position of the Ministry of Education, Science and Technology.

On the other hand, the response to item number 26 of the questionnaire suggested a radical departure from the previous contradictory position taken by the teachers and administrators. When asked to describe their opinion on “the secondary school has no business training students for work”, teachers and administrators rejected the notion by ten to one (46%

'disagree', 34% 'strongly disagree', 5% 'agree', 3% 'strongly agree', and the rest did not respond to the item)

In summary, the findings revealed that though there is a well-defined educational philosophy and policy, there is also some evidence of discrepancy between the policy of the Ministry of Education, Science and Technology and the perceptions of the teachers and administrators relative to the mission and function of secondary education in Sierra Leone. The findings indicated that the opinions of the principals and teachers, who were charged with the responsibility of translating policy position and statements into action, were not in harmony with policy prescriptions promulgated by the Sierra Leone Government through the Ministry of Education, Science and Technology.

The Intended Curriculum

In an effort to evaluate the intended curriculum, the investigator conducted a close examination of the various syllabi, which make up the core curriculum. The National Curriculum Research and Development Centre (NCRDC) developed the curriculum. The centre has as its aims and objectives:

- a) to conduct research and situational analyses which provide detailed information about the educational process and the criteria for such changes in the curriculum as may be necessary;
- (b) to provide guidelines for systematic curriculum development, dissemination and implementation;
- © to undertake frequent monitoring as well as formative and summative evaluation of curriculum programmes;
- (e) to initiate, promote and develop new curricula in consonance with research findings and to articulate the objectives of the approved educational structure/system;

- (f) to conduct seminars and workshops for the development of curricula or the preparation of teaching materials;
- (g) to determine the textbook needs of the educational system for Basic Education and commission authors for their preparation;
- (h) to conduct in-service training courses for teachers, inspectors of schools and college lecturers, in support of curriculum changes and organise orientation courses, seminars and workshops on new curriculum programmes and the use of new textbooks.
- (i) to solicit non-commissioned authors whose manuscripts fall in line with the National curricula;
- (j) to submit prepared curricula and texts to an Advisory Technical Committee set up by the Governing Council for the evaluation as to their suitability for publishing and dissemination;
- (k) to prepare approved materials for tender by publishers to be chosen by international competitive bidding;
- (l) to undertake other activities in curriculum research and development and in textbook writing and production as may be requested by the Ministry of Education, Science and Technology.

According to the Centre the national syllabus evolved from the 1978 findings and recommendations of the West African Examinations Council (WAEC) Tribunal which stipulated, inter alia, that (a) the WAEC should tailor its exams to the national syllabus of each member state, (b) member countries should develop their own national teaching syllabi that would determine content areas based on local needs and the desired scope of the secondary education as perceived by member nations.

The resultant proposal of the National Curriculum Research Development Centre (NCRDC) in conjunction with the Ministry of Education, Science and Technology characterised the prescribed curriculum in terms of its component subject areas --- a core, and an optional or elective area. The prescribed core area comprised Mathematics, Social Studies, English and Science. The recommended electives were: Home Economics, Foreign Language/French, Agriculture and Technical Studies. In the final analysis, Agriculture, French, Physical & Health Education and Religious and Moral Education became optional core subjects.

In addition to the eight subject areas mapped out, the NCRDC included curriculum guidelines and recommendations for attaining the prescribed goals in each of the subject areas identified. The guidelines and recommendations included: (a) prescribed topics, (b) specific and terminal objectives, (c) learning activities and (d) assessment.

According to NCRDC (1985), and endorsed by the Ministry of Education, Science and Technology, the rationale for developing and prescribing the syllabus was:

- i) to make education in secondary schools more relevant to the student and the nation.
- ii) to coordinate the educational processes in Sierra Leone Secondary Schools by determining what should be taught, learnt, and examined,
- iii) to provide more effective teaching strategies for teachers,
- iv) to enable teachers to prepare pupil for their role in society as well as for their final school leaving examinations.

An examination of the core subject areas resulted in the following findings:-

English

The English course content made provision for students to acquire skills in four areas of language learning – oral, reading, writing, and grammar/language use. The English Language skills were integrated into English Literature instruction, with a proposed change of name to Language Art Activities. It was recommended, based on the course content, that at least eight

35 – 45 minute sessions of English Activities per week (of which at least one session should be devoted to the acquisition of oral skills, four to reading skills, and three to language content) were necessary for effective implementation of the course.

The long-term objective of the course would be: to enable students to function satisfactorily in English after the first three-year phase (JSS one, two and three), and to demonstrate advanced proficiency in English after completing the second phase (SSS one, two and three). The long-term goal of instruction in English would be three-fold: (a) “understand, speak and write a good standard of English for advancement in tertiary education or for occupational purposes” (NCRDC 1985, p. 25), (b) use English appropriately at national and international levels, (c) use literature in English for personal development.

The curriculum writers developed four major themes: “Childhood”, “Growing up”, “African traditions”, and “One from each other”. Each instructional session would revolve around one or more of the identified themes.

The prescribed literature texts were drawn for poetry, prose, and drama and, would depict the works of African as well as non-African writers within traditional African and western contexts. The prescribed topics, suggested learning activities, and recommended assessment strategies were consistent with the stipulated objectives.

An analysis of a total of about 168 specific objectives listed in the six-year National Syllabus in English (as a subject area) revealed that 100% of the objectives identified were determined to have the potential to elicit behavioural changes that would be consistent with the terminal objectives. About 382 learning activities were recommended of which 169 were determined to be teacher-generated, teacher-initiated, and teacher-directed. The recommended assessment was provided in the form of closed-ended questions such as: “Can students...?”. These questions were pertinent to the specified objectives. They equally probed for a demonstrable change in behaviour. However, neither the objectives nor the assessment strategies required a quantifiable yardstick of change in students’ behaviour. The assessment did not specifically indicate the extent or depth of mastery for a given objective.

Also, the recommended evaluation strategies did not indicate the level of mastery that would be required for satisfactory completion of course content. For a national syllabus that was designed to establish uniform national standards, the absence of (at least) a specified expected level of achievement would represent a typical exclusion within a curriculum.

Mathematics

The National Teaching Syllabus for Secondary Schools for Mathematics was structured as a generic course in mathematics. It was developed by a team of representatives from the NCRDC, the Government Technical Institute and two teachers from secondary schools in Sierra Leone.

According to NCRDC (1985), the principal objective of the course would be to foster “numeracy” and “mathematical competence” with a view to helping students develop an appreciation for mathematics, and at the same time build their self-confidence in using mathematics. The NCRDC indicated that, based on the prescriptions of the developers, premium was placed on the utilitarian aspect of mathematics.

Two phases of course-work (“Blocks”) were identified - - phase one which would span through JSS one, two, and three, and phase two which would begin at SSS one and ends at SSS three. Phase two would, therefore, be a continuation of phase one. The course-work during this phase would seek to broaden the pupil’s knowledge and ability to apply mathematical principles to their daily interaction with the world.

The general aim of the mathematics course was: (a) “to develop a positive attitude towards mathematics”, (b) “to acquire mathematical competence for everyday living”, and (c) “to master concepts and skills in mathematics which form a necessary foundation for further academic exercise (NCRDC, p. 190).

Two sets of specific objectives for each of the two phases or blocks were identified. The objectives for phase one incorporated the following goals:

- to enable students to develop greater proficiency in computation,
- to empower students to develop logically consistent deductions and arguments,

- to enable students to represent mathematical situations symbolically,
- to empower students to comprehend the significance of mathematics in their everyday life.

The objectives for phase two included:

- to broaden students' scope in mathematics,
- to make provision for situations in which students could not only master, but also apply skills and knowledge in mathematics,
- to enable students to maximise their use of mathematics in their everyday life.

The course was centered around seven major topics: Number and Operations, Everyday Mathematics, Measurement, Geometry and Trigonometry, Statistics, Graphical Representations, and Algebra. Each of the seven topics outlined would be incorporated into the course-work at every level in the Secondary School. According to NCRDC (1985), the general course in mathematics would constitute conciliation between traditional math and modern math. The selection of topics was primarily determined by the extent to which they would be related to the student's everyday life. The specific objectives of the course were derived from further subdividing the major topics into sub-topics. Learning activities, specific objectives, evaluation and teaching strategies were formulated and coordinated in relation to the stated objectives.

In addition to the prescribed instructional objectives, the developers included a good number of suggested learning activities, (or practical exercises) which had the potential to make mathematics more relevant and practical to the student. About eight-two specific objectives were prescribed in the three-year syllabus for Mathematics.

Approximately 275 learning activities involving mathematical concepts and operations were recommended. Each of the specific objectives was determined to be consistent with the originally identified terminal objective.

Like in the other subject areas, the assessment tool prescribed gave no indication of the expected standard or level of achievement required for successful course completion. The

investigator concluded that such an exclusion was an atypical rarity in a nationally prescribed curriculum.

Social Studies

The present Social Studies Program in Sierra Leone is the product of two relatively recent developments in secondary curriculum planning in Sierra Leone dating from 1975. Following the initial establishment of the Social Studies Division within the Curriculum Development Unit in 1972, the Institute of Education, under the auspices of the Agency for International Development undertook the development of a social studies program in 1975. The program was geared toward: (a) introducing an integrated social studies course into the secondary curriculum, (b) sensitising the nation to the importance of social studies in the development of concepts, skills and attitudes, (c) assisting teachers in developing and fostering among students an integrated approach to perceiving and reacting to their environment, and (d) developing appropriate prototype materials for use in the teaching of social studies.

An inter-disciplinary approach was used to define, conceptualise, and investigate phenomena within the subject area of social studies. Central to the course, was the theme “Man and his Environment”. According to the NCRDC (1985), the curriculum developers determined that it was necessary “to provide students in the first two levels of the secondary school system (JSS one and two) with a clear understanding of important aspects of the geography and history of their country” (p. 301). Two reasons were provided for this approach: (a) to introduce students to the history and geography of Sierra Leone, so that they could relate man’s interaction to the Sierra Leonean context, and (b) to provide students with a strong foundation for the acquisition of advanced skills and knowledge in geography and history beyond the third form.

A social studies seminar was organised and the social studies course, which resulted from that seminar, established the primacy of an inter-disciplinary approach to the teaching and learning of social studies in Sierra Leone. Based on the recommendations and deliberations of participants, the theme – Man and his physical, social and cultural environment – was adopted. A plan to develop three progressive units of instruction for JSS one, two, and three of the secondary school system were also conceived. The themes of these units – “Man Himself”,

“Man’s Abode”, and “Man in Society” – were adopted for course work in JSS one, two, and three respectively.

The second major development in curriculum planning in social studies evolved as a result of an evaluation of the former, and a subsequent inclusion of National Population Education to the secondary school curriculum. Instructional materials for this added dimension were primarily developed from the deliberations and findings of social studies seminars, working groups, and workshops. A revision of the original social studies content, scope and texts was also effected.

According to the NCRDC, National Population Education was incorporated into the social studies program in an attempt to empower students to interpret population phenomena in relation to themselves, their family, and the nation. It was assumed that such an orientation would influence their actions relative to unplanned and uncontrolled population growth. Among the concerns of the curriculum developers were – Sierra Leone’s relatively high population growth rate, high infant mortality, congestion and overcrowding in urban areas, inadequate health and school facilities. The paraphrased terminal objectives of the social studies were: (a) to empower students with critical thinking skills so that they could make a reasoned judgement about themselves and their environment, (b) to equip students with the knowledge and skills necessary for functioning in a constantly changing environment, (c) to help develop in students positive character traits, and responsible attitudes toward the environment, (d) to facilitate the process of adaptation and integration into the physical, social and cultural environment, (e) to help students understand and appreciate diversity and interdependence among people at the local, national and global levels, (f) to help students understand the socio-economic and political factors which influence and result from population growth, as well as the quality of life of members of the community, (g) to help students gain an awareness of social problems such as: racism, poverty, justice, fair-play, and over population, and (h) to enable students to identify and seek solutions to social problems affecting national development. Based on the perceived mission of Social Studies, the NCRD (1985) adopted the following definition of Social Studies:

A problem approach discipline through which man studies and learns about problems of survival in his environment. It is a study of how man influences and in turn is influenced by his physical, social, political, religious, economic, psychological, cultural, scientific and technological environments. It is a way of life. (p.30)

The restructured content of the social studies program maintained its unifying theme

-- "Man in his Environment". However, unlike the previous Social Studies Program, the Social Studies/Population Education Program incorporated six content segments:

- Origin? Development and Characteristics of man through time
- Man's Environment
- Man's Culture
- Population and Resources
- Communication
- Global issues: Achievements and Problems.

Instructional units were designed around the incorporation of all six segments into each unit of instruction. Seven unifying concepts constituted the instructional core from JSS one to SSS three. These concepts were: (a) Environment, (b) Identity, (c) Development, (d) Interdependence, (e) Values, (f) Socialization, (g) Continuity and Change.

The over-all mission of the Social Studies National Teaching Syllabus produced by the NCRDC (1985) was:

To study man and his relationship with his physical, social, cultural and economic environment, and to develop population awareness and responsible attitudes and skills to personal, national and global problems and issues. (p. 305)

About 166 specific objectives were prescribed with a total of approximately 190 recommended learning activities for the six year Social Studies National Teaching Syllabus. The learning activities were identified as potentially effective in actualising the stated behavioural changes as identified in each of the specific objectives. The specific objectives were correspondingly

determined to be consistent with the stated mission of the Social Studies/National Population Education Program.

An analysis of the Social Studies program revealed an emphasis on the importance of the Sierra Leonean's understanding, appreciation for, and symbiotic interaction with his/her physical, social, political and economic environment. A knowledge and awareness of one's environment (national as well as international) is invariably essential to productive participation in, and contribution to one's environment. An understanding of one's culture (including the past and present accomplishments of its people), the value systems which are operative in and out of that cultural context, and the aspirations of the populace are all essential ingredients to a productive work-force.

It is also pertinent to mention that the Sierra Leone Government/AID Bunubu Project was born out of an identical definition and mission at the elementary school level. Both the Bunubu Project and the Social Studies program were illustrative of a justified insistence on environmental studies. A corresponding emphasis on identifying, appreciating and preserving the environment was also highlighted in the 1974/5 – 1978/9 and 1981/2 – 1986/7 National Development Plans. The potential returns to the nation's tourism industry was also conspicuously noted in both Development Plans. The emphasis on appreciating and preserving the environment was equally evident in the objectives of the Social Studies program.

Based on its stipulated goal, and relative to the recommended strategies for manpower and economic development of the ILO (ILO/JASPA, 1990), the Ministry of Labor, and the Ministry of Development and Economic Planning, the nationally prescribed course work for Social Studies in secondary schools was determined to be pertinent to the nation's manpower needs. However, the inadequacy in the recommended assessment tool identified earlier (in the syllabi previously examined), was found to be duplicated in the Social Studies National Teaching Syllabus.

It must also be noted that the name Sierra Leone Studies was used in the Senior Secondary School instead of Social Studies and also that no school in the country had ever offered Sierra Leone Studies as a subject because of lack of teachers, as stated earlier.

Science

The National Teaching Syllabus for Science provided a common course of study for all students in JSS one, two and three. The Science program was structured based on six fundamental concepts: (a) Science and Society, (b) The Universe, (c) Energy, (d) Matter, (e) Ecology, (f) Continuity, and change.

Three basic characteristics of the prescribed course in Science were emphasized: (a) Science instruction was undertaken from a holistic perspective, as opposed to the narrow specialty areas such as Physics, Biology, Chemistry, etc... For that reason, the recommended nomenclature for the program was “Integrated Science”, (b) the learning environment wants incorporate not only the limited boundaries of the classroom, but also the student’s external environment, so as to accommodate an intercourse of related ideas between both contexts, and (c) scientific principles and concepts should be taught in such a way as to facilitate transference from one age group or grade level to another.

Based on the three fundamental characteristics identified, the curriculum developers recommended the use of the following teaching strategies or methodology: (a) project method, (b) follow-up activities, (c) home work, (d) field trips, (e) use of community-based resource persons such as doctors, scientists, technicians, etc., and (f) the use of other persons interested in Science. The curriculum developers qualified their assumptions as:

1. Science would be mandatory for all students, at every level of secondary education because as a developing nation, Sierra Leone’s development would be directly dependent on the level of scientific literacy attained by the citizens,
2. the most appropriate method of transmitting or acquiring scientific skills and knowledge in the Sierra Leonean context would be through an integrated approach,
3. the need to evaluate scientific inquiry or statements for validity or empirical justification would be paramount.

The NCRDC (1985) described the aims and objectives of the science program as: primarily,

To unify traditional discipline of Science in a holistic approach that enhances the pupils perceptions, appreciation and understanding of scientific principles, processes and applications.... (p. 254)

The long-term behavioural outcome of instruction in the Science program are: (a) creative thinking, (b) developing a problem-solving orientation to science, (c) developing manipulative skills to effect scientific inquiry, and (d) developing an awareness of the conflicts between science and local cultural beliefs and practices;

2. To assist students in developing an awareness of the role of science in nation building;
3. To encourage students to seek careers in Science, or Science related fields.

A total of about 146 specific objectives, which involved identifying, stating, comparing or contrasting, measuring, analysing, and other thinking skills were prescribed. All the specific objectives prescribed were found to be consistent with the primary goal. Approximately 21 main concepts were introduced, and a total of about 221 learning activities, which involved active, hands-on experience or manipulation of scientific procedures and concepts, were recommended.

The suggested evaluation tools were deemed with the stated objectives. The recommended assessment tools (in the form of closed-ended questions) did not, however, lend themselves to a quantifiable assessment of intended behavioural outcomes. The scope or extent of learning or mastery of the prescribed content could not be qualified with maximum exactitude.

However, the role of, and demand for scientific knowledge at almost every level, and in different phases of national development have been evident. The Ministry of Development and Economic Planning revealed in the 1981/2 – 1986/7 National Development Plan that development projects like the hydroelectric plant, rural and bauxite-mining expansion could not be implemented partly because of lack of appropriate technology. An equal importance

was ascribed to the “adoption of modern technology and transition to commercial agriculture involving a techno-economic transformation” (p. 27).

On the other hand, the main goal of the Science program as prescribed by the NCRDC was found to be pertinent to fostering the acquisition of the requisite scientific knowledge and skills for developing manpower in: (a) geological exploration and exploitation, (b) agro-based manufacturing or food processing, (c) small-scale manufacturing, (d) construction-related engineering, (e) industrial hygiene, and the general living conditions of the Sierra Leonean.

The specific objectives in Science were equally found to be consistent with the primary goal or mission of the prescribed syllabus, and at the same time externally consistent with the manpower and national development needs of Sierra Leone as identified in the two most recent National Development Plans.

By the same tokens, the main objectives of both the English and Mathematics programs were directly relevant to the planned strategies for manpower and economic development evinced in the 1974/5 – 1978/9 as well as the 1981/2 – 1986/7 National Development Plans. The goals of the syllabi in English and Mathematics established the primacy of raising the level of literacy and numeracy. The pursuit of literacy and numeracy was equally accentuated in the ILO (1990) recommendations relating to the pivotal role played by basic education in economic and manpower development:

Investments in social services like basic education and training, literacy programmes, preventive health care, targeted nutrition programmes, ... are likely to yield social rates of return that will compare favourably with those of most other economic investment projects. (p. 71)

The specific objectives in English and Mathematics were found to be internally consistent with the primary goal or mission as delineated by the prescribed syllabi. In addition, the primary goal was also found to be externally consistent with the two National Development Plans, and the ILO recommended strategies for alleviating unemployment and poverty.

The researcher also examined the syllabus for some of the optional core subjects in the Junior Secondary School (Agriculture, Physical & Health Education and Religious & Moral Education) and one subject each from the prevocational and non-vocational areas (Home Economics and Creative Arts). Each of the syllabuses was found to be adequate in contents, with prescribed topics, specific and terminal objectives, learning activities and modes of assessment. Each subject was scheduled to be taught for two hours and forty minutes per week.

Each subject was consistent with the philosophy of education as well as with national development and middle level manpower of the country. The evaluation strategies did not indicate the level of mastery that would be required for satisfactory completion of course content. This again represents an atypical exclusion within the curriculum.

An examination of the syllabi was also carried in the investigation of the Senior Secondary School and Technical/Vocational Schools. The syllabi of the core subjects have already been discussed except for the Agricultural Science, or a Vocational subject or a Technical subject. Under Vocational subjects each pupil must select one from the following; Agricultural Economics and Extension, Business Management, Clerical Office Duties, Clothing and Textiles, Commerce, Financial Accounting, Food and Nutrition, French, Home Management, Management – In – Living, Principles of Cost Accounting, Shorthand and Typewriting. Every pupil in the Technical group must select one from Applied Electricity, Auto Mechanics, Building Construction, Electronics, Engineering Science, Farm Mechanisation, Metal Work, and Technical Drawing and Woodwork.

The syllabi the investigator examined were Agricultural Science, Business Management, Foods & Nutrition, Financial Accounting, Metal Work and Wood Work. They were found to be adequate and would definitely provide the students with a broad base quality education in preparing them for higher education or for useful living within the society. Each syllabus examined had its own specific objectives and is in line with the philosophy of education. They did not, however, indicate the level of mastery that would be required for satisfactory completion of course content.

In summarising the findings relating to the intended curriculum, it was evident that there was internal consistency (within each of the four core areas) between the specific objectives and the stated mission or goal of the prescribed course-work. A close evaluation and comparison between the prescribed instructional objectives, and the stated goals in each subject area indicated that they were internally consistent. Each syllabus for the subject areas examined was determined to be consistent with the philosophy of education, as well as with the national development and manpower needs of Sierra Leone.

The curriculum prescriptions in each of the subjects were found to be relevant to the nation's manpower needs. Neither the core curriculum nor the supplementary/elective subject area made ample provision for the acquisition or inculcation of a unified system of values and attitudes – moral, civic or patriotic – that are essential for national unity, progress, and development. It is the investigator's determination that even though the Social Studies syllabus incorporated units on social norms, the gravity and extent of the prevalent poor work ethics, malpractice and corruption in Sierra Leone would necessitate a deliberate inclusion of an area of study in the curriculum that would seek to address the anomaly.

In concluding, the findings indicated that though the intended curriculum was determined to be relevant to the middle level manpower needs of the country and that it would go a long way in getting people to be 'self reliant', a deficit was however identified in the area of developing an appropriate repertoire of attitudes and values necessary for a productive work force, economic progress and national development.

The Operational Curriculum

The assessment of the operational curriculum was conducted specifically within the context of formal observations in four selected schools, one Technical/Vocational Institute and one Polytechnic. It incorporated classroom observations, an analysis of the responses in a written survey, informal discussions with students, teachers, lecturers, principals, some members of the community and employers who were participating in the job experience exercise, and informal observations of schools/institutes and their context.

With the exception of Sierra Leone Studies all the subject areas of the core curriculum were provided for in all the schools that were involved in this study (through questionnaires, discussions, personal visits or interviews). On the other hand, French Home Economics, Creative Practical Arts, Shorthand were taught in about half of the schools, while Agriculture and the subjects in the technical areas were being offered in less than 20% of the schools.

The schools observed were Services Secondary School, Prince Of Wales School, Lady Patricia Kabbah Memorial Secondary School, Freetown Secondary School For Girls, were randomly selected with urban and rural categories. The Polytechnic of Milton Margai College of Education and Doe's Commercial and Vocational Institute were also observed. A total of forty-five classroom observations were conducted. Internal interviews and discussions were held with teachers/lecturers, students and principals in a total of fifteen schools, three Technical/Vocational institutes and a Polytechnic. One hundred and seventy-two questionnaires (constitute 86% of the total sent) were received from fifteen secondary schools representing the Western Area, the Eastern and Southern Provinces. Schools in the Northern Province are still to be rehabilitated after the rebel war.

The purpose of the assessment was primarily to determine the degree of congruence between curriculum prescriptions and the pedagogical practices operative within the school setting. The assessment of the operational curriculum involved, as a secondary objective, an analysis of the operating procedures exhibited within the institution/school setting especially as they would relate to facilitating or impeding the realisation of the Secondary School/Technical/Vocational curricula as prescribed.

During the investigator's observation in the secondary schools, the absence of student's as well as teachers' textbooks and workbook (or written exercises) was pervasive. Textbooks were only seen in use in six out of the thirty-three lessons observed in secondary schools, of the six instances in which textbooks were available, only in four cases did at least 30% of the students handle or use textbooks during the lessons. Informal discussions and conversations with teachers as well as students revealed that generally textbooks were not frequently used as an instructional aid because of:- (a) the prescribed textbooks were often not available in the country (b) even when available, were too expensive. (c) public libraries did not stock school

textbooks in large quantities and (d) most schools did not have library facilities and even those with library facilities did not have books in them. In all but four cases, the chalk and the blackboard constituted the single most intensely used teaching aid. Projectors, films, game television, computers, worksheet and teacher-made instructional materials were apparently non-existent.

A similar situation was discovered during the researcher's observation at the Technical/Vocational Institute and the Polytechnic. Textbooks and any other materials were hardly seen in the lecture rooms. The only institutional aid that was seen, was the blackboard and chalk except in the case of the Polytechnic where equipment chemicals etc were seen. Interviews with the principals and a few lecturers revealed that students were without prescribed texts and other relevant materials because of the following: - (a) books and materials were expensive and most of the students were privately sponsored (b) required textbooks were not available in the country (c) libraries were stocked with old books. It was also found out that apart from the Technical/Vocational Schools, which made use of WASSCE syllabi the other Technical Vocational Institutions made use of different syllabi.

In an interview session with students of three of the Technical Vocational Institutes who were on a job experience exercise and the Proprietors of the establishments, it was revealed that: -

- (i) the job experience exercise was very necessary and useful to bridge the gap between classroom situation and the 'world of work,'
- (ii) the curricula used in their various institutes were adequate and would definitely provide the country with middle-level manpower,
- (iii) the students would like to be self-employed thus being self-reliant after graduation.
- (iv) lack of capital would prevent them from being self employed,
- (v) some institutions has made it a policy to give "self start skit" to their graduants as a way of assisting them to become self employed,
- (vi) inadequate space, equipment, machinery and other materials prevented proprietors from given opportunity to more students who would wish to use their establishments for job experience,

- (vii) those who attended Technical Vocational Institutions were better equipped for the world of work than those who attended Technical Vocational Schools,
- (viii) a change of attitude towards Technical Vocational Education of the populace would encourage more students to opt for the area.

Three types of delivery systems were found to be widely used: - a quasi-discussion approach (in which the teacher was the most active participant), the question and answer approach (with the teaching asking most of the questions), and the lecture approach. Of the three approaches, the lecture approach was the most dominant and was used about 75% of the time. Even in the case of practical subject like Food and Nutrition, Agriculture etc. The teachers/lecturers did all the talking in the classroom. All the lessons observed utilized a unified group arrangement in which the whole class would receive the same stimuli at the same time throughout the lesson. No evidence of individualised or group instruction was apparent. In the case of some Technical Vocational Institutes (privately owned and managed) there was a semblance of individualised instructions.

During formal observation of classes in Mathematics, Physics, Biology and Home Management in four different schools, no teaching and or practical exercise was evident. Students were virtually reduced to passive listeners or mechanical respondents to questions posed by teachers. There was no provision for hands-on experience with the concepts introduced during the lesson. In one of the schools observed the unavailability of typewriting machine reduced the subject 'Typewriting' which is a practical subject, to "Spelling and Dictation". In respect of the institute and Polytechnic observed, Typewriting machines were available, but were few and so students had to scramble for them, as they were being used on a first come first serve basis.

School laboratories were practically void of science equipment and supplies. One of the schools which the investigator observed, had a few laboratory equipment and supplies in the Principals' office instead of in the laboratory. The state and condition of the counter-tops and sinks bore no indication that they have been recently used.

Both the Home Economics and Science Laboratories in the Polytechnics were impressive. There were equipments, materials and supplies for students though they were grossly inadequate as the number of students far exceeded the number of available equipment & materials. The Lecturers were very helpful, providing extra help for students outside the official time. The time given to the subjects Biology and Home Management was profitably spent as students were directed to do practical work with little or no interference by the lecturers.

During a physical Education lesson in one of the rural schools, teacher-student interaction was only observed to have occurred in four separate occasions lasting a total of less than ten minutes. The students spent the rest of the lesson copying notes from the blackboard. There was evidence of no textbooks, no practical exercise, no physical exercise.

The researcher also observed that, generally, teachers demonstrated a desire to be resourceful to students. In most of the schools, some teachers would spend time after school grading students assignments, coaching students, or performing some related duties. Even though teachers claimed that working conditions were poor, they appeared to manifest interests in the academic performance of their students.

Generally, the most dominant trend in the instructional practices was in the quality of teacher-student interaction. Each of the observed teacher interactive demeanor during instruction (with the exception of two instances) was directed toward one or a combination of the following: (a) orienting students, (b) instructing students, (c) providing feedback to students, or ((d) correcting a perceived evidence of poor learning. There is evidence of little or no effort on the part of teachers to render the lessons spry, even though the academic-learning-time (ALT) was fully utilized. In general, the teaching and learning processes were determined to be subject-centered, teacher-generated and teacher-directed. Explanations and elucidations were purely theoretical, and teachers persistently did most of the talking, and all of the demonstrations.

In the Math, Physics, Chemistry and Biology classes observed, there was no evidence of any instructional treatment of the practical application of concepts taught. The relatedness or

relevance of the implications of the scientific phenomena studied, to everyday life was not made evident to the students.

Since generally, internal consistency and external relevance could be judged against the background of real performance versus expected outcome, the examination system was brought to bear on the analysis. The consistency of poor examination results would suggest that there was a persistent anomaly between the level of achievement of the students and the expectations or standards imposed by the exams. 59% – 62% failure rate of its students at BECE would suggest that a school system had been only 37% – 41% successful in meeting its objective of adequately providing quality education for all its students.

It is, therefore, a questionable coincidence that the teachers believed (according to the survey analysis), that only about 30% of students should benefit the most from secondary education. The wastage (in human and economic resources) identified in this analysis could be considered unjustifiably enormous. The school system could either be sacrificing too many students because of an unreasonably conceptualised standard or could be, in essence, too weak in instruction to accommodate the rigors of the examination. The table 8 would give an indication as to what the WASSCE results were in 2000, 2001 and 2002.

Table 8**West African Senior Secondary School Certificate Examination (WASSCE)****Three Year Performance (2000 – 2002)**

- (a) Six subjects showed an upward trend in the cumulative percentage rate of candidates passing at Grade A-C

SUBJECT	2000	2001	2002
Biology	2.07	4.20	6.75
Christian Religious Knowledge	4.61	16.04	23.03
Home Management	19.90	69.04	73.85
Food & Nutrition	39.66	57.39	80.54
French	14.81	32.42	34.43
Arabic	0.00	50.00	61.58

- (b) Twenty-four subjects showed fluctuations in the cumulative percentage rate of candidate passing at Grade A-C in the various subject groupings. (See Table 8 Below)

Table 8 (Continued)

<u>SUBJECT</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
English Language	3.62	10.62	2.13
Mathematics	3.80	15.81	14.10
Economics	57.78	63.64	40.38
History	52.73	42.87	48.86
Business Management	12.53	7.06	25.17
Financial Accounting	20.31	38.58	29.41
Government	40.30	46.55	38.74
Commerce	7.59	38.58	9.94
Principles of Cost Accounting	6.65	28.30	8.63
Chemistry	11.06	7.44	6.83
Physics	14.99	19.37	15.59
Geography	12.33	19.39	18.67
Further Maths	7.22	8.06	3.91
Health Science	37.70	18.82	25.59
Science (Core)	29.66	24.56	38.21
Clothing & Textiles	10.45	30.99	25.79
Engineering Science	30.00	17.76	17.67
Technical Drawing	15.09	20.80	6.62
Typewriting	1.19	7.79	0.00
Clerical Office Duties	50.00	11.32	7.97
Metal Work	100.00	10.87	40.00
Physical Education	94.44	97.44	75.19
Wood Work	33.33	8.33	9.09
Electronics	0.00	13.64	8.82

Table 8 (continued)

<u>SUBJECT</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Literature In English	73.82	2.16	0.02
Agricultural Science	35.99	25.63	17.33
Islamic Studies	94.87	73.31	47.83

Two subjects showed no improvement in the cumulative percentage passing at Grade A-C

Table 8 (continued)

<u>SUBJECT</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Building & Construction	0.00	0.00	0.00
Shorthand	0.00	0.00	0.00

Source: Summary of WASSCE results by Ministry of Education, Science and Technology 2002, pp.9 – 10

The results of the examinations would also suggest:

- (i) Lack of qualified and dedicated teachers
- (ii) The examination system was not appropriate as an assessment instrument for the prescribed curriculum content
- (iii) Pedagogical practices were not commensurate with the demands of the prescribed contents.
- (iv) That a lot has to be done especially in the area of Technical/Vocational education.

All the same, the findings revealed a dismal imbalance between the standards or goals set, and the standards achieved.

Through informal discussion with two principals, the Researcher got to know that the WASSCE was a little above the old GCE 'O Level' examination and that some of the teachers who were teaching at that level could not quite comfortably handle the subjects at the present level. Infact there are subjects in the curriculum for which teachers could not be found. The bulk of the teachers in the school system hold the Higher Teachers' Certificates (HTC) and with it they are trained and equipped to teach in the Junior Secondary School. Graduates, according to an official of the Ministry of Education, Science and Technology, should teach at the Senior Secondary School level, but they prefer to enter the Civil Service and other Parastatals, he concluded.

One of the documents the Researcher examined at the Ministry of Education, Science and Technology revealed that the Government of Sierra Leone had already put in place measures that would solve the problem of shortage of trained and qualified teachers especially in new subject areas. One such measure according to the document examined was the upgrading of the Milton Margai College of Education and Technology, to degree awarding status (B.Ed) in selected subjects. This programme was introduced in accordance with the provision of the New Education Policy of July, 1995. Due to some constraints, the first phase comprising of six subjects was introduced in the 1995/96 academic year, these included: Creative Practical Arts, Performing Arts, Physical Health Education, Guidance and Counselling, Measurement & Evaluation, and Educational Administration. The second phase was implemented in the 1996/97 academic year with four subject areas – Business Studies, Social Studies, Secretarial Studies and Technical Studies. Community Development Studies, which has a component of Home Economics and Agricultural Science, was added to the list in the academic year 1999/2000. This measure should at least go a long way in solving the problem of shortage of teachers especially in the new subject areas, declared a school administrator. The response to item number 33 in the questionnaire – 'there are teachers for every subjects in my school' did not support the view of that administrator as 70% of the respondents 'strongly disagree', 20% 'disagree', 8% 'agree', and 2% 'strongly agree'.

The majority of teachers reported that: (a) (in item number 25) his/her school "administrator can easily detect deviation from curriculum" (47% 'agree', 11% 'strongly agree'), (b) generally, they do not individualize instruction (item number 17). When stated thus,

“Generally, I individualize instruction”, teachers responded: 44% ‘disagree’, 8% ‘strongly disagree’; (c) they have not used almost the same teaching techniques every year. Their response to: “I make use of the same teaching technique every year” (item number 18) was: 9% ‘strongly disagree’, 56% ‘disagree’, as opposed to 26% ‘agree’, and 2% ‘strongly agree’, (d) to the best of their knowledge “secondary teachers teach according to the curriculum” (item number 14) – 50% agree’, 3% ‘strongly agree’, 12% ‘disagree’, 14% ‘strongly disagree’; (e) the curriculum determined what they teach (item number 4) - - 57% ‘agree’, 21% ‘strongly agree’; (f) (item number 8) they “cover approximately the same content every year” - - 44% ‘agree’, 12% ‘strongly agree’, 3% ‘strongly disagree’, 30% ‘disagree’, (g) “curriculum objectives were clearly explained” to them (item number 9) 47% ‘agree’, 18% ‘strongly agree’, 23% ‘disagree’, 2% ‘strongly disagree’; (h) they prepared for every lesson (item number 12) “I prepare for every lesson”, 50% ‘strongly agree’, 30% ‘agree’, 8% ‘disagree’, 6% ‘not sure’.

Condensing the responses of teachers and administrators would indicate that a wide range of pedagogical practices and perceptions existed among teachers within the school system. The findings also indicated that a good proportion of the teachers claimed to have a clear perception of what the curriculum as well as the educational system expected of them.

However, the preponderance of evidence from the observation did not support the perception that teachers adhered faithfully to curriculum guidelines. Conformity to content area and content sequence was evident, though compliance with recommended learning activities and methodology was not apparent. Only 3% of the teachers surveyed indicated that they had participated in in-service training within the past five years. By the same token, the findings of the formal observations indicated that, in general, the teachers’ performances in the classroom were suggestive of some preparation for their lessons, even though the observer saw written plans in less than 50% of the lessons observed.

The specialists revealed in their interview that the Technical/Vocational Schools had not yet been provided with copies of the intended syllabi and curriculum prescriptions, even though some of the Technical/Vocational Schools have started taking the NVQ examination. They gave lack of resources as the reason for not yet developing syllabi for the Technical/Vocational Schools. They further disclosed that as a result of inadequate funds, provisions for in-service

training destined to familiarise teachers and administrators with the goals and strategies for attaining them, as prescribed, were less than adequate. The specialist added that even the Senior Secondary School where the prescribed curriculum had been made available, monitoring for compliance had been nil. Their assertions corroborated those of four School Principals who indicated that the office of the Secondary School Inspectorate had been office-bound, ineffective, and submerged into oblivion by (among other things), logistics and related problems. In one situation, a principal who had been the incumbent for over five years claimed that his school had not been inspected since his tenure. The opinion expressed above has the support of the response to item number 6 on the questionnaire. “Inspectors of schools pay regular visit to my school” – 80% ‘strongly disagree’, 15% ‘disagree’ and 3% ‘not sure’.

In an interview with one of the Principals of a Technical/Vocational School, it was also revealed that some of the Technical Vocational Schools were using the WASSCE syllabi and curriculum prescription but yet their student were taking the NVQ examination whilst other schools registered their students for the WASSCE. In a close conversation with some of the teachers in the Technical/Vocational Schools, some of them accepted that they had never seen the syllabus for the subjects they teach. The response to item number 4 (the curriculum determine what I teach) on the questionnaire – 50% ‘disagree’, 8% ‘strongly disagree’, 30% ‘strongly agree’, 3% agree and 9% ‘not sure’, lend support to the statement of those teachers and the specialist who revealed that Technical Vocational Schools had not yet been provided with copies of the intended syllabi and curriculum prescriptions.

In interviews, discussions and conversations with parents, students and teachers it was revealed that the Government did not take Technical Vocational areas with seriousness and as a result of that students did not opt for Technical Vocational Schools but rather the bulk of them opted for Senior Secondary Schools, hence the unpopularity of Technical Vocational Schools.

Discussions with yet another set of teachers and principals also revealed that the quality of instruction in the secondary school system, as well as compliance with the curriculum prescription were being jeopardised as a result of inadequate infrastructure, electricity, classroom furniture, equipment and supplies, low teacher morale resulting from low salaries and late payment of salaries, poor conditions of service and the low social status of teachers. A

Senior Officer of the Ministry of Education, Science and Technology further corroborated their perceptions. The official also stated that the secondary school inspectorate had been conspicuously ineffective.

The principals also disclosed that their most persistent hindrance to complying with curriculum prescriptions was in the recruitment of trained and qualified teachers. A principal of a well established inner city school affirmed that courses in two core subject areas were not offered because of the unavailability of trained and qualified teachers in those subject areas. The principal further disclosed that even in some subject areas where teachers were available at the beginning of the school year, students did not receive instruction for over a month because some of the teachers abandoned teaching at some point during the school year in order to seek more lucrative jobs. Teacher hiring and retention was the most common problem reported by the principals.

However, the majority of teachers surveyed reported that the strength of the present curriculum was its emphasis on the acquisition of Technical and Vocational skills, basic literacy and numeracy and that it could be considered relevant to the provision of middle level manpower and the development needs of the country. Thus the response to item number 32 “the present curriculum provides quality middle level manpower for the country” – 60% ‘strongly agree’, 13% ‘agree’, 7% ‘strongly disagree’, 5% ‘disagree’, 10% ‘not sure’.

Teachers also indicated that their greatest frustration were (arranged in proportional descending order): (a) lack of instructional materials and supplies, library facilities, classroom space, and adequate play grounds, (b) low salary, irregular payment of salaries, poor working conditions and low social status, (c) high teacher-pupil ratio or overcrowding (d) students’ contempt for education, (e) indisciplined students, (f) lack of government support for education and (g) examination malpractices.

In concluding, the investigator discovered from the assessment of the operational curriculum that pedagogical practices were not consistent with the underlying assumptions and prescriptions of the intended curriculum. The findings also indicated that endeavors to comply with the prescribed curriculum had been fraught with a multiplicity of impediments (real and

apparent) ranging from lack of equipment and supplies, low teacher morale, inadequate infra-structure to inadequate number of trained and qualified teachers. Equally, the national social climate, the learning environment, and the psychological predispositions of the teachers as well as the students were found to be not conducive to the attainment of the prescribed goals.

At the same time, the absence of any effective machinery for insuring quality control of the product of the educational process blurred the pursuit of educational excellence or accountability. It was also conjectured that the lack of commitment to involve teachers and familiarize them with the expectations of Ministry of Education, Science & Technology as well as the strategies to meet set objectives, obscured the assumptions and intentions of the curriculum planners.

However, results of both BECE & WASSCE examinations would suggest that the educational system had woefully failed in its preparation of students to meet the defined criteria. The findings also suggested that the perceived correlation between and among the intended curriculum, the operational curriculum, and the output of the educational process (as assessed by the BECE & WASSCE examinations) was weak and tenuous at best. The instructional practices were far from complying with the prescribed curriculum. Furthermore, the failure to address the practical implications of the learning process, as well as a demonstrable penchant for fostering knowledge as opposed to skills further compounded the deficit inherent in the system. The low teacher morale (purportedly resulting from poor working conditions, meagre wages and delays in payment of salaries) had evidently culminated in not only an acute shortage of trained and qualified teachers, but also in low productive output from the present core of professional teachers. It could, therefore, be concluded from the findings that the operational curriculum was not consistent with the intended curriculum.

Summary of Findings

The findings indicated that there was both a shortage of manpower, and potential for manpower development in (a) agriculture, (b) mining, (c) commerce (d) small-scale industries and manufacturing, (e) artisan activities such as technical repair services, fabrication of farm tools. Equally, excesses in manpower existed in clerical and related fields. The findings indicated that mechanism has been put in place to redress the perceived imbalance.

The intended secondary school curriculum was found to be relevant to the manpower needs of Sierra Leone. The operational curriculum was determined to have been impoverished by a number of practices and factors which included (a) inadequate instructional supplies and equipment, (b) ineffective system of monitoring compliance with set prescriptions, (c) low teacher morale, (d) inadequate number of trained and qualified teachers. These inadequacies culminated in practices, which abandoned curriculum prescriptions as well as an emphasis on the practical application of learning.

Based on the abandonment and resultant fortuity of sound educational practice (evidently caused by inadequate resources and commitment), it was determined that for the operational curriculum to be consistent with either the intended curriculum or the manpower needs of the country, immediate action needs to be taken by the Government to address the anomalies.

CHAPTER VI

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This chapter contains a discussion on the implications of the findings for the 6-3-3-4 secondary curriculum process and practices in Sierra Leone. The discussion involves the major components of the educational process (the student, the teacher, and the curriculum) at the secondary level, and the context of the process. Also included in this chapter are: the conclusions drawn from the investigation as well as the recommendations made, and suggestions for future research.

It will be unrealistic to assume that adopting and implementing a relevant curricula at secondary level and the Technical/Vocational arm of the system by itself would impeach the multi-dimensional problems facing Sierra Leone. An effectively run economic system, socially and politically viable institutions, politicians who preach and practice moral rectitude, are all essential to manpower planning and national development.

An evaluation of the Secondary School/ Technical/Vocational curricula invariably involves an assessment of the essential elements of the educational process. This discussion is focused on the implications of the content (or components) and context of the educational process for the curricula. The three essential components of the educational process – the student, the teacher, and the curriculum content – constitute the focal point of the first segment of the discussion. According to Bolin (1987), Eisner (1985), Aoki (1983), Dewey (1956), any assessment of the curriculum would involve these three essential elements: (a) the learner, (b) the teacher, and (c) the curriculum content.

The second segment of the discussion delves in the context of the curriculum implementation process. The curriculum is a product of society. It is also destined to influence society. The curriculum context is, therefore, as important as its content. In this regard, Apple (1983) made the following observations:

Its focus on product has led to a thoroughgoing naiveté about the very process of education, about the internal dynamics of the institution. Second, its tendency toward atheoreticism has made it difficult for us to link these internal dynamics to the larger ideological, economic, and political context. (p. 3)

The context of the process – extrogenous (political and socio-economic factors) as well as nitrogenous (intra-organizational factors) – is discussed against the background of how it influences curriculum implementation.

Components of the educational process

A major component of the curriculum process – the learner – would constitute one of the most fundamental elements in any curriculum evaluation endeavour (Aoki 1985). Curriculum implementation should focus on (a) where the learner is – psychologically and sociologically, (b) where the school expects the learner to be at the end of the process, and (c) how well does the curriculum represent the personal as well as social (in this case, national) needs of the learner.

The findings of the investigation of the intended curriculum revealed that the scope of the content area, the sequencing of instructional units and the quality of the learning activities reflected those concerns. On the one hand, the instructional practices manifested during formal classroom observations did not reveal a child-centered approach to teaching and learning. Students were evidently deprived of hands-on experiences with the concept taught. They were equally deprived of comprehending the practical implications of the knowledge acquired. It was not evident that the child's interests, motivations, or psycho-organic make-up were factored into the learning process. Relevance as would relate to associating learning experiences with real life situations, and to the applicability of those experiences was obscured in the classroom setting.

On the other hand, the assessment strategies prescribed apparently did not reflect the nature of the learner. Though the recommended closed-ended questions (“Can the students do.?”) would indicate an assessment based on competency, the subjective nature of the approach renders the

process unpredictable and potentially confusing to both the student and the teacher. An assessment procedure, which gives no precise indication of the expected level of performance, has great potential to influence the quality of learning as well as the effort put into attaining the set standards. Eisner's (1985) recommendation is pertinent to the above observations:

Education is conceived of as a product that schools deliver into the performance systems of children. If the school does not have standards for student performance, it should have. (pp. 4-5)

Eisner further emphasized the importance of the student's as well as the teacher's precise knowledge of the assessment procedures and instruments:

To operationalize a graded conception of educational practice it is important to have definite goals and definite tasks... the goals of a grade's work in a subject must be absolutely definite, must be known to pupils as well as teachers... (p. 5)

The lack of clearly defined expectations of both the teacher and the learner relative to specific behavioural outcomes of learning was an inadequacy in the curriculum that would beg for immediate attention.

Second, the absence of officially prescribed syllabi for use in the Tech/Voc. Schools is also an anomaly which has to be promptly addressed. The use of the WASSCE syllabi is of questionable efficacy in the education process. The WASSCE is a regional examination that is set and conducted based on inter-national criteria. Its relevance to specific local conditions as well as its appropriateness to evaluate educational phenomena in these uniquely different settings is contestable. It can, therefore, impact negatively not only on the child's performance, but also on the assessment of his/her performance.

Thirdly, an education system with a high drop-out rate is of contestable value to the learner and the society it serves. The BECE results revealed a success rate of about 37 – 41%. This means that the cumulative efforts of all in the education process at up to BECE level are about 37 – 41% successful in attaining the standards set by the exams, as well as by the education system.

The results for WASSCE 2000, 2001 and 2002 produced a worst situation. The percentage passes at WASSCE is lower than that of BECE. A system (including its teacher) which accommodates such a high failure rate with indifference perpetuates failure in its students. Research on teachers' beliefs and thought processes (Clarks & Peterson, 1986; Peterson & Barger 1984) suggested that a teachers' expectations affect students' performance and achievement in the classroom. A student's achievement is correspondingly low when teachers' expectations are low. Teachers' responses to item number 27 of the questionnaire equally reinforces the suspicion that mass failure is not only expected but also a common-place phenomenon.

If the WASSCE exam is used as a major yard-stick of students' performance, measures should be taken to ensure that (a) its course content is practical and applicable to the educational context (b) practical in the practical oriented subjects should be done and (c) the exam is an appropriate instrument for assessing the types of learning outcomes in the nationally and locally unique settings of the countries involved. The fact that all the previously discussed factors impinge negatively on the learning process, suggests that invariably they will have deleterious effects on the learner at the secondary level. The absence of a well organised and effective Guidance and Counselling structure further complicates the dilemma of the student.

The second of the three elements identified ---- the teacher ---- is almost as important as the first. In this study, discussion on the teacher centres on (a) teacher-training and supply, (b) incentive for retaining trained and qualified teachers and (c) teacher accountability and efficiency. The bulk of teacher training for secondary schools is provided through the Milton Margai College of Education and Technology, Njala University College and Fourah Bay College. It is estimated that on the average those three institutions produce over 300 trained and qualified teachers annually. On the one hand, this estimate can amply accommodate teacher attrition due to the attainment of the retirement age. On the other hand, attrition provoked by low wages and poor conditions of service would appear to constitute a major problem. Evidence of studies of this phenomenon in Sierra Leone is not available. There are apparently no studies suggesting a casual relationship between job satisfaction and attrition in the secondary teaching corps in Sierra Leone. However, the survey results, as well as discussions with teachers and administrators pointed to (a) lack of supplies, (b) low salaries, (c)

irregular payment of salaries, and (d) poor conditions of service, as the most intense frustrations they experience.

Apart from the high rate of teacher attrition, a high ratio of qualified teacher to pupils is also evident.⁷ According to the Ministry of Education, Science and Technology the numbers established as pupil-teacher ratio are 40:1 for the primary level and for the secondary level an average teaching load of 28 periods per week for a 40 period week and an average class of 40 pupils per teacher. The low pupil-teacher ratio for the secondary level was explained by the fact that at that level specialisation takes place and it is not a one grade per teacher situation as in the case for primary level. (“The New Era Newsletter” Jan 2003, p. 12). As a result of the shortage of teachers, the ratio is way above that prescribed by the Ministry of Education, Science and Technology. The acute shortage of trained and qualified teachers constitutes an added dimension (the potential for poor content delivery) to an already serious problem.

Table 9
Number and Percentage of Teachers by Qualification – 2001

Qualification	Male	Female	Total	Percentage by Qualification
Graduate Professional	1091	145	1236	6.0
Graduate	553	67	620	3.0
Higher Teacher’s Certificate	2682	885	3567	17.2
Teacher’s Certificate	3763	2004	5767	27.8
Total Qualified	7591	3101	11190	54
GCE or WASSCE	3807	879	4686	22.6
Senior Secondary	635	160	795	3.8
Junior Secondary	140	15	155	0.7
Other:	3239	651	3890	18.8
Total Unqualified	7821	1705	9526	46
TOTAL	15910	4806	20716	100.0

Source: “The New Era Newsletter.” Jan, 2003

These teachers indicated above served in the different school levels as shown in Table 10:

Table 10
Actual Number and Percentage of Teachers by Level – 2001

School Level	No. of Teachers	Percentage of Teachers by Level
Formal Primary	15077	72.8
Formal Secondary	4424	21.4
Other Basic Education Program	1084	5.2
N/A	131	0.6
TOTAL	20716	100

Source: "The New Era Newsletter." Jan, 2003.

Between 1997 and year 2002 only two thousand qualified teachers entered the school system whilst the sum total of the six Teachers' College per annum exceeded One Thousand Five Hundred. It thus appears that although Government supports the majority of teachers in the Colleges, that is, through students awards or study leave with pay, on graduation a significant number do not enter the teaching field. ("The New Era Newsletter," p. 14)

Qualified teachers always refuse to teach in schools in the Provinces as reflected in Table 11

Table 11
Year 2000 Unqualified Teachers By Region And School Level/Type

	PRIMUQ	SECUQ
WEST (The Capital)	24.4	16.1
NORTH	46.6	34.8
SOUTH	46.1	31.7
EAST	22.2	12.6

Source: "The New Era Newsletter". Jan, 2003

Note: Kailahun which has the greatest number of unqualified teachers in the Eastern Province did not have data available for the above. Similarly, Koinadugu in the Northern Province.

Policies and programs that are destined to train and at the same time retrain professional teachers must be instituted or revitalised. The emphasis on teacher education in the National Education Master Plan 1997 – 2006 is a welcomed initiative with great potentials to enhance the operational curriculum. Milton Margai College of Education and Technology has been upgraded to degree-granting status, its curriculum has been diversified to include a wider range of vocational and technical areas, its students' population has increased considerably. These measures would go a long way in addressing the acute shortage of teachers. Coupled with other improvements, such as the merger of teacher colleges and technical and vocational institutes, a substantial upgrading of teacher training and teacher supply could reduce the imbalance between the intended and the operational curricula.

Though the teacher-training institutions seek to provide pre-career teacher training, the absence of a structured, effective, and regular in-service training programme for teachers is disturbing. Neither the education process nor the pedagogical practices can remain static. Failure to familiarize teachers with novel approaches to teaching as well as with new policy initiatives and directives can have negative repercussions on the curriculum implementation process. The findings revealed that only 3% of the teachers surveyed reported having participated in an in-service program in the past five years. Pre-career as well as in-service programmes are all crucial to the adoption and implementation of the secondary school curriculum. The remarks of Clark and Peterson (1986) are pertinent to that claim:

The Olson and Munby studies provide a sense of both the variability and consequentiality of teachers' implicit theories about teaching...When implementing a significant curricula, organisational or instructional change, these researchers believe systems can be ignored at the innovator's peril. (p. 291)

The above citation lends credibility to the perceived importance of teacher involvement in the curriculum diffusion as well implementation processes.

During observations in a secondary school in Freetown, the investigator interacted with some of the teachers. The dedication of these teachers was obvious. They spent hours after school grading papers, coaching students, and performing related duties. They complained about the

poor working conditions, but at the same time they provided assistance to their students (evidently beyond the call of duty). Though the high level of dedication was not apparently ubiquitous, in general, teacher dedication was fairly pervasive in the schools observed.

However, there was no indication of a structured mechanism for teacher evaluation. An education system, which lacks an effective teacher-evaluation process, is practically without any accurate means of identifying, and rewarding either dedicated teachers or effective teaching methods. Equally, inefficient teachers as well as undesirable teaching practices and methods can go unnoticed.

The WASSCE (whose effectiveness in assessing students' performance has been questioned and previously discussed) is reported (item number 14) to be the most widely used teacher appraisal instrument. The teachers and administrators have questioned its effectiveness and appropriateness as an assessment tool. Notwithstanding its perceived weaknesses, the WASSCE results appeared to be the most consistently used teacher appraisal tool. If effecting quality control by the single most commonly used tool is tenuous, then it can be argued that the quality of the education process is highly suspect. The WASSCE results cannot be considered a reliable yard-stick for assessing either a teachers' performance or his/her compliance with curriculum prescriptions. To evaluate a teacher only on the basis of the results of an examination is of questionable educational foundation.

In addition to the apparent lack of a sound appraisal process within each school, weaknesses were evident in the system-wide appraisal process. The principals and teachers of secondary schools, as well as an official at the Ministry of Education admitted that the Secondary School Inspectorate was office-bound and ineffective. Without an effective appraisal process in each school, and with an ineffective Secondary School Inspectorate, conformity to curriculum prescriptions and guidelines cannot be guaranteed. The stringency of teacher efficiency and accountability to the system (and the community) is practically relegated to the discretion of the teacher on the one hand, and to the whims and caprices of school principals, on the other hand. The repercussions of this inadequacy on the curriculum implementation process can be incalculably deleterious.

The third of the three elements targeted for discussion in this segment – the curriculum – constitutes the pivot of all instructional activities in the secondary school context. The focus of the discussion on the curriculum will be on three classifications of the curriculum: (a) the intended curriculum (i.e. the prescribed curriculum), (b) the null curriculum (i.e. the subject areas that are not taught and provided for in the curriculum), and (c) the operational curriculum (that is the enacted curriculum or the curriculum-in-use).

The intended curriculum in Sierra Leone is structured into two categories... the compulsory core curriculum and an elective or optional area. At JSS level the electives are Technology, Creative Practical Arts, Business Studies, Electronics and Arabic. The core curriculum comprises Language Arts, Mathematics, Integrated Science and Social Studies, which are compulsory, and Agriculture, French, PHE, RME, one Sierra Leonean Language from which two must be offered. The findings of this study indicated that all the subject areas of compulsory core curriculum were provided for in all the schools that were involved in this study. On the other hand, French PHE and Home Economics were taught in about half of the schools, because of lack of teachers. In the schools in which French was taught, only one had a trained and qualified French teacher, the other school had untrained and unqualified French teachers.

The findings of the investigation indicated that though (a) the content, latitude and depth, (b) the range and depth of instructional objectives (c) recommended methodologies, and (d) content sequencing were determined to be relevant to the manpower and development needs of Sierra Leone, the prescribed core area was limited in scope. The exclusion of specific provision for civic responsibilities or work ethics was considered an inadequacy, which could impact negatively on the manpower and development needs of Sierra Leone. Likewise, the absence of a specified level of mastering necessary for successful course completion was determined to be an inadequacy in the intended curriculum.

The null curriculum is, generally, of significance in any curriculum evaluation endeavour. What schools do not teach may provide an insight into the perceived importance attached to different subject areas. It may also reflect the underlying values, and sometimes the concealed

preferences of the policy makers and professionals who determine what is deemed necessary for inclusion in or exclusion from the secondary school.

Therefore, the curriculum process is important not only for what areas are included, but also for those that are neglected. Evidently, by eschewing change and innovation, the educational process can end up reproducing itself.

In this respect, the role and function of the secondary school – as an agent of change is curtailed. Concepts and skills students learn or do not learn, processes they have been deprived of knowing and using, have consequences for the kind of lives they will live. Likewise, what students cannot do or do not know will affect the quality of their output to society. Eisner (1985) contends that ignorance is not merely a neutral void. She claimed that:

The absence of a set of considerations or perspectives or the ability to use certain processes for appraising a context biases the evidence one is able to take into account. A parochial perspective or simplistic analysis is the inevitable progeny of ignorance. (p. 97)

If the mission of formal education in Sierra Leone is to elevate knowledge and skills, weaken prejudice, and develop critical and productive minds, then it behoves this investigation to highlight the omissions that exist in the intended curriculum that are of consequence to the manpower and development needs of Sierra Leone.

The findings of the investigation revealed rampant corrupt practices, poor work habits and ethics. A society in which sound moral principles, national pride, healthy and ethical work habits are being consistently eroded will invariably submit itself to moral decadence, inefficiency and unproductivity.

In this respect, the school has a social duty to perform. This duty involves the inclusion (or the integration) of such content areas in the curriculum. These content areas will be destined to rectify identified anomalies, which threaten national security and prosperity. A nation with under-developed human resources, and that is morally and economically bankrupt will have little chance of surviving this century. Based on that rationale, the inclusion of provision for

the inculcation of a unified system of values pertaining to work ethics, civic responsibilities, and national pride is deemed a necessity.

Provision has been made in the curriculum for the Health Education. Unfortunately, as a result of lack of teachers only few schools are offering this all-important subject. If Sierra Leone is to tackle the problem of low infant mortality rate, then Health Education should be a priority area in the secondary schools. Low infant and adult morbidity rates were linked to an inefficient health delivery system. In the absence of an effective natural health delivery system, preventive practices are crucial. Knowledge of simple first aid intervention techniques, and healthy habits at the secondary level will potentially save lives. Consequently, Health Education should be made a compulsory core subject at the secondary level.

The third area, which constitutes the null curriculum of the optional core subject areas like Agriculture, PHE and Technical/Vocational Education, deserves special attention. These subjects are classified under the null curriculum because majority of the schools in the country are not offering them as a result of scarcity of teachers in those areas. An official of the Ministry of Education, Science and Technology remarked that, in the absence of teachers, even though the new curriculum introduced under the 6-3-3-4 was heavily in favour of Technical/Vocational education, the educational system would revert to the olden days in which liberal education was the order of the day. In fact there were many people the researcher came across during his investigation that preferred liberal education to Technical/Vocational education.

The pro-liberal education people supported Foster (1991) and Bowman (1980) who argued that more liberal education was better, and that the introduction of specific vocational content areas in the secondary core curriculum was both unjustifiable and unwarranted. Foster and others also questioned the economic rent ability of introducing vocational education at the secondary level. Avis (1981) specifically questioned the types and models of vocational training programmes introduced at the secondary level. Lulat (1988) noted that the problem with vocational education in developing countries was that inappropriate vocational education models were adopted with little regard for context. Lulat remarked that:

In most third world societies, as in the West, only a small portion of the education system has a relationship with the economy that can be termed as technical (p. 319).

On the other hand, Triggs (1987) stated that, in general, four assumptions emerged in an attempt to support liberal or general education, as opposed to vocational education: (a) skills training was inefficient in a climate of rapid change, (b) attempts to isolate and teach specific value-laden skills were doomed to failure, (c) education aimed at eliciting specific behavioural outcomes were becoming less important, and (d) altering cognition could be more effective in changing behaviour than are skills training.

Eismon and Hart (1988) identified six dimensions of the argument which would favour the exclusion of vocational training at the secondary level: (a) vocational education was not cost efficient, (b) recruitment of suitable staff for vocational education program was difficult, (c) vocational education could generate unrealistic employment expectations, (d) students' attitudes to manual occupations were not usually changed, (e) time available and facilities were not normally sufficient to provide sound vocational training, and (f) students would use vocational schools as a stepping stone to more prestigious institutions.

Godman (1990), in analysing vocational education in Sub-Saharan Africa, contended that vocational education was the only conceivable solution to maximizing human resources use in Sub-Saharan Africa. Godman also indicated that vocational education in Sub-Saharan Africa had often been misrepresented and misunderstood by evaluators. Godman identified four problems that could be related to vocational education in Africa: (a) disputes and failures have been given prominence, rather than achievements and successes, (b) vocational education had been over shadowed by the discrepancy over manpower demand and supply, (c) vocational education models had frequently been borrowed from Western countries and marginally adapted with little regard for the socio-economic contexts.

On the other hand, Kraft and Nakib (1991) argued that the models and variables economists used to determine the returns-to-education were out-dated and inaccurate. They claimed that the models which were conceived in the 1960's did not account for a variety of intangibles which would constitute the present-day educational process. They further suggested that some

of the assumptions made, and the conclusions arrived at, relative to the cost-effectiveness of liberal education were of questionable validity.

Sifuna (1986), in assessing the vocational education curriculum in Kenya's elementary school system, dispelled the notion that vocational education was inappropriate for schools. Sifuna's assessment which discovered cognitive as well as attitudinal development among the students, provided a justification for the inclusion of vocational education in the core curriculum of schools. Eismon and Hart (1988) also identified cognitive and attitudinal benefits from the vocational training in Kenya, East Africa.

Equally, Stern, Dayton, Paik and Weisberg (1989) counteracted the assumptions that: (a) vocational education was not cost efficient in relation to traditional liberal education, (b) vocational education was not effective in changing attitudes, and (c) the time available, and facilities were normally insufficient to make vocational education meaningful. Stern, Dayton et al (1989) evaluated eleven academic programs (combining academic and vocational education) in California high schools. The estimated net economic benefit of the program, especially in drop-out prevention among 327 students was between \$1.0 and \$1.3 million.

There is enough tangible evidence from different parts of the world (Sifuna, 1986; Triggs, 1987; Stern, Dayton et al, 1989; Godwin, 1990-) that vocational education, as a component of the school curriculum, cannot only be cost-efficient, but also beneficial to the student and society as a whole. The arguments against combining academic and vocational education at the secondary school level can be considered too sweeping and of questionable educational foundation.

It would be inconceivable to argue that a vocational or technically oriented student would require twelve years of liberal education (up to WASSCE) to be a good plumber or farmer. Equally, it would be without foundation to argue that conceptual learning (as opposed to training) is more readily translated into operational skills. It is the conviction of the investigator that the liberal education experiment in Sierra Leone has failed, and that Sierra Leone can no longer afford the luxury and wastage associated with twelve years of liberal education.

The arguments (in favour of providing mainly liberal education throughout secondary school) based on the potential usefulness of liberal education are too far-fetched from the realities of present-day conditions of life in Sierra Leone. The dawn of exclusion of vocational education and training from the curriculum is unjustifiable. The potential wastage in human resources, the economic back-lash from it, and the negative attitude toward manual work which it could reinforce has made traditional liberal education, as practiced in Sierra Leone, an impediment to manpower and economic development.

The new 6-3-3-4 system of education in Sierra Leone has given prominence to Technical/Vocational education. The authorities should ensure that the type and model adopted is appropriate for the economic and social contexts of Sierra Leone. Adopting the wrong type of vocational education could be counter-productive.

The discussion on the third curriculum classification... the operational curriculum--- involves the pedagogical practices associated with implementing the intended curriculum. The findings revealed that there was no effective supervision and monitoring of schools by the Ministry of Education, Science and Technology on the one hand, and of teachers by principals on the other hand. Equally, in the absence of effective supervision and monitoring, quality and standards could not be guaranteed. Consequently, the operational curriculum did not reflect the intentions and assumptions embedded in the intended curriculum. It should be noted that however well intentioned a plan of action is, it is likely to be meaningless if compliance cannot be guaranteed.

Some of the schools provided instruction in all the content areas of the core curriculum. Others did not. Principals disclosed that they made selection as to subjects offerings based on the availability of funds, and teachers not the needs of their students. Since supervision was not effective, compliance was sacrificed to the discretion of the school principals.

The lack of teaching aids and equipment also impacted negatively on the quality of instruction. Instructional materials, teachers who are motivated to teach, students who are motivated to learn, a safe and healthful environment are all essential components of the learning process.

One or any combination of weaknesses can negatively influence the teaching and learning processes.

Instructional materials do not necessarily have to be imported from abroad. Superior learning outcomes are achieved when students find instructional materials relevant to their context (Clark & Salomon, 1985). The lack of equipment and supplies reduced the teaching (and particularly of science) to an academic exercise void of practical application. This inadequacy neutralised the underlying assumptions embedded in the curriculum prescriptions.

Particular attention has to be paid not only to the availability of textbooks, but also the quality of their contents. Textbooks should be relevant to the educational process and its context. It is, therefore, important to generate interest among Sierra Leonean educators to produce instructional materials, including textbooks for use in Sierra Leone. In this regard, the efforts of Sierra Leonean writers in the fields of Home Economics, Business Studies, RME, BM, Agricultural Science, History and Social Studies deserve some commendation. It was noted during the investigation that the most widely used Business Studies, Social Studies and History texts were authored by Sierra Leoneans. Similar endeavours in other subject areas should be encouraged.

The findings also revealed that at the level of implementation, teaching was practically limited to only imparting knowledge to the students. There was no indication that students either grasped the implications of the concepts taught or were provided opportunities to apply the concepts learned to practical situations. Classroom observation revealed that teachers did not provide students the opportunity to have hands-on experience with the knowledge they had supposedly acquired.

One of the implications of this type of pedagogical practice for the child is that knowledge was presented as an abstraction without practical application. Such practices have a potential to develop in students the attitude that knowledge acquisition was the sole purpose and function of education. The claim could be made that knowledge, by itself, is of little significance unless it is used to satisfy needs, identify problems, and seek solutions to problems. For a developing nation like Sierra Leone, knowledge as well as its crucial and appropriate applications for

solving problems is important. Teaching should, therefore, not only emphasize the acquisition of knowledge, but also the appropriate use of knowledge to solve personal and societal problems.

Learning in the classroom also appeared to be too passive. Students were reduced to passive listeners and mechanical respondents. Generally, no excitement in students was apparent during the process, and classroom activities were limited to copying notes from the chalkboard, listening passively and reacting to questions posed by the teachers. Without much excitement in the learning process, students who are not self-motivated can be inclined to grow disinterested in learning. Retaining unmotivated students, or getting them to do productive work can then become a difficult task for the teacher. Pedagogical practices can unquestionably serve as a catalyst or retardant to high school dropout. Classroom practices, as observed in Sierra Leone, can be a catalyst to the school dropout rate.

For the operational curriculum to reflect the principles and assumptions of the intended curriculum, measures must be taken to ensure the availability of: (a) resources, including textbooks, equipment and supplies (b) improved conditions of service for teachers – incentives, better salaries, regular payment of salaries, (c) adequate number of trained and qualified teachers, (d) improved school infra-structure – buildings, desks, proper lighting, and (e) an effective Secondary School Inspectorate.

Context of the educational process

Tradition or the historical context, to a great extent, has influenced the curriculum process in Sierra Leone (Sumner, 1963; ILO/JASPA, 1990). Lillis (1984) suggests that historical attitudes in developing countries constitute a major factor in the resistance to change. He noted that “there is an obvious degree of inheritance from the colonial period in the schooling system of now politically independent countries goes without say” (p. 175). The historical context coupled with the lack of commitment to initiate change created an inertia in the educational process in Sierra Leone.

Attitudes in Sierra Leone have apparently fostered the notion that vocational education is not valid education. ILO/JASPA (1980) acknowledges this fact and subsequently noted that even the wage systems in Sierra Leone favour paper qualification as opposed to relevant skills. Innovative proposals for change, which are not in accord with those dominant assumptions and attitudes, are usually rejected (Lillis, 1984).

The literature on educational development in Sierra Leone (Sumner, 1963); Anderson & Baker, 1969) supported the claim that formal education was regarded as means to escape the burden of manual work. The 3Rs (Reading, Writing and Arithmetic) together with Religious Knowledge constituted the core of the curriculum during the colonial era. This education, the only one known to Sierra Leoneans then, became synonymous with valid education. The political ambitions of the British, including the activities of Christian Missionaries in Sierra Leone, were bent on creating an elite class of Sierra Leoneans who could help advance their economic, political and religious agenda. The mission of education then, was to produce a small cadre of Africans who could do basic computation, read and write so as to be able to perform limited clerical duties. Formal education, then, was symbolic of a process designed to ensure the continued subservience and evangelisation of the native Sierra Leonean.

Equally, the missionaries had their implicit design for formal education in Sierra Leone. They were intent on indoctrinating Africans in what they, the missionaries, perceived as Christian principles and western values. The purpose of education for the missionaries was to transform the African to a literate adjunct of their religious and expansionist designs. Formal education thus became an agent of change that was imposed on the subordinate in spite of his/her interests. It was neither child-centered nor was it contextually relevant to the aspirations of its real clientele. The utilitarian function of education was equally not entrenched in the system of formal education that was inherited from the British.

Efforts, especially after the colonial era (i.e., after 1961) to make education responsive to the political, social, and economic contexts of the Sierra Leonean have before the 6-3-3-4 educational system failed. The assimilation of the dominant or elite class of Africans into the religious and political machinery of the colonial power legitimised the process. It equally provided assurance of its perpetuation. Social progress and mobility were, in practice, linked

to the inherited value systems and institutions acquired during the colonial era. By seeking or gaining employment with the Government, Sierra Leoneans knowingly or unknowingly subscribed to, and reinforce the paper qualification requirements imposed by the bureaucratic system. Through association with the formal institutions established by the colonial regime, Sierra Leoneans developed an appreciation and affinity for the conventions and traditions imbibed during the colonial period.

Within such a socio-economic context, the school system can be easily lured into a sense of self-fulfilment and complacency. It is equally likely that the educational system had been reinforcing the paper qualification syndrome. Societal standards, wage and promotion systems, social mobility and status, in most cases, are solely determined by paper qualification. This could lead one to believe that paper qualification is the lone product of education. Using education as a means to alleviate or solve social problems can easily become elusive. It is, however, highly regrettable that some students, parents, and members of the Sierra Leonean community have not been able to dispel the notion that only liberal education, as imported, is valid education.

Adopting and implementing a secondary school curriculum, which emphasises manual or vocational education, can be easily construed as a deviation from the norm. It is apparent that a potential conflict exists between socio-economic progress on the one hand, and entrenched social attitudes and values on the other hand.

It is, therefore, important that measures be taken to cultivate the right attitude toward education in general, and vocational/technical education in particular. The Government should aggressively seek to restructure the wage system in order to elevate vocational skills to a well-deserved level of importance. Equally, resources should be made available to (a) identify appropriate vocational education models, (b) adapt and adopt an appropriate vocational/technical education programme, and (c) maintain an effective vocational and technical education programme. Combining a meaningful vocational/technical education programme with liberal education at the secondary level in Sierra Leone, therefore, entail a significant commitment of moral as well as economic resources.

UNDP (1989) noted that some of the major problems relating to education and training in developing nations in the 1990's would be "in planning, management and financing of secondary education" (p. 22). This can be very true for Sierra Leone. The wastage in human and economic resources that results from the past traditional academic education process has been reduced as a result of combining academics with vocational/technical education.

Equally, if wastage resulting from mismanagement, inefficiency, bribery, and corrupt practices is minimized, the economic resources going down the drains could partly finance a program of this nature. The over-reliance on foreign donors caused by the rebel war has apparently increased the nation's dependence on foreign countries for her welfare. It has also apparently rendered the nation indifferent to her own well-being. Maximising the rentability of the nation's resources is crucial to the survival of the nation as a viable social, political and economic entity.

Some of the major issues secondary education may have to grapple with in the 21st century are efficiency and accountability. The ground-work has to be laid in the other social, political, and economic institutions. The education system is an integral part of society. It influences and is influenced by the other components of the Sierra Leonean society. Diversifying the curriculum so that the secondary school curriculum and the culminating educational experiences are relevant to the student and his/her environment is essential to national development. Such a measure has potential to improve the condition of the child, and society as a whole.

It behoves politicians, policy makers and educators to make the necessary commitment in order to improve the secondary curriculum, pedagogical practices, and the total educational output. Without such a commitment, the future of the secondary school leaver as well as that of the nation will continue to be bleak. In a country like Sierra Leone where the education process is not determined by market forces, educators and policy makers should keep a watchful eye on the extent to which education is responsive to the nation's needs.

CONCLUSIONS

It was necessary for drastic changes to be made in the old educational system, which after all, was inherited from the colonial masters to serve their own interest, and for a period that has now completely changed. As leaders in an independent, responsible nation that takes seriously the life changes of all its citizens, especially the young ones, educationists have a duty to change the system to meet the new needs of the contemporary times.

It is hoped that the previous chapters have given an insight into the 6-3-3-4 system – the rationale for adopting it and what makes us so sure that the 6-3-3-4 education system is better than the old one it replaced. In the first place, the new system integrates the world of the student's home with that of the school, using the tools, knowledge and concepts he understands best to ease him into new knowledge, and widening his interest and horizons without making him lose interests in the best of his own culture and his own background. Social Studies at JSS and Sierra Leone Studies at SSS levels were included in the curricula so that students would understand the country as one nation of different culture and people who have to work together and not pull apart. Unfortunately, no Senior Secondary School in the country is offering Sierra Leone Studies because of the lack of teachers in that area. In Junior Secondary School, Social Studies is a core, and it is hoped that it would enlarge the student's knowledge of his own country and help him to see that all parts of the country are inevitably tied together by the strings of history into one future embracing the destiny of Africa and ultimately that of the human race.

An important thrust of the new 6-3-3-4 system is the encouragement of girls to enter the school system. In the old system, because of religious, cultural and socio-economic reasons, very few girls even began school, and a large number of those who did so, dropped out. The new system offers an easy linkage between the formal and non-formal education system so that the disadvantageous girls and women could have a second chance of formal education to improve their life styles and socio-economic mobility. From estimates given by the Central Statistics Office for 1995, between 1985 and 1995, decrease in literacy rates of the sexes occurred from 36.6% to 31% for males and from 22.8% to 11% for females. ("The New Era Newsletter", 2002 p.8) According to UNDP estimates, however, by the year 2000 increase had taken place

to 36% for males and 23% for females. The NFPE Project decided on the admission rule of two girls to one boy so as to increase the enrolment of girls in the programme. The rule, however did run counter to deep-rooted sensitive socio-cultural factors in some communities and as a result girls enrolment was still low.

Non-formal education has played a vital role in the 6-3-3-4 system of education. According to documents examined by the investigator at the Ministry of Education, Science and Technology, non-formal education programmes were fairly evenly distributed throughout the regions as the table below shows:

Table12
Distribution of Non-Formal Education Programmes by Region – 2001

Region	East	North	South	West
Percentage Distribution	27.6	18.6	24.1	29.7

Source:("The New Era Newsletter". June, 2002 P 4)

A total of 46,706 learners were enrolled in non-formal education programmes. Non-Formal Primary Education Programmes accounted for 19,381 (10,174 girls and 9,207 boys) of the learners.

In many ways the 6-3-3-4 system is an improvement on the old system as it could provide the nation with middle level manpower and change the direction of the nation positively from an almost dependent and parasitical people to an innovative and confident nation with knowledge, skills and attitude that could make people successful business owners and entrepreneurs with education related to the world of work, business, technology and other facets of realistic life. With this system the Sierra Leonean would once more have a pride in his country, its culture and indigenous heritage.

The 6-3-3-4 system has facilitated the transfer from school to employment and self-employment. These easy inter-faces are so important that a Task Force Report devotes a chapter to it. The linkages that existed before the inception of the 6-3-3-4 system were at best

perfunctory. In most cases the world of work and world of school were separate, isolated islands. The need for this inter face is increasingly important. Job opportunity in the modern sector of the economy and the service sector (including the civil service) are getting scarcer and scarcer. The young have to be equipped for work and guided into such less glamorous but developmental important sectors as agriculture and the middle level sector of the economy where there is great dearth of Sierra Leone Craftsmen, and support staff for the highly trained professionals. They also have to be encouraged and supported into the difficult world of entrepreneurship, which is now full of rich and thriving aliens.

Other conclusions drawn from the findings and discussions are as follows:

- i) There was a clearly defined and comprehensive philosophy as well as policy for formal education in Sierra Leone.
- ii) The intended secondary school curriculum in use in Sierra Leone's secondary school was relevant to the nation's manpower needs.
- iii) Neither the core curriculum, nor the electives made ample provision for instruction in a unified system of values – moral, civic or patriotic – that were considered essential to a productive work force.
- iv) The pedagogical practices, as manifested in the operational curriculum, were not consistent with the underlying assumptions and intentions of the intended curriculum. They appeared to demonstrate a bias in favour of the acquisition of knowledge, and against the application of skills.
- v) Attempts to comply with curriculum prescriptions have been compromised by: (a) lack of instructional materials and equipment, (b) low teacher salary, irregular payment of teachers' salaries, and poor work conditions, (c) inadequate infra-structure, (d) inadequate number of trained and qualified teachers, and (e) an ineffective curriculum diffusion system.
- vi) There were discrepancies between policy prescriptions and teachers' perceptions in relation to the mission of secondary education in Sierra Leone.
- vii) There was no evidence of any effective teacher appraisal process in the schools as well as a system-wide procedure for monitoring compliance with curriculum prescriptions.

- viii) There were manpower needs and potential for manpower development in: (a) agriculture, (b) mining, (c) commerce, (d) small scale industries and manufacturing, (e) artisan activities such as technical repair services, fabrication of farm tools, carpentry, masonry, house construction, and tailoring, and (f) tourism/arts and craft.
- ix) Excesses in manpower existed in clerical and related fields.
- x) Mechanism has been put in place to redress the imbalance in manpower needs.
- xi) There was an absence of a comprehensive and consistent mechanism for assessing and monitoring manpower needs relative to formal educational output.
- xii) There was a lack of commitment by authorities to allocate resources required to alleviate youth unemployment and under-employment.
- xiii) There was widespread inefficiency and poor work habits and attitudes.
- xiv) There was relentless urban migration, a saturated and dwindling public sector, and a potential buoyant private sector in the rural areas.

The system pays attention to vocational and technical training so as to provide middle level manpower and self employment (self-reliant).

The aspect of continuous assessment helps the child to be punctual and keep a steady head on assignment and class work as grades gained contribute 10% towards the promotion exams score, instead of depending on the work done in final exams.

Pupils start to learn rudiments of agriculture from the primary school onto JSS and this gives them a good background if they intend to pursue agriculture as a career. Also with basic education the pupils can become self-employed at the end of JSS.

The new system does not only cater for the cognitive aspect but also the affective and psychomotor and scores gained in these areas contribute to the overall continuous assessment. The system provides a universal education for pupils between 6 – 19 years. This ensures 9 years of basic education.

The 6-3-3-4 education system caters for employment but this could not be achieved in the absence of the required equipment and tools which most people cannot afford. Continuous

Assessment marks may be deceptive, as some teachers favour pupils and may therefore give subjective grades.

Also from the findings and discussions the under mentioned conclusions have been drawn. There is a problem of remuneration for teachers/lecturers and particularly for the servicing of secondary schools. There has been a general unwillingness to pay higher salaries necessary to attract the better qualified entrants to teaching that it supposedly wants. There has been no real increase in teachers' salaries in this country. Teachers/lecturers have only benefited as a result of the rather infrequent across-the-board increases for all Government employees. Teachers' salaries have never been considered per se. These low salaries coupled with poor conditions of service have led to high staff mobility outside the profession. These have moved mainly into the private sector. In order to keep their family going, teachers have resorted to alternative ways of enhancing their income – petty trading or the ghost teachers' syndrome, hence teaching have become a past-time activities for them. The end results have been extreme low level of professional commitment and absenteeism.

There was a marked absence of conducive environment for learning to take place at all levels of education. In some of the schools that offer science the investigator observed that there was no laboratory for any science practicals. Metal Work or Wood Work was mostly studied from a chalk board drawing. Students had to sit on the floor as the supply of tables, desks or chairs was inadequate.

Teachers, administrators, students and other stake holders agreed that if everything was put in place the 6-3-3-4 system of education according to its curriculum would definitely provide the country with middle level manpower and also enable students to become self employed/self reliant.

Technical and Vocational education had for long been neglected. However, this is set to change because the 6-3-3-4 system of education which was introduced in September 1993, is heavily bias towards Technical and Vocational Education. There are not enough institutions, teachers, and materials to make it possible for all the students who may want to go to Technical Institutions or at higher level. In short, the present provision of Technical/Vocational

Institutions falls short of what is needed to support and sustain development, and is deficient in both quantitative and qualitative terms. There are however some Technical Institutions that are models of appropriate and good practice. The core objective of this component is to combat the general shortage of skilled manpower through organised and sustained support of good practice in technical skills training and the network of such example throughout the country.

The new system needs a lot of equipment, machinery, tools, gadget etc and entails a lot of finance which most educational institutions/people lack.

The status of schools could affect the pupils as some may become pompous because they feel the school they attend is an SSS one and so superior to a purely JSS one. A feeling of inferiority could result from the reverse situation.

That whilst enrolment in teacher colleges had been increasing, the majority of the graduates were specialist in the teaching of the Arts subjects and not the Science or Technical/Vocational subjects.

Recommendations

Based on the findings of the investigation, and the discussion which ensued, the following recommendations are made:

1. Work Ethics/Civic Responsibilities should be included in the core curriculum.
2. Increased resources should be allocated to education in order to (a) maintain and improve existing institutions and programmes, (b) produce and provide necessary supplies and equipment.
3. Revitalise the Secondary School Inspectorate Division so as to render it effective for monitoring compliance. It should be staffed with people who have served as Principal/Head Teacher for at least five years. A teacher who has failed woefully in the classroom cannot be a good inspector of schools. Vehicles and other logistics should be made available to the inspectors to facilitate their movements.
4. Institute clearly defined system-wide procedures and guidelines for evaluating and monitoring schools.
5. The teachers who had already being employed have not been trained for the new assignment they have been called upon to perform. Suddenly untrained, unqualified and unprepared teachers have become expert in new and delicate field of study. They cannot help the system and cannot in anyway help the pupils themselves when the new system means to provide with an advantageous form of education for superior performance in relevant areas in their community. It is impossible to see how this programme can succeed if the authorities do not arrest this mad rush, reverse the situation and put the horse before the cart again. The investigator now recommends that in-service training for teachers be immediately organised. Distance learning should also be introduced within the system so that the large number of untrained and unqualified teachers in the system would have the opportunity to become trained and qualified. This will increase the number of teachers in the classroom thereby reducing the pupil/teacher ratio.
6. Establish a school-based teacher appraisal process.
7. Establish a Liaison Office in the Ministry of Education, Science and Technology to work in concert with (a) Institutions training teachers, (b) the Ministry of Labour,

(c) the Ministry of Development and Economic Planning, and (d) various members or sectors of the community. It must however be noted that the authorities of secondary education are partly handicapped by the problems of the job market, the world-of-work and its ever changing nature. It is usually difficult for them to assess the forecasting of manpower needs and assessment of needs for skills in the society.

8. Government should improve the conditions of service for teachers, provide incentives for them and the salaries of teachers should be commensurate with the work they do and such salaries should be paid regularly and promptly. Remote area allowance should be introduced so that trained and qualified teachers would be attracted to the remote and backward rural areas especially those in the provinces. Minimal housing requirements for those teachers must be met and construction of new schools must include housing requirement for teachers. Recognition and other rewards should be given to teachers making suggestions that lead to improvement in teaching methods.
9. Government should also consider retraining and reemploying retired personnel.
10. Government should also consider harmonising the varying conditions of service into a unified system for all employees by training and qualifications, so that no matter where one finds oneself, one will be earning the same salary as any other person some where else, with the same qualification. This would help to increase the number of trained and qualified teachers in the classroom as there are so many trained and qualified teachers who have left the classroom for greener pasture.
11. Teachers who wish to upgrade their skills should be allowed to do so even if it means working less than the normal time with full-time pay. The obstacle between training and trainees should be totally removed.
12. More scholarships should be provided for those willing and qualified to enrol in Teacher Training Colleges and fees should be waived for those who opt for technical and vocational discipline.
13. Subject allowance should be introduced and be paid to teachers who teach Technical/Vocational subjects, Mathematics and Science.
14. There are basically three main measures, which should be taken to make staff get into, stay on and/or develop on a job. These options are referred to as motivational

strategies and include: - (a) Use of force, duress, threat etc = Fear Motivation, (b) Exploitation of changes in behaviour = Attitude Motivation, (c) Use of various forms of rewards = Incentive Motivation. The investigator recommends the incentive motivation, which is considered the most, appropriate, to raise the capacity, efficiency and motivation of the teaching force.

15. Provide for more teachers/lecturers involvement in the decision-making process
16. Initiate an effective workable system-wide provision for effective Guidance and Counselling
17. The Ministry of Education, Science and Technology, should coordinate assessment procedures among schools at successive stages of the secondary education process.
18. Expand the curriculum further of secondary teacher-training institutions and their student population.
19. The nation's teaching force should have access to programmes for the continued improvement of their professional skills and the opportunity to acquire knowledge and skills needed to instruct and prepare all students for the future.
20. In order to get more pupils to go and stay in school education should be free up to SSS III. This measure would help to reduce the dropout rate.
21. Government should provide conducive environment for learning to take place in the different institutions, that is to provide academic and administrative equipment, spacious classrooms, laboratories, workshops, libraries, tools etc. Vocational education is only meaningful when the appropriate tools or equipment are used in the teaching/learning process.
22. In order to effectively address the development of technical and vocational education the under mentioned issues need to be addressed by Government:-
 - (i) should make available and retain qualified technical and vocational teachers,
 - (ii) create appropriate social and cultural attitude,
 - (iii) develop relevant and appropriate technical/vocational programmes and experiences,
 - (iv) make available relevant and appropriate equipment, workshops, laboratories and materials,

- (v) the relationship between institutional technical/vocational education and the world of work.
23. Government should also seriously consider ways and means to produce locally, with component having little foreign exchange costs, other educational materials and equipment for schools and colleges. The country has the expertise to undertake such an activity. The authorities need only the will to initiate the project.
 24. Only textbooks that meet the established criteria should be used in schools/institutes.
 25. In order to prepare students for the work force the researcher suggests that Government should use the linkage system. There should be linkages between vocational and academic curricula, between secondary and post secondary occupational programmes, and to a lesser degree, between school and workplaces. Increased attention to accountability is expected from the Administrators through the performance systems of standards and measures they develop that address programme quality and outcomes.

Suggestions For Future Research

The findings of this study suggest that a similar imbalance may exist at the tertiary level. It is suggested that a careful assessment be made at the University in order to find out how responsive the degree programmes at the tertiary level are to the development needs of Sierra Leone. The quality of instruction and research, facilities for research and advanced studies, and components of the organisational culture at the university level are crucial to the national development aspirations of the nation. The high cost of college education in Sierra Leone, and the amount of resources allocated to tertiary education would justify a systematic analysis and assessment of the rentability of tertiary education.

NOTES

1. **The International Handbook on Education Systems (1985), pp. 352 –353**
It was noted that the Education Review of 1974 recommended expansion of primary school place by two and a half times, so that by 1990, 78% of seven year old children would be in school.
2. **Africa Recovery (1989), Vol. 3, No 3, p. 10.**
3. **ILO/JASPA (1980), p. 3.**
4. **Ministry of Education, Science and Technology (1989), pp. vii – viii.**
Between 1986 – 87 and 1988 – 89 education accounted for 25% of total cost expenditure.
5. ILO/JASPA (1990), p.41. Indicated that the unemployment rate in Freetown was in excess of 15%, and unemployment among youths was over 30%.
6. Wyse, A. (1989), p. 35. Attested that education during this period had white-collar occupations as a primary focus.
7. Summer, D, (1963), p.6
8. Anderson, E., and Baker, E. (1969); p.10.
9. Timity, R. (1983), p. 88.
10. Borg, E., & Gall, M. (1989). pp. 741-780; Eisner, E. (1985). pp. 192-215
11. Tyler, R. (1949).p 106.
12. Lee Schrest, “Naturalistic methods in the study of social attitudes”, paper presented at APA Annual Conference, (1966).

APPENDIX A

APPENDIX B

APPENDIX C
QUESTIONNAIRE 1 of 3

Name of School.....Address.....
 Proprietor (example, Government/Mission/Private).....
 Current Enrolment: Male.....Female.....
 What is your official title?.....
 Qualification.....College Major.....Minor.....
 What subject(s) do you teach?.....How long have you taught it?.....
 When did you last receive training in your field?.....Was it required?.....Yes...No..
 Was it (a) Seminar (b) Conference (c) In-service (d) Other? Specify.....

Please Check (X) The Category Which Best Describes Your Opinion

		Strongly Agree	Agree	Strongly Disagree	Disagree	Not Sure
1	The present curriculum is adequate in content					
2	The present curriculum is fundamentally skill-oriented					
3	Secondary education should provide only liberal education					
4	The curriculum determines what I teach					
5	There are trained and qualified teachers for all subjects offered.					
6	Inspectors of schools pay regular visits to my school					
7	Only BECE & WASSCE results are used to assess teacher's performance					
8	I cover approximately the same curriculum content every year					
9	Curriculum objectives are clearly explained to me					
10	The present curriculum is adequate in providing vocational skills					
11	I prepare lesson notes at least 75% of the time					
12	I prepare for every lesson					
13	My contribution into curriculum design and development is often sought					
14	To the best of my knowledge, secondary school teachers teach according to the curriculum					
15	The present secondary school curriculum makes adequate provision for teachers creativity and innovation					

16	The present curriculum is relevant to the nation's development needs					
17	Generally, I individualise instruction					
18	I make use of the same teaching technique every year					
19	The WASSCE exam is too academic					
20	The time student spend acquiring skills (as opposed to knowledge is adequate)					
21	Unemployment is now a serious socio-economic problem in Sierra Leone					
22	The time students spend acquiring knowledge (as opposed to skills) in my subject area is adequate					
23	The college-bound student should benefit most from secondary education					
24	My performance is judged based on the amount of curriculum content covered					
25	Administrators can easily detect deviation from curriculum in my school					
26	Secondary school has no business training students for work					
27	Secondary school drop-out is now a national problem					
28	Job training should begin after secondary school					
29	The time allotted to instruction in my subject area is adequate					
30	The present secondary school curriculum contributes to school dropout					
31	The present curriculum will help student to become self reliant after leaving school					
32	The present curriculum provides quality middle man power for the country					

QUESTIONNAIRE 3 of 3

The following subjects are taught in my school: (Please check as many as applicable).

Mathematics.....Science.....English.....Social Studies.....Physical Ed.....Art/Craft.....
 Business/Office Management.....Industrial Arts.....Agricultural Science.....
 Vocational Ed.....Foreign Language.....Home Economics.....Other(s).....
 Specify.....

The following materials and facilities are inadequate in my school: (check as many as applicable)

(a) Students' text-books.....(b) Teachers' text-books.....(c) Ventilation.....
 (d) Play-grounds.....(e) Audio-visual aids.....(f) Library facilities.....
 (g) Classroom space..... (h) Other..... Specify.....

What are the strengths of the present secondary school curriculum?

What are the weaknesses of the present secondary school curriculum?

What are your greatest frustrations/accomplishments in attaining instructional objectives?

Do you think there are conflicts between curriculum prescriptions and instructional practices? If so, please explain.

What kind of modification/alterations must be made to the present secondary curriculum in order to make it more relevant to the development needs of Sierra Leone?

Would you like a copy of the findings of this study? If so, please state your mailing address below.

Confidential..... Not Confidential.....

GLOSSARY OF TERMS USED

Academic rationalism: A curriculum orientation which establishes the claim that the function of the school is to foster the intellectual growth of students in subject areas that are deemed worthy of study.

Basic education: The provision of facilities for all citizens to be literate and numerate and help given to them to cultivate the knowledge, skills and attitudes that will enable them to earn a good living, to improve their social and health circumstances, to be patriotic citizens of Sierra Leone and to understand the complexities and opportunities of the modern world.

Bracketing: A research strategy that aims at isolating the essential features of the events and processes under investigation.

Capturing: A qualitative research approach that seeks to secure instances of the phenomenon that is being studied.

Cognitive development An intellectual process that involves growth in one or more of the following domains of information processing: acquisition, comprehension, application, analysis, synthesis and evaluation.

Constructing: The process of synthesizing the key elements of a phenomenon in order to give meaning to events and situations as they relate to the subject under investigation.

Contextualizing: A qualitative research endeavour that is aimed at relating bracketed phenomena to lived experiences.

Curriculum: This is the totality of planned experiences and activities prescribed for a specified school setting, and designed to have educational consequences for the students within that setting.

Deconstructing: The process of critically analysing previous studies and representations of the phenomenon studied.

Educational evaluation: The process of making a reasoned assessment of the merit and worth of an educational program. The object of evaluation may involve instructional methods, curriculum materials, educational institutions, educators, or students.

Educational philosophy: A body of principles that are destined to furnish deep and wholesome motives, beliefs and direction to an educational program or system.

Educational process: The process by which one or more individuals provide another with the means and opportunities for learning. The process of education involves manipulating an individual's environment in such a way as to bring about certain changes in behaviour. The process involves three elements: (a) the child, who must conform to certain expectations within the learning context so as to enable him/her to benefit from the process, (b) the content which must be presented in a meaningful way and must be implemented through meaningful tasks, and (c) the teacher who must help the student transfer what (s)he has learned in the classroom to novel situations.

Educational relevance: The relatedness and applicability of educational experiences to specified elements and conditions within a given social system.

Formal education: A systematic and structured series of experiences designed to influence an individual's interaction with his/her environment.

Formal sector: (see public sector).

Framing: This is the endeavour of a researcher that aims at locating a problematic phenomenon, discovering its context, and identifying institutions, sites and locations where persons associated with the problem interact.

Hermeneutical situation: An interpretive situation which involves the interaction between the researcher's previous experiences and the phenomenon under investigation.

Ideology: This is a set of ideas (usually political) that attempts to provide an explanation or justification for the way things are and should be.

Informal sector: (see Private sector).

Intended curriculum: The underlying assumptions, strategies, values, and intentions contained in a formally prescribed curriculum.

Interpretive Interactionism: A qualitative research method that confers meanings on symbolic interaction and lived experiences.

Labor force: The total number of people engaged in productive work. In this study, this term is used interchangeably with work force.

Learning: This is a relatively permanent change in behavior that is occasioned by an individual's interaction with his/her environment.

Liberal education: A structured program of studies that is directed toward not developing specific skills and abilities, but to the general cognitive capacities of the individual. It is a broad-based education.

Manpower needs: The shortages of different qualified groups of labour. Manpower needs are often generated and aggravated by the absence of planning. A manpower need is said to exist when the demand for qualified labour outstrips the supply. The supply of labour relates to the number of people available at different job categories, whereas demand relates to the number of people required at different job categories or occupations.

Manpower planning: This is the systematic endeavour aimed at forecasting the demand and supply of manpower in qualified categories, in an effort to ensure that supplies of manpower

are available when planned requirements arise. It is usually intended to assess the external efficiency of education and training, and the relevance of training programs to the world of work.

Operational curriculum: This is a sum of educational events that transpire in the process of interpreting and translating the prescribed curriculum into educational experiences.

Personal relevance: A curriculum orientation that emphasises the primacy of personal meaning, and the school's responsibility to institute programs in concert with students so as to make such meanings possible.

Policy: A framework of expressed intentions, expectations and procedures which seek to guide or constrain the activities of social actors within an organisation or system.

Private sector: In the Sierra Leonean context, the private sector is composed of small-scale business ventures (usually employing fewer than six workers) with self-employment constituting the bulk of the total employment. The family usually owns the business, and training is acquired through apprenticeship.

Psychomotor Learning: Those learning which require physical performance by students. Such learning are usually acquired by practicing a skill-oriented task.

Public sector: The usually dominant segment of the market (especially in a country like Sierra Leone) with administratively structured earning prescriptions that are, among other things, based on paper qualification. In Sierra Leone, the government (as well as para-statal business ventures) has been the most active element in the public sector.

Social adaptation: A curriculum orientation in which the aims and content of a school program are derived from an analysis of the needs of the society that the school is designed to serve.

Social reconstruction: A curriculum orientation that emphasises the primacy of progressively developing critical consciousness among students so that they become aware of social problems, and seek ways to alleviate them.

Syllabus: A vehicle by which organisation and structure of intended educational outcomes are communicated from teacher to teacher, and from the teacher to the learner. A syllabus may be arranged as units of instruction, including a rationale for the selected approach to planning. As an organising document in an area of instruction, a syllabus may take the form of a course description that runs for a given period of time (generally, in Sierra Leone, it is yearly).

Symbolic interaction: Lived experiences that are mediated by symbols and language.

Teaching: A goal-directed interactive activity that deliberately seeks to bring about a relatively permanent change in the behaviour of the learner.

Technical education: From the foregoing, it can be argued that Technical Education is a subset of Vocational Education. All those vocational subjects that are of a mathematical orientation, or involve machinery, some physical effort and considerable hand and eye co-ordination skills have been clustered together and tagged 'Technical'. Examples of these are electronics, auto-mechanics, plumbing and carpentry.

Technology/means-ends: A curriculum orientation in which curriculum planning is conceived as a technical endeavour whose primary task is the identification and adoption of appropriate means destined to achieved stated educational goals.

Thick description: A detailed and dense analysis that seeks to capture the meanings and experiences of events and people, and bring the reader to the heart of the experience being studied.

Traditional Education: In the radical pedagogy of the Brazilian educator, Paolo Freire the traditional education follows the banking concept of education.

Vocational education: Vocational Education is derived from the Latin word “Voco”, which means “to call”. Vocational hence means “the call to serve” and Vocational Education can be referred to as the training of people involving the use of their hands and brain to produce and serve. As a consequence of the foregoing, all courses that lead to production as a way of service are arguably ‘vocational’. Courses of this nature range from bricklaying to architecture.

Western Area: Greater Freetown-the capital of Sierra Leone, West Africa.

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