International

Journal of

Scientific Research in

Education

Volume 1(1), JUNE 2008

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Human resources management	Special Education
Individual professional learning portfolio	Staff professional growth and development
Information Communication Technologies (ICT) in Education	Teacher education
Information systems for education and training support	Teacher effectiveness
Information systems management	Theories of educational management

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CONTENTS

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International Journal of Scientific Research in Education (IJSRE)

An evaluation of the impact of the PSMDP on the management performance areas from the perspectives of the SMT's[†]

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Abstract

The Government of Botswana has made concerted efforts since attaining independence in 1966 to improve the quality of its primary education sector through a number of reforms. One such reform was the introduction of the Primary Schools Management Development Project in 1999 which was a joint venture with the British Department for International Development (DFID) whose main purpose was to develop the management and instructional leadership skills in primary school heads in order to make them more effective in their jobs. This paper reports the findings of a study that was carried out to evaluate whether the PSMDP achieved its intended mandate of improving the management of primary schools in Botswana. The study adopted the survey research design with questionnaires for different categories of teachers being the main instrument used. The study targeted three out of the six primary education regions, namely Central North, Southern and South Central. A total of forty Government primary schools were used with a total sample of 560 teachers in all.

BACKGROUND TO THE STUDY

Primary education in Botswana has, before and immediately after independence, not been treated as an important a foundation as it deserved to be and this is manifested from the poor resources which characterised it. More importance was centred on secondary education as it was the thinking that as a new nation, graduates of this level were more trainable to meet the required manpower needs (Monyatsi, 2003). One illustra-tion of this neglect is the fact that at independence the country had many of its primary teaching staff offering their services without any professional training. Over the years, the teachers training colleges have awarded four different kinds of teaching certificates; the Elementary Teachers Certifi-cate (ETC), Primary Lower (PL), Primary Higher (PH), and Primary Teacher Certificate (PTC) (http://www.unesco.org/education/wef/countryreports/botswana/rapport_2_1.html.).

At independence in 1966, the dominant qualifications for primary school teachers' professional qualifications offered at these colleges were the Primary Lower Certificate and the Primary Higher Certificate. Those with the Primary Lower Certificate would have entered the teacher training colleges after successfully passing Old Standard Four and/or Six Examinations; and those who would have failed Junior Certificate Examinations (done after the first three years of secondary education). For the Primary Higher qualifications, they would have entered the teachers' training colleges after successfully passing the Junior Certificate Examinations. The Elementary Teachers' Certificate was introduced in 1968 as a way of upgrading those untrained teachers who did not qualify to enter the teachers' training colleges (Dodds, 1994). The situation as reflected in the report of the National Commission of Education of 1977 shows that even a decade subsequent to independence, as high as 81% of the untrained teachers had only completed standard seven, while 56% of the trained teachers had completed standard seven to qualify for training in Teacher Training Colleges (Republic of Botswana, 1977).

The Government of Botswana has, however, since the first Commission on Education made some efforts to improve the quality of primary education. For instance, during National Development 5, in line with the recommendations of the National Commission on Education, 1975, Primary Education was given the highest priority within the education sector (Republic of Botswana, 1985:126). The United States Agency for International Development (USAID) was engaged in projects such as the Primary Education Improvement Project (PEIP) from 1980 – 1990 with the aim of improving primary education by training education officers and inspectors, including lecturers for the colleges of education. It was also engaged in the Botswana Junior Second-ary Education Improvement Project (JSEIP) from 1985–1991 whose aim was to help the government of Botswana to expand its 7-years basic education program (primary) to 9 years (primary and junior secondary). These projects also popularized the learner-centered pedagogy which Tabulawa (2003) posits that it is a type of teaching practice that reflects Western neo-liberal ideology and is intended to promote the liberal democratic societies and, concom-itantly, capital-ism. Accord-ing to Tabulawa (2003:9), like all aspects of education, learner-centered pedagogy is not value neutral, and has quite apparent "social, epistemol-ogical and philosophical foundations and the dominant technicist view of this pedagogy marks its ideological/political nature". The learner-centered approach inculcated into the students critical thinking skills, debating skills and questioning skills that produced citizens who were democratically compliant.

Another strategy used to improve primary education was in-service education which dated as far back as 1968 when it was based at one of the teacher training colleges, and was mainly aimed at equipping teachers with specific pedagogic skills including child-centred approaches which encouraged learning through activity or discovery or experimenting (http://www.gla.ac.uk/centres/cradall/docs/Botswanapapers/Kamaupaper_39.pdf)

Furthermore, in 1981, the Department of Primary Education was established in the Faculty of Education of the University of Botswana with the help of the United States Agency for International Development with the objectives of *inter alia*, to:

(a) provide leadership in the improvement of basic education, in collaboration with other departments and the Ministry of Education.
(b) strive toward becoming a centre of excellence dedicated to improving the quality of teacher education and teaching in the primary schools.
(c) prepare personnel for higher posts of responsibility in the field of primary education who are capable of being agents for the improvement of primary/basic education.
(d) contribute to the body of knowledge about the educational enterprise in Botswana through research and evaluation undertakings.
(e) strive toward becoming agents of innovation and changes in the field of primary/basic education (University of Botswana, 1997).

There was not much in-service training to assist those who had been elevated to such critical positions of leadership until the 1990s, except externally resourced workshops organized by the education officers who were mainly interested in pedagogical issues.

It has to be noted however that, with the passage of time, in-service education became more diversified as was illustrated by the introdu-ction of Primary Education Improvement Project (PEIP) and the establishment of Education Centres all over the country. Teacher support for professional development is provided through a network of 12

Education Centres, which are located at strategic points in the country so that in-service activities could be done near to where the teachers are. 11 of these 12 Education Centres have custom build facilities.

The Centres have the capacity to provide residential courses. Each Centre is staffed with In-service Education officers whose responsibility is to provide teachers with the necessary professional support for effective implementation of the school curriculum. The programmes run at the Education Centres are designed to meet the needs of schools. Staff Development Committees were established in the schools to act as liaison organs for the professional development of teachers. In most instances In-service Education Officers conduct school based workshops whereby they work with teachers in their regular environment. The functions of the Education Centres include**:**

- To provide an effective and coherent in-service education programme and to support the implementation of government policies and recommendations by liaising with all stakeholders.
- To identify the needs of schools and to be responsive and sensitive to their requirements and difficulties through provision of support services.
- To develop training programmes which will foster the professional development of all teachers in order to make them more effective classroom practitioners.
- To promote autonomous school based staff development.
- To sensitise schools to new developments in education and to systematically monitor and support them.
- To provide opportunities for in-service officers to update and upgrade their professional skills and qualifications (http://www.moe.gov.bw/ttd/index.html; Republic of Botswana, 1991).

Schools did not engage in any school-based staff development, but relied mostly on education centre-based workshops conducted by officers based in these education centres, as well as resource persons from Colleges of Education and the University of Botswana.

The Government of Botswana also took the initiative to invest heavily in the training of classroom teachers as a way of improving the education at that level. One strategy of meeting this was that the minimum entry qualification for training as a primary school teacher was raised initially to Junior Certificate (JC) and later to Cambridge Overseas School Certificate (COSC). This is clearly stated in Recommendation 100 [para. 10.5.9} (a) which reads: With respect to primary teachers, the Commission *recommends* that:

The entry qualifications into primary teacher training should be raised to a minimum COSC "O" level and the period of training should be three years. The pilot Diploma programme should be extended to all primary teacher training institutions so that future primary teachers will be trained for the Diploma in primary Education qualification (Republic of Botswana, 1994: 45).

Much as the Government of Botswana intensified the training of classroom teachers, for over thirty years of independence not much relevant training was provided to prepare teachers for positions of leadership, if at all there was any. This was despite the fact that it had been emphasized *inter alia* in the National Development 6 to raise the quality of primary education through the training of education officers and head-teachers in the professional supervision of teachers.

Many school heads and other members of the school management teams (SMTs) were thrown into the deep end with none or very minimal management skills and experience. The turning point came in the early 1990s with a shift from the centralised model of training to a more school-based in-service training with accountability of programmes left in the hands of school staff (Republic of Botswana, 1994). This shift was a response to Recommendation 105c of the RNPE which stipulated that:

The head as an instructional leader, together with the deputy and senior teachers, should take major responsibility for in-service training for teachers within the schools, through regular observation of teachers and organisation of workshops, to foster communication between teachers on professional matters and to address weaknesses *(*Republic of Botswana, 1994: 47).

This recommendation suggested a shift of emphasis from school heads being managers or administrators to curriculum leaders, whose primary purpose is to assist other teachers to shape the purposes and meanings that they use to make sense of, and to justify their contribution to educational development (Day, Hall, Gammage and Coles, 1993 citing Duigman and MacPherson (1992). It was realized that although instructional leadership was critical, it was seldom practised and the reasons given included: lack of in depth training of heads in their role as instructional leader, lack of time to execute instructional activities, increased paper work and the community's expectation that the head should be a manager (Flath, 1989; Fullan 1991). The recommendation therefore implied changes in the way in which staff development was organized in schools as illustrated by Joyce and Showers (1995) that such policy means providing the opportunity for immediate and sustained practice, collaboration and peer coaching, and studying development and implementation. This idea is supported by Dunham (1995) when he contends that, the well-being of all the members of the school community and even the survival of the school itself are dependent on the decision-making skills of senior and middle managers. Teachers perform best when there is a collegial and supportive environment offered by a school manager that respects their autonomy and builds upon their experiences.

In 1999, the Ministry of Education in collaboration with the Department for International Development (DFID) launched the Primary School Management Development Project (PSMDP). The Primary School Management Development Project (PSMDP) was a response to Revised National Policy on Education (RNPE, 1994) recommendation 115 which emphasized the need to focus on improving the quality of primary school management. The School Management Teams (SMTs), according to the policy, are viewed as critical forces that need professional skills to foster change and quality in schools.

The goal of the PSMDP was 'to improve the quality of primary education in Botswana by providing effective management training and support to school management teams' (Republic of Botswana, 2002). The overall aim of the project was therefore to establish a sustainable primary school management system, hence improve the quality of primary education in Botswana. This partnership between DFID and the Government of Botswana was to develop management and instructional leadership skills in primary school heads so as to make them more effective in their jobs (Ministry of Education, 1999).

STATEMENT OF THE PROBLEM

The following skills areas which were used in both the baseline survey in 1999 and the impact evaluation of 2002 as indicators of effectiveness were also used in this study to evaluate whether there was sustained impact of the PSMDP on the management performance areas from the perspectives of the SMTs: *motivating, planning, staff development, monitoring, staff appraisal, developing community relations, delegation, teacher management, parental involvement and team building* (Ministry of Education, 2000).

METHODOLOGY

The study adopted a survey research design. As pointed out by McBurney (1990: 60) "the purpose of a survey is simply to determine how people feel about a particular issue"; a view also shared by Fink (1995) who believes that perceptions which influence how people ultimately feel about a particular issue and how they react towards it are also determined through a survey. Therefore, how the SMTs perceive the PSMD programme would influence how they feel about and react towards it. These feelings and perceptions were established through a survey with a combination of questionnaires, observations, interviews and focus group interactions used in data collection.

Delimitation and Population of the study

The delimitation of the study comprised of three (3) out of six (6) primary education regions namely the Central North, Francistown, Southern and South Central. These three regions are each composed of rural, urban, and remote area schools. Since the study aimed at finding out how the impact is like, it is assumed that it might also be different from one type of settlement to the other. One inspectoral area was selected from each of the three regions making three inspectoral areas for the study. The population of the study comprised of school management team members (who are the focus of this paper), teachers, PSMDP coordinators, PSMAs from selected regions, PTA's and both policy and curriculum officers from the Ministry of Education.

Sampling

Though the research team had aimed at using forty schools selected through systematic sampling, this was made difficult by limited funding to reach some schools. A total of twenty four (24) government primary schools which are a focus of the PSMDP program were therefore used in the study. An unsolicited list of schools supplied by the MoE was used. This list was already presented alphabetically and without changing the order with which the Ministry provided it, every *n*th school was selected until the desired sample was reached. As Cresswell (2002) pointed out, a systematic random sample is where every *n*th subject in the population is chosen until a desired sample is reached. From the list chosen, convenience sampling was done because schools which were easily accessible were visited and respondents who were available at the time of visits were used to provide the information required.

From each conveniently chosen school, a simple random sampling procedure was used to pick two teachers from each stream (Stds 1-7) who responded to a questionnaire. A total of 29 PSMA's were engaged in a focus group interview.

Data Collection Procedures

The focus group interaction was deliberately used to validate the questionnaire data, interview data and observational data because as pointed out by Miles and Huberman (1994) it is useful when one needs to explain and illuminate or interpret quantitative data. Qualitative interviews can also obtain in-depth information about a participant's thoughts, beliefs, knowledge, reasoning, motivations and feelings about the topic. It also allows the researcher to enter into the inner world of another person and to gain an understanding of that person's perspective (Johnson and Christensen, 2004). Fifty five SMTs filled in a semi structured questionnaire out of which 15 (27%) school heads/deputies were interviewed.

Negotiating access

As per Bell (2004)'s advice, permission was requested from and granted by the Director of Primary Education in the Ministry of Education to carry out this research. Letters were written to relevant officers to negotiate access into individual schools and about the detailed modalities of conducting the research such as the dates and times of visits to various sites. Data collection was done by the researchers.

Data Analysis

Questionnaire Data

To a large extent the questionnaires were pre-coded. The remaining questionnaire questions were coded after data collection. All data from questionnaires was scored. Data imputing into the computer was done followed by analysis through the Statistical Package for Social Sciences 15.0 (SPSS 15.0) program. Research assistants were engaged for this process.

Interview Data

After conducting the interviews with heads of schools and their deputies, the researchers immediately developed a case record per interview. The themes emerging from the data were then identified. The indicators of effectiveness and sustainability were used as the major themes. Coding of the case records was then conducted. This involved "*identifying text segments, placing a bracket around them and assigning a code word or phrase that accurately describes the meaning of the text segment*" (Creswell, 2005:238). Content analysis was then done with data from both questionnaires and interviews. As alluded to by some authors (Cresswell 2005; Baker 1999), content analysis is often used where studies seek to understand values and social perspectives on issues. Content analysis was therefore appropriate in analyzing data from interviews and questionnaires as the study sought to establish perspectives of various subjects on a social programme. This involved establishing the frequency with which the established

programme effectiveness indicators occur in various data codes from various sources (Bell, 2004) and establishing whether the content represents the concept of effectiveness of the programme as defined by the indicators of the PSMDP (Cresswell, 2005). All data from interviews and questionnaires was triangulated and interpreted.

Findings from School Management Teams

A questionnaire was distributed to 70 SMT members out of which only 40 responded. Of those who responded, the majority, twenty six (65%) were females, six (15%) were males while eight (20 %%) did not identify their gender. Nineteen (73%) of the female SMTs had a junior certificate as their highest level of academic qualification while only three (11.5%) had ordinary level (O' Level) academic qualification. Only three (04%) SMTs possessed a degree qualification while the majority had a Primary Teacher's Certificate. None of the respondents indicated possessing a professional management qualification as would have been expected.

The subsequent sections of the questionnaire intended to establish from the SMTs if they had any performance difficulties in the given performance management areas which included: *motivating, planning, staff development, monitoring, staff appraisal, developing community relations, delegation, teacher management, parental involvement and team building*. First the SMTs were requested to assess as to whether or not they see themselves as having performance difficulties. The same respondents were again asked to assess their fellow SMTs in terms of whether or not they think they are performing their administrative duties well. Following are responses regarding each management performance area (PMA) which serve as indicators of effectiveness in primary school management.

Administration

A total of nine (22.5%) respondents felt they were having difficulties performing their administrative duties. The remaining 31 (77.5%) indicated that they did not have any problems performing these duties. On being asked to give their perceptions of how they see their colleagues performing their administrative duties, a total of 34 (85%) respondents, 21 of which were females, 5 males while eight were not identified by gender, indicated that they perceived their colleagues to be performing their administrative duties without any difficulties. Only six thought their fellow SMTs had administrative performance problems.

That the majority of SMTs had no administrative performance problems is not surprising as literature abounds that oftentimes, more attention in schools is given to managerial and administrative and that of the instructional leader is relegated to others in the administrative hierarchy even though the core business of a school is teaching and learning (Stronge, 1988; Flath, 1989). This aspect of administration was also found to have improved in the Impact Evaluation Study of 2002 when the project came to an end and this was said to be a result of the PSMDP. This also shows that there was sustenance of issues from the termination of the project.

Planning and Delegation,

Respondents were asked about their perception with regards their own ability to plan in their organisation as well as their ability to delegate duties appropriately. A total of 4 respondents indicated that they experienced problems in both planning and delegation of duties while two indicated they only had difficulties in delegation and not in planning. A total of 26 (65%) respondents on the other hand indicated that they did not experience any difficulties in executing both their delegation and planning duties. Eight (20%) of those who indicated that they had problems with planning intimated that they were comfortable with delegating duties.

Planning and delegation are both management and leadership functions and SMTs are duty bound to perform these functions in order to meet the goals of schools. As indicated in the literature, planning in schools begins with the clear identification of goals or vision to work towards as well as induce commitment and enthusiasm; and next is to assess what changes need to occur and which may be accomplished by asking the people involved, reading documents and observing what is going on (Phillips). As policy dictates that SMTs should play their roles as instructional leaders, they should involve themselves with setting clear goals, allocating resources to instruction, managing the curriculum, monitoring lesson plans, and evaluating teachers.

In the Impact Evaluation Study of 2002, the SMTs were found to be performing these functions very well as a result of the PSMDP. The results of this study also indicate the sustenance of the programme focus as SMTs are still doing their job very well as the majority of respondents indicated having no difficulties with both planning and delegation of duties.

Communication and Consultation

As the ability to communicate is one of the indicators of effective management, the respondents were asked to indicate their perception of how they communicate. Thirty (75%) respondents out of a total of 40 indicated that they perceive themselves as not having difficulties communicating with their co-workers and other stakeholders. Twenty six (65%) of these respondents also perceived other SMTs as not having any difficulties with communication. Whitaker (1997) identified as one of the skills essential for instructional leadership "the need to be good communicators". This is said to be essential as they have to communicate essential beliefs regarding learning such as conviction that all children can learn.

Consultation was another indicator of ability to lead and manage; and the respondents were asked whether or not they had any difficulties consulting others. They were also asked to indicate how they see their fellow SMTs engaging in consultations. Thirty seven (92.5%) respondents perceived themselves as people who have no problem consulting with others. With regards their assessment of their fellow SMTs on the process of consultation, thirty three (82.5%) of the respondents felt their colleagues did not have any problems. On the issue of consultation, SMTs as instructional leaders should be able to make suggestions, give feedback, model effective instruction, solicit opinions, support collaboration, provide professional development opportunities and give praise if deserved. It might be concluded that the respondents are happy about the way they both communicate and consult others in issues relating to managing the schools.

Interpersonal Relations and Discipline.

Interpersonal skills and discipline are yet another set of components of effective school management which were used both in the Impact Evaluation Study of 2002 and the current one and it was found that they were all positive. The respondents were asked to assess themselves with regards their own perceptions of their interpersonal skills. They were also asked to indicate their own perception of other SMT as far as their interpersonal skills were concerned. A number of recent studies (Appleby, 2000; Johanson & Fried, 2002; Yancey, 2001) have found that the most critical job skill a new employee needs to possess is good interpersonal skills. Employees with good interpersonal skills have the following competencies:

- Effectively translating and conveying information.
- Being able to accurately interpret other people's emotions.
- Being sensitive to other people's feelings.
- Calmly arriving at resolutions to conflict.
- Avoiding gossip.
- Being polite.

Five respondents felt that they had difficulties regarding interpersonal skills, and they also felt that other SMTs had difficulties regarding their interpersonal skills. A total of 26 (65%) respondents however indicated that as far as they are concerned, they did not have any problems regarding the interpersonal skills. They also assessed other SMTs as not having any difficulties regarding interpersonal skills.

Related to the interpersonal skills was the question of discipline. Good interpersonal skills, or self-discipline and empathy, are more important in today's world of work than ever before because the nature of work is different today from what it was in our grandparents' day. Many writers (Bridges, 1994; Cascio, 1995; Howard, 1995; Ilgen & Hollenbeck, 1991) have pointed out that job requirements are expanding, becoming more fluid and less set in bureaucratic stone. Originating in the quality movement in the 1980s, there has been an increase in the use of self-managed work teams. Another outgrowth of the quality movement has been an increased focus on servicing customers,

both internal and external customers. Subsequently, today's employees are expected to possess the personality traits and people skills that will enable them to work well in teams (McIntyre & Salas, 1995), engage in organizational citizenship behaviors that help coworkers accomplish organizational goals (Borman & Motowidlo, 1993), and develop a customer service orientation (Schneider & Bowen, 1995). In other words, developing and using your interpersonal skills will be vital to your future success.

In this study, four respondents who intimated that they had difficulties with interpersonal skills also indicated that other SMTs had discipline problems. The majority of respondents twenty seven (67.5%) indicated that others did not have any problems with discipline issues while thirteen (32.5%) indicated that others have difficulty with discipline issues. It can therefore be concluded that as a result of the PSMDP there has developed collaborative school cultures comprised of collaborative leadership, collegial support, learning partners, teacher collaboration, professional development and unity of purpose. School management has improved.

Monitoring and Motivation

Monitoring and motivation are part of the functions of management. For instance, Smit and Cronje (2003:11) contend that "managers monitor performance and action, ensuring that they conform to plans to attain the predetermined goals and this enables management to identify and rectify any deviations from the plans, and to take into account factors that might oblige them to revise their goals and plans". They further posit that "managers are responsible for getting things done through other people-they collaborate with their superiors, peers, and subor-dinates, with individuals and groups, to attain the goals of the organization. Leading the organization means making use of influence and power to motivate employees to achieve organizational goals".

In this study, respondents were asked to assess themselves regarding their performance in monitoring and motivating their subordinates. Three respondents indicated having difficulties in both monitoring and assessing their staff whilst thirty four indicated that they did not have any problems motivating and monitoring their staff.

The same respondents were asked to assess their fellow SMT in terms of how they perceive their performance in monitoring and assessing their subordinates. Out of a total of 40 respondents, only two indicated that other SMTs have difficulty motivating and monitoring their staff. Nine were perceived to have difficulties with only motivating staff. The rest twenty seven (67.5%) were perceived as not having any difficulties with both monitoring as well as motivating their staff members. It is therefore clear that the PSMDP had positive impact on empowering the SMTs with skills and knowledge to monitor and motivate staff to carry out their duties well.

Developing Good School Community Relations

Partnership in education is one of the important considerations for effective management of education in Botswana. The report of the National Commission on Education of 1993 "the Commission wishes to see more community and parental involvement in education" (Republic of Botswana, 1993:xviii) while the RNPE of 1994, Recommendation 118 [para. 11.6.3] states that: With respect to Parent Teachers Associations (PTAs), the Commission *recommends* that:

> The Government should intensify the efforts to encourage the establishment of PTAs. It is accepted that Parent Teachers Associations provide an effective forum for schools to keep in close contact with the communities that they serve, and therefore ensure that parents take an interest in, and contribute to the education of their children. Government will therefore mobilize communities to form PTAs to assist schools (Republic of Botswana, 1994:52).

The importance of parental involvement in the education of their children is also highlighted by Salathe who declared that:

> Parental involvement is vitally important for communities and children. When parents are involved in their children's schools in areas such as helping choose curriculum materials, they feel more connected with their children's education, more responsible for encouraging their children, and more supportive of the teaching staff.

Therefore effective managers of schools are expected to be able to develop and sustain school community relations and this was therefore one of the performance indicators that SMTs were asked to assess themselves and others on.

As far as self assessment and assessment of others of the ability to develop community relations was concerned, four SMTs felt that both themselves and others are having difficulties developing good school community relations while five assessed themselves as doing very well while others were having difficulties. A total of thirty (75%) respondents assessed themselves and others as doing well in the development of school community relations. As an indicator of effectiveness, it can be concluded that since the PSMDP, there has been increased participation of communities and parents in the management of schools in Botswana. In Botswana it was emphasized in the first policy of education that:

> Education for the young is a joint responsibility of the school, community and the parents, that calls for a willingness to give time to school matters through PTA and to contribute to the physical upkeep and maintenance of the premises by labour and financial contributions (Republic of Botswana, 1977:57).

This is further emphasized by Mongale (2005:21) when she posits that:

> *It came to the realization that communities are moving beyond traditional notions of parental involvement to new ways of re-thinking about parent –school relationship. It is important that improving public schools depends not only on parents and educators working together but must include everyone else in the community.*

Parental involvement in Botswana primary schools can be said to have been enhanced by the PSMDP as illustrated above.

Team Building

Managers should work as a team among themselves as well as with their subordinates if they have to successfully achieve their results. This has been illustrated above that today's jobs emphasize teamwork (McIntyre and Salas, 1995; Borman & Motowidlo, 1993). Therefore, team building was seen as yet another pertinent management performance indicator. Five respondents out of 40 thought they had difficulties building teams themselves and also thought other SMTs also had similar difficulties. Yet another five thought they did not have any difficulties building teams but thought others had difficulties. The rest of the respondents, twenty eight (70%) pointed out that neither themselves or other SMTs had any difficulties in building management teams as well as staff teams. That the SMTs which came into effect as a result of the PSMDP in 1999 were still operating effectively in 2007 is testimony to the sustenance of the programme.

Staff Appraisal

Mullins (1996:639) captures the essence of appraisal in managerial context when he declares:

> A comprehensive appraisal system can provide the basis for key managerial decisions such as those related to the allocation of duties and responsibilities, pay, delegation, levels of supervision, promotions, training and development needs, and terminations.

On their part, Goddard and Emerson (1995:11) refer to teacher appraisal as:

> …a continuous and systematic process intended to help individual teachers with their professional development and career planning, and to help ensure that the in-service training, and development of teachers matches the complementary needs of individual teachers and the schools.

Monyatsi (2003:25) contends that that appraisal is used as a technique to influence and control employee behaviour in order to increase productivity and effectiveness. It also serves to provide accountability for better services to the

public. Furthermore, literature on teacher appraisal shows that it can be very complex as it involves a number of factors that can either impede or support educator effectiveness (Malongwa, 1995:153).

The ability to appraise staff is important for a manager to be able to assist as appropriate or to make managerial decisions related to the demands of duty. Therefore the SMTs' ability to appraise their staff was used yet as another indicator of effective management. Six SMTs assessed themselves and others as having difficulties in appraising their staff while two assessed themselves as doing well and other s as having difficulties. The rest, twenty nine (72.5%) assessed themselves and other SMTs as doing well in appraising staff.

CONCLUSIONS

It is succinctly clear from this study that the Government of Botswana since gaining independence gave a lot of priority to the development of the education system despite the neglect suffered during the colonial era. Education was catered for well as opportunities for teacher training and development were explored to the extent of working in partnership with international organizations such as the USAID in an endeavor to improve the performance of students in schools.

This study illustrates that since Botswana attained independence, the Government has recognized the vital role that can be played by teachers in the ultimate goal of students learning; but was concerned with the caliber and supply of teachers. Firstly, teachers are the most significant instrument for effecting student learning and this role has even been perceived to be higher in developing countries where the culture of the school and that of the home are mostly at variance. The situation is further exacerbated by such hardships as the acute shortage of curriculum and instructional materials, and poor professional support materials (Monyatsi, 2003).

Second, teachers remain the most significant implementers of interventions and reforms intended to improve the quality of education and ultimately student learning. They are, therefore, the gatekeepers between policy reforms, interventions, and students' actual learning experiences. Thirdly, as one of the largest cadres of the civil service, and due to the proportionate expenditure involved, it is proper for the stakeholders to question whether the observed quality of teaching warrants the expenditure on teachers.

The findings of this study also illustrate that the Government of Botswana has never tired to look elsewhere for assistance in her attempts to improve the education its citizens enjoyed. Apart from the local interventions such as well-thought policies on education and their pronouncements, the Government entered into many agreements with foreign donors and also sent its teachers for training abroad. The Government of Botswana also realized that for schools to be effective there was a dire need for the improvement of their management. It was therefore one of the purposes of the Primary Schools Management Development Project of 1999 – 2002 to "improve the management of primary schools"; and this study is an evaluation of the impact of this joint partnership between the Government of Botswana and the British Government.

Overall, the findings point to the fact that there is a positive perception of self by most SMT respondents with regards their performance in the various management areas of motivating, planning, staff development, monitoring, staff appraisal, developing community relations, delegation, teacher management, parental involvement and team building. They feel there has been a general improvement in the areas of management and this is attributed to the Primary Development Management Programme (PSMDP). For instance they feel there has been an overall improvement in both standard four and Primary School Leaving Examinations results as the project which had empowered the SMT with the knowledge, skills and attitudes to effectively supervise members of their teams.

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International Journal of Scientific Research in Education (IJSRE)

ISSN: 1117-3259
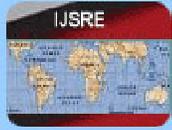
An Appraisal of Instructional Materials Used to Educate Migrant Fishermen's Children in Rivers State, Nigeria

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Abstract

This study evaluated the instructional materials in the effective implementation of migrant fishermen's children education programme in Rivers state of Nigeria. The population for the study was made up of all the teachers and the pupils. All the 179 teachers constituted a sample for the study and 590 primary six pupils were selected from 59 schools through a simple random sampling technique (10 pupils from each school). The researcher designed a migrant fishermen education questionnaire (MFEQ) for teachers and a written achievement test for pupils (WATP) to gather data for the study. The questionnaire consisted of Likert-type items to elicit information. The written achievement test for pupils was made up of 50 questions, 20 from English language, 20 from mathematics and 10 from social studies. The reliability coefficient of the instruments were ascertained using Pearson Product Moment Correlation which gave the value of 0.87 and 0.90 respectively two research question guided the study and two null hypotheses were formulated and tested for statistical significance at .05 alpha levels using chi-square (x^2). The findings show that there is a significant relationship between the available instructional materials and effective implementation of migrant fishermen's children education. Based on these findings, recommendations were proffered.

Keywords: Evaluation; Instructional material; Effective implementation; Migrant fishermen

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BACKGROUND INFORMATION OF THE STUDY

History is not clear when man started inhabiting this earth, but there is some account which suggests that man came to the earth in almost the same way as wild animals around him, without weapons, houses and language. Man learnt about his environment, which enabled him to determine what was to be eaten and what was not to be eaten. Educational activities at the time were simple but functional in the sense that they were taught to contribute to the needs of the society.

Progressively, man developed to the level when he "invented" fishing nets and traps and built canoes and boats. Agricultural activities were also developed. As education cannot be divorced from societal activities, the young ones learned and engaged in activities of their parents, and the education was basically social and agricultural in terms of focus.

The above analysis reveals that although early man was not as developed as we are today, he had great capacity, dictated by circumstances, to learn a great deal of things for the survival and for the good of his environment. Man, therefore, is basically a learning animal and education must provide him with the necessary challenges to learn. It stands to reason that education and man are inextricably interrelated.

The Ashby Commission as contained in Fafunwa (1991) emphasizes the formal schooling for the sedentary population only to the exclusion of the educational disadvantaged groups like the cattle Fulani and migrant fishermen. The Universal Primary Education and Universal Basic Education for all sons and daughters of Nigeria took no consideration for the peculiar conditions of the children of nomadic people. The children of migrant fishermen have been so marginalized that it is necessary for them to be fairly considered in educational provisions.

For the nomadic child, equal educational opportunity must include provision of special formal learning experiences that do not adequately disrupt his lifestyle. Unless he is provided special educational services, which, while integrating him into the mainstream culture, also conserves the best in his culture and economic role, it could not be claimed that he is granted meaningful equal educational opportu-nity, which his sedentary counterpart enjoys (Okonkwo, 1987).

In Nigeria, the remarkable breakthrough towards the provision of formal education to pastoral nomadic children came after a National workshop on nomadic education held in Yola, Adamawa state in 1986. This historic meeting gave birth to the Blueprint on Nomadic Education tagged "Fair Deal for the Nomads" published in 1987. The blueprint was followed by mobilization and enlightenment campaign, which were accomplished by a committee set up by the Federal Government. The climax of the campaign was reached by the formal launching of the program on 2nd July, 1987 in Yola, Adamawa state.

The migrant fishermen education scheme was only included in the programme of the National Commission for Nomadic Education (NCNE) on the "directive" of the National Council on Education at its 37th meeting held in Kano on the 22nd – 23rd March, 1990; three months after the enabling Decree No. 41 establishing the Commission has been passed into law on the 12th of December, 1989.

It is remarkable to note that the migrant fishermen's children education scheme covers those residing in the riverine areas of Rivers, Akwa Ibom, Delta, Cross River, Ondo and Ogun States. In 1997, the NCNE statistics of nomadic primary school in the participating states by pupil's enrolment and teachers showed that "there are 154 primary schools for the children of migrant fishermen with 454 teachers and 16, 432 pupils (8,574 boys and 7,859 girls).

Rivers State is regarded as one of the educationally disadvantaged states in Nigeria. This is probably because one-third of the state is found within the riverine communities whose major occupation is fishing. A large proportion of the fishermen are mig-rants. They move with the fresh water fishing areas to the deep sea and back again according to nature's dictations. They move from one fishing port to another, hunting for fishes to sustain a living and to keep buoyant the fishing trade.

In particular, schools were established for migrant fishermen's children in nine local government areas of Rivers State in 2003. The data provided by the Planning, Research and Statistics Department of the Ministry of Education, Port Harcourt in 2003 shows that 59 migrant fishermen's schools were established with a total enrolment of 5,062 pupils. The total number of teachers that served the established migrant fishermen schools is 179. They consist of 134 males and 45 females. It is very glaring that migrant fisher-men's children education are actually in existence, firmly established with high pupil enrolment and teachers within the system. This supports the fact that actual teaching-learning process is going on, and it becomes necessary that the migrant fishermen's children education be evaluated especially the aspect of instructional materials. Without the evaluation of the program, it would be difficult to assess the extent to which the program has been implemented.

Purpose of the Study

The study has the overall purpose of evaluating the instructional materials used in the migrant fishermen's children education program in Rivers State of Nigeria. Specifically, the study is designed with the following objectives.

❖ To assess the appropriateness of the availability of instructional materials in the effective implementation of the program.
❖ To determine the utilization of instructional materials in the program.

The overall purpose of this study is to evaluate the instructional materials used in the migrant fishermen's children education program in Rivers State of Nigeria.

Research Questions

In order to achieve the desired objectives the following research questions were posited to guide the study.

❖ To what extent are instructional materials available to educate the migrant fishermen's children in Rivers State?
❖ To what extent is the adequate utilization of instructional materials used for effective implementation of migrant fishermen's children education in Rivers State?

Research Hypotheses

In order to provide answers to the questions above, the following null hypotheses were formulated:

❖ There is no significant relationship between the availability of instructional materials and effective implementation of the migrant fishermen's children education program in Rivers State.
❖ There is no significant relationship between the adequate utilization of instructional materials and the effective implementation of the migrant fishermen's children education program in Rivers State.

Statement of the Problem

The relevance of education in any society cannot be understated. It is regarded as the single potent factor that leads to the improvement of the individual as well as the society. The need to provide basic formal education to all migrant and minority groups in Nigeria with emphasis on pastoral nomads and migrant fishermen is therefore a paramount social response-bility. This need and the social responsibility asso-ciated with it are well documented (Aminu, 1988; Ezeomah, 1988; Ezewu et al, 1988; Ezewu, 1991; Lar, 1989; Ntukidem & Ebong, 1989, Ijomah & Musa, 1989; Ijomah, 1996).

The question of how credible the migrant fishermen's education programme is, in terms of effec-tiveness and appropriateness of instructional materials has remained a major issue of interest to many people in Rivers State and environs.

Scope of the Study

The researcher confines the study to the nine riverine local government areas of Rivers State, specifically designed for the fishermen who are engaged in different kinds of migrations with their families. This means that the application of the research findings is generalized within the geographical area of riverine in Rivers State. However, the results could also be generalized to other riverine communities in other states with similar ecological and geographical terrains.

LITERATURE REVIEW

Meaning of Instructional Materials

Instructional materials have been defined by various authors. For example, Bruner (1973) says that the teacher's work as communicator, model and identification figure can be supported by a wise use of variety of devices that expand experience, clarify it and give it personal significance. Agun (1988) refers to them as learning materials, the proper use of which helps learners to learn faster and better. Similarly Obanya (1989) view them as didactic materials-things which are supposed to make learning and teaching possible while according to Johnson (1989) instructional materials

are the collections and selection of resources (mechanical, otherwise) from available resources which are applied and integrated into a systematic process of teaching and learning to make learning effective. Ikerionwu (2000) refers to them as objects or devices, which help the teacher to make a lesson to the learner. Instructional materials therefore are concrete or physical objects which provide sound, visual or both to the sense organs during teaching (Agina-Obu, 2005).

According to Abdullahi (1982) instructional materials are materials or tools locally made or imported that could make tremendous enhancement of lesson impact if intelligently used.

In most cases, many learners have the difficulty in understanding certain concepts as a result of their level of cognitive operation, it is against this background that Jean Piaget postulated human beings to be classified along sensory-motor, pre-operational, concrete and abstract cognitive levels.

Classification of Instructional Materials

Instructional materials are in various classes. They are audio or aural, visual or audio-visual. Thus audio instructional materials refer to those devices that make use of the sense of hearing only, like the television, radio, audio tape recording, etc. Visual instructional materials are those devices that appeal to the sense of sight only such as the chalkboard, chart, slide, filmstrip, etc. An audio-visual instructional material therefore is a combination of devices which appeal to the senses of both hearing and seeing such as television, motion picture and the computer. Among the instructional materials the classroom teacher uses, the visuals out-number the combination of the audio and the audio-visual.

In the classification of the visuals, two distinct groups emerge and they are iconic and the digital. The iconic visuals look like the objects they stand for as in drawing, painting, sculpturing, etc. for example, when we draw a computer; the image gives the impression of what a computer look like. On the other hand, a visuals is digital when the representation does not resemble what the object stands for. Thus, when we write the word *COMPUTER* instead of drawing it we are making use of digital visuals. The inexperience is at a loss when digital rather than iconic visual is used.

Apart from classifying instructional materials based on sensory modes, there are four other ways of classification and they are printed and non-printed, Hardware/Equipment and software/materials, first, second and third generations and high technology/high cost and low technology/low cost instructional materials. As stated earlier, the sensory mode comprises of three subgroups of (a) audio, (b) visual and (c) audio-visual.

1. **Category 1 – sensory modes**

Audio	Visual		Audio –visual
	Projected	Non-Projected	
Radio, record Disc, audio Tape, recordings (reel to reel, cassette)	Projectors Slides Transparencies, etc.	Books Journal Magazines, map, graphs, newspapers, charts, diagrams, photographs, posters, drawings, paintings, chalkboards, etc.	Television Computer Motion picture, video language, laboratory, etc,

2. **Category 2- printed and non-printed instructional materials**

Printed materials	Non-printed materials
Book, journals, magazines, charts, newspapers, drawings, photographs, graphs, cartoons, etc	Television, chalkboard, models, specimen, motion pictures, etc.

3. **Category 3- Hardware/Equipment and Software/materials**

Hardware/Equipment	Software/materials
Computer, television, radio, record player, slide projector, overhead projector, chalkboard, video play track, machine, etc.	Slide, filmstrip, transparency, maps, graphs, posters, cassette (audio and video chalk, etc.)

4. **Category 4-first, second and third generation of instructional materials**

First	Second	Third
Chalkboard, book, journal, magazines, charts, maps, drawing, painting, posters, photographs, etc.	Television, filmstrips system, video system, radio, projector, etc.	Computer, satellite, etc.

5. Category 5-High technology/high cost and low technology/low cost instructional materials

The high cost combines both the second and third generation instructional materials found in the fourth category above while the low cost involves items in the first generation.

The list of instructional materials that a teacher can use to improve the quality of instruction is inexhaustible. The teacher's level of resourcefulness, creativity and imagination is in fact, unlimited. Instructional materials will, therefore, include all forms of information carriers that can be used to promote and encourage effective teaching and learning activities. According to Agun (1982) these are:

Textbooks, supplementary books, workbooks, reference books, charts, magazines maps, journals, pamphlets, newspaper, poster, programmed texts and non-print-materials, like film, film strips, models mock-ups studies, pictures, audio and video tapes, recorders, transparencies, globes, chalkboard, etc. (p.48).

The Functions of Instructional Materials

The usefulness of instructional materials in the teaching-learning process is highlighted below:

- Facilitate the learning of abstract concepts and ideas.
- Keep the learners busy and active thus, increasing their participation in the lesson.
- Save teachers' energy of talking too much.
- Illustrate the concepts clearer and better than the teachers' words only.
- Help overcome the limitations of the class-room, by making the inaccessible accessible.
- Help to broaden students' knowledge, increase their level of understanding as well as discourage rote-learning (if used judiciously).
- Help to stimulate and motivate learners.
  (Esu, Enukoha & Umoren (2004:107)

Instructional materials are said to be part of the instructional procedure. Thus, studies have shown that when skills are related to practical situations, attitude and attention improve. Inyang-Abia and Esu (1990) cited in Esu et al (2004:103) assert that "instructional materials are the pivot on which the wheel of the teaching-learning process rotates". Dike (1989) states that educational technology is concerned with the provision of alternative instructional materials, which can help to extend the range of various experiences of learners in any teaching-learning situation. He iden-tified the importance of providing alternative resource materials, which can be seen in three ways the individual learn.

1. At the level of direct experience;
2. At the iconic (image of pictorial) level and;
3. At the symbolic level.

Individuals differ in so many aspects and they learn at different levels, so providing alternative resource materials is very necessary. The purpose of instruction therefore, is to help people learn. Instruction may include events that are generated by a page of prints, by a picture, by television program or by a combination of physical objects among other things. Furthermore, instructional materials can then be described as a systematic arrangement of instruction in such a way that, learning is facilitated.

The aim of designing instruction is to activate and support the learning of the individual pupil. This aim is characteristics of instruction whenever it occurs whether between a tutor and the pupil in a school classroom, an adult interest or the job setting. Instru-ctional design should be based on knowledge of how human beings learn. It thus should take fully into account learning conditions that need to be established in order for the desired effects to occur.

A fundamental reason for designing instruction is to ensure that no one is educationally disadvantaged and that all pupils have equal opportunities to use their individual talents to the fullest degree. The instructional materials and devices when properly used can accomplish some objectives. They supply a concrete basis for conceptual thinking and reduce meaningful word responses of pupils; they make learning more permanent, they have the high degree of interest for pupils and they offer a reality of experience, which still depends on his relationship with the student.

Availability of Instructional Materials in the Migrant Fishermen's Children Education Program

The need to develop an effective instructional system in nomadic education is particularly significant. According to UNESCO (1985), this is both an oppor-tunity and a threat. It is a challenge and on the other hand, it is an opportunity to educate teachers and pupils from the traditional grind of conventional teaching and learning processes into a rich instructional experience based on a wider range of carefully planned learning experience.

Instructional design calls for a thorough pre-planning. It involves preparing a blueprint of instru-ctional development and delivery, utilizing multi-media, multi-disciplinary approaches with the obje-ctive of improving the teaching and learning processes on one hand and enhancing potential effectiveness of nomadic education as a system on the other, striking a balance between possibilities and realities.

Awotua-Efebo (1995) highlights an important aspect of instructional texts design and writing. He points out that even though textbooks play an important role in the teaching and learning processes, many students find prescribed texts "too hard" for them to study. Nomadic learning schools and teachers therefore, ought to ensure that instructional designers prepare texts and other instructional materials on an easy-to-grasp level. Esu (1995) cited in Esu et al (2004:103) succinctly pointed that ordinary word of verbalization has been to be inadequate for effective teaching because it has failed to deliver the needed objective instruction in schools hence the instructional materials which may be used by the learner to facilitate the acquisition and evaluation of knowledge and skills.

The Executive Secretary of the National Commission for Nomadic Education, Tahir (2002) admitted that there is a general lack of adequate instructional materials particularly pupils' texts in the nomadic school system.

In the same vein, Tawari (1998) states that the Commission for now can only supply exercise books, chalks and such minor things. Instructional materials are grossly inadequate for effective teaching/learning process. There are inadequate teaching aids and engine boats to transport the pupils from the neighboring fishing ports to the schools, as planned by the State Government at the inception of the program.

Ekpo (2004) aptly declared that instructional materials are often used to compensate for the inadequacies of the sense organs or to reinforce the capacity of the dominant organs. They must be relevant for the realization of the intentions of the curriculum. Thus, there is a short fall in the available instructional materials and teachers are unable to improvise with what is available in our environment in order to effectively drive home the lessons taught. Therefore, the inadequacies of sense organs are not compensated.

RESEARCH METHODOLOGY

Area of the Study

This research was carried out in Rivers State of Nigeria. The State is located between longitude 6° 27" and 7° 91" East of the Greenwich meridian and latitude 4° 25" and 5° 38" North of the Equator. It is situated at the south – south corner of Nigeria, in the oil-rich Niger Delta. It is bounded in the North by Imo State, on the South by the Atlantic Ocean, on the East by Abia and Akwa Ibom States and on the West by Bayelsa and Delta States.

Design of the Study

The basic design of the study is survey where data were collected from the respondents to test the hypotheses concerning the status of the problem under consideration that is, an evaluation of instructional materials in the effective implementation of migrant fishermen's children education program in Rivers State of Nigeria.

Population

There are nine (9) riverine local government areas with fifty-nine (59) schools in Rivers State in which migrant fishermen's children schools operate. The population for this study is made up of all teacher and school pupils. The 2003 data supplied by the Planning Research and Statistics Department of the Rivers State Ministry of Education Port Harcourt reveals that a total of 5,062 pupils were enrolled with 179 teachers serving in the schools consisting of 134 males and 45 females.

Sample and Sampling Technique

A simple random sampling technique was used to select primary six pupils in the target population. This sampling technique was used because the population is homogenous. In each school, ten (10) pupils were sampled for the study through balloting. Therefore, a total of five hundred and ninety (590) pupils participated in the study as subjects represent over ten percent (10%). For the fact that the population for the teachers was small, the researcher studied the entire population, which is 179 teachers. This practice is called census, which gives the most accurate information about the population.

Instrumentation

The Instruments used in this study were classified into two: a Migrant Fishermen Education Questionnaire (MFEQ) for teachers and Written Achievement Test for Pupils (WATP). The first is divided into two parts-part A and Part B. Part A focused on the present qualification of each teacher while Part B covered the variables with nine (9) items using the 5-point Likert scale, weighted as follows: Strongly Agreed (SA) = 4, Agreed (A) = 3, Disagreed (D) = 2, Strongly Disagreed (SD) = 1 and undecided (UD) = 0 for positive statements while SA = 1, A = 2, D=3, SD = 4 and UD = O for negative ones. The Written Achievement Test for Pupils (WATP) was made up of 50 questions, 20 from English language, 20 from mathematics and 10 from social studies.

Validation of the Research Instruments

The two instruments used by the researcher were scrutinized for face and content validity by specialists and experts in measurement and evaluation, curriculum studies and subject areas. The instruments were finally rewritten by the researcher by integrating the suggestions and corrections pointed out by the experts. The instruments, therefore, have face and content validities and are thus valid for the study.

Reliability of the Instruments

The reliability of an instrument deals with the extent to which the results accruing from an instrument are stable and consistent. In order to determine how reliable the instruments are, the test-retest reliability procedure was adopted. The

two sets of responses were scored and computed. The data gathered from the responses were statistically analyzed using Pearson Product Moment Correlation Technique. The result is shown in Table 1 below:

Table 1: Questionnaires for Teachers and Pupils showing Mean, Standard Deviation and Reliability Estimates as Derived from Test-Retest Procedure (N=50)

S/No	Variables	No. of Items	Instrument	Mean	SD	rxy
1.	MFEQ	9	1st	2.58	0.34	0.87
			2nd	2.60	0.33	
2.	WATP	50	1st	33.00	6.18	0.90
			2nd	34.485	5.85	

From the Table 1, the reliability estimates for all the instruments were very high, 0.87 and 0.90 respectively. These values are high enough to permit the use of the instruments for this study.

Administration of the Instruments

For the purpose of this study, the researcher went to all the migrant fishermen's children schools in Rivers State and obtained permission from the school heads to administer the questionnaire and the achievement test. The teachers were consulted directly. Instructions guiding the filling of the instrument were given to the respondents. The researcher supervised the filling, after that, the instrument was retrieved from the respondent on the spot after completion. In the same vein, the test was administered to the pupils and the scripts retrieved thereafter. A duration of one hour was allowed for the completion of the Written Achievement Test for Pupils. The researcher ensured that no script was taken away by the respondents. In all, 179 copies of questionnaire and 590 scripts were administered to teachers and pupils respectively.

Statistical Treatment of Data

The hypotheses were statistically analyzed. The statistical tool for the analysis of the data was chi-square (X^2).

Data Analyses and Results

This segment of the study presents the results derived from the analysis of data as described previously. It will also interpret the results in consistence with known statistical principles as well as discuss the findings within the context of social and psychological theories.

Hypothesis One (Ho$_1$)

There is no significant relationship between avai-lability of instructional materials and effective imple-mentation of the migrant fishermen's children education.

In testing hypothesis 1, chi-square (X^2) was employed to find out if there was any significant relationship between available instructional materials and effective implementation of the migrant fishermen's children education. The result of the analysis is reported in Table 2 below:

Table 2: Chi-square Analysis for the Significance of the Relationship between Availability of Instructional Materials and Effective Implementation of the Migrant Fishermen's Children Education.

Instructional materials	Agree	Disagree	Row Total	Calculated X^2 value	Critical X^2 value	Decision at p<.05
Available	1223 (931.37)	616 (907.63)	1839			
Not Available	621 (912.63)	1181 (889.37)	1802	373.84.	3.84	*
Column Total	1844	1797	3641			

* = Significant at P < .05 alpha level; df = 1

The analysis in Table 2 shows that the calculated X –value, 373.84 is greater than the critical X^2- value 3.84, therefore the null hypothesis stating a non – significant relationship between availability of instructional materials and effective implementation of the migrant fishermen's children education was rejected. This implies that there exists significant relationship between the available instructional materials and effective implementation of migrant fishermen's children education.

Hypothesis Two (H0$_2$)

There is no significant relationship between adequate utilization of instructional materials and effective implementation of the migrant fishermen's children education.

Table 3: Chi-square Analysis for the Significance of the Relationship between Adequate Utilization of Instructional Materials and Effective Implementation of the Migrant Fishermen's Children Education.

Instructional materials	Agree	Disagree	Row total	Calculated X^2- value	Critical X^2- value	Decision at p<05
Adequate	1976 (2044.08)	584 (515.92)	2560			
Inadequate	2192 (2123.92)	468 (536.08)	2660	22.08	3.84	*
Column Total	4168	1052	5220			

* = Significant at p<. 05 alpha level; df = 1

The analysis in Table 3 shows that the calculated X^2–value, 22.08 is greater than the critical X^2 – value, 3.84. Since the calculated value is greater than the critical value at p< .05 alpha level, therefore the null hypo-thesis stating a non-significant relationship between adequate utilization of instructional materials and effe-ctive implementation of the migrant fishermen's children education was rejected. This means that there exists significant relationship between adequate utilization of instructional materials and effective implementation of the migrant fishermen's children education.

DISCUSSION OF FINDINGS

The finding of the study also showed that there is significant relationship between availability of instructional materials and effective implementation of migrant fishermen's children education program in Rivers State of Nigeria as shown in Table 2. Also, the result of the study showed that there is significant relationship between adequate utilization of instru-ctional materials and effective implementation of migrant fishermen's children education program as shown in Table 3. These findings are consistent with the opinions of Inyang – Abia and Esu (1990), Bruner (1973) and Agun (1988) that instructional materials are the pivot on which the wheel of the teaching – learning process rotates, that teacher's work can be supported by a wise use of variety of devices that expand experience, clarify it and give it personal significance and that learning materials helps learners to learn faster and better. The findings are in consonance with Esu (2004) that ordinary word of verbalization without the use of instructional materials has been to be inadequate for effective teaching.

The finding also showed that there is shortage of instructional materials which corroborates Tahir (2002) that there is a general lack of adequate instructional materials particularly pupils' texts in the nomadic schools system. The commonly used instructional materials are the chalkboard, chalk and maps. Other instructional materials like charts, models, graph boards, wall globes, modules illustrating display, audio-visual materials (T.V. Lectures, video, tapes, film and radio, etc), zigzag books, flash cards, etc are rarely used. The basic instructional materials for teaching are not in existence in most of our migrant schools. This is believed to be a serious setback to improving the teaching–learning process of our migrant schools.

The place of instructional materials in the effective implementation of migrant fishermen's children education program cannot be undermined. Instructional materials perform, the following fun-ctions, which include the extension of the range of experience available to learners, they supplement and complement the teacher's verbal explanations thereby making learning experience rich, providing the teacher with interest compelling springboards into a wide variety of learning activities. They therefore, motivate learners the desire to learn more and they assist the teacher in overcoming physical difficulties in delivering his lesson.

This calls for teacher's resourcefulness and improvisation where there is dearth or shortage of instructional materials. The ability of the teacher to make alternative, "local" materials in place of "standard" ready-made materials makes his lesson effective. Improvised materials are cheap, readily available, often up-to-date in content, often produced according to specification, made possible availability of large quantity of materials at short notice, encourages creativity, bringing learning homewards and often better suited to the climatic conditions of the local environment. Thus, instructional materials which are used to compensate for the inadequacies for sense organs or to reinforce the capacity of the dominant organs are grossly inadequate and under-utilized.

CONCLUSIONS

Instructional materials supplement, reinforce, clarify, vitalize, emphasize instruction and enhance learning in the process of transmitting knowledge, ideas, skills and attitude. Audio-visual and other necessary support materials for teaching various subjects in all the migrant fisherfolks' children schools are in short supply and in some cases, virtually non-existent.

In the area of utilization of instructional materials, the situation is extremely discouraging some of the causes of the problem as identified are lack of information about available resources, lack of basic knowledge and skills by individual teachers about design, development, selection and utilization of instr-ucttional materials, lack of instructional support for educational media activities and non-availability of electrical power supply.

The issue of availability and non-utilization of instructional materials is that the various individual and instructional canters are non-adequately planned, financed, implemented and coordinated.

With the dearth of instructional materials on all the migrant fisherfolks' children schools in Rivers State of Nigeria, the teachers find it difficult to prepare and communicate the message. It is a fact that classroom learning depends on effective commun-ication, skillful application of the several techniques and materials for learning. When adequate instructional materials are added to suitable methods, efficiency in learning is assured. Maximum impact can be made on learning when an efficient instructor uses suitable method and appropriate teaching materials. The impact created on the pupils justifies the effectiveness of teaching-learning activities. The inadequate provision and non-utilization of instructional materials will definitely produce a society of headless hearts, heartless intellects and half-baked children. In similar vein, the danger of half education is inestimable. It is like a child born with one eye, one leg and one hand. The effectiveness of any instructional materials depends on the following three major factors. First, it

must appeal to the senses of hearing and seeing, etc. Secondly, it must attract and hold attention of the learners. Finally, it must focus the attention on essential elements to be learned at the proper time.

Instructional materials must be directly relevant to the content of the lesson. It must be integrated with the teacher's whole approach and subject presentation. It must be preceded and followed up by work calculated to ensure maximum compre-hension. Therefore, educational objectives must deter-mine the instructional materials. The effectiveness in the use of instructional materials lie on the fact that both the teacher and the learner participate actively. All these are conspicuously lacking in the migrant fisherfolk schools in Rivers State of Nigeria.

Recommendations

Based on the findings of this research work, the following recommendations are made for the enhancement of effective implementation of migrant fisherfolks' children education which includes:

1. There is need for serious training and re-training of teachers in form of workshops, seminars, in-service and sandwich programs on how to use or produce instructional materials. This will help to make their class very interesting and stimulating.
2. The study also showed that adequate provision of instructional materials is a necessary tool for effective implementation of the program. Thus, free teaching aids should adequately be provided in all the schools by the National Commission for Nomadic Education (NCNE), Kaduna.
3. Teachers should also improvise instructional materials. Invariably, this should enhance effective teaching and learning processes and encourage parents to send their children to school.
4. There is need for the development of positive attitudes by teachers. This will encourage the development of proficiency.
5. Should a classroom teacher get involved in the program, his/her should not teach any lesson without any instructional material if curric-ulum objectives of the migrant fisherfolks' children education will be realized.
6. The migrant schools should be well-supervised to make sure they comply with the stipulated standard to enhance uniformity and quality.

Implications of the Study

One of the tragic consequences of inadequate supply and use of instructional materials is low educational standard. The inadequacies of instructional materials and under-utilization in virtually all the schools have made education very unattractive to the fisherfolks' children. The skills, attitudes and competencies acquired should enable the pupil to achieve social, economic, political and cultural development. The education of the migrant fisherfolks' children will enable them to adapt to the changing environment. Finally, the desire of migrant fisherfolks' children and their parents for schooling and relevant curricular will increase.

Suggestions for Further Study

The education of migrant fisherfolks' children in Rivers State, Nigeria is a contemporary study. Thus, the researcher makes the following suggestions for future study.

(1) The same study can be carried out in other states where migrant fisherfolks' children education operate like Bayelsa, Akwa Ibom, Cross River and Ondo states, etc.
(2) Further studies on the migrant fisherfolks' children education may be directed towards the impact on the participating communities.
(3) Further study can also be carried out on an investigation into the various approaches used in the program.
(4) The use of community resources for enriching the migrant fisherfolks' children schools.
(5) A comparative study of the program in similar certain is highly recommended.
(6) The study can be carried out to evaluate if other variables intervening and extraneous not considered in this study such as funding, teaching methods, adequate personnel, educ-ational facilities, etc can affect the implement-tation of the education of migrant fisherfolks' education.

(7)   The study can also be carried out on the socio-cultural and ecological factors in the education of children of migrant fisherfolks in Rivers State, Nigeria.

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International Journal of Scientific Research in Education (IJSRE)

ISSN: 1117-3259

Non-Formal Education as a Tool to Human Resource Development: An Assessment

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Abstract

This study investigated the contributions of non-formal education to human resource development in Rivers State of Nigeria. There is a belief currently gaining ground among scholars, for example, Amirize (2001, p. 2) is of the believe that non-formal education represents a solution to the deficiencies of formal education as a panacea to the developmental needs of third world countries. Therefore, this exploration is a survey research, questionnaire was used for data gathering with a reliability coefficient of 0.91, and multiple statistical procedures were employed in the analysis. 944 participants of the Rivers State's non-formal education programs were sampled. This study was guided by four (4) research questions and hypotheses to obtain information on the extent to which the programs provided life skills and employment opportunities to the graduates of these programs. The study showed that the skills taught in the programs were more practically oriented and thus enhanced opportunities for employment. Recommendations were made on the basis of the findings that more of these programs be established throughout the state and indeed the country.

BACKGROUND INFORMATION TO THE STUDY

Education is one of the social institutions that contributes significantly towards the construction and maintenance of social order (Ifeanacho in Anikpo & Atemie 2006, p. 82). Education has been defined as a process by which a young adult develop the abilities, attitudes and other forms of behavior which are of a positive value to the society in which he lives (Fafunwa, 1974, p. 17). The concept education has further earned an important posture in the society. This claim is obvious as education has been identified in Nigeria as a tool 'par excellence' for effecting national development (Federal Republic of Nigeria, 2004, p. 4; Okoh, 2005, p. 3). Excellence in this paradigm is a generally accepted best ways of doing things in educa-tion in search of distinction in teaching and learning situations. It is an

essential component of best practice that creates quality teaching strategies that produces improved scholarship (Ololube & Ubogu, 2008).

There are four types of education namely—indigenous (traditional) education, formal education, informal education and non-formal and adult edu-cation. Indigenous education also referred to as tradi-tional education practiced within the African context is the oral transmission of the people's statement of beliefs, rules and customs from one generation to another. Formal education is a consciously planned instructional process based on a prescribed syllabus and carried on in the school. Informal education is educational set-up not based on fixed or prescribed rules, it is determined by the prevailing nature and content of what is to be learned. And non-formal and adult education is a remedial literacy program carried out to impart the basic skills of reading, writing and arithmetic to adults. Adult education is particularly geared towards functional literacy, where the benefi-ciaries are expected to use the skills acquired to improve their daily living standards. Examples of non-formal education include skills acquisition programs, remedial programs, agricultural extension programs etc.

The Federal Republic of Nigeria (2004, p. 4) identified education in Nigeria as "an instrument 'par excellence' for effecting national development"; to understand this development, economic growth must be considered. The indices for measuring national development in terms of liberal approach include Gross National Product (GNP), Gross Domestic Product (GDP) and Per Capita Income (PCI). Of course this national development stems from the degree of resour-cefulness of the citizenry both at individual level and collectively. Having identified education as a vehicle for manpower (resourcefulness) development; it is axiomatic that formal education is capital intensive in terms of infrastructural demands etc hence most families in Rivers State are unable to meet the demands of the formal school system. This gives rise to massive cases of school drop out, who in the absence of formal school engagement turn to such socially abhorable acts of cultism and so called youth restiveness as well as other social vices including teenage pregnancy, hostage taking etc. Other consequences of non engagement in formal school include unemployment as a result of lack of knowledge and skills needed for employment in industries and public establishments.

The experience of massive unemployment of Rivers State indigenes invariably results from the above scenario. It is however alleged that Rivers State indigenes are ill equipped for wage employment/self-employment as a result of lack of technical skills needed in various industries as well as lack of entrepreneurial initiatives and the enhancing ethical aspect. Moreso, since Non-formal education is regarded as an alternative to formal schooling, it is expected that the said Non-formal education should train people on these skills. Besides, it is the view of Amirize (2001, p. 2) that Non-formal education could make the difference.

Purpose of the Study

The study has the overall purpose of ascertaining whether non-formal education can make people to be resourceful. Specifically, the study is designed to determine whether non-formal education provides life planning educational skills. Ascertain whether non-formal education provides participants with practical skills. Find out whether the skills acquired in Non-Formal Education are related to the basic skills in formal technical schools and ascertain whether non-formal education prepares and equips people for wage employment or self-employment.

Research Questions

In order to give direction and focus to the study, the following research questions were raised:

- To what extent has non-formal education provided life planning educational skills?
- To what extent has non-formal education provided the participants with practical skills?
- To what extent are non-formal educational skills related to the basic skills in formal technical schools?
- To what extent do skills acquired in non-formal education programs enhance securing employment?

Research Hypotheses

In order to test the research questions, the following hypothesis were put forward to guide the researchers achieve their objectives:

- There is no significant difference between life planning skills provided by non-formal edu-cation and formal education.
- There is no significant difference between the practical skills acquired by those who participate in non-formal education and those who did not attend non-formal education programs.
- There is no significant difference between the skills provided by non-formal education and formal technical schools.
- There is no relationship between skills acq-uired in non-Formal Education program and opportunity for securing employment.

Scope of the Study

The study was limited to selected non-formal education centers in Rivers State, they include: The Adolescent Project (TAP) at Elelenwo, Port Harcourt; Nigeria Prisons Service Port Harcourt; Rivers State Skills Acquisition Centre, Port Harcourt; and National Directorate of Employment (NDE), Port Harcourt.

LITERATURE REVIEW

Education

According to Freire (1970, p. 25), education is a form of power—namely the ability of an individual to be critical of his context, which by implication enhances people's empowerment through increased awareness. Adult education in developing countries plays three basic roles, namely, tradition, economic and political (Curle, 1969). The traditional role has to do with maintaining and emphasizing traditional values; the economic role with technical education, and the political role with implementing ideology. There is what Onuoha (1984) describes as the banking concept matter which is the most important dimension of the learning process. According to the banking concept, the individual's role is one of a passive receiver of a store of information given by a teacher. The teacher is the banker who disseminates information according to the needs of the individuals as determined by the teacher in collaboration with the political, social and cultural system-without the involvement of the individual learner. However, in terms of real development, the banking concept of education is an ideological state apparatus, serving the purpose of those who control power and resources. Power in developing economies is usually misconceived as the means to coerce and manipulate, and the purpose of education under such power structure is not to liberate or empower the masses or transform society but to perpetuate the imbalances in society.

The Federal Republic of Nigeria (2004, p. 12) classified special education into three major categories namely the disabled, the disadvantaged and the gifted/talented. The disadvantaged are children of the nomadic pastorals, migrant fisher folks, migrant far-mers, hunters etc. One of the aims of special education is to provide adequate education for all people with special needs in order that they may fully contribute their own quota to the development of the nation. Consequence to the above, Ikpaya in (Efanga, 2007), stated "improvement in the education of the special needs people requires a certain level of commitment and consistency on the part of government (at all levels) and the major stakeholders in the field. We may regard it as a good insurance for sustainable development from which all stakeholders stand to benefit". Worried over the importance of empowering the future women in her home, community, society and the nation at large, Tahir (1998) said "the participation of the nomadic girl in the existing formal and non-formal basic education program is abysmally low, with literacy rates ranging between 0.2% and 2%".

Development

The self-concept development of the individual should be the primary purpose of education, which should involve the enablement and liberation of the individual from all forms of oppressions and inhibitions. Article 2 of the International

Bill of Human Rights states that "Education shall be directed to the full development of the human rights and fundamental freedoms…" The aim of liberal education is to enable man to be himself, to become himself. It is said that development has a purpose; that purpose is the liberation of man. But man can only liberate or develop himself. As an instrument of liberation, people's empowerment and social transformation, education means the ability to resolve contradictions. It should be a countervailing force applied for the purpose of checking the abuses of power by those who use it to oppress and hold the masses in bondage. By emphasizing independent and critical thinking, reflective analysis of events and openness to change, education can become a means of peoples' empowerment. It is not the dull, maintenance learning that can bring about the empowerment of people, but innovative learning which is person-centered and equips the individual to make sound judgments and analysis of issues. The individual should develop the skill necessary to test contradictory values and situations, which exist in the society. Since these contradictions evolve within the context of values, a sound education is not only one that recognizes what is right or wrong in a given context, but that which makes an individual to take the appropriate action when action is called for. Genuine development and education involve the moral strength to expose and speak against oppressive forces and falsehood. Misuse and the conceit of power are pro-bably the greatest threat to the survival and dignity of man in developing societies today (Williams, 1981).

Duru (1998) opined that "development is a process of socio-economic and political transformation of problems generating structure in such a way that it leads to improvement in the level of living of the people including income, education, health and nutrition and other related social services; decreasing inequality in the distribution of income, urban-rural imbalances and political and economic opportunities." According to Nndozie (in Duru, 1998), development is the capacity of members of the society to actualize themselves by participating actively in the social engineering of their lives and destiny. In fact, they must draw their strengths and aspirations from their socio-economic milieu. The people must be free and confident to set their goals and be involved in their realization.

Life-Long Education

United Nations Organization (1975) defined adult education as a component of life-long education which begins in the cradle and ends in the grave. The concept arises out of the awareness of rapid changes in technology and institutions which in turn require human beings to up-date their skills and knowledge in order to catch up with modern events of individual at childhood, youth and adulthood. Part of the goal of life-long education is therefore to reinforce and improve the education of the young as well as offer adults broad opportunities for self-renewal and social advancement. The French call it "education perma-nent", reinforcing, the idea of its continuity and functionality. In developed countries of Europe and North America, it is designed as recurrent education. Recurrent education involves re-organization of the whole educational system so that learners may come back to or come into at will throughout life (Ihejirika, 2000, pp. 53-54).

Meaning of Non-Formal Education

Non-formal education according to Coombs and Ahmed in (Ihejirika, 2000, p. 56) is any organized systematic educational activity carried on outside the framework of the formal school system to provide selected type of learning to particular sub-group in the population, adults as well as children. Non-formal education includes many types of learning experiences. It is a life-long process of learning which include adult education, apprenticeship system, continuing educa-tion, in-service programs, on-the-job training pro-grams, personnel and professional development, refresher courses, staff development programs; workers and students' industrial training. Extension education as an aspect of non-formal education include co-operative extension programs, extramural classes, external and extension degree program, out-reach and off-campus educational programs such as weekend sandwich courses. It also includes community development education such as rural development training, manpower resource training, youth camps, holiday programs, mass mobilization campaigns and community health education are aspects of non-formal education. Similarly, short-term learning activities such as conferences, evening classes, seminars, workshops, as well as specialized purpose programs like functional and literacy programs, volunteer youth programs, skill-acquisition and liberal education classes constitute non-formal education which can be called "living-room" or leisure education. It also include corres-pondence study, home study, self-study programs, mass communication education and open media

courses, research service programs, television or radio school, open university and other independent study activities (Amirize, 2001, p. 1).

Non-formal education is designed to encourage all forms of functional education given to youths and adults outside the formal school systems such as functional literacy, remedial and vocational education. (Federal Republic of Nigeria, 2004, p. 25). In the light of the preceding, Ihejirika (2000, p. 56) posits that non-formal education connotes: "alternative to schooling" and known in some quarters as "out of school education". Explaining non-formal education further, Ihejirika opines that it covers training and instruction outside the formal education system and ranges from apprenticeship to national mass literacy. It may be vocational, such as the craft centers in Nigeria or the girls' vocational centers established in many developed and developing countries which train girls in vocational skills like sewing and preparation of young women for marriage and small businesses. For him, it could be political and social education such as that carried on in Citizenship Training Centre at Aluu in Rivers State. In French speaking African countries, there are large-scale programs of rural animation aimed at developing rural communities from within. Animation or rural animation above has been explained by Bown (in Kosemani, 1995, p. 173) as a similar concept for liberal education and is used as a common phrase in French speaking West African countries. For Brown it implies enlivening, arousing to greater cons-ciousness or stirring up of rural population.

Non-formal education is given in form of training. Learners are not involved in intensive and rigorous mental activity. They learn particular skills or trades. The various skills acquisition and apprentice-eship programs are examples of non-formal education. Because of the differences in skills to be acquired, the assessment process will also differ. Tailoring-sewing, hairdressing, welding, radio mechanics, carpentry, motor mechanics, are some non-formal education programs that are in operation (Asuka 2002, p. 122).

Goals or Objectives of Non-Formal Education

The Federal Republic of Nigeria (2004, p. 25) outlined the goals of mass literacy, adult and non-formal education as that which shall be to:

1. Provide functional literacy and continuing education for adults and youths who have never had the advantage of formal education or who did not complete their primary education. These include the nomads, migrant families, the disabled and other categories or groups, especially the disadvantaged gender.
2. Provide functional and remedial education for those young people who did not complete secondary education.
3. Provide education for different categories of completers of the formal education system in order to improve their basic knowledge and skills.
4. Provide in-service on the job, vocational and professional training for different categories of workers and professionals in order to improve their skills, and
5. Give the adult citizens of the country necessary aesthetic, cultural and civic education for public enlightenment.

Gbamanja (1997, p. 93) writing on nomadic education opined that the aims include the following:

1. To take education to the door steps of children of nomads and migrant fishermen who have been denied their right to education because of their geographical location.
2. The program is aimed at enabling the nomads to acquire functional literacy for general information, enlightenment as well as basic numeracy for accounting and improved management of their stock, and
3. The purpose of bringing education to all classes of people.

Furthermore, The International Encyclopedia of Edu-cation (1985, pp. 35-37) identifies four major goals of non-formal education which include the following:

1. Alternative Route to Upward Mobility: The emphasis on academic competence in the formal system means that only learners who are able to achieve the required level of comp-etence are the only few that will

eventually gain upward mobility at the expense of low achievers. Non-formal educations afford alte-rnative routes to cope with the required level of competence in the school education.

2. Training for the Modernizing Workforce: The planned labor needs of the economy are often not met by the formal school; the result is structural unemployment, while there are over production of manpower that cannot be filled in the economy. Non-formal education recog-nizes the need for adjusting the learning program to change conditions in the society.
3. Rural Development: The education system should cater for the whole population not just school age who because of the necessity of schooling immigrate to the urban centers; thereby totally neglecting those in the rural areas where great measure of resources for development resides.
4. Political Incorporation: Non-formal education has its main area, the political facilitation of the individual to be conscious of himself as a citizen or as belonging to a political comm.-unity. Developing nations are in daring need to develop national consciousness among the citizens over and above ethnic sentiment which has been one of the major obstacles towards national development and integration.

The above not withstanding, Amirize (2001, p. 6) posits that the purpose of non-formal education include to prepare and equip people for wage employment or for self-employment; upgrade the knowledge and skills of those already in employments; improvement of people's political, cultural, social and spiritual aware-ness through conscientization; and stimulate industrial output; provide citizenship and leadership training opportunities for people. It also promotes healthy and responsible uses of leisure through joyful activities, fosters entrepreneurship and personal enablement by continual engagements, and generates employment opportunities for youths in rural communities.

Characteristics of Non-Formal Education

According to Fordham (1983, p. 2) there are four major characteristics of non-formal education which under-lines its significance in contemporary education quest. They are outlined thus:

1. That non-formal education is very relevant to the needs of disadvantaged groups in their society which are often not well catered for by the school.
2. It is concerned with specific categories of persons.
3. It is focused on clearly defined purposes such as learning through distance education and HIV/AIDS as well as family education.
4. It is flexible in organization and method.

Commissions and Agencies of Non-Formal Education in Nigeria

According to the Federal Republic of Nigeria (2004, pp. 26-28) the following bodies are established to enhance the attainment of its goals which include:

1. The national commission for mass literacy and non-formal education shall coordinate the program nation-wide.
2. State agencies for mass education shall imple-ment the National Policy on Mass Literacy, Adult and Non-Formal Education in the states
3. Local government councils shall be respon-sible for ensuring that the literacy net-work committees at the local government, district, village, ward and centre levels are operating efficiently and effectively etc.

Modes of Non-Formal Education

Development without conscience and concern for human values and without the enablement of the individual would not be genuine or lasting, since technology alone does not constitute development. Freire (1970) posits that for non-formal education to be effective and meaningful, it should be all-round embracing the followings:

1. Technical aspect or technology facilitation mode, involving acquisition of useful skills in an industrializing and technology-oriented world.
2. Aesthetic or ethical aspect, with the cultivation of humane values which manifests in a deep inner feeling or conscientization.
3. Social aspect or the ability of an individual to get along with other people without behaving like a beast or assuming the position of a god., this would enhance harmony in society, respect for the feeling of others, tolerance of divergent views and peaceful coexistence.
4. Biological aspect, which includes the proper care, respect for and maintenance of the human body so that there are no excesses, abuses or deficiencies arising from overindulgences, ne-gligence or addiction. This requires giving the body the right and balance diet and drink, which will promote good health, avoidance of activities that, would harm or endanger any part of the body and the need for adequate rest and sleep. Personal hygiene and health education are also included in this aspect of non-formal education.

Non-formal education is pragmatic and functionally related to needs of individual and society, whether short-term or long-term. It is also change oriented because it seeks to identify and recognize areas of felt-needs which it seeks to address.

Options or Models of Non-Formal Education

Various options of non-formal education usually indicate and arise from the purpose and needs which they are intended to serve according to prevailing situations and priorities of a society and program sponsors Amirize (2001, p. 28) outlined the following models:

1. Agriculture Extension Model: This is about the commonest and earliest model of non-formal education practiced in Nigeria, whose purpose was geared towards increased food production through improved farming methods. Facili-tators of this model were agricultural extension officers and the target audiences were rural farmers and cooperative societies. Extension officers played the role of agents of change who identified agricultural needs in various communities and devised strategies to solve them by working in collaboration and partnership with farmers and cooperatives.
2. Apprenticeship Model: As the oldest and universal approach to skill acquisition, various governments and employers of labor have used the apprenticeship system as a reliable and effective model of non-formal occupational education. Such programs in Nigeria included the National Directorate of Employment (NDE), Skill Acquisition Program, School-To-Land and other vocational training and job-improvement programs. This system is less expensive, practical, functional and pragmatic.
3. Age-Group Model: This is traditional African model of non-formal education whereby peer groups and youths of the same age range interact and engage in various community activities. This model promotes the under-standding of social obligations and rules as well as the acquisition of basic skills, which would enable youths to function as responsible members of society.
4. Self-Help Model: This method does not only rely on local skills and materials, but it also promotes self-reliance and industry. Comm-unity leaders and chairmen of Community Development Committees (CDC) are usually facilitators in this model and their roles include helping and motivating the community through the youths, first to identify their needs and then mobilize and organize them to work in the project.
5. Sunday school Model: The goal of this model of non-formal education goes beyond religion and moral instructions. Sometimes instructions given and skills taught in Sunday school can include cookery and home management for girls and the theory of music and other trades for boys. Some churches train youths as organists, choirmasters and youth-leaders through the Sunday school.
6. Training Institute Model: This model of non-formal education is a kind of on-the-job train-ing within places of work, meant to improve the occupational competence of the partici-pants. They include farm training centers, management training and job orientation centres organized by industries, organizations or governments.
7. Village Craft Centre Model: Sometimes initiated by local government authorities or community development agencies, this mode has two purposes namely: to impact some skills to youths in rural areas thus creating self-

employment, and discourages rural-urban migration among youths of both sexes. It encourages hard work, creativity and the dignity of labor by challenging villagers to shun idleness. Skills taught include masonry, sewing, weaving, dying, shoemaking, carpen-try, painting, plumbing, etc. Facilitators play the role of teachers and entrepreneurs.

8. Basic Literacy Education Model: This can also be organized by local government authorities or other voluntary agencies. The intention here is to teach basic literacy—Reading, Writing and Arithmetic (3 R's) in the form of adult education classes or night school. Migrant Fishermen's and Nomadic Education programs aimed at adopting this model.

9. Community Mobilization Model: This model can be described as a system of liberal education and counseling, aimed at rural communities, helping to transform the people by working in close relationship with them. The idea is not to impart literacy or skill but to liberate the minds of the people from debilitating conditions; a system of conscien-tization so as to enable the individuals and the community generally. Facilitators are community development experts.

10. Enrichment-of-Skill Model: This is a process of enablement of the individual through responsible and creative use of leisure, devoted to enriching the mind through creative and constructive engagements.

So far, the above review of literature has created a deeper understanding to the meaning of non-formal education. Its life-long process of learning is quite characteristic. The technical aspect and aesthetic aspect of the modes of non-formal education show that it cuts across the four domains-cognitive, affective, psycho-motor and psycho-productive. The models or options of non-formal education indicate and arise from the purposes and needs which they are intended to serve according to prevailing situations and priorities of a society and program sponsors. Thus there is the Sunday School model, agriculture extension model, apprenticeship model etc; this means that non-formal education reaches the "grassroots".

Extension education as a non-formal education aims at bringing about positive change development, self-determination, mutual cooperation, skills acqui-sition, continuous urge to learn and effective and responsible use of leisure. This no doubt is compre-hensive. Freire (1970, pp. 35-45) summarily reveals the importance of the non-formal education saying that for it to be effective and meaningful, it should be all round embracing the following:

1. Technology facilitation mode involving acquisition of useful skills in an industrializing and technology-oriented world.

2. Social aspect or the ability of an individual to get along with others. This would enhance harmony in society, respect for the feelings of others tolerance of divergent views and peaceful coexistence.

3. Ethical aspect involving the cultivation of humane values, which manifest in a deep inner feeling or conscientization.

4. Biological aspect, which includes the proper care, respect for maintenance of the human body so that there are no excesses, abuses or deficiencies arising from over indulgences, negligence or addition.

This shows that non formal education is pragmatic and functionally related to the needs of individual and society. It is also change oriented in the sense that it seeks to identify and recognize areas of felt-needs which it seeks to address.

RESEARCH METHODOLOGY

A survey research design was used for this study to unravel the contributions of Non-formal education to the educational development in Rivers State. The population of this study consists of all the participants undergoing training in the under-listed Non-formal education centers in 2006. They include Nigeria Prisons Service, Port Harcourt 2,182 persons; Rivers State Skills Acquisition Centre Port Harcourt 4,500 persons; National Directorate of Employment Port Harcourt 1,000 persons; and The Adolescent Project Elelenwo 1,756 persons. The total population amounts to 9,438 persons or trainees. The sample for this study was made up of 944 respondents drawn from the four chosen Non-formal education centers in Rivers State. The sample represents ten percent (10%) of the entire population of the study. A breakdown is shown in the table 1 below:

Table 1: Sample size distributions

S/N	Non-formal education centres	Population	Sample size
1	The Adolescent Project (TAP), Elelenwo	1,756	176
2	Nigeria Prisons Service, Port Harcourt	2,182	218
3	Rivers State Skills Acquisition Centre Port Harcourt	4,500	450
4	National Directorate of Employment, Port Harcourt	1,000	100
	Total	9,438	944

In each of the centers, stratified random sampling was used. In such case the trainees were divided into strata (departments) and simple random sampling was used to draw the sample from each stratum by balloting to ensure that every participant has an equal chance of being selected. At the end all the samples drawn from each stratum were added together to arrive at the aforementioned total sample size.

Instrumentation

The main instrument used is a questionnaire designed by the researcher. This formed the basis for the primary data. The questionnaire is divided into three sections meant to elicit information on various aspects of the research questions. Section A elicits information on the respondent's personal data; sections B to C sought to elicit the respondent's experiences in the program. Section C adopted a simple Yes and No response while sections B adopted a response on a three-point likert-type scale of Agree (A), Undecided (U), and Disagree (D).

Procedure for administration of questionnaire

The researcher went personally to the various non-formal education centers to administer the questionnaire. The questionnaires were retrieved after one week. A total of 944 questionnaires were administered to the various selected non-formal education centers in Rivers State. Meanwhile before the questionnaires were administered, the draft questionnaire was sent to two experts in Measurement and Evaluation for vetting. They were to study the items in terms of adequacy, structuring and sequencing of ideas. The researcher later repackaged the instrument based on the reactions by the two experts. To this end, the instrument is therefore adjudged ambiguity free, had face and content validities hence valid for the study. A pilot study was conducted to determine the reliability of the instrument. The researcher administered 50 copies of the questionnaire to randomly selected participants in the various non-formal education centers. The split-half method (odd-even) was used for computing the reliability coefficient using Pearson Product Moment Correlation. The hypotheses were tested at 0.05 alpha levels with chi-square (X^2).

Presentation of Empirical Result

The table below shows a breakdown of the respondents according to their institutions or centers.

Table 2 Analysis of responses according to their institutions or centers

Institutions	No of respondents
The Adolescent Project, Elelenwo	169
Nigeria Prisons Service, Port Harcourt	213
Rivers State Skills Acquisition Centre, Port Harcourt	441
National Directorate of Employment, Port Harcourt	98
Total	921

Research Question One

To what extent has non-formal education provided life planning educational skills? To answer this research question, percentages were used.

Table 3 Percentage of the extent to which non-formal education provide life planning educational skills

Responses	Frequency	Percentage (%)
Agree	600	65
Disagree	250	27
Undecided	71	08
Total	921	100

Results in Table 3 shows that approximately 65% of the participants agreed that non formal education provided life planning educational skills while 27% disagreed and 8% were undecided. Based on this, one may accept that non-formal education contributes to provision of life planning educational skills. Furthermore, the hypothesis was also tested.

Hypothesis one

Hypothesis one states that there is no significant difference between life planning skills provided by non-formal education and formal education. To test this hypothesis, a chi-square test statistic at 0.05 level of significance was used. The summary of the result is shown in the table below.

Table 4: Summary of chi-square test on the difference between life planning skills provided by non-formal education and formal education

Responses	Observed freq. (fo)	Expected freq. (fe)	Fo-fe	$(fo-fe)^2$	$(fo-fe)^2/fe$
Agree	600	307	293	85849	279.64
Undecided	71	307	-236	55696	181.42
Disagree	250	307	-57	3249	10.58
					$X^2=471.64$

At α level of 0.05 and degrees of freedom of 2, the critical value is 6. Since the calculated value of 471.64 is greater than the critical value of 6, we reject the null hypothesis and accept the alternative. This means that there is a significant difference between life planning skills provided by non-formal education and formal education.

Research Question Two

To what extent has non-formal education provided the participants with practical skills?

Table 5 Percentage of the extent to which non-formal education provided participants with practical skills

Responses	Frequency	Percentage (%)
Yes	700	76
No	221	24
Total	921	100

From the Table 5 above, approximately 76% of the respondents agreed that non-formal education provides the participants with practical skills, while 24% disagreed. From the figures, one can see that non-formal education provides participants with practical skills. This notwithstanding, the hypothesis was also tested.

Hypothesis two

It states that there is no significant difference between the skills acquired by those who participate in non-formal education and those who did not attend non-formal education programs. To test this hypothesis a chi-square test statistic at 0.05 level of significance was used. The summary of the result is shown in the table below.

Table 6: Summary of chi-square test for significant difference between the practical skills acquired by those who participate in non-formal education and those who did not attend non-formal education programs.

Responses	Observed freq. (fo)	Expected freq. (fe)	Fo-fe	$(fo-fe)^2$	$(fo-fe)^2/fe$
Yes	700	460.5	239.5	57360.25	124.56
No	221	460.5	-239.5	57360.25	124.56
					$X^2=249.12$

At a degree of freedom of 1 and α level of 0.05, the critical value is 3.84. Since the calculated X^2 value of 249.12 is greater than the critical value of 3.84, we reject the null hypothesis and therefore conclude that non-formal education provides participants with practical skills. Therefore, there is a significant difference between the skills acquired by those who participate in non-formal education and those who did not attend non-formal education program.

Research Question Three

To what extent are non-formal educational skills related to the basic skills in formal technical schools?

Table 7: List of skills available in non-formal education programs and formal technical school

Skills available in non-formal education programs		Skills available in formal technical schools
1. Auto-electricity	2. Auto-mechanic	1. Wood work
3 Metal work	4. Textile	2. Auto-mechanic
5. Catering	6. Tailoring	3. Metal work
7. Computer training	8. Welding	4. Technical drawing
9. Building	10. Painting	5. Textile
11. Weaving	12. Tie-dye	6. Electronics
13. Needle work	14. Fine arts	7. Applied electricity
15. Chemical technology	16. Hat making	8. Building construction
17. Decoration	18. Music	
19. Hair dressing	20. Shoe making	

The above Table 7 above shows that the skills available in formal technical school are also available in non-formal education Skills Acquisition Centers apart from Technical Drawing.

Hypothesis three

Hypothesis three states that there is no significant difference between the skills provided by non-formal education and formal technical schools. To test this hypothesis, chi-square was used at α level of 0.05.

Table 8: Summary of chi-square test for significant difference between the skills provided by non-formal education and technical schools.

Responses	Observed freq. (fo)	Expected freq. (fe)	Fo-fe	$(fo-fe)^2$	$(fo-fe)^2/fe$
Non formal	20	14	6	36	2.57
Technical school	8	14	-6	36	2.57
					$X^2=5.14$

At a degree of freedom of 1 and α level of 0.05, the critical value is 3.84. Since the calculated X^2 value of 5.14 is greater than the critical value of 3.84, we reject the null hypothesis and conclude that there is a significant different between the skills provided by non-formal education and technical schools.

Research question four

To what extent do skills acquired in non-formal education enhance securing employment?

Table 9: Percentage of the extent to which skills acquired in non-formal education skills acquisition centers enhance securing employment

Responses	Frequency	Percentages (%)
Agree	651	70.7
Undecided	10	1.1
Disagree	260	28.2
Total	921	100.0

From the table above, approximately 71% agreed that skills acquired in non-formal education skills acquisition centers enhance securing employment while 28% agreed that it does not. The 1% for undecided is negligible. However, in order to draw a reliable conclusion, the hypothesis was tested as shown below.

Hypothesis four

It states that there is no relationship between skills acquired in non-formal education programs and opportunity for securing employment. Chi-square was used to test this hypothesis.

Table 10: Summary of chi-square test for relationship between skills acquired and opportunity for securing employment

Responses	Observed freq. (fo)	Expected freq. (fe)	Fo-fe	$(fo-fe)^2$	$(fo-fe)^2/fe$
Agree	651	307	344	118336	385.46
Undecided	10	307	-297	88516	288.33
Disagree	260	307	-47	2209	7.20
					$X^2=680.99$

At a degree of freedom of 2 and α level of 0.05, the critical value is 6. Since the calculated X^2 value of 680.99 is greater than the critical value of 6, we reject the null hypothesis and conclude that there is a significant relationship between skills acquired and opportunity for securing employment.

Discussion of Results

This paper investigated the impact of Non-Formal Education to educational/human resource development in Rivers State of Nigeria. Generally, the analysis of the result obtained showed that non-formal education is effective in the provision of life planning education. This has been exemplified in a handbook of The Adolescent Project (TAP) titled "The Achievements of TAP in Rivers State and Nationwide". The handbook informs that TAP has kept in-school adolescents busy by getting them committed to various skills of their choice for six weeks annually mainly during the long vacation period from the month of August. In the last five years, the adolescents that participated in this program are made to undergo the life planning education training as a prerequisite for participating. The topics treated in life planning education include: sexuality, teenage unwanted pregnancy, abortion, communication skills, HIV/AIDS,

Right and respon-sibilities of adolescents, mediation and peer pressure, gender roles, cultism and examination malpractice. The children are taken through the life planning education for three days before they engage in the main skills. Furthermore, Assemblies of God (2006, p. 180) posits that "The inward reality of conversion must influence the outward life, including a person's character, disposition, conversation and behavior". This means that Sunday school which is a model of non-formal education also teaches life planning skills. Also in the Nigerian prisons, the in-mates are often given advice on how to refrain from acts capable of indicting them again after serving their jail terms.

The result in Table 5 and 6 also shows that non-formal education contributes in providing practical skills. This means that non-formal education is effective in the provision of practical skills. The above finding is supported by the large number of graduates of the Rivers State Skills Acquisition Centre, Port Harcourt. The August-December, 2005 batch were a total of 4, 500 successful candidates. The breakdown is: In agro-allied skills, 350 participants graduated; in spray painting 450 graduated; for welding and metal fabrication 1,750 graduated; in chalk making 500 persons; paint making 750 persons graduated, all totaling 4,500. The above practical training is from Rivers State Skills Acquisition Centre Port Harcourt alone. The National Directorate of Employment takes 1000 persons annually for training in various skills. According to the Director, National Directorate of Employment, the Directorate has established voca-tional skills development program. One of which is School-on-Wheels in which the skills acquisition activities of National Open Apprenticeship Scheme are taken to the grass roots through the use of well equipped mobile workshops (modules) and Waste-to-Wealth Scheme where interested unemployed youths are taught the techniques of converting hitherto neglected waste objects such as snail shells, horn, etc, into decorative items. There are several other non-formal educational programs that train people constantly in Rivers State.

The result in Table 7 shows that apart from Technical Drawing, non-formal education teaches the rest skills available in formal technical schools. The results show that non-formal education have several other skills which the formal technical schools do not teach. The National Directorate of Employment (NDE) has it that the Vocational Skills Development Program is designed primarily to impact vocational skills to school leavers and other unemployed youths who hitherto lacked productive and marketable skills. It is implemented through three schemes which include National Open Apprenticeship Scheme (NOAS) where unemployed school leavers are recruited by the NDE in the urban centers and attached them to Master Craftsmen to learn a vocation from the several trades available in the Scheme.

The result in Table 6 shows that the skills acquired in non-formal education centers enhance securing employment. This can be seen from the view of Ihejirika (2000, p. 58) as he opines that functional literacy education could be work oriented. For instance an industrial worker needs to improve his skills for greater efficiency and productivity through retraining and attendance of workshop and seminars. Also an apprentice who had completed his apprenticeship training could establish his own workshop (self employment). Besides, the certificates issued after the training could be used to seek employment in the oil company, civil service, manufacturing companies etc. depending on the sector that needs the trade or skill. Furthermore, Ranson (1994, p. 43) opined that the control and direction of education, because of its perceive function in preparing young people for their future roles in employment and society, becomes a central concern for the corporatist state.

The National Directorate of Employment (NDE) also operates Small Scale Enterprises Program designed to promote self-employment among job-seekers by inculcating in them the spirit of entrepre-neurship, creativity and self-reliance as against the usual dependence on public and private sector establishments for wage employment. To achieve this objective, the NDE encourage the potential entrep-reneur through provision of requisite training, otherwise called the Entrepreneurship Development Program (EDP), credit assistance and other necessary support services, to set up small scale businesses thereby generating jobs for themselves and other Nigerians.

CONCLUSION AND RECOMMENDATION

The research findings reveal that the utility of non-formal education is many and varied. Specifically, non-formal education serves the industrial sector by training its much needed manpower. According to the research, skills acquisition centers in Rivers State has been training participants in various skills and trades. Most of the skills provided by formal technical schools are also taught in non-formal education programs. The study reveals that the only exception is the Technical Drawing.

The skills/trades learnt enhance procurement of employment. The Trade Test Certificates issued to graduates of non-formal educational programs could be used to seek employment in either the private sector or public parastatal. Besides, such knowledge or skill acquired could be used for self-employment if the person so desires. Sometimes when wage employment is lacking, a graduate of non-formal education program could start up his/her own and even become an employer of labor.

Apart from the above, non-formal education improves efficiency and effectiveness of people already employed. The various in-service trainings of workers, the training and retraining of staff through workshops and seminars attest to the findings of this study.

Based on the significance of the result of the research, we wish to recommend that the Rivers State Government establish non-formal education centers in all her Local Government Areas since non-formal education teaches life planning educational skills. The proximity advantage would no doubt be optimally utilized by the grassroots. In the same vein, churches should make attendance of Sunday school compulsory since much of the life planning skills and the attendant moral ethics are taught in Sunday Schools.

The Rivers State Government and indeed the Federal Government of Nigeria should encourage the non-formal education program currently undertaken in prisons. Government should provide equipment to be given to any prisoner who completes his jail term so that he/she can engage in meaningful activity at home.

Also traditional birth attendants and bone setters should be encouraged to train others in lieu of hoarding their knowledge and monopolizing the trade. Finally, vocational guidance counselors should be provided bearing in mind that decision for life work can take place at various ages and levels in an individual (Zuofa 2001:104).

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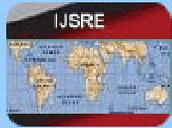
Education in Eritrea: Developmental Challenges
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Abstract

The ongoing national reconstruction process of Eritrea is centered on educational reformation. The government of Eritrea placed educational policy on top priority for national development which demands the emergence of new class of trained youth blended with disciplined minds and skills instead of raw graduation. It had established about eight colleges at tertiary level within a short span of time to build human resource required for the present and future. In line with this, it laid down new policies and curricula suit to the immediate national scenario. This article analyzed the strengths and weaknesses of the educational policies, planning and the infrastructure requirements to meet the intended goal. It explored and analyzed Eritrean educational development and its key challenges. It also provided some useful insights for policy development. The data for the study were mainly collected from the reports of Ministry of Education and other colleges in Eritrea. The outcome of the educational reformation is expected to have a profound effect in the development of the country.

INTRODUCTION AND BACKGROUND

Increase in human population imposes rapid changes on the planetary resources of a country. The scope and impact of such changes have multiple dimensions and implications that transcend geographic and cultural boundaries. The Human Development Report states that "to address the growing challenges of human security, a new development paradigm is needed that puts people at the centre of development, regards economic growth as a means and not an end, protects the life opportunities of future generations as well as present generations, and respects the natural systems of which all life depends" (UNDP, 1994).

Many authors have discussed the crucial role of human capital for growth and economic development. Even though some authors underlined the possibility of a negative relationship between girls' education and growth (Barro & Sala-i-Martin, 1996), most of them showed the importance of girls' education (Blackden & Bhanu, 1998; Rena, 2007). However, many developing countries exhibit huge gender inequalities in education. Enrolment rates remain lower for girls than for boys in most developing countries (Rena, 2008). In low income countries, the gross enrolment rates in primary education are equal to 103 percent for boys and 84 percent for girls. In high income countries, they are about 103 percent for boys and 104 percent for girls (World Bank, 2000; Rena, 2000).

Education plays a dominant role as an effective instrument for large-scale achievement and revolution in all spheres of human endeavor. Purposeful education enables the individual to understand and study the real life situation and to develop an opportunity for creating confidence in the minds of younger generation, and provide a strong base for rational and value-oriented and nation-building progress (Myers & Harbison, 1965; Mingat & Tan, 1986; Rena, 2000). Education helps youth preserve and change society, and also to understand, control and harness the forces of nature (Rena, 2006). Through shaping the behavior of youths and creating confidence in the minds of youth, education

provides a strong base for rational and value-oriented, nation-building progress (Woodhall, 1992). Education further assists in the acceleration of economic growth (Rena, 2005).

Technical and vocational courses in higher education play a significant role in this context. Therefore, a close introspection of the trend of technical and vocational courses in higher education is essential, not only for making them attractive, but also in shaping them to be economically and socially relevant in Eritrea (Rena and Eyob, 2008). The World Bank (2000) acknowledged the importance of technical and higher education for countries not to be left behind in a global economy based on knowledge. Criticizing an analysis that measures the benefits of higher education solely in terms of incremental earnings accruing to individuals, higher education is regarded as 'simultaneously improves individual's lives and enriches wider society' (World Bank, 2000, p. 37).

As soon as we stepped into the new millennium, the global economy has already experienced unprecedented changes, more so in the last three decades. Rapid strides in science and technology, the advent of computers, globalization and the pressure of world market made a great spur in the educational sector. We are witnessing several paradigm shifts in higher education, from "national" to "global education," from "state controlled" to an "open market economy," from "general education" to an "educational system driven by market forces," from "one-time education for a few" to "lifelong education for all," and from "teacher centered" to "learner centered" education, from classroom education to "digital learning" and from "science laboratory" to "virtual laboratories". These changes make new demands and pose fresh challenges to Eritrea's established education systems and practices (Rena, 2008).

Country Profile

The State of Eritrea is a small mountainous newly independent developing country in the northern part of the "Horn of Africa" on the Red Sea. Eritrea got its independence on May 24 1991 after thirty years of freedom struggle. It has an area of 121,144 sq km and has an estimated population of 4,670,000 (2005 est.).[1] It is bordered in the North and West by Sudan, in the South by Ethiopia and Djibouti and in the East by the Red Sea. Its capital is Asmara. The population is composed of nine ethnic groups and the country divided into six administrative regions.[2] The population is about equally divided between Christians and Muslims. Like many African economies, the economy of Eritrea is largely based on subsistence agriculture, with more than 70 per cent of the population involved in farming and herding. It has the GDP (nominal) per capita income of $271 (2007 estimates) (Wikipedia, 2008). Despite scarce resources, attributable to the harsh environment on the highland plateau and barren desert along the Red Sea strip, limited agricultural space in the lowlands for sustainable agricultural activities such as subsistence and pastoral farming, and the many challenging issues associated with development that have been exacerbated by the additional environmental and social burdens associated with the aftermaths of a post-conflict era, Eritrea has made and continues to make good socio-economic progress. Eritrea remains one of the poorest countries in the world, with a HDI index (o.483) of 156 out of 177 countries (Wikipedia, 2008). More than half of the population lives on less than US$1 per day. Eritrea's biggest asset is its hard-working people (Rena, 2007).

The Eritrean-Ethiopian War severely hurt Eritrea's economy. GDP growth in 1999 fell to less than 1%, and GDP decreased by 8.2% in 2000. In May 2000, Ethiopian offensive into southern Eritrea caused some $600 million in property damage and loss, including losses of $225 million in livestock and 55,000 homes. The attack prevented planting of crops in Eritrea's most productive region, causing food production to drop by 62%. Further, as of May 6th, 2008 Eritrea is the most expensive place in the world to buy fuel. At $9.58 per gallon, gasoline is 85¢ a gallon higher than in the next most expensive country, Norway (Wikipedia, 2008).

A look at the educational profile: at tertiary level, there are one University, Eritrea Institute of Technology (3 colleges) and 5 other colleges located in different parts of the country. The total number of students at all levels was about 186,000 in 1991 and reached over 700,000 in 2007. Eritrea places strong emphasis on education. The Macro Policy of Eritrea states, among other things, that in the long term, Eritrea will be producing "knowledge intensive" goods and services able to penetrate the world market (Government of Eritrea (GoE), 1994). The emphasis on education is also reflected on the government's policy on poverty eradication (Rena, 2006).

Since independence, the government of Eritrea has embarked on a wide-ranging program designed to revitalize and develop the collapsed economy and to promote its long-term growth. The overall vision of Eritrea's

future progress is ultimately to tone up the human capital, particularly through strengthening the education and health sectors (GoE, 1994).

This article explored and analyzed Eritrean educational development and its key challenges. It also provides some useful insights for the policy development. This article is based on the secondary data collected from various sources. The data were mainly collected from the reports of Ministry of Education and other colleges in the country. In some cases data has been projected by the author himself based on the current trends in the country.

YOUTH AND EDUCATION IN ERITREA

Soon after Independence in 1991, the educational reconstruction process in Eritrea gained top priority and recorded drastic changes at all levels including primary, secondary and tertiary education. Particularly, the recent past witnessed radical changes in tertiary education obviously aimed at rehabilitating the youths of Eritrea, who missed the formal higher education in lieu of freedom struggle, en mass into intellectual resource within a short span of time. Eritrean youths played a vital role in the freedom struggle and are considered to be the pillars of the future nation.[3] The government body of Eritrea is actively involving them in the current Warsay Yikiallow Nation building process (Rena & Eyob, 2008). The greater obligation of integrating the youths into the academic stream along with the backlog of the current students from the formal educational stream is necessary for the educational development of Eritrea. The priority-based political will of Eritrea to build manpower resource ingrained with discipline and literacy skill is unique in the rest of the African continent. While a closer analysis of such developments will be of extreme importance for national builders and educational administrators of Eritrea, its future impact and long term benefit will be an ideal case study for educational reformists around the world.

For a young nation, Eritrea human capital formation plays a cardinal role in activating the process of socioeconomic transformation. The building up of human capital is tremendously influenced by the standard of education made available by the educational institutions (Rena, 2007). While committing to the human capital building process, the policy makers enshrined enough room for diversification in the capacity building when the need arises. For example, while the Nation experiences all round reconstruction process, there is obvious scarcity of trained manpower initially for various administration and planning within the public sector. It included the urgent requirement of administrators and teachers in educational sector, public administrative clerks and engineers (building and repairing of road, offices and industries). Hence the birth of higher educational institute—Eritrea Institute of Technology (EIT) is linked with the generation of skilled manpower for the immediate requirement. EIT at Mainefhi (Central region) houses three colleges: the College of Engineering and Technology, the College of Science, and the College of Education. However, it is accommodating the College of Arts and Social Sciences to be shifted to Adi Queyha town (southern Region) in 2009.

Given that upgrading youth capabilities will strengthen the position and advancement of the country, the Government of Eritrea is undertaking youth rehabilitation and qualification programs in various fields of human capital development, and accordingly, giving them more emphasis. For instance, Eritrea allocated more than 4 percent of its national income, and about 37 per cent of budget services, for educational programs (Rena, 2007). This financial investment translates directly into the building of pre-schools (kindergartens), elementary and secondary schools up to university education (Rena, 2008).

Eritrean youth are solid assets of the country. The country could not have put its economy onto a successful development path without the readiness of its citizens, especially its youth. Hence, youth in Eritrea are playing a pivotal role in the reconstruction of the economy and the *Warsay Yikealo* National Development Campaign. Recognizing this, the Eritrean government is trying to provide the privilege of education to those youth who have participated in such development activities as a kind of incentive. For example, the 5,500 youth that took the first matriculation examination in 2003 in the *Warsay Yikealo* Secondary School were given the opportunity to continue learning in the Eritrea Institute of Technology (EIT), Mai Nefhi. Additionally, the 8,500 students who took the matriculation examination in July 2005 have joined the EIT. Every year substantial number of students join EIT and other colleges in the country.

In Eritrea, the students' who complete grade XI attend the *Warsay Yikealo* Secondary School at Sawa[4] to complete grade XII and sit for the matriculation examination there. Based on the matriculation examination results, the

students are then assigned to either EIT- Mai Nefhi or other colleges *(see table 1)*. The basic qualification for the students to enter into the higher learning institutions is that they have to complete their matriculation in Sawa with grade 12 and secure the required Grade Point Average (GPA) which differs for degree and diploma which vary from time to time. The details are presented in table 1. With such strong academic opportunities available to them, Eritrean youth have a good chance of finding ways of supporting their own life and the life of their families for future.

Table 1: Performance of students in Matriculation (CGPA for both 2004 and 2005 batches)

Matriculation CGPA	Number of students (2005 batch)	Number of students (2004 batch) students)	Percentage of students (2005Batch)	Percentage of students (2004 Batch)
0-.2	7	1273	0.31	25.63
.2-.4	224	397	9.85	7.98
.4-.6	217	374	9.54	7.54
.6-.8	199	363	8.75	7.32
.8-1.0	192	408	8.45	8.22
1.0-1.2	189	363	8.31	7.32
1.2-1.4	175	376	7.69	7.57
1.0-1.6	176	375	7.70	7.55
1.6-1.8	146	344	6.42	6.92
1.8-2.0	152	248	6.68	4.98
2.0-2.2	135	197	5.93	3.96
2.2-2.4	94	124	4.14	2.50
2.4-2.6	77	67	3.38	1.35
2.6-2.8	74	26	3.26	0.51
2.8-3.0	46	20	2.02	0.39
3.0-3.2	44	8	1.93	0.16
3.2-3.4	40	1	1.76	0.02
3.4-3.6	43	1	1.91	0.02
3.6-3.8	29	2	1.27	0.04
3.8-4.0	16	1	0.70	0.02
Total	2275	4968	100.00	100.00

Sources: Ministry of Education and EIT Records (2006)

The table above reveals that one-fourth of the students of 2004 batch were in 0-0.2 Matriculation Cumulative Grade Point Average (CGPA) grades which obviously is not a laudable one. In comparison to this only 0.31 per cent students of 2005 batch were in 0 – 0.2 Matriculation CGPA grade. Again the percentage of students with 2.6 and above is much higher in 2005 than that of 2004 batch. Another revealing point is that most of the students of 2004 batch (70 percent and above) hovering from 0-.2 to 1.8-2.0 Matriculation CGPA. At the prima facie, it seems 2005 batch students are better than 2004 batch. The CGPA for the same group of students (2005) at EIT is presented in Table 2.

Table 2: Students CGPA groups based on EIT report (2005)

Matriculation CGPA	Number of students 2005 Batch	Percentage of students 2005 Batch
0-.2	117	5.14
.2-.4	64	2.81
.4-.6	98	4.31
.6-.8	115	5.05
.8-1.0	131	5.76
1.0-1.2	155	6.81
1.2-1.4	154	6.79
1.4-1.6	192	8.45
1.6-1.8	189	8.31

1.8-2.0	189	8.31
2.0-2.2	157	6.82
2.2-2.4	167	7.35
2.4-2.6	130	5.76
2.6-2.8	115	5.06
2.8-3.0	91	4.00
3.0-3.2	72	3.17
3.2-3.4	46	2.02
3.4-3.6	43	1.89
3.6-3.8	29	1.27
3.8-4.0	21	0.92
Total	2275	100.00

Sources: Ministry of Education and EIT Records (2006)

Table 2 indicates that the percentage of students who secured 2.6 and above CGPA at EIT is comparatively better than the Matriculation CGPA *(see Table 1)*. In other words, students of 2005 batch have done comparatively better in EIT than their Matriculation Examination. It is important to note that 2005 batch students who secured 2.6 and above performed better than the 2004 batch as EIT CGPA for 2005 batch 2.6 + is 18 .13 per cent against 10.31 per cent for 2004 batch of students.

Hence, it is imperative that enabling citizens go through education and skill enhancement is more critical today to bring the needed social and economic change that the country desires. There is fairly well-founded concern that in the next decade, Eritrea could find itself performing a difficult balancing act: catering for the needs of a significantly large growing population while trying to find opportunities for a newly emerging workforce of youth that do not have marketable skills. It is imperative we note that thousands of youth enter the workforce each year in Eritrea without the benefit of a high school education and most do not have skills for the job market (Rena, 2007).

The imparting of skills largely depends on the Industrial Training Institutes (ITIs) and technical schools that have a base in the public and private sectors of Eritrea. The ITI system, despite some attempts at revamping, is viewed as insufficient and weighed down by factors such as the limited range of skills taught, outdated technology, high cost, and the requirement that those entering the system possess at least a high school qualification. In line with this, the Government of Eritrea has established National Center of Vocational Training in Sawa in March 2007 and trained more than 3,000 students. Yet, the challenge before the State, therefore, is to build on the existing infrastructure of ITIs, schools, colleges, and institutions in the private sector. Computers and multimedia now make it possible to learn in an interactive manner and should help form the core of any new strategy (Rena, 2008). The potential of multimedia to train both literate and illiterate youth makes it more attractive. Courses in the service sector areas, such as tourism and health care, could be taught at centers utilizing such technology, in addition to the existing schools and colleges in Eritrea.

The youth's economic reconstruction efforts have been successful in improving the quality of the country's infrastructure. The overall reliability of the supply of power, transport and communication services has been restored and improved substantially in most parts of the country through the *Warsay Yikealo* Development Campaign since 2002. Eritrean youth not only cherish deep memories of their aspirations to break the fetters of colonial rule, but also renew their pledge to build the Homeland and create a solid foundation embodied with the concepts of ardent patriotism, unshakable unity, and hard work. Hence, the youth have a strong belief and confidence that "we can do it and we will do it" (Rena, 2006).

TERTIARY EDUCATION IN ERITREA

To foresee better the challenges of tertiary education in Eritrea, the MoE has estimated the enrollment patterns for 12th grade level and also the corresponding enrollments at the tertiary level. The Ministry of Education prepared these forecasts for the next 10 years for the 12th grade level. If the current levels of access are maintained, it assumes even a lower figure of 40 percent (15% degree and 25% diploma) access rate to tertiary education *(see table 3)*. To obtain the estimates of the total student population at the tertiary education institutions, degree programs are assumed to have

durations of 4 to 5 years while the corresponding figures for the diploma programs are assumed to be 2 to 3 years (MoE, 2006).

Table 3: Forecast of student enrolments at the 12th grade level and at tertiary institutions

Academic year	Students enrolled in the 12th grade	Students accepted for tertiary education	Total number of students attending tertiary education
2006/2007	21,700	5,400	16,700
2007/2008	22,600	8,700	21,400
2008/2009	24,900	9,000	25,300
2009/2010	27,900	10,000	28,800
2010/2011	31,400	11,200	32,400
2011/2012	35,600	12,600	36,400
2012/2013	40,400	14,200	41,100
2013/2014	45,200	16,200	46,400
2014/2015	49,900	18,100	52,400

Source: Ministry of Education, 2006

The University of Asmara's total student enrollment in degree programs increased from 2,836 in 1995-1996 to 3,912 in 1999-2000, an increase of 28% in 4 years. In 1999-2000, total enrollment at the institution topped 4,500. In addition, the university awarded 1202 degrees and diplomas in 2006 out of which 948 were first degrees, 209 diplomas and 45 Master's degrees in select fields. The university has graduated batches for the 14th time since independence with a total of 10,160 students of which 70% are in degrees (Rena, 2007). However, it has remained closed since September 2006 and all the staff and students were transferred to EIT and other concerned colleges. Currently, those students who have completed high school and who have qualified to enter tertiary institutions are mostly admitted at the EIT. They attend one of four freshman streams: (a) Engineering and Technology, (b) Pure and Applied Sciences, (c) Business and Economics, and (d) Arts, Humanities and Social Sciences. The Rest of the, students are siphoned to similar streams offered by the other colleges.

Eritrea Institute of Technology (EIT)

The Eritrea Institute of Technology is considered as Eritrea's biggest boarding educational institute in the post-independence period. It is established in February 2004 and situated at about 28 kilometers (17 miles) southwest of the country's capital, Asmara. It caters for the needs of more than 10,000 students and about 400 faculty members, including expatriates, Eritreans of Diaspora and graduate assistants and the students of University service (Rena, 2008). It has a number of new and emerging departments; indeed, it is hoped that EIT makes an institute of its own kind that will boost Eritrea's educational, technical and developmental standards in the coming years. In fact, EIT within its four years of inception has recorded tremendous growth so as to offer fifteen Degree programs and equivalent or more Diploma programs from its 21 Departments *(see table 4)*.

Table 4: The Degree and Diploma Programs in Various Colleges in Eritrea

Institution	Degree	Diploma
Eritrea Institute of Technology	12	16
College of Marine Science	3	3
College of Business and Economics	6	4
College of Agriculture	5	6
College of Health Sciences	5	7
College of Arts and Social Sciences	3	2

		34			38
Total					
University of Asmara*		30			3

Source: Rena, 2007, p.131.
Note: * currently not in operation.

After four years EIT was found, with enough breathing time, focus has been laid on the improvement of other sectors including agriculture, health, management of marine resources and trade and commerce. Thus four more colleges were built to cater for these purpose which includes: the College of Agriculture at Hamelmalo in Anseba region, the College of Marine Sciences at Hirgigo in Northern Red Sea region, the College of Business and Economics at Halhale in Southern region, and the College of Health Sciences at Asmara in the Central region. The Orotta School of Medicine is also linked with the Health College. With the opening of new colleges, access to tertiary education has increased to about 45 percent. This is in contrast to the corresponding figure of 10 - 15 percent before the opening of colleges (MoE, 2006).

The duration of the degree programs is five years and diploma programs three years in the College of Engineering and Technology, while the duration in other colleges for degree is four years and diploma is two years. The college of Engineering and Technology offers the following courses in different disciplines. It is to be noted that during the academic year of 2007-08, the Department of Chemical Engineering is established with degree and diploma programs in chemical engineering. Diploma programs in town planning at the Department of Civil Engineering, and refrigeration and air conditioning in the Department of Mechanical Engineering are also expected to start in the future.

The pleasant weather, newly built road facility, transportation support, adequate computers, the upcoming infrastructure, disciplined-students and pollution-free environment certainly contribute towards nation building to meet the Millennium Developmental Goals (MDGs) set by the United Nations. Undoubtedly, EIT becomes the single most knowledge-base for the Nation (through liberal blending of the expertise of the largest expatriates with the local doyens). As stated earlier, the institute has been offering degree, diploma programs in numerous advanced disciplines with ambitious need of serving its country by its own human resources in the near future. However, there is an urgent need for the establishment of Information and Communication systems and laboratories to equip the nation's youth with the essence of science and technology. The ideology probably centered on "enrich the institute more and serve the nation better".

Table 5 and 6 provide the growth of degree and diploma students in five colleges of Eritrea. It is apparent that these colleges produce 6,865 graduates and 3,755 diploma holders by 2015. This number may not be sufficient to the growing needs of the nation since it has been working on Free Trade and Mining in the country. Hence, there is a need to develop tertiary educational institutions in the country.

Table 5: Growth rate for degree program in EIT & TE [Ten Year Projection]

S/ No	Year	Engineering	Science	Education	Social Science	Total
1	2005-06	280	280	56	168	784
2	2006-07	585	647	116	334	1,682
3	2007-08	888	948	176	499	2,511
4	2008-09	1,215	1,021	196	542	2,974
5	2009-10	1,486	1,320	255	761	3,822
6	2010-11	1,803	1,613	307	922	4,645
7	2011-12	2,093	1,966	359	1,081	5,499
8	2012-13	2,379	1,979	362	1,098	5,818
9	2013-14	2,725	2,267	414	1,255	6,661
10	2014-15	2,790	2,350	428	1,297	6,865

Source: Author's Projections based on the existing enrolment trends in EIT

Table 6: Growth Rate for Diploma Program in EIT & TE [Ten Year Projection]

S/ No	Year	Engineering	Science	Education	Social Science	Total
1	2005-06	405	45	489	90	1,029
2	2006-07	805	89	543	136	1,573
3	2007-08	851	113	552	149	1,665
4	2008-09	1,248	201	623	163	2,235
5	2009-10	1,255	209	620	176	2,260
6	2010-11	1,647	252	630	209	2,705
7	2011-12	1,685	260	695	223	2,863
8	2012-13	2,073	302	704	166	3,245
9	2013-14	2,108	309	713	180	3,310
10	2014-15	2,492	351	767	145	3,755

Source: Author's Projections based on the existing enrolment trends in EIT

The existing scientists, technocrats and policy makers in Eritrea need to work hard to produce more skilled manpower in science and technology. In this line, the establishment of EIT is the major developmental breakthrough which is highly appreciable. Further strengthening the institute so as to diffuse the knowledge base into industrial needs can bring multi-faceted developments which can ultimately make Eritrea a self-reliant country. The vision and implementation style of Eritrea in manpower building impregnated with discipline and literacy skill can be example for other African countries to emulate.

CHALLENGES FOR EDUCATION DEVELOPMENT

Education in Eritrea has seen several challenges before attaining its present status. The Italians, the British and the Ethiopians have left their respective marks (Rena, 2005). The extensive educational reforms currently taking place at all levels is aimed at structuring education to respond to the development needs of the country and to enable Eritrea to participate appropriately in this 21st century characterized by globalization and widespread knowledge based activities (MoE, 2006; Rena, 2007). The Eritrean education system faces challenges that are fairly common to other education systems in Sub-Saharan Africa. These are limited access; low quality; doubtful relevance; inefficiencies; inadequate financial and non-financial resources; and poor delivery capacity. The Government's vision for addressing these pressing challenges is well- articulated across key policy documents (Government of Eritrea, 2003, p. 8).

After the independence of Eritrea, despite the scarcity of resources and the shortage of academic staff, the University of Asmara was re-established to resume its academic work on October 10, 1991 with a few hundred students and five faculties. Then it struggled to accommodate many more courses including Engineering, pharmacy, agriculture etc., and a greater population of students than it was originally designed to cater for. Despite the positive developments the university was closed. If Eritrea wants to develop its own manpower, it needs to restart the University of Asmara with the "masters" and other research programs that are imperative in fostering the country's manpower and economic development.

Higher education is very expensive. The cost of providing instruction, laboratories and libraries and other accoutrements of higher education has gone up dramatically. Libraries and laboratories in particular now require major investments of resources (Altbach, 2007, p. 6). The new communications technologies, as well as keeping abreast of the dramatic growth in knowledge are also costly as Eritrea is trying to get loans from the World Bank and other international financial institutions. For example, USD 200 millions is sanctioned for the establishment and development of EIT. It also seeks financial assistance from its development partners like UNDP, Norway, China and Dutch etc. Besides, all the higher learning institutions are depending on expatriate teacher's particularly from India (majority), Pakistan (10), Russia (1) etc. It is to be noted that more than 50 per cent of the faculty members are expatriates where the country needs to pay almost 8-10 times more than its own manpower. For a young and small nation like Eritrea, it would be a heavy burden.

Over-crowded classrooms at tertiary level are a very serious issue. It is observed that, the pupil-classroom ratio is 1: 90 in EIT. Although, these higher learning institutions function at double-shifting (morning and afternoon), yet it could still not accommodate many aspirants who seek higher education.

Information and Communication Technology in education

Providing citizens with quality education is the means by which the socio-economic development of a country can be achieved. To accomplish this, improving the standard of education is imperative. Introducing Information and Communication Technology (ICT) in educational system can play a pivotal role in promoting education. The government of Eritrea has been pursuing the opportunities and constraints to introduce and sustain Information and Communication Technology in education.

Information and Communication Technology was introduced in 2004-05 in the new education system as part of the educational reform process. It is intended to improve the quality of education by supplementing the student-centered interactive pedagogy with latest technology. Currently, many secondary schools in the country introduced ICT as a subject. The Ministry of Education provided at least 60 computers for each secondary school. Some secondary schools such as Denden, Halay, Dembe Sembel etc, have Internet connections as part of the ICT education system. It is a strong belief that ICT education would help the students to discover a broad knowledge in other subject areas by searching different Websites.

The ultimate goal of introducing ICT in the education system is to use ICT as a tool in the teaching and learning process across all subject areas of the national curriculum. In other words, teachers are expected to use ICT to facilitate teaching and learning process in their respective subject areas. Similarly, students would have access to ICT facilities, including Internet, which can ultimately enhance their learning abilities through knowledge and information. Other goals of ICT instruction in Eritrea are:

1. Increasing access to knowledge for the benefit of the public;
2. Nurturing knowledge concepts in Eritrea Institute Technology;
3. Promoting application of knowledge in business and industry;
4. Promoting equal opportunities in terms of access, equity, relevance and continuity of education to all school-age children; and
5. Providing Adult education through formal and non-formal channels to produce more literate and skilled citizens.

ICT can also be a useful tool in facilitating distance learning. It can fill the gap created by the lack of formal education. This method is expected to be used by Eritrea Institute of Technology to reach people in rural areas in the future. It encourages the transfer of a great deal of information across various localities.

Eritrea has seen some progress in introducing Information Technology in education; yet, the government is required to recognize the importance of technology and initiate it at grass-root level starting at the primary school system. However, the Ministry of Education should train and appoint qualified teachers in that field. Since the country do not have the qualified teachers in this domain; it recruited large number of ICT experts from India during the recent past. It is important for Eritrea to spread ICT education in remote places where more than 70 percent of people live; it would obviously enable the citizens to get equal opportunities in the country.

Gender Inequality

Even if the positive relationship between economic development and the gender gap in education seems to be clear, the sense of causality remains uncertain (Kremer & Chen, 1999). Indeed, we can wonder if the gender gap in education is the cause or the consequence of underdevelopment. In order to highlight the relationship between girls' education, growth and economic development, we examine the gender gap in education and its consequences, notably on income inequality (Rena, 2007).

The female participation at all the levels is not encouraging; this is so particular in higher education, where less than 20 percent are entering into higher education. The data from the Ministry of Education shows that there are many reasons behind the low enrollment of female students. In the lowland areas where the Muslims are majority, many families tend to withdraw their children from school early because they do not want them to go to the same school with the boys (Rena, 2007). There is also an issue of underage marriage. They do not want to send them to Sawa to complete their high school. Many prize-winning students tend to stop their education due to cultural and

religious barriers. The absence of middle schools in Molki, Shambiko, Logo Anseba and Barka also has its role to play. The male students can rent a house in towns and go to school. Parents do not allow their female children to do same.

Above all, the parents do not have faith in their female children to be as productive as their male counterparts even after education. Nevertheless, in some of the schools, there is equal participation of both boys and girls and most of the prize winners are females. It is felt that girls can compete with their male counter parts if they have equal chance to study. In the first semester of the academic year 2006-2007 for example, in Sewra Elementary School, 47.6 percent of the students were females. Around 55 percent of those who stood from 1st to 5th were females.

Furthermore, as they grow older, female students get weaker due to home related works. In Zoba Debub for example, female enrollment is 35-39 percent in middle school. It drops to 27-28 percent in high school. It further declines to les than 20 percent at tertiary level. The distribution of middle and high school is lower than elementary which forces students to travel long. Parents do not allow their female children to rent a house around the school; they do not buy them a cycle either. This ultimately, encourages early marriages. Besides, cultural stigmas, economic problems are additional reasons for their low enrollment. It is observed that if parents die of HIV/AIDs, the female children tend to take the responsibility of the family, which narrows their chances of succeeding in education.

Children and youth need to have role models. The Ministry has been trying to train female teachers so that they will serve as role models to the students. However, most of the teachers in remote areas are males for many reasons. It is easier for female teachers to bring behavioral change in female students. There is anecdotal evidence that, this method has brought an ideal change in some boarding schools like Maria Boarding School. This is not enough; as government should create job opportunities and encourage the women to participate in the educational development process.

CONCLUSIONS

The Government of Eritrea developed educational policy on top priority of national development which demands the emergence of new class of trained youth blended with disciplined mind and skill instead of raw graduation. Despite the strenuous efforts made by the government in the development arena, the self-reliance in human resources has not yet been achieved. Thanks to the educational reforms initiated in 2003. There were many colleges established but they need libraries and laboratories and other needed infrastructure. Although, the country is on the way to have its own teachers at the middle and secondary level, there is still a long way to achieve its manpower needs at the tertiary level.

Besides, Eritrea has been facing serious challenges such as: low quality; doubtful relevance; inefficiencies; inadequate financial and non-financial resources; and poor delivery capacity etc. Above all, there is a gender disparity in every level of education. To bring about economic development and social justice, we should ensure equal participation of women in all sectors. The parents, society and the government should remember education is the gift that could be offered to Eritrean children irrespective of their gender.

Education has been viewed as a strategic tool for development; therefore, the content of the educational system needs to be reviewed carefully. The education system in Eritrea must be geared up, not only at raising the general, social and scientific knowledge of the youth, but also must equip the youth/individual with skills that would enable him/her to lead a productive, sustainable life.

Notes:

1. The population of Eritrea includes about 350,000 refugees from the Sudan. Every year hundreds of these refugees have been coming back to their homeland –Eritrea.

2. Eritrea has nine ethnic groups. They are: Tigrigna, Tigre, Saho, Afar, Bilein, Hidareb, Kunama, Nara and Rashaida. All these ethnic groups have their own languages and cultures. There are six administrative regions: Anseba, Debub, Maekel, Gash Barka, Southern Red Sea, Northern Red Sea.

3. Eritrean youth have been in the forefront of all historically registered national engagements. For example, the youth had a prominent position and participation during the thirty years freedom struggle (1961-1991). They also led the first post-independent development plan aimed at transforming the country's economy. They, also, played a vital role during the border conflict from 1998-2000 in safeguarding the country and reconstructing the economy.

4. There is one area of continuity with Eritrean People's Liberation Front (EPLF)'s earlier practices; national service is required of all young people (men and women alike) who did not previously serve in EPLF. They receive six months of military training and are then deployed in rural areas for a year to help with road building, reforestation, and other projects. Some Muslim Eritreans have tried to argue for the exemption of Muslim women and some families apparently tried to use marriage as an exemption for women, but the government has held fast to the requirement that all young citizens regardless of Contradictions of Liberation and Development in Eritrea gender, religion, or marital status must do their national service. The requirement of not only national service but military training for women is a significant legacy of EPLF's revolutionary culture. It also can be interpreted as emphasizing the supreme authority of the government over its female citizens over and above patriarchal domestic and religious authorities.

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