COMOSA

Journal of Open Schooling

COMMONWEALTH OPEN SCHOOLING ASSOCIATION

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AIMS AND OBJECTIVES

The Journal of Open Schooling is committed to school education through open learning methodologies. The journal is internationally referred, contributed, abstracted and subscribed. The affairs of the COMOSA Journal of Open Schooling are being managed with the help of an Editorial Advisory Board, and an Editorial Board.

The aims and objectives of the Journal are:

- to provide a forum across the Commonwealth Countries for scholarly discussion on concerns and issues in Open Schooling/Open Learning.
- to disseminate research, theory and practices including inter-disciplinary studies.

The COMOSA Journal includes research papers, articles, review of research, review of Books on Open and Distance Education and highlights programmes and activities in Open Schooling in Commonwealth Countries.

The research papers may inter alia reflect need of the study, objectives, research methodology including sample and results of the study. The researches may be empirical, archival, historical etc.

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COMOSA Journal of Open Schooling

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Chief Editor's Note

Commonwealth Open Schooling Association (COMOSA), is a non-profit, organization committed to support the efforts of open schooling institutions. It came in to existence in November 2009. The basic objective of the Association is to cooperate and collaborate in school education for sustainable development in commonwealth countries through Open and Distance Learning Mode, and thereby achieve the Millennium Development Goals (MDG).

The Association aims at achieving a number of outcomes. One of these is sharing of resources by compiling, publishing and distributing research and other materials. The Journal provides a forum to the member countries to mutually benefit by sharing views, activities, research and innovations. I am happy to share the news that the COMOSA Journal of Open Schooling has been registered and assigned **Number ISSN 0976-0407.**

This COMOSA Journal is the first issue (July-Dec2010) has seven papers/articles and two book reviews which covers different aspects of Open Distance Learning across commonwealth countries.

We are pleased to include the address of Sir John Daniel titled *"Education for the 21st Century: Time for Open Schools to Raise their Game" which was delivered to the General Body Meeting of COMOSA* scheduled on 21st November, 2010.

The article *Paradigm Shifts in Learning Policies and Practices vis-à-vis Distinctive Contribution of Open and Distance Learning in Papua New Guinea* elaborates how open and distance learning can expand scope and coverage of education and lifelong learning.

The Paper on *A Comparative Study of IGNOU and KNOU on Perception and Motivation of Women for Study through Distance Education Mode* describes the popularity and need of the ODL system among women of Korea and India particularly for getting better opportunities in life through a skill development programme.

How distance and open learning methods and processes of formative assessment support academic performance of remote and distance learners has been addressed in the paper titled *Formative Assessment: Experiences of Distance Learners in the Remote Western Part of Botswana.*

Continuing and Community Education (CCE) and Technical and Vocational Education and Training(TVET) have beneficial to hetrogenous target. The case studies from the Pacific environment have been discussed in the paper titled *Continuing Education & TVET: An Alternative System at the University of South Pacific.*

Bangladesh Open University through its Open Schooling programmes has

developed country-wide network to increase access and equity. The paper titled *Quality Assurance Process of Educational Programmes through Open Schooling at the Bangladesh Open University discusses this vital aspect of Open Schooling.*

The perception of students and prospective employers matter much for the popularity and relevance of any vocational courses. This has been elaborated in a study titled *Enrolment Trend of Vocational Education Programmes in Open Schooling: A Study of NIOS.*

The backbone of health care delivery system in Paramedical Education has become an important and integral part of medical education. *A case study of Radiography Course offered by the NIOS, (India)* reflects the Potential of ODL for training of Paramedical Technicians.

The contributors of this issue of the Journal deserve special thanks for their valuable contribution on varied themes. I appreciate the hard work of the Editorial Board of COMOSA and the Printing Unit of NIOS for publishing the present Journal.

We expect more contributions from the Open and Distance Learning Community for the forthcoming issue of the COMOSA Journal, so as to to keep the debates on various issues of ODL alive. I invite your comments and suggestions for making this Journal better in future.

      Best Wishes,

(Sitanshu S.Jena)
Chairman, NIOS
&
Chairperson, COMOSA

Education for the 21st Century:
Time for Open Schools to Raise their Game

Sir John Daniel
Commonwealth of Learning

1.0 Introduction

It is a pleasure to be with you. I apologise for having to talk to you today rather than during your conference proper tomorrow, but as you know, COL's big biennial event, the 6th Pan-Commonwealth Forum on Open Learning begins in Kochi this week and we have organised a series of pre-conference events that require my attendance.

Your meeting also falls into that category and we are very grateful to NIOS for hosting it. I value the opportunity to address you because in the last two years I have become much better acquainted with open schooling than I was before. I shall start by explaining the personal journey that stimulated that interest and led directly to my new book *Mega-Schools, Technology and Teachers: Achieving Education for All,* which was published in English and Chinese earlier this year.

As I wrote that book I came to the conclusion that those of you who work in open schools are far too modest about the role that open schools should play in 21st century education systems. Maybe you have toiled for so long in a part of the education system that has low status that you have failed to observe how things have changed. For large parts of the world the 21st century belongs to open schools, so my purpose today is to encourage you all to hold your heads higher and be more ambitious. That's why I've titled this address: *Education for the 21st Century: Time for Open Schools to Raise their Game.*

I shall suggest several ways in which you should be more ambitious. First, open and distance learning, or ODL, is booming. You shouldn't let university people have a monopoly on research into this vital phenomenon of our times. I suspect there are ten papers – maybe even a hundred – published on ODL in higher education for each one on open schooling. Yet at the moment research on open schooling is more important – and more interesting – than adding extra embroidery onto the already considerable literature of higher distance learning.

Second, you should take on a more central role in curriculum development for your national school systems. Open schools are national leaders in translating curricula into learning materials, which can be useful in the regular schools as well as for the open school pupils. You should arrange to be involved on a

permanent basis in the processes by which your national curricula evolve. This would at least avoid the situations that some of you have experienced where a major curriculum change was announced and your open schools were left high and dry with quantities of obsolete materials that had to be scrapped.

But your central role in contemporary education goes wider than curriculum. In nearly all countries, even very small ones, the education system is terribly compartmentalised. Different ministries and departments often do not coordinate their efforts and institutions at different levels of education live in their own solitudes. To be effective we need to take inspiration from biology and think of education in terms of an ecosystem. Open schools should a major node in such a system.

So that is my agenda. Let's go back to the beginning. Why will the 21st century belong to open schools?

2.0 Three key imperatives for education

There are always plenty of challenges in education, both nationally and globally, but three stand out as being of overwhelming importance for the next 20 years. Open schools have a role to play in addressing all of them.

2.1 The Secondary Surge

The first is what I call the secondary surge. For the last twenty years – and for some years to come – the major educational preoccupation of developing country governments and international agencies has been the campaign for Universal Primary Education or UPE. I know this campaign well because from 2001 to 2004 I was Assistant Director-General for Education at UNESCO and that campaign defined much of my work.

Our problem was that we were all so focussed on achieving UPE that we didn't spend much time thinking about what would happen if we were successful. And we have been successful. Thanks to the UPE campaign and huge efforts by many national governments, when it comes to getting children into primary school many developing countries have achieved in two decades what took a century for today's rich countries. There are still countries, notably Nigeria and Pakistan, that will be challenged to meet the goal of UPE by 2015, but most are well on the way.

The result, of course, is that a tidal wave of millions of children – actually hundreds of millions of children – is now heading for secondary schooling. One researcher estimated a few years ago that 400 million children between the ages of 12 and 17 were not in secondary school (Binder, 2006).

There is no chance whatsoever that the majority of these children will be accommodated by the expansion of conventional models of secondary education: the numbers are just too huge. Every possible alternative must be used to let

them continue their education. Open schooling is by far the most promising of the available alternatives because it is scalable at reasonable cost.

2.2 Climate Change

Secondary schooling is important. We have expended so much energy in the last 20 years on promoting the importance of primary education that the case for secondary education has been neglected. Primary education is good, but both parents and children know that what will really make a difference to their opportunities in life is the education people receive after primary school.

Secondary schooling for girls has a very special importance because it is humankind's best weapon against climate change. The primary driver of climate change is population. The reason that the world has a climate problem is that since the industrial revolution 200 years ago, the earth's population has increased by a factor of seven. Moreover, since that time the demands that each person makes on the planet's resources has also increased by a factor of seven, meaning that the impact of humankind on this world has grown by a factor of 50 times.

If we want to stop or slow climate change the first thing we must do is slow population growth. This is where the secondary education of girls is so important. Women with secondary education have, on average around the world, 1.5 fewer children than those without secondary schooling (Cohen, 2008). A difference of just one child per woman means 3 billion more or fewer people on the planet by 2050. Secondary education for girls *must* be a priority.

2.3 Teacher Shortage

The third challenge that I wish to flag is the teacher shortage. This is worldwide problem, not just a developing country problem, and has several causes. The rich world is seeing a massive wave of teacher retirements and, in some cases, horrendous attrition among new teachers. In the USA 50% of teachers leave the profession within five years of qualifying to join it. As well as attrition through retirement, many developing countries have to cope with a high death rate of teachers from AIDS at a time when they need many more teachers to complete the drive to universal primary education and expand secondary education.

I am not proposing open schooling as a solution to the teacher shortage, although it does help countries to deploy teachers and teaching assistants in better ways. However, the curriculum development and delivery systems of open schools can be very helpful in expanding the in-service education of teachers on which so much depends. This is part of what I mean by saying that open schools are a major node in an educational ecosystem for the 21st century that also includes the ministries of education and the teacher education institutions.

3. Open Schooling: raising the game

The framework for education in the next two decades will reflect those three key educational challenges: the secondary surge; secondary schooling for girls; and the teacher shortage. Against that background let me return to my main theme, namely that it is time for open schools to raise their game. I start with research.

3.1 Research

The memory of certain experiences stays with you a long time. I remember a cold day in January 2007 when I visited the World Bank with my COL colleague Mohan Menon. We had gone to the World Bank to talk about open schooling and, although Mohan was in charge of teacher education at COL at that time I took him along because, as a former chairman of NIOS, he knew a lot about open schools.

Our address to the World Bank officials covered the issue that I raised earlier – the secondary surge – and urged them to take an interest in open schooling. They admitted that they hadn't given enough thought to the consequences of success in the campaign for Universal Primary Education and that they needed to do so. However, development agencies like the World Bank are hugely invested in traditional ways of doing things, which their economists have researched for years.

In the case of secondary schooling, the research, which has been well summarised by Professor Keith Lewin (Lewin, 2008) shows that the difference in unit costs between primary and secondary schooling is much greater in developing countries than in the OECD countries. In the richer countries the unit costs of secondary are less than double those of primary, whereas in Africa secondary costs from 3 times to 8 times as much as primary. Lewin concluded that a country will never achieve universal secondary education unless it can get its national cost ratio down below two.

You might think that such results would have spurred the development agencies to look for ways of lowering the costs of secondary schooling. In a way they have, but always within the classroom paradigm. For example, Lewin notes that 'some of the policy options with most economic leverage (for getting costs down) are: reducing teacher salaries; increasing pupil-teacher ratios and class-teacher ratios; and increasing teachers' time on task'. You can just imagine how eager most ministers of education would be to embark on such reforms.

Our World Bank colleagues told us that they were very interested in open schooling but that the Bank could not invest money in new approaches unless they had been thoroughly researched and evaluated, which open schooling had not. At the end of our visit Mohan and I decided that we would get some research going on open schooling. Rather than lose time by applying to the World Bank to funding – although they would probably have given some – we decided that COL would fund it. We started by getting Greville Rumble and

Badri Koul to do a comparative study of NIOS and NAMCOL, which some of you will be familiar with.

They did a very thorough job, incidentally turning up some rather sloppy research on NAMCOL by the World Bank on the way (Marope, XXXX). Their book gave a boost to research on open schooling. Frances Ferreira and Dominique Abrioux followed it up with their book *Open Schooling for the 21st Century,* in which the chapters about different open schools summarise what research results are available.

My message to you today is to encourage research on your open schools. You don't have to do it yourselves, because your staff are hard pressed, but university education faculties are always looking for good research topics for their graduate students and it is not hard to convince them that research on open schooling is important.

What aspects of open schooling should they study? My advice is to keep it simple. Some of you know the iron triangle by which I often summarise the challenges facing education. The three big issues are access, quality and cost. We want to widen access, raise quality and lower cost – all at the same time. Open schooling can do that, so focus the research on how it does it.

While you are researching access, make sure you also research student success. We all know that drop-out, failure and low grades are the Achilles heel of open schooling. Ministers and development agencies know that too, so devote effort to research on improving quality, retention and output. Make sure that cost studies address both the unit costs of enrolment and the unit costs of graduation. Chances are you will still have a good story to tell!

3.2 Curriculum

So please encourage research. Let me now turn to curriculum and through that, to my wider point about positioning yourselves as major nodes in national educational ecosystems for the 21st century.

In my own book, *Mega-Schools*, I pick up on the distinction that Rumble and Koul made between complementary open schools, that simply offer the standard national curriculum in an open manner, and alternative open schools, like our host NIOS, which offer alternative curricula as well as alternative teaching methods. I propose a third type of open school, which I call the integrative open school. An integrative open school not only caters for its own large student body, but acts as a catalyst, a resource, a clearing house and a laboratory for the whole national school system.

It's time that open schools came in from the margins to the centre of education systems because they have so much to contribute. I suggest that curriculum is the best place for you to start this process. UNESCO research on the quality of schooling shows that lack of learning materials for students and pedagogical materials for students is the major shortcoming in developing countries. Such

materials help to get a focus on the curriculum which is also a key element of quality.

Open schools are in the business of producing learning materials for the curriculum. You should do this in the closest possible collaboration with the curriculum departments in the ministries of education and make them see what a valuable resource you can be. The results will surprise you. I remember some years ago when COL helped the Caribbean Examinations Council (CXC) to convert its curricular into self-learning materials for adult students. What happened, which it had not expected, was that these materials were seized on happily by teachers, who were delighted to have the curricula available in a teaching format. We are now working with the CXC to extend this.

This was also COL's motivation for working with six of your countries (Botswana, Lesotho, Namibia, Seychelles, Trinidad & Tobago and Zambia) to create the complete curriculum of the last two years of secondary school as Open Education Resources. They will be available in both print and eLearning formats. The six countries have divided up the subjects between them and each will adapt the OERs prepared in the other countries to its own national needs. I expect that they will be used in both open schools and conventional classrooms because all teachers love to get their hands on good learning materials.

I should add that one very important by-product of this work is that by the time the materials are finished the countries will have, between them, some one hundred masters teachers who have been trained in curriculum design, instructional design and eLearning. Many of these teachers are in conventional schools and well-place to play a major role in helping to create the synergy that I am describing between open schooling and traditional schooling.

So far I have simply talked about taking the existing curriculum and converting it into good learning materials. But open schools should also be pioneering new areas of curriculum as some of you, like NIOS and the Open College of UPNG are already doing. Those institutions can innovate more easily because they have their own powers of certification. If you do not then you will have to work closely with the curriculum people in the ministry so that new curricula can lead to certification.

In one area at least I am sure such an approach will be welcome. Most education authorities realise that they have a crisis in the areas of technical and vocational education and training. I will not go into the problems here but high cost, restricted access and training for skills unrelated to the labour market are just three issues.

I find it admirable that our host institution, NIOS, is tackling all three of these issue at once, and I am particularly impressed that it has achieving parity of male and female enrolment in its vocational courses. Clearly these women, in

particular, see greater sense and purpose in education that promises economic independence and a better life.

Curriculum is the place to start, but there are many other ways, which I explore at more length in my book, in which you can advance the notion of an integrative open school. Let me finish by noting three of them.

First, at a time when schemes for schooling reform are afoot in mostly countries open schooling can provide a backstop or a safety net for reforms by acting as a glue that helps to hold disparate elements in the school system together.

Second, most countries are eager to introduce more computers into schools, although it's hard to point to much success to date. Open schools have to be computer savvy, at least on the administrative side, and are a valuable resource for the whole school system. I have already mentioned the collaborative project for the creation of eLearning Open Educational Resources that COL is carrying out with six countries.

Finally, there are important links to be made between open schools and teacher education institutions. Modern teachers should know how to develop and use learning materials and teacher education will increasingly take place in the schools.

4.0 Conclusion

It is time to conclude. Open schooling is an idea whose time has come. It is education for the 21st century. Therefore it is time for you to raise your game, emerge from the shadows and take your place in the educational ecosystem that is needed to achieve the noble goals of education for all. I have tried to represent it here, fully acknowledging that any static representation of a system fails to capture its dynamic and evolutionary nature.

My diagram shows that there is a national school system, including public and private schools and a network of more informal learning hubs, under the authority of the ministry of education. The ministry is also linked to the open schooling sub-system, particularly through its curriculum and examinations function, and this sub-system also relates to the schools, notably as a source of learning materials, and to the learning hubs where it locates some of its study centres.

Also linked to the ministry, through its teacher education unit in particular, is the Teacher Education Institution sub-system. All Teacher Education Institutions have links with the schools and these are particularly strong for school-based teacher education. They will also relate to a national higher education system and to international initiatives.

The learning hubs act as resource centres for teachers, giving them access to a richer ICT infrastructure than they have in their schools. Finally, intersecting

with all these systems and subsystems is the community system, which has a highly complex set of sub-systems of its own.

I hope these thoughts have expanded your horizons on open schooling and shown you what a tremendous role you could be playing in your education systems.

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Paradigm Shift in Learning Policies and Practices vis-a-vis Distinctive Contribution of Open and Distance Learning

M A Mannan

Abstract: The emergence of the global knowledge economy has put a premium on the individual to have access to education and life long learning to adjust to flexibility and change. Individuals who develop and maintain high level skills achieve both economic and social success and those who do not, are at more risk of marginalization. Every country endeavours to become a learning society for which its citizens are to be equipped with knowledge, skills and qualifications they will need in the new century.

The conception of development goes beyond the economic growth and increase of per capita income to better education, poverty and hunger eradication, increasing access to and equality of opportunity, high standard of health and nutrition, environmental sustainability, global partnership and combating HIV/AIDS, malaria, etc. The education institutions in Papua New Guinea face greater challenges due to shift in paradigm- traditional teaching and learning to the changing needs for knowledge society in emerging development perspectives.

The conventional education system is limited in scope and coverage to meeting the need for acquiring and generating knowledge in all its forms, including the recovery and upgrading of traditional knowledge. Aspiration for social and economic development in Papua New Guinea must be simultaneously built on the foundation of knowledge and skills through a system of delivery that reachs the masses as appropriate for the present times. This paper elaborates on how open and distance learning can expand the scope and coverage of education and lifelong learning for its citizens to contribute to and benefit from development.

1.0 Introduction

Development is perceived primarily as economic growth, related to factors of labour and capital. Economic theories such as Monetarist and Keynesian argue that economic growth increases opportunities for employment and income; and the lower bracket of society contributes and benefits from the trickle down effect of the economic growth. The economic growth and consequent trickle down effect was however not effective to reduce growing number of poverty ridden people around the globe. Thus, the goal of development shifted from merely economic growth as an end to that of growth of people and enhancing the quality of human conditions (Aderinoye and Ojokheta, 2004).

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In 2000, all member states in the United Nations, adopted the Millennium Declaration which formed the basis for the formulation of the Millennium Development Goals (MDGs). These are: Eradication of Poverty and Hunger, Universal Primary Education, Gender Equity and Empowerment of Women, Reduction of Child Mortality, Improvement in Maternal Health, Combat HIV/AIDS, Malaria and other Diseases, Environmental Sustainability and Global Partnership for Development. The Technical Working Group that reviewed the MDGs in Papua New Guiena (PNG) concluded that it would be very difficult for PNG to achieve most of the demanding global targets by 2015.

Former UN Secretary General Kofi Annan expressed optimism by stating that: "The Millennium Development Goals are still achievable if we break with business as usual and massively accelerate and scale up action now". Education that shapes a knowledge based society is regarded as the driving force for accelerating the achievement of MDGs. Of the eight goals, three are directly education related and the other five require inputs from education. Therefore, "education is the route to the full development of people as human beings with social, spiritual, intellectual, and cultural aspirations as well as with economic interests" (Daniel, 2004).

2.0 Concept of Knowledge Society

The determinants of development have been changing from manufacturing to services and from capital resources to knowledge resources. The President of World Bank (2003) stated that:

> The world has moved to a revolution which is built on knowledge, on technology and on information…knowledge, if it is properly transferred, if it is made available to all, gives the greatest opportunity for people to advance themselves and to fight against poverty.

Considering the power of knowledge, UNESCO adopted the vision of the emergence of Knowledge Society in the 21st Century and recognized that unless the general population and specifically the marginalized are involved in the knowledge processes, the divide in the society will continue to prevail to the detriment of achieving MDGs. According to UNESCO World Report (2005), the knowledge society is:

> An empowering social vision which encompasses plurality, inclusion, solidarity, and participation. It is based on the principles of freedom of expression, universal access to information and knowledge, promotion of cultural diversity, and equal access to quality education.

"Education is sine qua non for the creation of knowledge society" (Khan, 2005). In order to comprehend the role of education in the creation of a knowledge society, it is necessary to distinguish between 'information' and 'knowledge'. Failure to do so results in one or other of these terms standing

as a synonym for the other, thereby confusing anyone who wishes to understand what each term signifies.

Wilson (2002) described the differences between 'knowledge' and 'information' as:

'Knowledge' is defined as what we know: knowledge involves the mental processes of comprehension, understanding and learning that go on in the mind and only in the mind, however much they involve interaction with the world outside the mind, and interaction with others. Whenever we wish to express what we know, we can only do so by uttering messages of one kind or another - oral, written, graphic, gesture or even through 'body language'. Such messages do not carry 'knowledge', they constitute 'information', which a knowing mind may assimilate, understand, comprehend and incorporate into its own knowledge structures. ..Therefore, the knowledge built from the messages can never be exactly the same as the knowledge base from which the messages were uttered.

Education plays a key role in transforming information into knowledge. A better education enables an individual to assimilate, understand, comprehend information and create new knowledge. A knowledge society exists with educated citizens and well trained workforce depending on their ability to exploit the potential of learning. Thus, "education is the foundation for access to the benefits of the information revolution that is opening up new vistas on the whole world" (Khan, 2005).

The exponential increase of flow of information, rapid change of technology and emergence of the global knowledge economy has put a premium on the individual to have access to education and life long learning to meet the changing needs and to remain competitive in the market. The individual as well as a society who "aspires economic and social development must similarly build on the foundation of knowledge and skills through a system of delivery of education to reach the masses as appropriate to the present time" (Mishra, 2005). Every country faces challenges to become a learning society and to ensure that its citizens are equipped with knowledge, skills and qualifications they will need in the new century.

The classical economic theory dealt with land, labour, capital and organization that determine economic growth while new growth theories attach importance to knowledge as a key factor for economic growth. Knowledge appears in two forms: understanding and skills to be acquired by the workers (economically active people) and outcome of a process of research and development. The first one is known as "human capital" and the second one is "innovation".

The World Bank added "social capital" as a missing link in the development process. This is simply connections for knowledge sharing. The World Bank defined social capital as " the informal rules, norms, and long-term relationships

that facilitate coordinated action and enable people to undertake cooperative ventures for mutual advantage"

The process of human and social capital formation, and innovation takes place within the education system at schools and universities as well as through life long learning. The four pillars mentioned in the Delor's Report: learning to know, learning to do, learning to be, and learning to live together, provides opportunities that are essential for full citizenship in a knowledge society.

3.0 A Knowledge based PNG Society

Papua New Guinea (PNG) is famously one of the most pluralistic nation-states in the entire world. With its rich linguistic diversity, myriad tribal groupings, differentiated cultures, remote community reaches, and sharply delineated regions, the country poses special challenges for political leaders, civil servants, and other interested local and international agencies who seek legitimate improvements in the lives of PNG's people.

From a development perspective, the greatest challenge is to find unity in all this diversity, in order to be able to deliver stability, democratic governance, and sustainable economic growth. People of PNG have, at best, a fragile understanding of the state and the things it has to offer. There is ignorance about the benefits an effective nation-state can deliver if its legitimacy is allowed to take root. Parochial rivalries can triumph over the need for law and order; local 'big' men can block progress in the lives of ordinary people (especially women and children); a retrogressive wantokism (people from same language group help each other) can hinder transparent developmental and redistributive social and economic programs.

This makes PNG vulnerable in a rapidly globalizing world, where various local and foreign interests can conspire to fragment the country and exploit it. The potential strengths of PNG's cultural and regional pluralism can quickly become its real weakness. Tribal wars, social conflicts, and cultural hostilities feed into law and order breakdowns. Corruption enters the equation, as cultural groups and their political leaders are persuaded by outsiders to prey on each other, in the interests of the outsiders.

One highly effective – and proven - answer to this is to make widely available the benefits of the global information revolution and creation of a knowledge society. Through appropriate educational programs that can reach every corner of the country, people may become aware of the need for a nationally coordinated and coherent response to the developmental challenges they face on a daily basis. Economist and Nobel laureate Amartya Sen has pointed out, that education is unequivocally the prime engine for driving development in all the poor states around the world.

4.0 Life Long Learning

Human civilisation has become extremely complex through the process of agrarian revolution, industrial revolution and now information revolution. Globalisation has further accelerated the requirement of high technology with high skills and knowledge as well as basic human survival with basic education, health, nutrition and freedom from poverty, HIV/AIDS, infant mortality etc.

PNG's economic growth requires foreign investment for want of local capital formation. While Papua New Guinea is still the most significant destination for foreign investment in the Pacific, it ranks 49th among 150 developing countries for total investment inflows between 1990 and 2003. The greatest obstacles to efficiency-seeking investment are generally regarded as skilled and semi-skilled labour supply and costs. In addition to creating new high-level skill workforce, the existing workforce in the industries should have the opportunity to upgrade their skills along with the change of technology and to remain competitive in the global market.

One of the major issues of crucial importance to development in PNG is the systematic weakness in management and a lack of high-level trained workforce to remain competitive at the time of trade liberalization (GoPNG and UNDP, 2004). The education system is expected to cater for educating and training high quality human capital with requisite skills to command the premium in the national development agenda.

PNG has a dual economy where 87 per cent of its population lives in remote and isolated small areas of which a small portion is engaged in cash economy. A large segment of population neither has necessary knowledge and skills nor opportunities to participate in cash economy. Literacy rate in rural areas is far below the national average of 45 per cent. Thus the aspirations for accelerating the improvement of quality of rural life will require to provide learning opportunities and to build a knowledge society. People should become literate to learn to enhance knowledge and free themselves from ignorance of not knowing themselves and the world around them; they should learn to acquire necessary skills and knowledge to address the issues affecting them; for example, renewable energy generation, management of water and farming, sustainable agriculture, etc. and other things they like to do in the development process. People should learn law and citizen's rights, governance, local level participation, conflict resolution in families and groups, the rights of others, civic society ways to live together; and they should learn about health and well-being in order to avoid diseases and to keep healthy, learn everyday science, and science and technology, to be productive persons in development. Learning is needed on a very large scale covering wide areas including remote mountains and isolated islands.

In a knowledge society, learning can no longer be the monopoly of the 18-25 age groups nor can it be limited to full-time study. While there are

inconsistencies between the primary and secondary levels of education in respect of access from one level to the other, similar inconsistencies exist between secondary and tertiary education. The expansion of the lower education system will increase Grade 12 school leavers to an estimated 15,000 in 2015, while tertiary institutions will be able to enrol not more than 5,000 graduates. The participation rate of tertiary age population has been less than 2 percent, which will gradually decrease in future due to high population growth. An increasing number of school leavers will seek opportunities for education through alternative modes of study. In addition, more part-time, employed, mature learners will make late entry into higher education. Moreover, to provide equal opportunities to education (a pre-condition for knowledge society) non-participants in education system should be brought into the fold of the education system. In the knowledge society, everyone will participate in education or formal and informal training throughout life. Such a society will provide learning opportunities / situations for citizens anywhere, anytime and exit at any point.

Considering that in a knowledge society, life long education is a need for all citizens, educational institutions are required to revisit their teaching-learning practices and bring about change that centres around the following:

- The educational institutions will have to come to terms with a new type of learners who will enter into the learning process any time of their life with different or no educational background and experience. They are independent learners and capable of self-learning. There will be a need for Paradigm shift from a teacher centred to learner-centered environment with appropriately designed self-instructional materials.

- Delivery systems will have to meet the practices of flexible learning where learning is expected to take place according to the convenience of the learner. Staff preferred work schedule would have to change to learning at anytime and at any place.

- Entry into and exit from the educational institutions will have to open up including replacement of pre-requisite by assumed knowledge.

- Role of academics will have to be re-examined to change into a rewarding learning environment. Staff should neither be afraid of losing their identity and freedom nor loss of quality. However, academics will have to acquire new skills to create and work in a learner centred environment and provide information and communication technology (ICT) enabled education.

- Educational institutions will have to distribute learning beyond the fixed location. ICT may be used to reach the mountains, wetlands and islands to deliver mass education.

- Educational institutions will have to collaborate and co-operate in designing, developing and delivering knowledge products at much lower costs.

5.0 Business Unusual

Education and lifelong learning is regarded as the driving force for building a

knowledge society as well as for development. While education and life long learning play a key role in knowledge society, it is also realised that traditional or conventional educational systems no longer suffice. The status of the current education and learning opportunities and future prospects demonstrated that the education system at all levels is not adequate to provide formal education as well as learning opportunities for thousands of rural population. In addition, the system is not capable of providing opportunities for life long learning of the current workforce and the disadvantaged who for some reason or other could not pursue formal studies. More specifically, women empowerment requires providing opportunities for learning at home and where they are.

The education systems were designed to meet the requirement of either industrial revolution and/or fit the agrarian society. The traditional learning system to some extent is responsible for global, regional and national divide. There is a clear need for "business – unusual" approaches in order to create a knowledge society (Khan, 2005).

Open and distance learning (ODL) has emerged as a "business unusual" approach in increasing educational opportunities to reach the unreached. It has the potential to bring education to the geographically dispersed both rural and urban people in PNG and to accelerate the building of a knowledge society. However, increasing access to formal education to acquire knowledge, skills and qualifications needs to be complemented by learning opportunities for general masses. Delors Report summed up the need for learning to be, learning to know, learning to do, and learning to live together. Conventional methods of teaching are not up to the task and Commonwealth nations including PNG have the opportunity to harness the potential of ODL to massive increase in human learning (Daniel, 2006).

6.0 ODL for Building Knowledge based PNG Society

The National Education Plans of PNG recognized the pivotal role of ODL to cater to the education of school age children as well as tertiary level education because the traditional system is not adequate to meet the current and growing demand. However, such recognition does not match with financial and other support for the development of ODL.

Although most of the tertiary institutions have taken initiatives to offer their on-campus courses through ODL, the development of capacity varies. Some institutions have well developed instructional design capacity while others have multi media production capacity. The challenge is to share these facilities between the institutions to maximize benefits and expand ODL.

Most of the institutions that are involved in ODL are dual mode institutions. Although there is a strong support from the top management, the entire parent institution, especially major role players such as academics and administrators are yet to embrace distance education as mainstream activities. In some cases distance education is seen as new opportunities for revenue generation, in other words a "Cash cow". It is encouraging to witness the growth of private

institutions but most of them are running their programmes as a post box of overseas institutions or some kind of face to face with little distance-learning component. The unplanned and sporadic establishment of distance education institutions raises doubt about their sustainability as well as quality of program delivery.

The number of academic and professional programs offered through ODL is limited due to lack of capacity of developing self-instructional materials as well as providing student support services. Most of the programs offered through ODL is serving life long learning needs to professionals in both public and private sectors. Educational institutions are yet to develop any recognizable community program for life long learning of the general masses in both rural and urban areas. However, UPNG Open College has mounted a Program called "Certificate in Tertiary and Community Studies" (CTCS).

The CTCS program is designed to serve two purposes: (i) prepare students with appropriate skills and knowledge to cope with academic studies in higher educational institutions; and (ii) providing skills for those who wish to use skills in other pursuits in life. The second thrust of the Program would take care of people who wish to study for self-enhancement and for special skills they might need in life, for example, for their homes or small businesses or even their communities.

The target group of this program ranges from schoolteachers to school dropouts and adults having basic numerical and literacy skills. Interested persons may take bridging courses to qualify for entry into the CTCS program.

The underlying framework for the CTCS program is to be based on four types of learning as summed up by Delor's report (learning to know, learning to do, learning to live together and learning to be):

The core knowledge and skills covered under each of the main areas of the framework are:

Components	Core Skills
Learning to know:	life skills, literacy, communication, numeracy, learning to learn
Learning to do	managing a community based organisation, managing a small business
Learning to live together	law and citizen's rights, governance, local level participation, conflict resolution in families and groups, the rights of others, civic society, appreciation of environment
Learning to be	health and well-being, everyday science, science and technology in development, appropriate technology
Project	Work experience or community related project with report writing as a major requirement

Courses are developed based on the core skills as identified against each area of the learning framework. Students are provided with self instructional materials supported by local mentors and tutors.

The entry requirement is based on assumed knowledge instead of pre-requisite which is determined by a competency test. Students are free to choose courses based on their intention to pursue higher studies or to return to their community to find a meaningful life.

CTCS Program has limited openness and is time bound. Planning is underway to make the CTCS program more in consonance with well established practices in open and distance learning system. CTCS Program should be seen as a starting point of future development in life long learning for the general masses towards the building of a knowledge society.

7.0 Conclusion

ODL is no longer an alternative mode of delivery of educational services to build a knowledge society for development but a mainstream education system in developing countries of Asia and Africa. Dhanarajan (2001) stated that "Moving knowledge to suit the needs of the learner rather than moving bodies to suit the convenience of institutions seemed to respond to all of the requirements for learning and training in knowledge based society". He further added that "there is a time to hold back and let things take their normal course and there is time to take leadership and bring about change". It is better to act now than late. Otherwise, people of PNG will miss the opportunity of enjoying a better life in a knowledge society with prosperity. It is time to act on getting rid of monopoly of Telikom on the use of satellite technology for educational purpose and a bold step towards the establishment of a PNG Open University.

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Perception and Motivation of Women for Study through Distance Education Mode: A Comparative Study of IGNOU and KNOU

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Abstract : *Women's population constitute half of the population in the world. However, they are not getting equal opportunities as their male counterparts. Therefore women, particularly in the Asian countries, are living in a male dominated society. In this context, the role of women's education becomes crucial for not only individual development but also for the country as a whole. It helps in improving the quality of life of women who are at home as well as those who are in jobs. The empowering role of women's education is multi-pronged, affecting not only women's lives, but also the lives of their children and others who are likely to depend on them. Education plays an important role in human development. It is a process of enlarging choices for all people and not just for certain sections of the society. Such a process is discriminating. And if women are continually excluded, they would fail to play their role in economic and social development; thus hampering the growth of the nation.*

1.0 Introduction

Women's education in India which is a developing country and in South Korea which is a developed country presents an interesting picture. India has focused on the importance of women's education since independence (1947). Various programmes have been introduced for achievement of these goals through provision of education to a large segment of illiterate women. Though the percentage of literacy among women has improved from 7.83 to 54.16, they still constituted about 228 million illiterate population at the time when the 2001 Census was conducted in India (GOI, 2001) .There was a big gap in the literacy rate between men (75.26%) and women (53.67%) during the same period. At present, inequality between men and women is one of the most crucial issues before the society. On the other hand, out of those who completed secondary education (35% of the total population who enrolled in Class 1); only 6% joined higher education. Still, a large number of women remain outside the existing higher education system in the country.

In traditional Korean society, women received little formal education. Christian missionaries started establishing schools for girls in the late nineteenth century and early twentieth century. The literacy rate was almost equal between men (99%) and women (97%) **(Table 1)**. Women accounted for approximately 28% of the total enrolment in higher education during the same year (http://

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en.wikipedia.org/wiki/Women_in_South Korea), which means that there was a big gap in educational status between women and men in Korea. Recently, the status of women in Korea has improved rapidly. A comparative picture of the status of women in India and South Korea is presented in **Table 1.**

Table 1: Women's Education Status in India and South Korea

Education Status	India	South Korea
Women Population	496.4 Million (2001) (48.26%)	22.9 Million (2000) (49.8%)
Literacy Rate	53.67%(Female) (2001) 75.26 %(Male)	97 % (Female) (2003) 99% (Male)
Female's Rate of higher education enrollment after secondary education completion	7.9 %(2006-07)	83.5%(2008)

Source: Thorat, S. Lecture delivered on Higher Education in India: Emerging Issues Related to Access, Inclusiveness and Quality, University of Mumbai, Mumbai, November 26, 2006
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2.0 Role of Distance Education in Women's Empowerment

Distance education can influence the quality of human resources in diverse ways. It enables educational institutions to provide education to a widely dispersed, diverse and unreached people. It has potential to spread necessary awareness to a large number of women who have no access to higher education, particularly the rural women, and improving the status of the population with regard to health, nutrition and education. In addition, distance education provides education to those women who are housewives and to those women who are in various jobs.

Keeping these benefits in mind, the present study was conducted to know students' perception towards study through distance education enrolled in the two Mega Open Universities of Asia, namely, the Korea National Open University (KNOU), Seoul, South Korea, and the Indira Gandhi National Open University (IGNOU), New Delhi, India. The study has been conducted on women students of these Open Universities.

2.1 Korea National Open University

KNOU was established in 1972 to provide a two-year junior college programme. It is locally known as the Broadcasting University. KNOU was initially part of the SEOUL National University (SNU). KNOU reorganized its programme from two year to a five year BA degree programme in 1981 and separated from SNU in 1982. It changed to four year curriculum in 1991. The graduate school was opened at KNOU in 2001. It focused on improving the quality of education through research and training. KNOU is the first and the largest distance education university in Korea. KNOU strives realization of goals of students by providing advanced and professional knowledge through periodically and continually upgraded lifelong education. In the initial stage,

KNOU served as an institution that provided opportunities to obtain a bachelor degree to those who could not afford higher education. It attracts many students with a university degree to boost their competitiveness by getting professional education (KNOU, 2006). Prior to 1990, the share of women students in the total enrolment in KNOU was less than that of men students. The share of women students in total enrolment in KNOU increased from 47.1% to 70.2% in 2008 (MEHRD, 2008). These statistics indicate that KNOU has provided a good opportunity for higher education to women, particularly those who were educationally, socially, economically disadvantaged in the past but wanted to improve their educational qualifications in later age.

2.2 Indira Gandhi National Open University

IGNOU was established in 1985. It has emerged as the largest Mega University in the democratic world. The university is mandated to: (a) widen access by offering high quality innovative and need-based programmes at different levels, especially to disadvantaged segments of society at affordable costs by using a variety of media and technology; and (b) promote, coordinate and regulate the standards of education offered through open and distance learning in the country. The University strives to achieve the objective of widening access to education to all sections of society. It provides for continuing professional development and training in all sectors of the economy. IGNOU is committed to quality in teaching, research, training and extension activities, and acts as a national resource centre for expertise and infrastructure in the Open and Distance Learning (ODL) system. Presently, emphasis is being given on developing interactive multimedia and online learning, thereby value adding the traditional distance education delivery with modern technology enabled education. The University has initiated a new scheme of providing quality skill education to female students through the Community College scheme. The share of female students in total enrolment in distance higher education system is almost same as in the conventional universities in India during the tenth plan (Gaba, 2007). However, the share of female students in total enrolment in IGNOU is lower (24.5%) in comparison to KNOU (70%).

3.0 Review of Literature

Very few research studies have been conducted on the present theme. Kanwar (1995) stressed the need for hiring and upward mobility of women in distance education institutions. Rathore, Singh and Dubey (1996) studied problems faced by women students while studying through ODL system. They found that irregular and unsystematic supply of reading materials, lack of timely tutorial help, poor quality of learning materials and lack of study centres in the neighborhood areas were the problems faced by women students in the ODL system. Taplin (2000) found that IGNOU's female students (i) got lower assignment marks than they expected, (ii) had family problems such as caring for young children, and (iii) experienced difficulties in getting course materials in time to complete assignments and take their examination. Sharma (1996) argues for empowerment (and not concessions) of women through effective

use of the distance education system. Gaba (1999) and Woodley (2001) found that graduates had changed job within their existing occupations in terms of promotion to a higher grade, a more specialized job in the same occupation, or a change of specialization within their occupation. Taplin and Jegede (2001) found that most of the students studied through ODL system for self satisfaction and for raised employment status. Gaba (2007) found that graduate women of IGNOU after completing their respective programmes benefitted in the form of getting promotion, job satisfaction, self-employment and satisfaction in personal life. Ojo (2008) found that distance education programmes provide literacy education as well as vocational skills development to women thereby empowering and enabling them to live a more comfortable life.

Review of related studies shows that ODL programme benefited everyone at every stage, including women having diverse backgrounds.

4.0 Objectives of the Study

The objectives of the study were:

a) to examine the reasons for registration (Admission) of women in the Courses of study through distance education mode while enrolling themselves in IGNOU and KNOU; and

b) to study the perceptions of women students in ODL system with regard to personal and social benefits in the form of employability and enhancement in income.

5.0 Research Method

The study makes use of primary and secondary data. A common questionnaire was developed and administered to the students of KNOU and IGNOU. The original questionnaire was developed at IDE, KNOU. It was tested on IGNOU students after making some minor changes. The questionnaire covered aspects such as students' profile, students' perception of the value of distance education degree and about their employability after completion of respective distance education programmes.

The questionnaire was administered through post among randomly selected 1500 students of the total 18604 students, who registered for the Bachelor Degree of Computer Applications (BCA) programme of IGNOU for the academic sessions beginning in July 2007 and January, 2008. It was administered during the month of March, 2008. The sample was selected region-wise taking care of rural/urban distribution of students. Only 156 (10.4%) filled in questionnaires were received till July, 2008. In order to support the sample size, purposive selection of 82 more students was made to get required data and making information more representative. They were contacted when they visited the University headquarters during the month of December, 2008. Thus, the findings of this study are based on 238 responses in case of IGNOU students.

In case of KNOU, the findings are based on 190 responses of the online

questionnaire to students who enrolled in computer science programme during February 2007. At the beginning of the 1ˢᵗ semester, all the fresh students were supposed to put their personal information into the online system to get their identification number. They were encouraged to participate in the online survey posted at the end of the web page of the online system. Due to the policy of personal information protection, only fresh students who checked the box of agreement with the online survey participation filled in the online questionnaire. Among the responses to the online survey, only the data of the female freshers in the computer science programme were selected and analyzed. The respondents were 21.7% of the total female fresh students (864) who enrolled in the computer science programme.

The programme selected was common in both the Universities i.e. the computer programme at undergraduate (college) because this programme had relatively higher possibility of getting jobs after completion of the programme. Hence, the findings of the study are based on 238 responses of IGNOU students and 190 responses of KNOU students.

6.0 Findings

6.1 Respondents' Socio-economic Profile

● Most of the IGNOU respondents (82%) were in the age group 21-30 years in comparison to KNOU respondents (52.6%).

● Majority of the IGNOU respondents (82%) were single in comparison to KNOU respondents (59.5%). Among the KNOU respondents 40.5% were married **(Table 2).** It seemed that Distance education programmes of KNOU gave good educational opportunities to married women who found it difficult to leave their homes because of their multiple roles. But, it could not be generalized in the Indian context, because computer programme was in greater demand among young female students than adult female students.

● Majority of the IGNOU respondents (83%) were unemployed. In contrast, 73.2% of KNOU respondents were employed.

● Above 92% respondents of both the Open Universities had high school qualification at the time of entering into computer programme **(Table 2).** It is understandable because it was pre-requisite for entering into the programme.

6.2 Respondents' Parents education status

● 64% of IGNOU respondents' fathers had high school and less than high school qualification in comparison to 86.3% of KNOU respondents' fathers **(Table 3).**

● Similarly, 79% of IGNOU respondent mothers had high school and less than high school qualification in comparison to 96.9% of KNOU respondents' mothers (Table 3).

It is interesting to note here that the qualification of most of KNOU respondents' parents were lower than those of the IGNOU respondents' parents.

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Table 2: Respondents' socio-economic profile (In Percentage)

Socio-economic background	IGNOU (n=238)	KNOU (n=190)
Age		
< 20 years	2	5.3
21-30 years	82	52.6
> 30 years	16	42.1
Marital status		
Married	18	40.5
Single	82	59.5
Employment Status		
Employed	13	73.2
Unemployed	83	22.6
Self-employed	4	4.2
Education Status		
High school	92	92.6
Technical college graduate	0	3.7
Conventional university dropout	0	2.6
Conventional university graduate	8	0.5
Post graduate	0	0.5

Table 3: Education status of Respondents' parents

	Father's education		Mother's education	
Educational Level	IGNOU	KNOU	IGNOU	KNOU
a) Literate	6 (2.5)	9 (4.7)	15 (6.3)	18 (9.5)
b) Primary school graduate (1st to 5th Standard)	5 (2.1)	37 (19.5)	36 (15.1)	54 (28.4)
c) Middle school graduate (6th to 8th Standard)	7 (3.4)	42 (22.1)	36 (15.1)	44 (23.2)
d) High school graduate	134 (56.3)	76 (40.0)	102 (42.8)	68 (35.8)
e) Technical college graduate	0 (0.0)	5 (2.6)	0 (0.0)	4 (0.0)
f) University dropout	0 (0.0)	6 (3.2)	0 (0.0)	0 (0.0)
g) University dropout	65 (27.0)	12 (6.3)	45 (18.9)	1 (0.5)
h) Post Gradeuate (Masters)	14 (5.8)	3 (1.6)	2 (0.9)	1 (0.5)
i) M.Phil & Ph.D. (Doctorate)	7 (2.9)	0 (0.0)	2 (0.9)	0 (0.0)
Total	238 (100.0)	190 (100.0)	238 (100.0)	190 (100.0)

Note: Figures in the parenthesis are percentages of total

6.3 Share of Female Students in Total Enrolment

The share of female students in total enrolment of the entire programme in IGNOU was less than that of KNOU from 2000 to 2008 as presented in Figure 1.This means that ODL is more popular with and is generally preferred by women in Korea (KNOU) than in India (IGNOU).

Figure 1: Share of Women students in total enrolment in KNOU and IGNOU
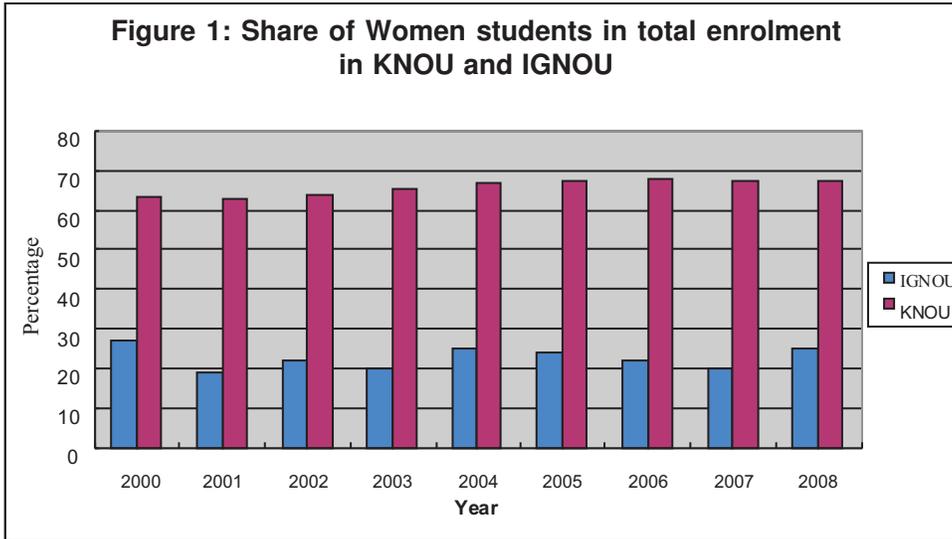
Source: (i)Student Registration Division, IGNOU; (ii) Ahn, J. (2009) Annual Statistics of KNOU, SEOUL: IDE (In Korean)

- Most of IGNOU's respondents (67%) were fresh students i.e., passed senior secondary examination. In contrast, most of the KNOU's respondents (47%) were in administrative jobs at the time of joining the programme.

- Most of the respondents of both the open universities were familiar with the services provided by their respective institutions. However, most of the KNOU respondents (41%) were well familiar with 'internet on air lecture' facilities in comparison to those in IGNOU (8%).

6.4 Perceptions about the Programme

Majority of the respondents of both the institutions said that they preferred to study through distance education mode because it facilitates managing both career and study. However, 24% of IGNOU respondents said that they preferred distance education programme because of greater opportunities for *getting promotion* and *entering into higher education programmes* in comparison to 7.9% respondents of KNOU. Rest of the respondents cited different reasons for study through distance mode **(Table 4).** It shows that students of both the Open Universities have different perceptions towards study through distance mode. Most of the respondents of IGNOU said that their determination helped them to complete their programme. However, a few respondents (12%) in case of IGNOU said that the course fully met their personal needs, which motivated them to complete the programme. Rest of the respondents said that other factors like their professional compulsion, support at home, support from IGNOU (i.e. headquarters, regional centers, study centres) motivated them to pursue the programme.

Table 4: Reasons for joining distance education mode

Reasons for study through Distance Education mode	IGNOU	KNOU
a) Managing both career and study	77 (32.3)	85 (44.7)
b) Reasonable tuition	0 (0.0)	26 (13.7)
c) Getting a bachelor's degree	0 (0.0)	12| (6.3)
d) Getting a professional in-depth knowledge	38 (16.0)	12 (12.1)
e) Getting a job or a promotion	57 (23.9)	15 (7.9)
f) Transfer to other universities	9 (3.8)	3 (1.6)
g) Entering into higher education programme (graduate school)	57 (24.0)	3 (1.6)
h) Enjoying learning	0 (0.0)	13 (6.8)
i) For my children's education	0 (0.0)	4 (2.1)
j) Other Reasons	0 (0.0)	6 (3.2)
Total	**238 (100.0)**	**190 (100.0)**

Note: Figures in the parenthesis are percentages of the total

6.5 Perception towards Benefits

Most of the IGNOU respondents (56%) perceived that their present degree would help them in achieving higher education, get a new job (20%), and get promotion (13%) in their present job. However, a few respondents perceived that this degree would help them in changing their present jobs (4%), in social aspects like marriage etc (4%); and in pursuing self employment (3%). Some of the respondents had multiple goals of getting a job as well as pursuing higher education. Some of the employed students in both the Open Universities, perceived that this degree would help them in getting promotion or change of job for better prospects in other organizations.

7.0 Discussion

The analysis reveals that women students perceived that pursuing their education through ODL mode would help them develop their careers. Respondents felt their education was helpful in certain aspects such as general job skills, motivation to improve work performance, confidence at work, and creating interest in further education to acquire more skills. However, a few respondents (23%) from IGNOU perceived that after completion of the programme, the degree would be beneficial to their specific job skills and ability to relate to professional colleagues.

The findings of the study also show that most of the respondents joined the Distance Education programmes because of the flexible characteristics of the ODL mode of education and with the purpose of mainly getting a job. They perceived their degree to be helpful in continuing education and getting new jobs. Holmberg (1985) points out that there is no evidence to indicate that distance students should be regarded as a homogenous group. For instance, KNOU is relatively more open than other universities in Korea in respect of age and educational level. There are many women who had lost opportunity for higher education when they were young because of financial, cultural, and other disadvantages and wanted to make up for such loss in their lives. An-other reason may be that the fees of KNOU programme was almost ten times less than that of the programmes of the conventional universities.

However, the findings of the study also indicate that the students pursuing ODL programmes do share broad demographic and situational similarities that have often provided the basis for profiles of the 'typical' distance student in higher education. This system helps developing skills of the students who are scattered in different regions of the country. Such clientele may not be able to get education due to one reason or another. Different types of skills are required for employment in industries. The ODL programmes help in updating existing skills of students and develop new skills as demand arise. Further, vocational education programmes are conducive to provide employment opportunities in many ways. These help develop necessary skills, attitude and motivation to match opportunities, wage employment as well as self-employment. Most of the students of IGNOU perceived that they would utilize their degrees in pursuing higher education, and would also eventually get a job.   Women's education in India has been a high priority of both government and society as educated women can play a very important role in the development of the country. Women's education not only helps in the development of human resources but also in improving the quality of life at home and outside. It has been established that educated women help in promoting education of the girl child, providing better guidance to children, and reducing infant mortality rate and growth of population. The role of ODL system with a blend of learning approaches can play a very crucial role for women's empowerment particularly in developing countries.

The findings of the study also indicate that majority of respondents would like to study through distance learning if they continued their education. They discarded the opinion of colleagues and graduates from conventional universities who regarded ODL mode of education/degree lower in standard than that of conventional universities.

To conclude, women graduates perceived that study through open and distance mode would help them in getting job/promotion, acquiring specialized job skills, improving work performance and continuing education to acquire further skills. The study also found that although student's profile was different in both the Open Universities, yet their perception about the Open and Distance Learning system was the same i.e., getting better opportunities in life.

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Formative Assessment: Experiences of Distance Learners in the Remote Western Part of Botswana

Godson Gatsha

Abstract:*The purpose of this study was to assess how distance and open learning methods and processes of formative assessment enhanced academic performance of remote distance learners. All secondary school courses including those delivered through Open and Distance Learning mode are examined by the Botswana Examination Council. The questions that arise are: what types of formative assessment are given to remote distance learners? How have remote distance learners perceived and experienced the formative assessment during their distance learning course? A qualitative case study approach was used. The findings of this study were that formative assessment/assignments were graded as very good, difficult, easy or inadequate. The delay in assessment feedback was experienced by all learners. Issues of monitoring and evaluation were also cited as being inadequate and as such learning support through assignment assessment was viewed as being inadequate. Hopelessnes and fear of failure characterised most participants. However the official records of pass rates in the 4 courses indicated that something was working despite the distance learner perceptions. Suggestions on effective learning support through formative assessment of secondary school courses delivered through ODL is made in this paper .*

1.0 Formative assessment-Conceptual and Theoretical Framework

The role of formative assessment is key to learning particularly at a distance. Without formative assessment no one would be able to tell whether learning is taking place or not. Just as in conventional schooling, formative assessment in distance learning includes amongst other things, determing how well distance learners are performing in academic terms and how effective the distance study materials are in helping learners to learn, (IGNOU, 2000). A number of authors, (Crooks, 2001; Brown, 2001; Bone, 1999; Cowie and Bell, 1999; Yorke 2003) seem to concur on the purpose of formative assessment, that is, to promote or enhance learner academic attainment, through a process of eliciting responses from learners and using them to enhance teaching and learning. The other purpose of assessment is to improve learning and to classify the performance of learners in rank order for certification purposes (Brown, 2001). In terms of improving learning, assessment is meant to provide feedback to learners, to motivate learners, to diagnose a learner's strengths and weaknesses, to help learners to develop their skills of self assessment and to provide a profile of what a learner has learnt. On the other hand, assessment for certification is meant to pass or fail a learner, to grade or rank a learner

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and to select for future courses of employment. However, in distance education or in any educational setting, where formative assessment is not contributing to the final assessment for certification purposes, there may be some misgivings about the adequacy of short end of course examination, especially awarding course credits with distinction when the data obtained is fairly much less than the data obtained in formative assessment in the form of assignments, (IGNOU, 2000).

In terms of formative assessment, feedback is critical if learners have to improve from one stage to the next. Feedback can be written or verbal. It is meant to motivate the learner and to give the learner the information necessary to improve.

The types of formative assessment that can encourage learners to progress are varied and include the following - objective tests, short answer, true or false, multiple choice, essay, summary, reports, problem solving etc, (IGNOU,2000). These types of formative assessment are usually embedded in the distance learning study materials with feedback normally given at the end of each unit. However, formative assessment in distance learning also takes place during the face to face tutor-learner interactions. This form of formative assessment is not planned and is unpredictable. It can be challenging to a new tutor or an experienced tutor with a new learning cohort. However in distance learning it would appear that learners prefer feedback given orally than the written one. Probably this may be because of the conventional schooling mindset, where learners get used to prompt feedback or readily available feedback. In this case, Boulet, Simard and Demelo, (1990) are also of the opinion that oral feedback may be more effective than written comments as learners tend not to pay attention to written comments. In distance learning it then becomes necessary to train tutors to assist learners during tutorials in a more proactive manner in order to ensure quality learning.

2.0 The context

Botswana is a country with a population of about 1.8 million. It has a vibrant economy driven by the mining sector. Whilst at independence, it was amongst the 25 poorest countries of the world, Botswana's economy dramatically changed after 1980 as a result of the mining industry, mainly diamond. The economic development led the country to develop its educational system such that, from 8 secondary schools at independence in 1996, there were 234 secondary schools country wide by 2007. However there are fewer secondary schools in the western part of Botswana. There are only two senior secondary schools in the western part of Botswana that deliver the Botswana General Certificate of Secondary Education (BGCSE) programme. The reason behind this disparity could be that the western part of Botswana is sparsely populated and as such, it is not cost effective to build schools at settlements that have small populations. Nevertheless, policy measures have ensured that out of school youths and adults in remote settlements are reached through alternative

delivery mode of education. The creation of the Botswana College of Distance and Open Learning (BOCODOL) by government in 1998, has seen BGCSE programme being delivered through open and distance learning methodologies. Specially through interactive study materials and Learning Satellite Centres at the remotes settlements – a decentralised leanrer support system. The courses are examined by the Botswana Examinations Council (BEC). BEC as an examination body is responsible for the summative assessment whilst institutions providing BGCSE tuition carry out formative assessments.

Remote distance learners face many disadvantages when it comes to formative assessment. For instance, they have no access to regular face to face tutorials and their assignment feedback is often delayed. Thus, the two critical aspects of learning support to distance learners are often inadequate.

This study focused on formative assessment provided to distance learners studying courses for the Botswana General Certificate of Secondary Education (BGCSE).

The critical questions that guided this study are:

Why did remote distance learners enrol for BGCSE courses?

What types of formative assessment were given to remote distance learners?

How did remote distance learners experience the formative assessment during their learning?

In order to have an in-depth understanding of formative assessment from the distance learners' perspective, a qualitative research design was adopted for this study.

3.0 Review of Literature

Literature is abound with success stories of formative assessment in developed countries like the UK and Australia, where classes are small. However where classes are large like in developing countries, there are reports of less success in the implementation of formative assessment. Heavy workloads also appear to be a barrier to effective formative assessment, (Carless, 2005). There are indications that at tertiary level institutions, formative assessment appears to be weakly conceptualised and insufficiently theorised (Yorke, 2003). As a result of this weak conceptualisation, it would appear that tertiary institutions have put in place structures that do not afford the opportunity for effective formative feedback to take place. For instance, semesterisation or modularisation has increased summative assessment at short intervals and thus provide less time for effective formative assessment to take place. (Knight and Yorke 2003).

It would appear from literature, (McDonald and Boud, 2003) that formative assessment may be attractive to facilitators and learners when they are directed towards aiding performance in high-stakes examinations. Training in self-assessment can enhance learner performance in an examination than traditional test preparation strategies (McDonald and Boud, 2003).

4.0 Research Design and Methodology

There are different research approaches that focus on how knowledge is developed. However the main educational research approaches are quantitative and qualitative. In this study a qualitative case study approach has been used. The approach used was determined by the purpose and type of research questions the study focuses on. Such an approach to research is acceptable as indicated by Creswell (2005).

4.1 Participants

The participants were learners mainly from the marginalised indigenous communities that is, the Basarwa (the San). They speak Sesarwa or San language as their first language. English and Afrikaans are either third or fourth languages for some of the learners. The participants were aged between 18 and 45 years. The majority of participants were females, unemployed and dependent on government subsidies given to their elderly and/or destitute relatives. They still hunt and gather, though on a limited scale because of the restrictions imposed by the current legislation and wildlife management policies. All households to which the participants belonged have experienced poverty. The twenty particpants were consciously selected because of their potential to share rich experiences on formative assessment as they had enrolled for open schooling courses for at least more than a year.

4.2 Research sites

The three research sites that were chosen were Inalegolo, New Xade and D'Kar. All these sites were located in the western part of Botswana. Other than the fact that the areas were familiar to the researcher, these sites were identified because of their remoteness from the regional office and the fact that in each of the sites there were information rich participants.

All the sites, are not easily accessible because of lack of public transport and poor telephone communication systems. All three sites often experience poor radio reception. The uniqueness of this context lies in its severe underdevelopment and in the tendency of the Basarwa/San communities to engage in some nomadic lifestyles that involve movement into the bush to hunt and gather and into farms to seek employment and to Ghanzi township for job seeking.

4.3 Research tools

The tools used to collect data included interviews and documents.

4.3.1 Initiaves

The interviews were semi-structured and group focussed. These were tape-recorded and were an hour long. The interview strategies were meant to collect rich data for in-depth understanding and interpretation of formative

assessment issues that enhance academic performance of distance learners. Interviews allowed collection of participants' perceptions, attitudes, feelings and experiences.

4.3.2 Documents

The documents that were used included the following:

- Monitoring and Evaluation Reports written by regional staff who regularly visit the satellite learning centres.

- Sampled Assignment Reports from randomly selected assignments that had been marked, written by the Learners, Tutor Co-ordinators who supervise assignment marking. The reports were part of quality assurance techniques that are followed.

- examination results since 2003.

The use of the above documents helped to validate the data that was collected through interviews.

5.0 Data Analysis

Once collection of data begins analysis of data is an on-going process. Hence, the data that was collected was analysed right from the onset. Reflection on the meaning of what was heard, seen and transcribed from the interviews was a simultaneous process. It was from these reflections that working propositions about the data collected were developed. This process of data analysis was inductive as it proceeded from data to propositions and then to theory.

Documents, that is reports, were subjected to content analysis. Data was coded and related codes grouped into families. A system of open coding was used, that is, codes were selected according to what the data meant. All the relevant documents were read several times in order to have an overview of much of the contextual data before any meaning was attributed to a single unit.

To ensure trustworthiness of this study, a description of the research context and of participants was provided. Multiple sources of data and strategies such as prolonged engagement at the sites were used. The data collection at the sites was spread over eight months. This prolonged engagement facilitated data saturation and to carry out repeated checks, that is returning to the participants and presenting the interview transcripts and interpretation derived from the interviews with the intention of confirming the accuracy and credibility of the findings. Such prolonged engagement at the sites enabled the participants to verify and judge the accuracy and credibility of the findings and interpretations. However there were constraints.

5.1 Constraints

The participants in this research came from the western part of Botswana.

The results of this study, therefore, cannot be generalised. Hence conclusions are restricted. However the description of learners and their contexts does provide for transferability to similar contexts. There is also the likelihood of bias and subjectivity as the distance education provider responsible for the provision of learning support in the selected three areas was the employer of the researcher. In order to counter this bias, two colleagues who were not part of the learner support department and were well versed in distance learning issues reviewed the work done. The process of peer review resulted in the findings and interpretation that follows in the next section.

6.0 Findings and Interpretation

The presentation and interpretation of findings in this section is according to the research questions. The reasons for enrolling for BGCSE and then the types of formative assessments the participants experienced have been taken up first.

6.1 Why do remote distance learners enrol for BGCSE?

The reasons for enrolling for BGCSE were common in all the research sites. Therefore, all the responses from all the sites in this section have been considered without separating issues according to their respective sites. Some participants provided more than one reason for enrolling for the BGCSE programme. There were mainly three common reasons advanced by distance learners in all the sites, and these were; (i) to get a BGCSE certificate and apply for jobs, (ii) to up- grade qualifications so that one could be admitted into higher education institutions and (iii) to get the BGCSE certificate in order to apply for promotion at work. This is what some participants said when they were asked to respond as to why they had enrolled for BGCE programme:

Participant 1:	*So that my certificate should be better, so that when I apply for something they can take me because of better results…*
Participant 2:	*To upgrade my educational level so that I can be in high position at Work*
Participant 3:	*To upgrade my results. I did not do well and I do not qualify for the course that I want to do, so I think enrolling in BOCODOL will help me.*
Participant 4:	*Because I wanted to upgrade my studies and pursue further studies.*

The reason for enrolling in order to get a certificate and apply for employment was most common in all the sites and it cut across all age groups. This was probably because of the unemployment problem experienced by all age groups. The majority of the participants were unemployed and the employment need was greatest at the time; hence the majority of participants cited acquiring the BGCSE certificate as a reason for enrolling for the programme. During the interviews, participants indicated that even menial jobs required a BGCSE level of education. This may be a result of competition for limited employment opportunities in Botswana.

It was also interesting to note that despite the context and remoteness, some participants were aware of the call by government through the country's Vision 2016, that Botswana should be an educated and informed nation by the year

2016, hence their reasons to enroll for the BGCSE programme. This has been expressed by participant 6 as:

Participant 6:	*Because I do not have a BGCSE certificate and also for job opportunities and due to day to day style of living I enrolled for BGCSE......... to have that opportunity to reach the Vision we are talking about. Also to do that "MOTTO" we engaged i.e. all of us is supposed to be educated in vision 2016, that's why*

Vision 2016 is Botswana's vision meant to ensure prosperity for all by the year 2016 when Botswana would have enjoyed 50 years of independence from Britain. The vision awareness and implementation by some participants might be a result of several meetings held at villages and settlements known locally as *Kgotla* meetings. These meetings are held by local and national leaders in all villages and settlements in Botswana in a bid to build up awareness for Vision 2016. This may suggest that community mobilisation through *Kgotla* meetings could be used in learning support strategies to sustain persistence rates in distance learning.

Some participants also revealed that they were driven by poverty to enroll for the BGCSE programme. This is what participants 7 and 8 said during the interviews when asked why they enrolled for the BGCSE programme;

Participant 7:	*The main reason for enrolling for distance courses is to break the circle of poverty.*
Participant 8:	*Eè, subu-subu kg'oana raa dxàu sa (Yes I want to break the circle of poverty). Basically I want to improve the living standard of my family and myself*

It appears from the above that participants held the view that a BGCSE certificate would change their lives. They believed that acquiring the certificate would open up opportunities for work and they would thus move out of poverty. This perception is however misplaced as there are many unemployed citizens of Botswana who have BGCSE and even higher qualifications. It appears from the above that participants held the view that a BGCSE certificate would change their lives. They believed that acquiring the certificate would open up opportunities for work and they would thus move out of poverty. This perception is however misplaced as there are many unemployed citizens of Botswana who have BGCSE and even higher qualifications.

However, participants' reasons for enrolling for the BGCSE programme meant that they had certain expectations from the distance education provider. Their expectations are likely to have been shaped by their needs and their past educational experience at public schools. They expected to be taught like at conventional public schools. Their expectations of how they were going to be supported through formative assessment was therefore clouded in their needs and past educational experiences. In the light of the above expectations, types of formative assessment used to enhance distance learners' academic performance were examined.

6.2 What types of formative assessment were given to remote distance learners?

Formative assessment for BGCSE distance learners includes activities and exercises, unit assignments and mock examinations (BOCODOL, 2001). Through activities and exercises in the study materials, distance learners are able to assess themselves using the feedback and answer section at the end of each study unit. Distance learners are encouraged to look at the feedback section only after they have tried to respond to the activity or exercise in order to make self-assessment meaningful.

The unit assignments do not count towards the grading of the final examination but serve a very importatnt purpose that of developing the skills needed to pass the end of course examination. The unit assignment also gives learners a good idea of what to expect in the examination. The unit assignments are designed in a manner that follows the structure or format of the examination (BOCODOL, 2001). The assignments are tutor marked. Learners are encouraged to re-do the assignment whenever they score less than 50%.

The other form of assessment as previously mentioned is the mock examination. The purpose of this assessment is to help check learner readiness for examination. It also helps to give the learner the necessary experience of writing under examination conditions.

6.3 How did remote distance learners perceive and experience the formative assessment during their learning?

The types of formative assessment that attracted more responses from participants were assignment feedback, verbal feedback and feedback from mock examinations.

The findings of this study, when it came to experiences, were mixed and included the following amongst many: the formative assessment assignments were rated as *very good*, *difficult*, *easy* and *inadequate*. It was also revealed that formative assessment had not been reviewed since 2001 and same assignments in all courses offered had been repeatedly given to new students. The fear was students were tempted to use responses that were provided by previous students and as such they did not make an effort in answering their assignments. Good ODL practice shoudl not encourage this as it hardly enhances learning. However there were positive responses from some participants who were encouraged to persist in their studies. They remained positive and felt being encouraged by the feedback they got as shown below:

Interviewer:	*In your assignments that have been marked by your English tutor, you got comments. What kind of comments were written in your assignments?*
Participant 1:	*Comments were encouraging.*
Interviewer:	*What kind of comments did you get?*
Participant 2.	*All encouragement were good, I remember getting 17% in Mathematics and the man never said you are going to fail but encouraged me to press on up until now.*
Interviewer:	*What did you do after getting the assignment?*
Participant 2:	*I did the paper again and I got 37% and the comments were that I should keep on improving.*
Interviewer.	*How do the assignments help?*
Participant 1:	*Help to test ourselves whether we are weak or strong.*
Interviewer:	*What can you say about the English tutorial session, how helpful is the tutorial?*
Participant 1:	*I have improved a lot, the teacher is very good; we ask a lot of questions. I started getting 60% then 70% to 85%, I think I am going to get A.*

However, the picture potrayed above was countered by some negative experiences that some participants had undergone as demonstrated in the excerpts below. The negative experiences resulted from several challenges that included assignment completion, submission and feedback. They either found it difficult to do the assignments or found themselves with no feedback to assignments submitted. Others found themselves discouraged by low marks and ended up not continuing. However, others pointed out that inadequate learning materials deterred them from doing their assignments.

Interviewer:	*Do you do assignments?*
Participant 1:	*I don't do them because I have only cassettes for studying but I don't have the radio, so it makes it difficult for me to study.*
Interviewer:	*Did you do others?*
Participant 1:	*Yes, I had submitted them for marking.*
Interviewer:	*How was your performance?*
Participant1:	*I got 38% and the other one 20%.*
Interviewer:	*What were your tutors' comments?*
Participant 1:	*Need a lot of improvement and be serious with my studies.*
Interviewer:	*How many assignments did you submit?*
Participant 2:	*I only submitted Mathematics assignments.*
Interviewer:	*Were they marked?*
Participant 2:	*Yes.*
Interviewer:	*How much did you score?*
Participant 2:	*4%*
Interviewer:	*What was the problem?*
Participant 2:	*I did not understand.*

Hopelessnes and fear of failure characterised most participants who had negative experiences of formative assessment. However the official records of pass rates in the 4 courses indicated that something was working despite the distance learner perceptions, as indicated in the academic perfomance as shown in **Table 1** below.

Out of 43 remote distance learners who sat for English BGCSE examinations, 7 attained 'C' or better and 21 'D' grade passes, and out of 36 participants who sat for Mathematics - 12 got 'C' grade or better and in HSB 7 got 'C' grade and 1 registered an 'A' star. And in Setswana, out of 24 learners, 8 got 'C' grade or better and 8 'D' passes. Given the non-conducive context already described, it may be considered that the remote learners have performed satisfactorily well under the circumstances.

Table 1. Performance of remote distance learners (2003 to 2006)

	No. of Exam. Candidates	A* 85% and above	A 75% to 84%	B 60% to 74%	C 50% to 59%	D 45% to 49%	E 40% to 44%	F 30% to 39%	G 20% to 29%	U 0% to 19%
English	43	-	-	1	6	21	13	2	-	-
Setswana	24	-	-	2	6	8	5	2	1	-
Maths	36	-	-	2	10	4	4	6	6	4
HSB	22	1	-	1	6	2	9	2	1	-

In the light of the above performance, it is not surprising that assignment feedback/comments were generally perceived to be very important. The participants believed that they learnt through assignment feedback and that assignment questions were likely to be similar to the questions in the end of course examinations. Below are some of the experiences that sum up the experiences of those participants who felt assignment feedback to be critical in enhancing their academic performance.

> *Participant 7:* *Assignments help us a lot, one reads and understands after that one would answer the questions. Therefore, this helps when the marks are low to be able to work harder by asking for tutorial assistance. One can also form study groups to be assisted to understand better since 'setshwarwa ke ntsa pedi se se thata. (the job becomes easier if there is more than one person). Assignments enable us to remember materials we studied before and also help us to remember during final examination preparations. On the other hand, they simplify notes and are easy to comprehend.*

Participant 8:	*The assignments are a permanent record that helps most of us distance learners, because we used them to revise in order to prepare for final examinations. They are very helpful even though most of the questions are not asked in final exams, but they give us a clue of what we as distance learners should expect during the final examinations.*

However there were exceptions to the above perceptions. Some participants' perceptions were that it was not important to submit assignments. They had not submitted because they had prioritised on other tasks they considered more important. For instance, one participant considered reading those areas she felt behind in being more important than doing English assignments. For example, she had submitted only one assignment in her English course and then concentrated on other courses where she believed she was lagging behind. And on being asked why she had not done all her English assignments she had this to say:

Interviewer:	*Last time you were sharing with me that you did not do other Assignments. What happened?*
Participant 3:	*Because of time, I wanted to cover up the material that I did not, to prepare for the coming examination.*

Feedback on mock examination was also perceived to be critical in preparing for the end of course examinations and as such participants asked it to be marked swiftly and to be given back their scripts before the end of course examinations commenced in order to revise. The belief in the importance of mock examinations feedback appears to have been very strong and the excerpt given below is evidence to that strong perception.

Interviewer:	*Any similarities/difference in mock/final/assignment questions?*
Participant 2:	*When I wrote the mock I had fear, but as I wrote the final the fear disappeared.*
Interviewer:	*Did the Mock examination help you?*
Participant 3:	*Helped a lot when I look at history the same structure was the same as Mock, except in HSB, there were slight differences.*
Interviewer:	*If you compare marks you got in assignments and mock examination was there any improvement?*
Participant 1:	*Yes; because I completed my assignments where I met difficulties the tutor helped me.*

When asked what the participants thought would work for them in order to achieve better grades at BGCSE examinations, the demand was for more regular weekend tutorials where they hoped to get verbal feedback. They said such assistance would enable them to be confident enough to do assignments and submit them. They believed that if supported by face to face tutorials on a regular basis they would be able to submit assignments and

would be encouraged to study hard and this would most likely make them get better grades in the examinations. This is how two participants commented when asked what would work best for them:

Participant 4:	*I think submitting more assignments and studying hard can make me achieve better results.*
Participant 5:	*Assignments must be marked on time and sent back to us quickly.*

7.0 Conclusions

Remote distance learners enrol for BGCSE in order to upgrade their educational qualification and to increase their chances of employment. They believe a BGCSE certificate can open doors for higher education or for employment. In order to enhance their academic performance at BGCSE level, the distance learning provider ensures that different formative assessments are either self-administered or administered by tutors. However, there were two main types of formative assessments support that remote distance learners appeared to favour, that is, prompt assignment feedback and verbal tutor feedback given during face to face tutorial sessions. The tutorial sessions need to be scheduled regularly if verbal feedback is to sustain remote learners to persist in their studies.

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Continuing Education & TVET: An Alternative System at the University of South Pacific

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Abstract : *A combined system of the complementary and alternative forms of Open Schooling operates at the University of the South Pacific (USP) through its Continuing and Community Education (CCE) Centre and the College of Foundation Studies (CFS). In different ways the two institutions provide an inclusive service by offering an alternative learning pathway to various levels of learners who did not have the opportunity to progress through the traditional academic pathway. They serve both school-age leavers as well as adults of different age groups. The courses – short professional courses, business tailor made packages, semester-based distance and flexible learning courses and Technical and Vocational Education Training (TVET) courses – focus on life skills and work-oriented content.*

CCE and TVET have given a lifeline to many students. The case studies in this paper come from the Pacific environment and they reflect both the conflicts and hopes that the students experience.

1.0 Background

The University of the South Pacific (USP) is one of two regional institutions in the world. The USP region that covers 12 Pacific Island countries – Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu - traverses a large ocean mass and five time zones. The geographical isolation of the small island nations together with the sharp information differential in the region have made distance and flexible learning the logical and most convenient approach right from the beginning. The map presented on the next page shows the wide distribution of the USP region.

The University has pioneered distance and flexible learning and teaching since the 1970s through its Extension Services. Since opening its doors in 1968, the University has shown an ongoing, deep commitment to fulfilling the challenge of providing best quality education for the people even as the circumstances of the region continued to change. It has been an active partner in the total development of its member countries and the region in the last forty years. With a total enrolment of slightly over 19,000 students (2008) studying in all 12 countries the USP is the premier provider of quality tertiary education in the region.

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Map of the USP Region

The system of open schooling that exists at the USP is a combined system of the complementary and alternative forms of open schooling (Daniel and Ferreira, 2008) and operates through the Continuing and Community Education (CCE) Centre and the College of Foundation Studies (CFS). The two sections provide an inclusive service in different ways by offering an alternative learning pathway to various levels of learners who failed to progress through the traditional academic pathway. This paper highlights the success of different technical and vocational courses through case studies.

2.0 About Distance & Flexible Learning at the USP

Over the years the Extension Services looking after DFL have grown progressively and have become increasingly integrated with the over all operations of the University. In 2002, this was renamed as the Distance and Flexible Learning Support Centre (DFLSC) in line with restructuring plans for improved services. In a further realignment and prioritizing of activities in 2007, there was a further name change in its name to the Centre for Flexible and Distance Learning (CFDL). Three sub-units came under the CFDL:

- Distance and Flexible Learning
- Continuing Education
- Pre-degree Studies

The CCE Centre and the CFS have since become independent entities of the University and are now self-funding.

The DFL Unit works collaboratively with Schools and Departments for the design and development of learning materials and establishing environments

for USP courses using a variety of modes (Bonato, 2005). From the traditional print materials of the early years, most courses are now designed for a multimedia approach to teaching and learning while some courses are totally online. DFL course development caters to learners at all levels of study covering pre-degree, sub-degree as well as vocational and degree qualifications.

The establishment of Campuses in all the USP countries and the strengthening of the private satellite network *USPNet* and other communications are major developments that have created greater access. USP enrolments have increased significantly over the years and DFL enrolments in particular have skyrocketed. Indeed there have been huge increases in terms of student numbers, number of courses and programs, and staff numbers and profiles. For example, in the 28 years between 1976 to 2004, there has been a very significant increase from the 90 students enrolled in 16 DFL courses in 1976 to 15,000 students enrolled in 150 DFL courses in 2004 (CFDL, 2009). By 2005 over 300 courses were using a variety of modes including e-learning and video-broadcasts (Bonato, 2005). The University's total enrolment in 2008 was 19,146 and over sixty percent (60%) of that number were students who enrolled as flexible learners.

3.0 Lifelong Learning & Technical and Vocational Education & Training in Pacific Island Countries

In many traditional societies of the Pacific Island Countries (PICs), the learning context for the people is life in their homes and communities. People *learn by living* their role-specific tasks and responsibilities. Village elders and people of quality (Bakalevu, 2003) are the repositories of traditional knowledge and provide guidance and training. Education in the community is largely aimed at continuing the social order and maintaining the status quo (Thaman, 2003).

Life Long Learning (LLL) is broad-based, encompassing education and training in both the formal and informal sectors (Veramu, 2008). It is broad in character, extensive in coverage and diverse in content, methodology and participants (Kedrayate, 1997). The most commonly understood role of LLL is the provision of alternative education to individuals who have left school and require training for gainful employment. Some may have left without attaining the necessary school-leaving certificates and need some bridge course to fill important gaps and bring them up to standard. Others may be already employed but wish to acquire new skills to keep abreast with new times, new knowledge and new development.

LLL policies in PICs are at different stages of development and implementation. Already a number of LLL projects and programs are being undertaken by different groups like NGOs, Churches and communities. The Tutu Marist Training Centre in Fiji and the *Waan Aelon in Majel* (Canoes of the Marshall Islands) or "WAM" project of the Marshall Islands are two of the most successful ones (Pacific Forum Secretariat, 2007). They also resemble the alternative

form of open schooling (Daniel & Ferreira, 2008). The MATUA program at Nabua Secondary School in Fiji deserves special mention in successfully providing the conventional school curriculum after school hours for out-of-school learners who desire Sixth and Seventh form qualification. The School operates the conventional program during normal school hours and the MATUA program in the evenings. Both programs use the same curriculum, are taught by the same teachers, and offer the same examinations. The success of the MATUA program is best exemplified by this success story:-

> Losalini Mawi was named Dux of the School at the Nabua Secondary School Form Seven graduation yesterday. Mrs Mawi, who is five months pregnant with her first child, was on cloud nine after beating over 50 Form Seven students for the prize. She is a MATUA Program student and was encouraged to continue her education even though she left Ratu Mara College, on Lakeba, in 1998. Mrs Mawi could not hold back her tears after her name was called.
>
> Apart from the dux award, the woman from Vakano, Lakeba in Lau, took out the History and Best Attendance prizes. Mrs Mawi won the hearts of students, teachers and parents present when husband Timoci Mawi was asked to present her History prize. The couple received accolades after Mr Mawi gave Losalini a peck on her cheek.
>
> "Age is no barrier to education," says Losalini Mawi.
>
> "This is another chapter of my life and I am proud that I am able to achieve the dux prize of the school. It never occurred in my dreams that I would reach Form Seven and even complete it. The Fiji Form Seven Examination is only days away and I am confident that I will do well.
>
> I left school in 1998 after failing my Form Six exam and I settled down in the village and found a husband. But an uncle of mine, Malakai Tadulala, came over to the village and told me there was a program where I could sit my sixth form exam again. We had to leave the island and come to Suva. In 2005 I enrolled as a Matua Program student to do Form Six. I passed my Form Six exam and was last year enrolled as a seventh former. I did well, but I knew that I could have done much better, so this year I am giving it another try,"
>
> Mrs Mawi said she could not have asked for a better husband. "He has been behind me and is the one who is paying for all my education expenses.

(Source: Fiji Times, November 2 2007; page 6)

The Education Ministers Forum on non-formal education asserted that LLL "has the potential to provide a proactive learning approach as a *system, process* and *setting* and become a dynamic force for change in the Pacific" (Pacific Forum Secretariat, 2007). They have called for a holistic approach to strengthen policy and resource provisions, establish constructive links between all systems, develop curriculum materials, co-ordinate capacity building and put in place quality control measures.

Speaking at a regional Technical and Vocational Education and Training workshop in Palau, UNESCO consultant Rupert Maclean (2009) shared the UNESCO view of education as the key to development, and TVET as "the educational master key that opens a door for any country struggling to survive". Maclean considers TVET as the key "because it facilitates skills development and employability". He states that, "If TVET training is available to all who require it, there will be a reduction in poverty, a movement towards equity and fairness, and disadvantage will diminish".

TVET educational provisions are comprehensive are available under various names including include apprenticeship training, technical & vocational education, occupational education, vocational education and training, career and technical education, continuing vocational education and training, etc. Maclean called for the community to be convinced of the importance of TVET as a provider of life skills for employment and citizenship, initiative and self-sufficiency, and self employment.

4.0 College of Foundation Studies

The College of Foundation Studies (CFS) that was initially called the Pre-degree Studies Unit is a facility of continuing education. It functions like a senior secondary school and prepares students for University study at the USP as well as other tertiary institutions locally and abroad. Its two main programs of study are:

(i) the Preliminary Studies which is equivalent to the Sixth form, and

(ii) the Foundation Studies that is equivalent to the Seventh Form Certificate.

The services of the CFS are not limited only to 'successful' school leavers but also school-age learners who have not been successful in Form 6 and Form 7 and require bridging in a select number of courses to bring them up to par. In addition, mature-age learners wanting university entrance qualifications can enroll in the same programs.

To be more accessible to the region, the CFS uses effective delivery through mixed modes. Its tutors are subject specialists who develop course materials and support students through the normal DFL system of the University. Staff work closely and maintain close dialogue with school authorities in the region. A new dimension of the CFS being tried out is the franchise of its programs to secondary schools that prefer a closer alignment to University studies.

5.0 Continuing & Community Education Center, USP

The mission of the Continuing and Community Education Center (CCE) is to "deliver excellence in Continuing and Community education that empowers and enables individuals and communities in the region to be able to sustain themselves" (RCCE, 2009). The Centre is an important catalyst for change and acts as a bridge between the University and the community. The CCE's role in facilitating the transition to tertiary study in the form of pre-degree studies and programs is its particular strength.

The CCE Centres in the regional campuses offer a wide variety of courses and programs that focus on life skills and work-related content. The courses can be classified under four major types: (i) Community ICT Courses; (ii) Business Courses; (iii) Community Livelihood Courses; and (iv) Basic Preparatory Courses.

Generally the duration of CCE courses varies from 10 to 32 hours of teaching spread over a number of weeks. Courses cover a wide array of subjects such as computer skills, languages, book keeping, mathematics, business studies, economics, creative writing, community development skills, literature, handicrafts, floral arts, fabric arts, woodcarving, fine arts, carving, poetry, music, video production, leadership skills, health studies, public teaching, problem solving and general literacy skills.

The courses offered at the different Campuses vary depending on priority needs of the people. Some courses like the Bislama language courses in Vanuatu are specific to that country while others like the very popular IT courses are easily replicated from one campus to another. There is no denying the appeal of CCE courses to students and adults of all ages and status. A couple of stories are presented to portray the varying experiences of the students.

Basic Mechanics Course at the Tonga Campus

In December 2007, the Tonga Campus hired a lecturer of the Tonga Maritime Polytechnic Institute (TMPI) to run a 2 weeks Basic Mechanics Course for drivers and vehicle owners. In the two weeks, students were taken through five two-hour sessions of basic vehicle maintenance and care. The course was a resounding success and received positive feedback from the thirteen happy clients who previously relied on others for the service.

"I am going to be a better driver and vehicle owner. I now know something about minimizing oil and fuel consumption that I didn't know before", a happy participant said.

Caregiving Course at Lautoka Campus, Fiji

The Lautoka Campus in western Fiji began this course in 2007. A large number of men and women from Fiji and other PICs work overseas as caregivers and remittances are an important source of income. While for many graduates the Certificate has been the stepping stone to employment, others like Llisapeci have found another use for it closer home. Here is her story.

Llisapeci was lucky to have walked into a ready-made hotel job after leaving school. However, when she got married and had her first child, the young mother had to leave work to look after her new family. Llisapeci completed the Caregiving Course in 2008. She said,

"My children are big now and I have been thinking of getting back to work but it is not easy because I did not train after leaving school. Then someone told me about the Caregiving course. The person said that what I learn could be my passport to a caregiving job overseas, maybe America or Australia, so I enrolled.

Llisapeci then shared how her feelings and priorities changed during the course to forget about employment overseas and focus on an urgent need at home.

"The lectures and discussion were very useful and I kept thinking about my aged mother-in-law. Everything the lecturer shared fitted my situation exactly – that caring for her had been stressful and very difficult. I began to understand why it is difficult to take care of old people without proper knowledge and skills.

I did my 4-weeks practical attachment here at home and the tutor came to assess how I took care of my mother-in-law who is bedridden. I have shared my knowledge and skills to women in the village and other Women's groups. Maybe I will go overseas later. Right now I am happy that the course has made me a better wife, daughter and mother ", Llisapeci said.

Horticulture, Flower Arrangement, Fish Farming …

Dipti Mala attended one of the country's top secondary schools and aced the Fiji Seventh Form examination in 1997. She enrolled in the USP's BSc programme the following year as a private student. Unfortunately, financial difficulties forced her to abandon studies and seek employment.

Dipti has worked as a law clerk since 2000. She is married and has a daughter. Being a keen learner, Dipti developed a liking for short courses that teach life skills. To-date, Dipti has the following CCE courses to her credit:

(i) Stages 1-3 in Flower Arrangement

(ii) IT Course in Databases, Web design, and Graphic design

(iii) Stages 1 &2 in Landscaping

(iv) Stages 1 & 2 in Nursery Management

(v) Fish farming

(vi) Stages 1 & 2 in Floriculture

Why did Dipti need to do so many courses? Why has she not gone back to complete her degree. This is her answer:

"I am very happy in my job. I am still keen to study but not the long period of bookwork study. I tried to do law in 2003 but after 2 units I gave up because I needed to spend time with my daughter. The Saturday classes are better because that is my free day and I can do what I want. The short classes give quick results and that is nice. I love flowers and horticulture. I use my flower arrangement skills for church and family functions. I can see a future in that.

The computer skills are useful in my work. Technology is changing fast and I need to be confident with IT. I will continue to learn the latest in IT. Everything I learn I put into practice – that is the kind of learning I prefer. And I have some ideas for setting up a fish farm maybe later on."

Dipti is not done. This year she intends to enroll in the Certificate in ECE. In her words, "to help me be a better mother to my daughter, I intend to pursue the CCE course."

At a time when the lowering of compulsory retirement age has caught many people unprepared, Dipti recommends the short life-skill courses of the CCE Centre and multi-skilling as the way to go forward.

6.0 Regional Continuing and Community Education Programs of Study

The newly restructured Regional Continuing and Community Education (RCCE) Centre at the main Laucala Campus in Suva also coordinates regional non-credit Certificate Programs from time to time through distance and flexible learning. These are the Certificate in Early Childhood Education (CECE), the Certificate in Disability Studies (CDIS), the Community Workers' Certificate (CWC) and the Basic Preparatory Program which are accepted by employers and tertiary institutions.

The Minimum entry requirement for all four programs is Form 4 (Year 10) level of education. Each program comprises three full-semester courses. Currently, only the CECE program is still being offered. There continues to be a big demand for it in light of Early Childhood Education now being mandatory as the first stage of school learning systems. There are provisions for graduates

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of the CECE to proceed to the formal Diploma in ECE and the B.Ed. (ECE) In-Service programs at the School of Education. The Certificate in Disability Studies (CDS) has not received the same level of enthusiasm. The current feeling is that 'mainstreaming disabilities' means that disability studies should be part of the training of all teachers and not confined to a separate group of specialist practitioners. The future of this programme to be and other disability programs seems to be uncertain. Nevertheless, many leading practitioners of early childhood education and disability care throughout the PICs are graduates of the CCE Centre and had trained through the CECE and CDS programs. The next stories come from such three graduates.

Certificate in Early Childhood Education (CECE)

John Keniwa'ia & Laiza Rodi Keniwa'ia (Solomon Islands)

John Keniwa'ia runs the Early Childhood Education Consultancy Agency in Honiara, Solomon Islands. He employs two teachers who work with him to offer a variety of services that include general consultation and awareness programs. He also runs a kindergarten in the complex. Where he is today is a far cry from the young man from Malaita Province who was forced to leave school in 1982 because of family problems. He was in Form 2 at the time.

"After leaving school I stayed home to help look after my brothers and sisters. Then I worked as a clerk for the Council of Chiefs in my province of Malaita, taking minutes and writing reports for them. I also applied to the Malaita Education Board and in 1993 they gave me a teaching job. They gave me a three-year contract to teach Class One in a local primary school".

How did John teach without a formal teacher training? What did he teach? His reply was, "I just relied on memories of my own learning in Class 1, like 1 + 1 = 2." When that teaching contract expired he left for the capital Honiara, in search of stable employment. In 1997, while working as a waiter in a hotel he learned about the USP and was elated that with his background he could actually enroll in a university program.

John said "I chose the Pre-School Certificate that was offered by USP and completed it in 1998. I like ECE because it was new and different. Also I had taken care of my brothers and sisters before and it was OK. I felt confident about my future".

John became ECE teacher at a local public school. "I was happy to be a trained teacher", he said. Assured that his career was established, John enrolled into SICHE's Certificate in ECE in 1999 and completed it in 2000. John has not looked back since and is now established as a leading ECE educator and consultant in the Solomon Islands. Along the way he met his wife, Laiza Rodi, herself an ECE educator. They share the same passion.

Laiza Rodi Keniwa'ia spent most part of her early years working with the Sisters of the Anglican Church. In 1997 this young woman from Guadalcanal Province enrolled into the Preschool Certificate being offered by the USP's Continuing Education Centre. With the Certificate in hand, Liza Rodi began a career in early childhood education. Like her husband John, she never looked back after that.

Laiza said "In 1998 SICHE started enrolments and I wanted to go further in my career so I enrolled for the Certificate in ECE, which I completed in 2000. I continued to teach in ECE and created awareness among other colleagues. It was still a new area and not many people knew about it". In 2004 the Ministry of Education appointed her as Coordinator for ECE for Guadalcanal Province, the position she still holds. Mrs Keniwa'ia intends to take further studies with the University in 2010.

The experiences of the husband-wife team of John and Laiza Keniwa'ia testify to the realities of education in the Pacific region and the way CCE demystifies the perception of a university.

Certificate in Disability Studies (CDC)

Etonia Waqa, Fiji

When Etonia Waqa began sixth form at secondary school, he had his sight on big things. The common belief was that once you get to Form 6 you are safe! The reality though is the very opposite – every year the highest number of failures, among of Fijian students, as recorded in the Fiji School Leaving Certificate (FSLC), is of those that sit at the sixth form. Etonia left school in 1998 with no clear plans for the future.

Etonia's real break did not come until three years later. In 2002 someone introduced the young man to Hilton Special School in Suva. His first day at the school changed his life.

"I was struck by the different disabilities. They affected me and I wanted to help".

Straightaway Etonia began attending evening classes in Sign Language at the school, and one thing led to another. In 2003 Etonia Waqa enrolled into the CCE Centre's Certificate in Disability Studies.

"I did not think I can get into USP because I failed FSLC in Form 6. Only the students who pass FSLC can get to University. I was happy about my study because it is new in Fiji. I know of people with disability in my village and I wanted to help them".

Etonia was in awe of his new knowledge. He had found his vocation. Etonia was on top of the world when he graduated from USP in 2004. The following year he went for Practicum at the Fiji Vocational Training Centre for People with Disabilities. He impressed them so much that they offered him fulltime position. He is still there and enjoying it.

"I have met different people in this job. I have toured all over Fiji. I have visited some overseas countries. I cannot believe this is possible because I failed Form 6".

Etonia is still learning on the job and intends to pursue further studies soon.

It is students who make the programs. The stories in this paper are only six of the several thousand voices who have benefitted from LLL courses and programs that offered them a lifeline. The realities that these graduates express reflect both the conflicts and hopes that they and many others experience.

7.0 Conclusion

Dropouts are becoming a stark reality of our school systems and schools have limited resources to cater for them. The numbers are increasing and the faces are getting younger. The reasons for this are many:

(i)   There are far more primary school-leavers than available places in secondary schools so the dropouts are getting younger;

(ii)   Opportunities previously available to students to repeat a class in order to prepare better for the next level up are diminishing fast;

(iii)   National policies for compulsory education are more concerned with keeping students in school and off the streets for a few more years without clear provisions to ensure useful, worthwhile learning that will provide for practical living after school.

Fortunately, help is available to the region in many forms. Strengthening TVET activities, innovative capacity building of teachers and developing open educational resources are proactive starters.

Research has shown that students involved in TVET courses at secondary level have far lower drop-out and repeater rates than students in the pure academic streams (Maclean, 2009). However, instead of simply focusing on curriculum choice, Maclean suggests a total curriculum reform that includes a reform of teacher education. It is true that "good schools require good teachers" (Delors, 1996). The need now is for innovative teacher training that integrates the areas of material development, learner support and the use of ICT (Daniel & Ferreira, 2008). TVET and Open schooling have the advantage of being less expensive compared to the conventional school system (Daniel & Ferreira, 2008; Maclean, 2009). A TVET curriculum offered through open schooling approaches has the potential to change a stalled system that works moderately well for some students and not at all for others.

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Quality Assurance Process of Educational Programmes through Open Schooling at the Bangladesh Open University

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Abstract : *Under the umbrella of the Bangladesh Open University (BOU), Open School (OS) develops self-learning materials (SLMs) for its programmes using the in-house style and process which conform to the agreed policy and practice in terms of the University's academic planning criteria and conducts assessment, as summative evaluation, through University's Examination Department. This paper discusses the issues related to the process that BOU-OS maintains for program development and learners assessment.*

1.0 Introduction

Under Bangladesh Open University (BOU), Open School constitutionally enjoys equal status as the five other Schools (Faculties) of the University namely School of Education (SOE), School of Business (SOB), School of Agriculture & Rural Development (SARD), School of Science & Technology (SST) and school of Social Sciences, Humanities & Languages (SSHL). The Open School (OS) runs three pre-University programmes –

- Junior School Certificate (JSC) for Grade 6-8,
- Secondary School Certificate (SSC) for Grade 9-10 and
- Higher Secondary Certificate (HSC) for Grade 11-12 as part of its academic portfolio.

As of today, Open School has been very popular and successful because it fulfills the prime aim of the BOU in providing wide access to the community as a "university of second chance". BOU-OS registers more learners than the rest of the Schools put together in the country. The University enrolls each year nearly 100,000 learners in its 23 programs of study and 90 per cent of them are the learners of the Open School programs. The BOU-OS programmes cover every remote corner of the country, and provide the highest revenue to the university exchequer. As such there is a saying that Open School is the "Cash Cow" for the University. In addition to the formal programmes, BOU has the open non-formal education (ONFE) programs which are linked to the Schools. BOU-OS provides ONFE on Basic Science and Mathematics. However, considering the two main programs of BOU-OS, Secondary School Certificate (SSC) and Higher Secondary Certificate (HSC) programmes,

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this paper describes the processes adopted by the Open School with quality reference to course development, and the examination systems.

2.0 Target Groups

BOU started its operation through a project under loan arrangement with Asian Development Bank (ADB). The ADB Project Profile (1993) describes...... "potential beneficiaries will be the middle and lower class rural youths with primary and secondary levels of education, untrained teachers at primary and secondary schools, rural women including housewives, extension agencies in the field of agriculture, rural development, family planning, health and those professional groups who upgrade their skills for professional development. The rural disadvantaged youths who have very limited access to conventional education will be the special beneficiaries of the BOU establishment project. The NGOs working in the field of environmental stabilization, health care, skills training, functional literacy will also be the potential target beneficiaries".

Keeping this in mind the BOU-OS considers itself as providing a model for open access to educational opportunity. It provides provision for education to women, the poor, the unemployed, and those in remote rural areas, which the conventional formal education system (with its associated catchments areas and its socio-economic barriers to entry is unable to cater for. The enrollment in BOU-OS makes BOU a Mega-University. The following Table shows the enrolment trend in the BOU-OS.

Table1: Learner Enrolment in BOU-OS

Enrollment					
Programs					
JSC		SSC		HSC	
(Grade. 6-8)		(Grade: 9-10)		(Grade:11-12)	
Year	Learners	Year	Learners	Year	Learners
		1995	16,168		
		1996	14,111		
		1997	15,803		
		1998	16,427	**1998**	12,006
		1999	25,114	1999	-
		2000	25,829	2000	25,694
		2001	32,063	2001	17,154
		2002	35,734	2002	26,906
		2003	32,094	2003	34,363
		2004	46,325	2004	39,168
		2005	43,747	2005	33,247
		2006	64,752	2006	43,361
2007	2,000	2007	110,654	2007	72,529
2008	-	2008	120,130	2008	42,974
2009	-	2009	77,251	2009	
Total	**2,000**		**676,202**		**347,402**

2.1 Programme Delivery

The program curriculum is at par with the conventional curriculum. When there is a change brought about by National Textbook and Curriculum Board (NCTB) the BOU-OS changes the syllabus of the courses accordingly. The curricula of SSC and HSC do not have vocational courses; but the JSC Programme curriculum is coupled with vocational courses. The BOU-OS extensively uses print, radio & T. V. broadcasts through the national channels and tutorial support services at locations near to the learner's place. ICT learning materials, in a limited range, are also used at the ODL centres.

3.0 Program Approval

The formal approval processes ensure that individual course proposals from the School conform to the agreed policy and practice in terms of the University's Academic Planning Criteria and the requirements of the Academic Planning Management Cycle. The Programme approval passes through a process which includes Academic Planning Committee (APC), Academic Council (AC) and Board of Governors (Syndicate). The University maintains the same procedure for all the programmes including programmes of the Open School.

In order to prepare proposal for a new programme, the School forms a Working Committee. The Committee conducts a Need Assessment Survey (NAS) to identify the demand for the Programme through questionnaire survey and/or focus group discussions. The NAS focuses on curriculum, syllabus, and assessment etc. Before the programme is due to be presented, a formal and more detailed proposal is drawn up, based on the results of the NAS for approval by the Academic Planning Committee (APC). The proposal is shaped by the Curriculum Committee with respect to syllabus, delivery methods, assessment strategies and Course Teams for development. The School Committee reviews and recommends the programme proposed for approval by the Academic Council (AC). The proposal is finally placed before the Board of Governors (BOG) for approval to implement. This is illustrated in Figure 1 on the next page.

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│     PROGRAMME DEVELOPMENT       │
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Working Committee:

- Undertakes Need Assessment Survey;

- Prepares draft proposal;

- Presents at the Faculty Seminar

- Prepares final proposal for APC

Curriculum Committee develops:

- Syllabus: content and sub-content

- Delivery methods

- Assessment strategies

- Course Teams: writers, editors and reviewers

School Committee:

- Recommends for Approval by the AC

Academic Council (AC):

- Approves the proposed program

Board of Governors (Syndicate):
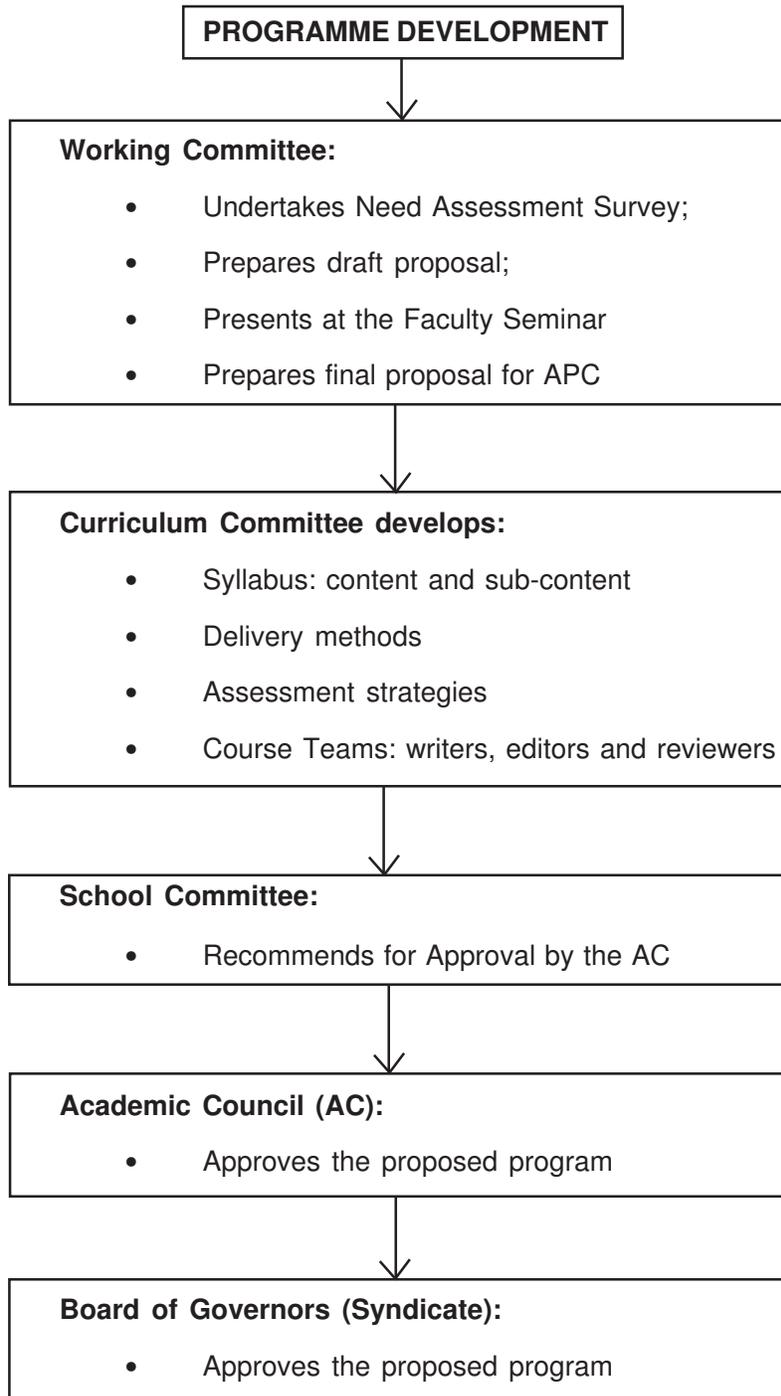
- Approves the proposed program

Figure 1: BOU-OS Development of Courses of Studies

4.0 Programme Development

The School Curriculum Committee is one of the authorities in the University and its Chairperson is appointed by the Vice Chancellor. In Open School, normally, the Dean is appointed as the Chairperson. The Committee is required to:

- approve the general subject matter, detailed syllabus, objectives, the method of assessment, the structure and relationship of the course components, tutorial requirement, broadcast and resource requirements and any other relevant requirements;

- appoint members of staff for all Course Teams, including the Course Team Chair, subject to ratification by the Curriculum Committee;

- appoint external course validators/assessors/reviewers in the context of guidelines laid down by the Academic Council.

Courses are normally divided into:

- Units which broadly comprise of material required to study for 5-6 hours;

- Lessons which are sub-content of the unit and comprise of the materials required to study for 45 minutes.

- Randomly selected units are developmentally tested on group of students as a part of the try-out of the course materials. Courses are revised in the light of student/tutor feedback collected through surveys, focus group discussion and through extensive informal review process. This process is strictly followed at the Open School. Hence in this way Quality Assurance (QA) is maintained in the process of development of new course in the School. QA is applied to the teaching points of the subject matter, and the examination and assessment policy linked to the central policy of the University as a whole.

The Open School's Course Team includes:

- a course coordinator responsible for administrative arrangements of course production;

- a number of leading academics and external writers;

- a broadcast specialists, if required;

- an editor and illustrators.

The Course Team carries the responsibility for ensuring the quality of the School's teaching of each course. It has a range of tasks as:

- developing subject matter of the course;

- identifying learner support for teaching points;

- planning, implementing, monitoring and reviewing the presentation of the course to the learners.

- ensuring the production of high quality teaching materials;

- creating and implementing appropriate assessment for the course;

An editor comments not only on the content of the material, but also advises authors on the way the information is presented. As a member of a course team, the editor aims to:

- advise the team on all matters relating to publishing;

- ensure that materials are clear, consistent, well-structured in relation to the in-house style and pedagogically appropriate for distance learners;

- ensure that materials are grammatically correct and error-free;

- ensure that materials are linked to the curriculum;

- ensure that published materials do not infringe copy rights.

Working constantly under the scrutiny of a peer group, and being involved in the discussion of teaching and learning strategies for each course facilitate professional development for all members of staff as also production of high quality courses. Editors thus have an integrating role in the production process in order to assure the quality and fitness for purpose of the intended learning.

The University appoints a reviewer who is a senior, experienced person of academic repute. The reviewer checks the content and certifies the text for publication. In fact, reviewer is the referee of the text that means he/she may cancel or release the materials for publication at BOU. Reviewer's decision is always final, through his/her name is not printed in the texts. In addition, names of the writers and editor are not disclosed to the reviewer and review report is permanently reserved for future reference.

5.0 Learners' Assessments

Assessment of the learners of the SSC and HSC programmes is summative in nature and done by the Examination Committee (EC) which is responsible for assuring compliance with the University's academic standards. For the BOU-OS, the University appoints external examiners for each examination with a purpose to

a) assist in ensuring that academic standards are comparable with the formal Board of Examination, and

b) provide an external scrutiny of the assessment methods.

The University subscribes to the Code of Practice on External Examining and in particular on the appointment of external examiners. Like the formal examination Board, the University conducts both SSC and HSC examinations as a public examination and as a result, public security press, local administration, government treasury are involved.

Examiners are prioritized as Open School faculties, other school faculties of the BOU, the tutors and the teachers of the respective field. The Examination Department of BOU conducts the administration of the overall examination with the support of the Open School and its Tutorial Centres.

5.0 Conclusion

The BOU-OS programmes are highly successful programme as every year there is increase in the number of enrolments and provide highest revenue for the University. Through its programmes, the School developed country-wide networks and entered every corner of the country to increase access and equity. BOU provides special attention to management of Open Schooling. The School has its own quality checking measures so that programmes become marketable and are comparable with the conventional school programmes. In conclusion, it can be said that in the BOU, quality assurance is maintained in the process of every activity.

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Enrolment Trend of Vocational Education Programmes in Open Schooling: A Study of NIOS, India

Koushalya Barik

Abstract: *The National Institute of Open Schooling (NIOS) started offering vocational education programmes through open and distance learning (ODL) mode in 1992. Courses in the broad areas of Agriculture, Engineering & Technology, Health & Paramedical, Home Science & Hospitality Management, Computer & Information Technology, Business & Commerce, and Teacher Training are available. Vocational courses became quite popular among students and enrolment increased sharply till 2002-03. In subsequent period, however, a declining trend in enrolment is observed. In order to bring out the underlying reasons of such a trend, the paper analyses enrolment data of NIOS for the period 1997-98 to 2009-10. It is found that share of vocational stream in total enrolment of NIOS is very low. Enrolment is concentrated in few states and vocational education is not popular in many states. Moreover, many vocational programmes have negligible enrolment and these programmes have become deadweight for NIOS. A positive feature, however, is that women outnumber men in admission to vocational programmes of NIOS.*

1.0 Introduction

The availability of skilled workers in India has not been commensurate with its growing demand in recent years. Accelerated economic growth, led mainly by the contribution of the service sectors, has placed higher demand for skilled workers at various levels. Migration of labour force across regions, mobility of people due to advancement in transport and communication network, changing lifestyle due to urbanisation, and rising living standards in the wake of higher per capita income have increased the demand for services in various fields. There is demand for people skilled in various vocations not only from within the country but also from foreign countries. The supply constraint of skilled workers emanate from inadequate capacity creation in Indian education system, incorrect demand projections, and lack of awareness about benefits of vocational education among people.

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The Indian government has laid emphasis on vocational education from the very beginning. The First Five Year Plan (FYP) (1951-56) made certain observations which are relevant even today. It pointed out that, 'The absence of adequate facilities for technical and vocational education results in a much larger number of students going in for general education than is justified by the requirements of the country or the tastes and aptitudes of the pupils. ... This also leads to undue strain on the resources of universities as students on the completion of secondary education tend to drift to universities in the absence of any other alternative. … Education should, therefore, be given a more practical bias from the very beginning and at the post-secondary stage there should be greater adjustment between the needs of the country and the output of educational institutions'. Subsequent FYPs have put emphasis on the need for vocational education which culminated in the establishment of several technical and vocational institutions. In synchronisation with the growing need the plan outlay on vocational education saw a rapid increase in the subsequent FYPs. Several committees have also been set up with an objective of bringing in reforms in education and these committees have invariably advocated greater emphasis on vocational education. The Secondary Education Commission which submitted its report way back in 1953 talked about 'greater diversity and comprehensiveness in educational courses' and 'providing more comprehensive courses which would include both general and vocational subjects' (Second FYP, 1956-61). The establishment of multipurpose schools during the 1950s and 1960s considered inclusion of crafts and diversified courses as an integral part of secondary education. The less than expected outcome of government polices on vocational education during the first four decades of planning can be ascertained from the Eighth FYP (1992-97) document where it is admitted that 'efforts to divert the school leavers to vocational stream have so far been too little in relation to the size of the problem'. While analyzing the mismatch between supply of and demand for skilled personnel in the Indian labour market, the Eighth FYP traces the reason largely to shortages of middle level technical and supervisory skills and surplus supply of graduates and post-graduates in arts, commerce and science. Thus the Eighth FYP called for development of 'appropriate mechanisms in the training and employment system to ensure that those graduating out of the vocational and middle level technical training courses have the route to higher ladders open to them, through upgradation of their qualifications and skills by undergoing training in higher level courses during their employment career' (Eighth FYP, vol.1). The Tenth FYP (2002-07) also focused on revision of curricula with emphasis on vocationalisation and

employment-oriented courses, expansion and diversification of the open learning system, reorganisation of teacher training, and greater use of ICTs. These objectives have been achieved only partly (Eleventh FYP, vol. 2). The Eleventh FYP (2007-12) set up a Task Force on Skill Development which suggests provision of flexibility in school curriculum to give weightage to vocational subjects and transfer of credits across academic programmes (Skill Development Mission 2007).

In recent years distance education institutions have been able to create a space for themselves in vocational education as they cater to a different clientele. Taking advantage of the flexibilities embedded in the open and distance learning (ODL) system they have been able to motivate large number of people to pursue life-long continuous learning in academic programmes. Flexibility offered to students in 'place and pace of study', non-compulsory nature of class room attendance, and learner-centric approach in studies has benefitted a large segment of population who otherwise would not have got opportunities to pursue their studies. A major component of vocational education curriculum is hands-on training and practicals. Initially it was found to be difficult to combine two opposing features – compulsory nature of hands-on practice in vocational programmes and voluntary nature of attendance envisaged in distance education. In recent years, however, ODL system has become more innovative and has found ways to blend hands-on training and practicals with theoretical knowledge. Compulsory participation in short-duration intensive contact programme or practical classes spread-out over the weekends has become an essential feature of vocational courses offered through ODL. The inadequacy of conventional education system in meeting the demand for skilled personnel has further accentuated the importance of ODL in vocational education.

The ODL initiative in the field of vocational education however is in its nascent stage and has not really taken off. The ODL institutions offering vocational education are few and far between; most of them pertaining to higher education. The National Institute of Open Schooling (NIOS) is an exception which caters mostly to school education. NIOS vocational courses are offered at elementary, secondary, senior secondary and post-senior secondary levels through a network of its study-cum-training centres known as Accredited Vocational Institutes (AVI). The number of AVIs has grown over the years, as has the number of vocational programmes that are offered. However, despite concerted efforts to reach the unreached, the clientele of vocational courses seems to be declining in the past few years. Against this backdrop, an assessment of the enrolment pattern of NIOS appears to be appropriate.

The main objective of the present paper is to examine the enrolment pattern in vocational programmes of NIOS, particularly its trend, regional variation and gender distribution. The paper is based on data available from secondary sources. The paper is organized as follows: Section 2 below provides a panoramic overview of vocational courses offered by NIOS. Section 3 assesses the trend in vocational education in terms of its popularity across Indian states and among male and female candidates. Section 4 brings out the major conclusions of the paper.

2.0 Overview of Vocational Courses in NIOS

The NIOS was set up by the Ministry of Human Resource Development, Government of India as an autonomous organisation in 1989 with an objective of providing relevant continuing education at school stage, up to pre-degree level through ODL mode. In addition to general education at secondary and senior secondary levels it offers vocational education in seven broad areas, viz., Agriculture, Engineering & Technology, Health & Paramedical, Home Science & Hospitality Management, Computer & Information Technology, Business & Commerce, and Teacher Training. Vocational courses in NIOS started in 1992 as a Vocational Unit was created within the Academic Department to design and develop vocational courses. NIOS started vocational education with six courses in the areas of Typewriting (English), Typewriting (Hindi), Stenography (English), Stenography (Hindi), Jan Swasthya (Community Health), and Paripurna Mahila (Empowerment of Women) in 1992. As the number of courses and enrolment in vocational courses increased, a separate department called Vocational Department was established in 2002.

Keeping in view societal needs and market demand, new areas have been added to the list and the range of vocational courses has expanded over the years. As of November 2010 the NIOS offered 80 vocational courses; the duration of the courses ranging from 6 months to 2 years. These courses are offered as (i) Package courses of Certificate level and Diploma level which can be of one or two years duration, (ii) Stand-alone courses that are available in combination with academic courses and as independent courses too, (iii) Life Enrichment Courses, and (iv) Six months courses of certificate level. The broad areas of courses offered by NIOS are presented in Figure 1.
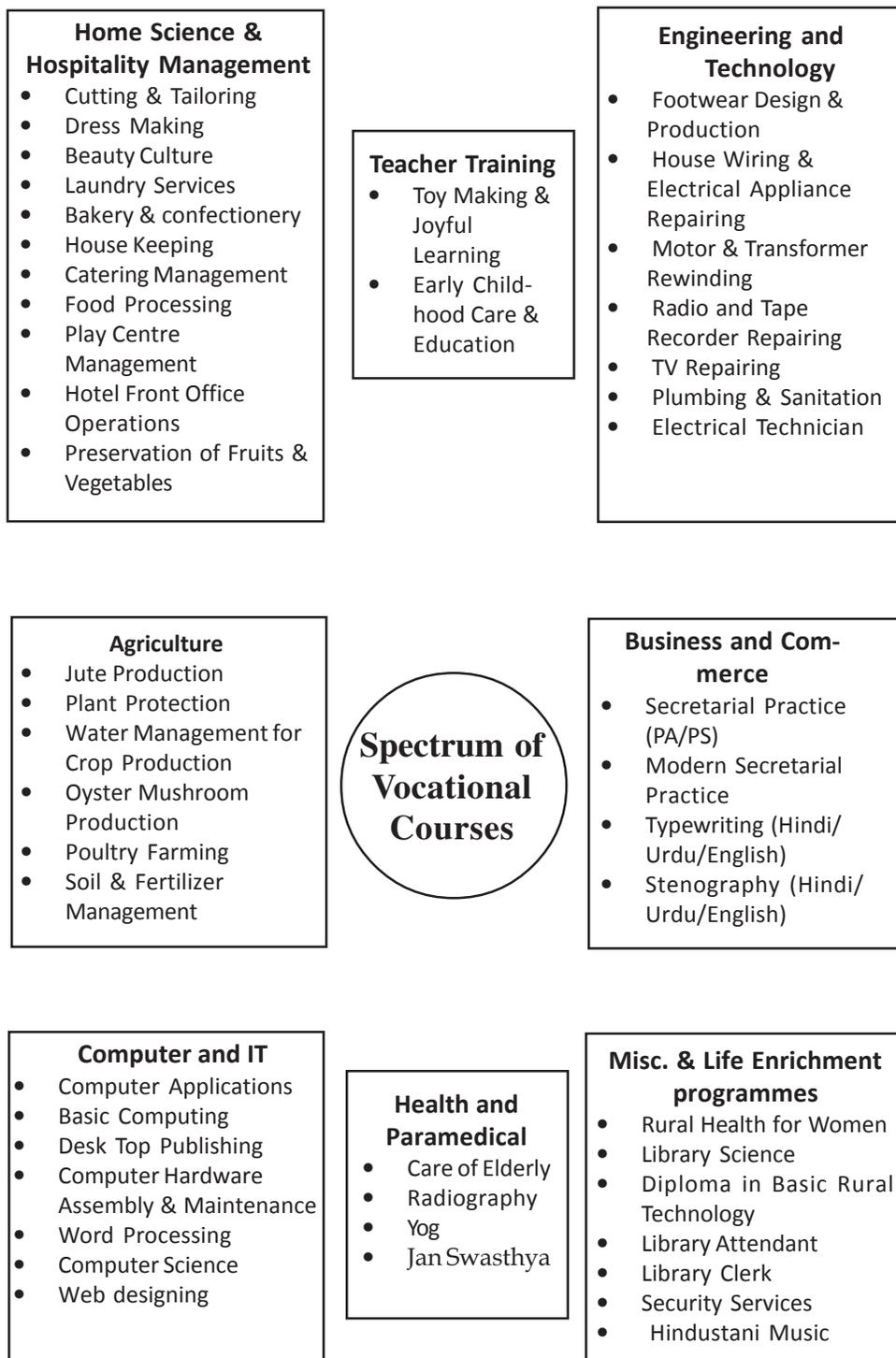
**Home Science &
Hospitality Management**
- Cutting & Tailoring
- Dress Making
- Beauty Culture
- Laundry Services
- Bakery & confectionery
- House Keeping
- Catering Management
- Food Processing
- Play Centre
  Management
- Hotel Front Office
  Operations
- Preservation of Fruits &
  Vegetables

Teacher Training
- Toy Making &
  Joyful
  Learning
- Early Child-
  hood Care &
  Education

**Engineering and
Technology**
- Footwear Design &
  Production
- House Wiring &
  Electrical Appliance
  Repairing
- Motor & Transformer
  Rewinding
- Radio and Tape
  Recorder Repairing
- TV Repairing
- Plumbing & Sanitation
- Electrical Technician

Agriculture
- Jute Production
- Plant Protection
- Water Management for
  Crop Production
- Oyster Mushroom
  Production
- Poultry Farming
- Soil & Fertilizer
  Management

**Spectrum of
Vocational
Courses**

**Business and Com-
merce**
- Secretarial Practice
  (PA/PS)
- Modern Secretarial
  Practice
- Typewriting (Hindi/
  Urdu/English)
- Stenography (Hindi/
  Urdu/English)

Computer and IT
- Computer Applications
- Basic Computing
- Desk Top Publishing
- Computer Hardware
  Assembly & Maintenance
- Word Processing
- Computer Science
- Web designing

**Health and
Paramedical**
- Care of Elderly
- Radiography
- Yog
- Jan Swasthya

**Misc. & Life Enrichment
programmes**
- Rural Health for Women
- Library Science
- Diploma in Basic Rural
  Technology
- Library Attendant
- Library Clerk
- Security Services
- Hindustani Music

Figure 1: Spectrum of Vocational Courses

Source: Based on publicity folders of NIOS

NIOS functions through a network of AVIs (study centres) for imparting skill-based training to its learners. Existing institutions such as Industrial Training Institutes (ITIs), Jan Shikshan Sansthans (JSS), Krishi Vigyan Kendras, NGOs and several other voluntary agencies are associated with NIOS in imparting vocational education. In line with the public-private partnership, certain industries are also coming forward to have collaboration with NIOS. In 2009 the NIOS signed an MoU with CISCO to offer courses in the area of Computer and IT while discussions with some others are in progress.

Admission to vocational courses is open throughout the year. A prospective student can submit application form either on-line at NIOS website or at the AVI where (s)he wants to take admission. The AVI is the contact point for students. The curriculum includes self-learning material (SLM), internal assessment (in some courses), audio/video component, lecturers in educational TV channel and radio, contact classes (theory) and hands-on training (lab/workshop sessions). The hands-on training imparted at AVIs carries a weightage of 60 to 70 percent in the final gradation of students. The students are expected to attend prescribed practical hours at AVIs.

The evaluation of students in vocational courses at NIOS is similar to that in conventional mode. In order to complete vocational examination three components, viz., i) practicals, ii) theory, and iii) internal assessment/project work have to be evaluated separately. In order to provide flexibility in pace of learning, enrolment of a student is valid up to a maximum of five years during which the student can appear in the final examination to clear the courses. Both theory and practical examinations are conducted twice a year. A student has the choice of writing answers in regional languages in addition to English and Hindi. It is observed that a vocational learner usually takes one to two years to complete a course; notwithstanding the cases of some students who take a longer time period.

3.0 Enrolment Patterns

3.1 Enrolment Trend

Enrolment in vocational courses of NIOS has shown a sharp increase up to 2002-03 after which a declining trend is observed (see Table 1). The number of students increased at a rapid rate from 5822 in 1997-98 to 22321 in 2002-03. The enrolment during the subsequent period (2003-04 to 2009-10) is quite discouraging; it has not seen a positive growth except for 2005-06 and 2007-08. The above data is plotted in Figure 2, which shows the stagnation in enrolment after 2002-03.

Table 1: Year-wise Enrollment in Vocational Courses

| Year	Enrollment	Per cent change	Year	Enrollment	Per cent change
1997-98	5,822	51.00	2003-04	21,211	(-) 4.97
1998-99	7,164	23.05	2004-05	20,985	(-) 1.07
1999-00	10,611	48.12	2005-06	22,879	9.03
2000-01	12,026	13.34	2006-07	22,166	(-) 3.12
2001-02	17,770	47.76	2007-08	23,674	6.80
2002-03	22,321	25.61	2008-09	22,343	(-) 5.62
			2009-10	19,073	(-)14.64

Source: Annual Report, 2009-10, NIOS
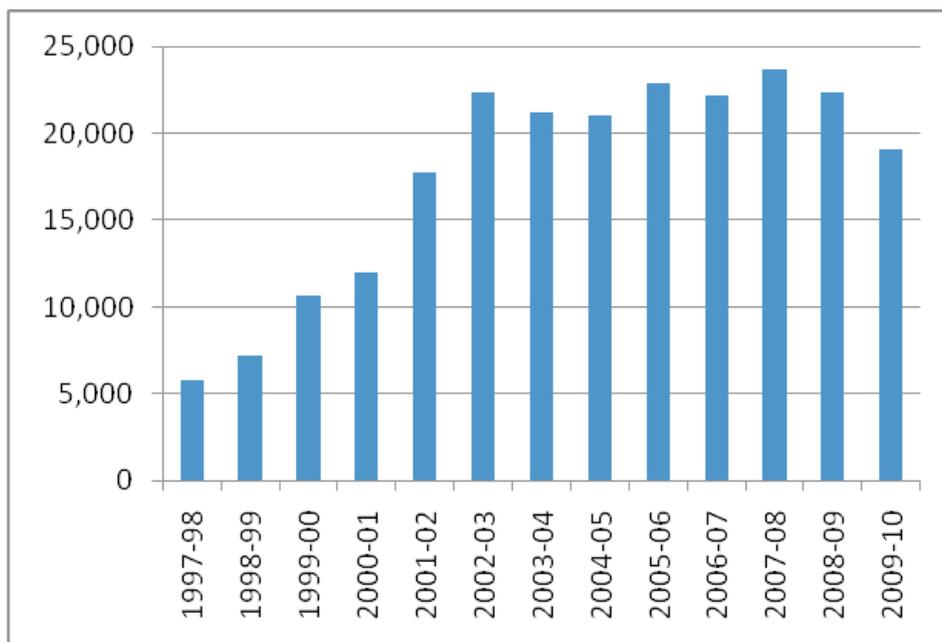
The stagnation in enrolment in vocational courses, however, is in sharp contrast with overall enrolment in NIOS. Enrolment in academic courses increased from 238069 in 2004-05 to 419702 in 2009-10. As a percentage of total enrolment the share of academic courses increased from 91.9 per cent in 2004-05 to 95.65 per cent in 2009-10 while that of vocational courses decreased from 8.1 per cent in 2004-05 to 4.35 per cent in 2009-10 (see Table 2).

Table 2: Total Enrolment of Students in NIOS

year	Number of Students Enrolled			Percentage enrollment	
	Academic	**Vocational**	**Total**	**Academic**	**Vocational**
2004-05	238069	20985	259054	91.90	8.10
2005-06	267026	22879	289905	92.11	7.89
2006-07	290983	22166	313149	92.92	7.08
2007-08	356726	23674	380400	93.78	6.22
2008-09	371625	22343	393968	94.33	5.67
2009-10	419702	19073	438775	95.65	4.35

Source: Author's calculation from Annual Reports of NIOS

For a clearer perception the enrolment in vocational and academic courses are plotted in Figure 3. It shows that enrolment in academic courses is much higher than that in vocational courses. Moreover, the increasing trend in academic and decreasing trend in vocational courses can be observed from Figure 3 given below.
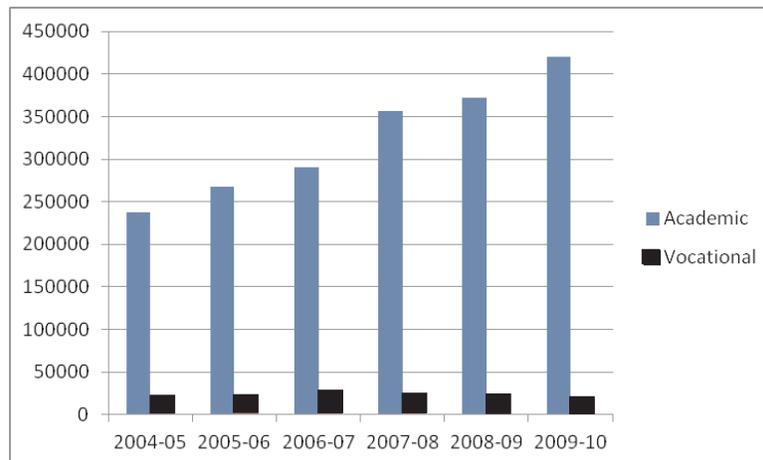
Figure 3: Enrolment during 2004-05 to 2009-10

As can be observed, the number of students enrolled in vocational courses is much less compared to total enrolment of NIOS. In the session 2009-10 vocational courses had a share of only 4.35 per cent in total enrolment (see Table 2). This could be because of the perception among people that vocational education is somewhat inferior compared to general education. Researchers have highlighted this issue in empirical studies of many developing as well as developed countries (see for example, Alam, 2008 and Tilak, 2002 among others). According to UNESCO (2004) South Asian countries have very small vocational secondary education system; enrolment in vocational education being less than 2 per cent of total enrolment in secondary education. Other possible causes for low enrolment could be lack of emphasis on vocational education, non-revision of courses and ill-designed courses. Vocational

education is considered to be an antidote to urban-biased elite education and it retains the potential to bridge the rural urban gap (Tilak 2002). Thus establishment of AVIs in small towns which cater to rural population may help in enhancement of enrolment in vocational education.

3.2 Regional Variation in Enrolment

Vocational students of NIOS are attached to an AVI where they avail facilities such as contact classes and hands-on training. The availability of an AVI may provide incentives to prospective students while non-availability of an AVI in the region blocks their entry to vocational education. The highest number of AVIs are present in Delhi (240) followed by Uttar Pradesh (160). It may be pointed out here that these two states account for the highest enrolment. There are certain states mostly in the North-East (see Table 3) where no AVI is present.

Table 3: Distribution of AVIs and Vocational Students (2009-10) across States

Sl. No.	State	Number of AVIs	Number of Students	S.No.	State	Number of AVIs	Number of Students
1	Andhra Pradesh	16	153 (0.80)	19	Nagaland	02	0
2.	Arunachal Pradesh	01	0	20	Odisha	20	452 (2.37)
3.	Assam	08	130 (0.68)	21	Punjab	35	915 (4.80)
4.	Bihar	49	922 (2.88)	22	Rajasthan	53	549 (4.84)
5.	Chattisgarh	20	337 (1.77)	23	Sikkim	0	0
6.	Goa	05	68 (0.36)	24	Tamil Nadu	61	609 (3.20)
7.	Gujarat	16	133 (0.70)	25	Tripura	01	0
8.	Haryana	50	1188 (6.23)	26	Uttarakhand	28	158
9.	Himachal Pradesh	49	1110 (5.82)	27	Uttar Pradesh	160	3286 (17.24)
10.	Jammu & Kashmir	21	260 (1.36)	28	West Bengal	21	314 (1.65)
11.	Jharkhand	21	188 (0.99)	29	Andaman & Nicobar	02	07 (0.04)
12.	Karnataka	24	497 (2.61)	30	Chandigarh	06	298 (1.56)
13.	Keral	93	1823 (9.57)	31	Dadra and Nagar Haveli	0	0
14.	Madhya Pradesh	91	1180 (6.19)	32	Daman & Diu	0	0
15.	Maharashtra	38	675 (3.54)	33	Delhi	240	3697 (19.40)
16.	Manipur	02	0	34	Lakshadweep	0	0
17.	Meghalaya	01	0	35	Pondicherry	02	100 (0.52)
18.	Mizoram	0	0	36	Overseas	03	07 (0.04)
					Total	**1139**	**19073 (100.0)**

Notes: 1. Data pertains to the academic year 2009-10.
2. Figures in parentheses indicate percentage to total.
Source: Author's calculation from Annual Reports of NIOS.

It can also be observed from Table 3 that the number of students admitted in some AVIs is too small. This could be because of two reasons. First, vocational institutes require specialized equipment and faculty as a result of which an AVI is permitted to enroll students only in a limited number of programmes depending upon its available infrastructure. Second, except for certain programmes such as Beauty Culture, Cutting and Tailoring, Computer Applications, Early Childhood Care and Education, and House Wiring and Electrical Appliances Repairing, many courses are not opted for by many. For the session 2009-10 there are 40 courses where enrolment is less than 50 and in 10 courses it ranges between 50 and 100. Only in the case of 14 courses enrolment is above 1000. There are 11 vocational programmes, viz., Type Writing (Hindi), Solar Energy Technician, Biogas Technician, Plant Protection, Food Processing, Preservation of Vegetables and fruits, Soil and Fertilizer Management, Four Wheeler Mechanic, Electroplating, Paripurna Mahila and Library Clerk where enrolment is in single digit (NIOS 2010).

There is much variation in enrolment across states in India (see Table 3). While the vocational courses offered by NIOS are popular in certain states, they are yet to make a mark in many states. Table 3 presents the number of students enrolled in vocational courses (combined) in various states during the session 2009-10. It can be observed from the table that the highest number of students come from Delhi (19.4 per cent) followed by Uttar Pradesh (17.24 per cent). Some other states with substantial enrolment are Kerala (9.57 per cent), Madhya Pradesh (6.19 per cent) and Himachal Pradesh (5.82 per cent). It is worth mentioning that the North Eastern states have no enrolment at all except for Assam where 130 students are enrolled in 2009-10.

3.3 Participation of Females and Socially Disadvantaged Groups

Usually education in the Indian scenario is biased against females, although the situation is improving over time due to growing awareness among people. The difference between females and males become sharper as one moves up along the education levels (NSSO, 2010). The number of female students enrolled in vocational courses of NIOS however is much higher than that of male students. It can be seen from Table 4 that 55.11 per cent students in vocational courses of NIOS are females compared 44.89 per cent males. Two explanations, as given below, can be put forth in support of the above feature.

First, the NSS Report (64th Round) (NSSO, 2010) surveyed the educational expenditure and participation in India for the period July 2007 to June 2008. It found that per capita expenditure for males in vocational education was Rs. 13480 compared to Rs. 2595 in general education and Rs. 32594 in technical education. On the other hand, per capita expenditure for females in vocational education was Rs. 17705 compared to Rs.2293 in general education and Rs. 31111 in technical education. An implication of the above is that vocational education for females is more expensive compared to that for males. This is in sharp contrast to general education and technical education where per capita expenditure for females is cheaper than that for males. No such

disadvantage is faced by female students in vocational courses of NIOS. The disincentive in terms of higher expenses of vocational education in conventional mode works as an incentive for females to join NIOS. The bias against females in conventional mode explains to some extent why more females opt for vocational courses of NIOS.

Second, family environment in India has seen some discrimination of female child where males get preference over females, which extends to education also. Parents may set different priorities for males and females; they may not like females to travel longer distance on a daily basis or to move out of the locality or may not like to spend higher amounts on education of a female child. Flexibilities offered by NIOS perhaps help such students to realize their goals.

Table 4: Gender/Social Group-wise Enrolment in 2009-10

Gender	Number	Per cent	Social groups	Number	Per cent
Males	**8562**	**44.89**	**General**	**16823**	**88.21**
Females	10511	55.11	Scheduled Castes	1611	8.44
Total	19073	100.00	Scheduled Tribes	468	2.46
			Ex-serviceman	12	0.06
			Differently Abled	143	0.75
			OBC	16	0.08
			Total	**19073**	**100.00**

Source: Annual Report of NIOS, 2009-10

Another concern often expressed is of social equity in enrolment. It is observed that enrolment from backward segments of population is comparatively less in educational institutions, which calls for reservation of seats. Since NIOS is an ODL institution, it does not have any limitations on number of seats. Moreover, as admission is not based on entrance test, reservation of seats is not required. Despite the fact that admission is offered to all, enrolment of SC, ST and OBC is much less than expected.

4.0 Conclusion

Four major inferences can be drawn from an analysis of the vocational enrolment data of NIOS. First, there is decline in enrolment in the recent past; the trend needs to be reversed. Second, NIOS at present is offering a number of vocational courses where enrolment is abysmally low; these courses need to be either abandoned or drastically restructured. Third, female students find the NIOS vocational courses much more attractive; NIOS may capitalize this positive feature. Fourth, vocational education is concentrated in a few states;

concerted effort should be made to spread it to other states.

Vocational courses are very often region-specific such that local culture and requirements need to be taken into account at the curriculum design stage. Secondly, in a fast-changing socio-economic environment, vocational courses need to be revised frequently. In fact, Daniel and Ferreira (2009) bring out certain 'desirable features' of an open schooling system to serve as a resource base. These desirable features are

- Good learning material

- Focus on curriculum

- Regular, reliable and timely assessment of learning

- Pedagogical materials for teachers

- Relevant content

- Teaching of reading and writing

- Structured teaching: direct instruction, guided practice, and independent learning

- Appropriate language instruction

- Larger classes if accompanied by better inputs

Many vocational courses offered by NIOS pertain to traditional vocations passed over generations in a family set up or learnt in an informal set up where formal teaching/training is not found necessary. NIOS may recognise such prior learning in informal setting and upgrade and certify their skill. A modular framework of courses may be adopted to integrate prior learning with formal vocational training.

In the case of certain courses the involvement of corporate sector in design and development stages appears to be of paramount importance. After economic liberalisation India has witnessed technological upgradation in many fields. The requirement of industries, so far as skilled workers are concerned, is changing too fast. Involvement of industries and private sector at curriculum design phase may help increase employability of the students.

The perceptions of students and prospective employers matter much for the popularity and relevance of vocational courses of NIOS. In the absence of survey data, analysis of such a nature, however, cannot be carried out. Future research on vocational education should be focused in this direction.

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Potential of Open and Distance Learning for Training of Paramedical Technicians: Case Study of Radiography Course offered by the National Institute of Open Schooling (NIOS), India

[1] **Dr. Mamta Srivastava and** [2] **Prof. Satish K. Bhargava**

Abstract : *Paramedical science is an inseparable part of the health care system and runs parallel to the medical science in diagnosis and treatment of diseases. Diagnostic tools like the clinical laboratory, X-ray, Ultrasound, CT scan and other invasive or non-invasive methods and therapeutic technical modes like physiotherapy, occupational therapy and speech therapy are part of the paramedical system.*

With development of medical science and its attendant spurt in complex mechanization of medical equipment, there has been substantial growth in paramedical science. There is an ever increasing demand for trained paramedical manpower in the Indian subcontinent as reflected in the Report of the Prime Minister's Council on Trade and Industry. Paramedical education has become an important and integral part of medical education. It is the backbone of health care delivery system.

1.0 Situation Analysis in India

India is a huge country with population of over 1000 million. Health care service is under tremendous pressure. Despite its importance in the health care industry, the potential of paramedical science as an organized form of education is still vastly underestimated. The government has so far, not drawn any strategy to promote independent paramedical education. There is no paramedical council like the Medical Council, the Nursing Council and the Pharmacy Council to govern this particular system of education. Exploiting this legal loophole, many unscrupulous agencies have opened training centres. In the absence of any governing authority, administrative regulation of centralized system, numerous pigmy-size dubious centres have mushroomed all over India. They distribute certificates, not knowledge. They produce certified paramedics, not qualified and educated personnel. They have made paramedical training a sort of profitable business, not social service. Bhabha Atomic Research Centre (BARC) in a national survey has observed that only 40 % of trained and qualified technical staff is working in hospitals, nursing homes and diagnostic centres. However, this figure is about 65 %-70 % in metros and district head quarters. With the availability of high tech equipments, it is important to have qualified trained staff. Imaging services are no exception in this regard. Expansion of imaging services has increased the pressure on services by radiographers/technicians. The status of radiography services

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can be assessed by comparing the estimated number of individuals served by one radiographer in India and some other countries (Table 1).

Table 1: No. of Persons served by one Radiographer in India, Australia, U.K. and U.S.A.

Country	India	Australia	U.K.	U.S.A
No. of persons served by one radiographer	1,14,000	5200	4480	2270

It is clear from these figures that India needs to train and upgrade more radiographers for better imaging services to serve its huge population.

2.0 Need for training of Paramedical Workers

In a developing country like India, where an optimal level of health service seems to be a dream today, the number of health workers is inadequate. The number of training institutions needs to be increased. A survey conducted by the Federation of Indian Chamber of Commerce and Industry (FICCI) *on emerging skill shortage in the Indian industry revealed the following:*

●   There were about 5,92,215 doctors available in the country in 2005 whereas the projected demand for 2015 was 1,200,000.

●   The number of nurses available in the country in 2005 was 929,826 and the projected demand in 2012 was 1,109,826.

●   In case of paramedics, acute shortage is likely to emerge in case of radiographers, ECG technicians,O.T Technicians, and Audiometrists

> *The data presented by the Prime Minister's Council on Trade and Industry also shows a similar trend.*

●   The number of Doctors required in the country by 2015 was 1,241,000.

●   The number of X-ray technicians required by 2015 was 12,410 against the available number of 4872.

●   The number of lab technicians required by 2015 was 62,050.

●   With limited number of training institutions, it is extremely difficult to train a large number of medical officers and paramedical workers.

2.1 Strategies for Training of Paramedical Workers through Distance Education

Distance education systems have emerged all over the world to meet the growing demand for education, including professional education, to provide opportunities at a comparatively low cost, and for meeting the continuing education needs of professionals and various other functionaries. The distance education system often involves a mix of multi-media for designing, developing

and implementing independent learning programmes through self-instructional materials, both in print as well as electronic format. Various media used for distance education delivery include print materials, audio and video programmes, radio and television programmes, tutoring and counselling, field visits, laboratory practicals, extended contact programmes, and teleconferencing. Distance education system allows self pacing for convenience of learners. It facilitates learners to have control over their learning.

2.2 Distance Education as a Potential Alternative Mode for Training of Paramedical Technicians

Distance education is considered as one of the most significant innovations in the field of education. It is a relatively new concept in India. Distance Education not only has the ability to train a large number of workers in a short time in a cost effective way but can also attend to skills without diluting the quality. The target learners can enjoy independent studies where print materials serve as educational tools and the cost of learning is comparatively less. The National Knowledge Commission, set up by the Prime Minister of India in 2005 to recommend and undertake reforms in order to make India a knowledge based economy and society, has strongly recommended distance education mode for upgradation of skills, for continuing education and also for normal teaching learning processes.

The National Institute of Open Schooling (NIOS), the largest Open Schooling system in the world, offers several courses of study in the area of Health and Paramedical education through distance mode. In 2007, having realized the potential of distance education, the Indian Medical Association with a strength of 1,78,000 doctors across India approached the NIOS for collaboration and signed an MOU for development of two more Diploma courses in the field viz., Medical Lab Technician and Operation Theatre Technician. Diploma courses in X -ray Technician or Radiography was introduced in the year 1999. The course was developed in collaboration with the University College of Medical Sciences and Guru Tegh Bahadur Hospital, Delhi. The eligibility for this course is Senior Secondary with science subjects.

Keeping the quality issue in mind, till date only 29 accredited centres (Study Centres) are operational all over India with an intake of only 10 students per accredited centre. The course gained publicity after 4 years of launching and majority of the centres became NIOS accredited centres after 2002.

3.0 Methodology

A questionnaire was designed and administered to the coordinators of all the 29 study centers where the radiography course was in operation. The questionnaire comprised of 2 sections. The first one was regarding personal details like age, sex address etc, while the second one was about course completion and about the placement or the after completion what the candidate was doing, salary etc. The data regarding the passouts was given by the coordinators of the study centers.

Table 2: Students registered with NIOS for Radiography course during last 5years

Year	Male	%	Female	%	Total
2002	121	77	30	23	151
2003	148	81.3	34	18.6	182
2004	99	75.5	32	24.4	131
2005	58	59.1	40	40.8	98
2006	37	50	37	50	74
2007	95	69.8	41	30.1	136
Total	**558**	**72.2**	**214**	**27.7**	**772**

The average age group of vocational admissions in NIOS is 15 to 20 years but for the Radiography course the same trend was not seen. For the X-ray technician course, the average age of admission is 20 to 25 years.

Table 3: Average Age Group of Vocational Education

Age Group	No.	%
< 20 years	96	12.4
20-25 years	384	49.7
>25 years	292	37.8

The radiography programme has shown a pass rate of 65% for year 1999-2007. A total of 370 students successfully completed the programme as per the data accounted upto 2007. The success of any vocational programme can be judged by employment avenues, job opportunities for learners, and satisfaction of the employers. Information gathered from those who have successfully completed the programme through feed back from the Accredited Vocational Institutions indicates that they have got jobs as Dark room assistants or Junior Radiographers in government / private hospitals and diagnostic clinics etc.

● 57.8 % of the pass outs are in jobs.

● 3.5 % went in for higher studies.

● Information is not known for the remaining 38.7%; of these, 14.2% are female candidates. There is no information whether they are unemployed or are married and have moved out.

- The employers are satisfied with the course content and the trained personnel that they are getting. Moreover, looking at the potential of the few institutions and the type of training that they impart, the number of seats allotted to them have also been increased for admission.

- The learners are also satisfied because there is ample job opportunity for them.

4.0 Conclusion

It is very clear that for a growing economy like India the skilled and trained work force is needed. Our formal education system can not produce desired number of skilled workers. In such a situation the alternative open and distance learning model has a tremendous scope for tackling such problems. In Developing countries where there is a need of providing training to large number of workers and with limited resources in such situation ODL models could play an important and viable role in improving over all skills of workers.

It is quite obvious from the FICCI Survey and the report of the Prime Minister's Council on Trade and Industry that demand for skilled workers in the area of radiography is quite high and is ever increasing. However as new and advanced high tech diagnostic techniques are coming up in the field of radiography, additional modules have to be added to the existing learning material. In order to update them and bring in the latest advancements in the field, Distance Education is an appropriate system of education for producing skilled radiographers.

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BOOK REVIEWS

Perspective on Distance Education: Open Schooling in the 21st Century

Dominique A.M.X. Abrioux and Frances Ferreira, Editors
Published by Commonwealth of Learning, Vancouver, 2009

This book is a very important addition to the as yet quite limited literature on Open Schooling. It is a thorough examination of some of the major issues around this growing trend in open and distance learning illustrated by a wide-ranging and carefully selected collection of case-studies.

In the preface, Sir John Daniel, President of the Commonwealth of Learning makes the welcome statements that: *'open schooling is an idea whose time has come……It can support the lifelong learning that enables people to prepare for – and respond to – the different roles, situations and environments that they will encounter during their lives'*

The book is divided into two parts: themes and issues around open schooling, including the Introduction by Dominique Abrioux and the Conclusion by Frances Ferreira and six case-studies drawn from different continents. It is worth noting that only one of the six has the words open schooling in its title, four of the others are called open colleges and one a learning network. I believe that for the range of target audiences covered, the word college is more appropriate (and possibly more acceptable to them) than the word school. It is, perhaps, too late for a plea to change the generic phrase used from schools to colleges…but I make it nevertheless.

 For me, the two most important chapters are the first two. The Introduction by Dominique Abrioux in a masterly fashion captures the essence of and the major issues around open schooling. These latter he summarises as:

- *increasing the breadth and equality of access;*

- *ensuring openness of access;*

- *ensuring that the curriculum provided to secondary school learners is relevant to the needs of their various constituencies;*

- *improving the quality of teaching and learning; and*

- *maximizing the cost-effectiveness, cost-efficiency and sustainability of the educational system.*

He goes on to elaborate these themes, in all cases thought-provokingly and succinctly. Suffice it for this review to refer to points he makes under three of

these headings. First, increasing the breadth and equality of access: he draws dramatic attention to the growing need for secondary education as more and more young people complete primary schools but cannot and will not find places in traditional secondary schools and also to the equally large and growing need for adults and post-school-age youth for access to secondary education to allow them to compete in the world of employment and self-employment. As he asks at the end of the section:

- *Is the target audience regular school age or more mature?*
- *What are the socio-economic characteristics of the audience?*
- *Are traditionally disadvantaged segments of society being targeted?*

Under the degree of openness, he draws attention to the claim that open learning should *'reduce barriers that may result from prior educational, financial, geographic, time or disability-related constraints;'* and raises the question as to the degree to which the case-studies and other open schools achieve this goal. Finally, and in my mind related to both, he draws attention to the issue of the appropriate curriculum for these audiences, making the point that *'different client groups may benefit from a different balance between academic and vocational programming;'*

Running through all the case-studies are the issues of relationships between the institutions themselves and the governments under which they operate. In particular these relate to whether or not there exists a clear government policy on open schooling and the extent to which the governance structures of the institutions allow them a significant degree of autonomy or restrict them to the rules and regulations of conventional education. Chapter 2, by Ed Du Vivier and Justin Ellis, deals with these issues in a clear and practical way. They stress the vital importance of governments enunciating a policy on open learning and, in particular, on open secondary provision, within which decisions on financing can be made and institutions should shape their own implementation plans. They list the advantages both for government policy makers and administrators in general and for open learning institutions staff, governors and students in particular of a clear government policy, stressing both that:

> *'Good policy ensures that the ODL sub-sector is less vulnerable to changes in government and funding priorities. Incorporating references to ODL in public statements of a government's intentions can also raise the status of this form of education and demonstrate how it fits in with the education system as a whole.'*

Du Vivier and Ellis then go on to give an excellent breakdown of the steps that have to be gone through in developing a government policy on open learning at pre-tertiary level, including its necessary limitations and the elements such a policy statement should include. They end with a list of 'practical tips for an effective policy' which could well serve as a checklist for the whole book:

- • *Put the beneficiaries at the forefront*
- • *Technology is not the best starting point*
- • *Saving money is not the main thing either*
- • *Sorry, but OS is not a quick-fix solution*
- • *Integrate OS with the education system as a whole*

I found the chapter by Margaret Haughey and Brian Stewart on ICT in open schooling the least satisfactory in the book. This was partly because I didn't fully understand a lot of it…possibly because of my own limited technical knowledge and the fact that I have been retired from active service for eight years now. The main reason, however, was that I do not believe that it is targeted sufficiently at open schools, particularly those in developing countries, as opposed to open universities in the industrialised world. The case-studies' sections on ICT, with the exception of that of the VLN, illustrate the real problems facing open schools in using advanced ICT. To some extent these are acknowledged in the closing pages of the chapter where two statements go a long way to redeeming its overall tone. First it is acknowledged, with reference to a previous study by Koul and Rumble, that:

> *'With respect to ICT, they point out that the global cost structure is not favorable to developing countries and that the comparative cost of face-to-face instruction may be substantially lower than the technological alternative.'*

Secondly one of their conclusions is that:

> *'The decision about what learning designs will be most appropriate should be made first. Then decisions about how to actually make this happen in the particular context should be made'*

As we have come to expect, Greville Rumble's chapter on Costs of Open Schooling is down-to earth, easy to understand and a practical guide for planners and managers on the cost issues that they need to take into account when designing or running an open school. I found refreshing his substitution of fixed and variable costs by committed and flexible costs, both concepts I find easier to understand. I have two comparatively minor quibbles with his conclusions about two of the factors affecting costs, not with the accuracy of what he says but with their possible implications: first his statement that *'The high cost of face-to-face support means that its use should be limited if costs are to be kept down.'* Surely where face-to-face support for young students means a significantly higher success rate, and there is some evidence that it does, those extra costs are worth it for economic, educational and social reasons so long as it is used in the most educationally effective way. Secondly, his suggestion that passing the costs on to students is one way of reducing costs would mean in many open schools seriously decreasing their ability to reach out with education to the most disadvantaged of students who must be their priority target audience.

The case studies are well chosen to represent a variety of countries and educational situations. They include four from developing nations, the Botswana College of Distance and Open Learning (BOCODOL), the National Institute of Open Schooling (NIOS) in India, the Namibian College of Open Learning (NAMCOL) and the Open College of the University of Papua New Guinea and two from industrialised nations, the Open Access College (OAC) of South Australia and the Vancouver Learning Network (VLN) of Canada. They also exemplify different governance structures, from ministry units to semi-autonomous institutions and a department of a university. One of the most interesting features of the selection is the variety of target audiences, from out-of-school children especially in the NIOS, to post-school-age youth and adolescents in BOCODOL and NAMCOL, adults in PNG and South Australia and cross-enrolling school students in Vancouver. This ability to reach out to many different groups of students is certainly one of the great strengths of open schools/colleges. There is clearly a lot of research needed to identify the variations of curricula, the most effective media/technology combinations and the varying levels and kinds of student support required to meet the respective needs of these different student bodies. Similarly, more research would be revealing about the effectiveness of different governance structures. If this book stimulates such research, its value will be immense.

The concluding chapter by Frances Ferreira efficiently summarises the main features of the case studies and draws a clear set of conclusions from them, relating them also to the themes high-lighted in the earlier chapters. Frances brings additional insight to bear on her conclusions from her own significant personal experience as the founding manager of one of the Colleges covered. Her chapter, like the book as a whole, is a 'must-read' for anyone planning or managing an open school or college, now or in the future, especially the final set of 'Recommendations for Open Schooling'. This is also a checklist for future research.

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Dropouts: A Challenge to Distance Education

The real wealth of a nation is its people and as such the economic development of the country depends more on the human development than on any other resources. Education plays a vital role in developing human capabilities as education imparts knowledge, skills, and attitudes. In fact, education is essential for greater realization of human potential necessary for welfare of individual and the country as a whole.

The tertiary education or higher education is considered as a dominant force for human resource development as it provides requisite skills and enhances their competencies. Realization of benefits of higher education has increased the demand for higher education considerably.

The education system has been changing with change of civilization. Due to ever increasing demand for education, the education system has transformed from gurukula system to classroom system and then to open and distance learning mode of education.

The National Policy Resolution on Education suggested further expansion of higher education through private study and evening colleges. This was reviewed in the year 1986. The National Policy on Education (NPE-1986) emphasized consolidation of existing institutions and as also launching of the open and distance learning system in order to augment opportunities for higher education.

The Study on Dropouts envisaged understanding their problems and suggest measures to prevent or minimize dropout rate. Wisdom lies not merely in dealing with the existing dropouts but in ensuring that dropout problem does not occur in future. It is imperative that distance education system in India should envisage maximum retention of students for human resource development.

The author of the book has given emphasis on identifying the underlying causes and factors that lead to the process of learners dropping out of distance education. What are the factors that hinder the learners to pursue their studies? How can one identify the potential dropouts so that preventive measures may be taken to retain them till successful completion of their courses of study. Among other things, the book under review explores studies of various distance education institutes in India and abroad.

Chapter one elaborates the meaning of Distance Education. "Distance Education denotes a system of education where the study is not led by teachers in classrooms but supported by counselors and an organization at a distance

from the learner". Thereafter the author mentions the Need for Distance Education, Theories of Distance Education, Aims and Objectives of Distance Education, Development of Distance Education and more importantly Flexibility in Distance Education System.

Global analysis of distance education system has been mentioned under two broad heads viz.,

- Distance education system in the first world;
- Distance education system prevailing in the Third World countries.

The author has also emphasized the role of the Commonwealth of Learning (COL) in distance education. COL was established in 1988 at Vancouver (Canada). It has contributed considerably in popularizing the distance education system and advocating the need for improvement of the quality of course materials, staff development and training, and dual mode of Open and Distance Learning (ODL) programme delivery – a part of the course to be covered by face to face teaching and rest through the distance mode.

The author has traced the evolution of Distance Education in India. With particular reference to the Indira Gandhi National Open University (IGNOU) that was established in 1985. Establishment of IGNOU assumed significance in the development of distance education in India. The IGNOU took a significant step by creating the Distance Education Council (DEC) in 1991 as a statutory body.

While giving an overview of role and functions of the distance education institutes, the author mentions advantages, limitations and challenges to distance education, and problem of dropouts in distance education.

The Second Chapter pertains to the studies on review of literature mentioning certain Dropouts conducted in India and abroad.

The Third Chapter on Research Methodology inter alia contains major factors that are responsible for dropping out. These include individual factors, psychological factors, family related factors, social related factors, health factors, education factors, employment related factors, economic factors, and institution factors.

In the Fourth Chapter the data collected in relation to dropouts in distance education programme has been analyzed based on the objectives and hypotheses of the study. The data has been subjected to the following approach, namely inferential and descriptive analysis. Inferential statistical technique was applied to derive the pertinent reasons for dropouts. The descriptive analysis was applied to find out the reasons for dropouts with regard to socio-economic background of the learners, Inferential statistical technique was applied to derive the pertinent reasons for dropouts.

The main objective of the study was to fathom the reasons for dropouts in three Universities, namely, the Madras University, the Madurai Kamraj University and the Bharathidasan University. The reasons for the dropouts were analysed in eight different dimensions and with regard to socio-economic background.

A majority of the dropouts expect that the university should have some tie-up with the nationalized banks for providing education loans to the needy learners.

The study concludes by a positive note that all the directorates of distance education/universities will take appropriate steps to ensure substantial decline in the percentage of dropouts. It suggests that student friendly distance education programmes will reduce substantially the drop out rate in distance education and would help the students to complete successfully the degrees/ diplomas course of their choice. They will definitely benefit by the ODL mode of education. It will eventually lead to suitable employment and career advancement.

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