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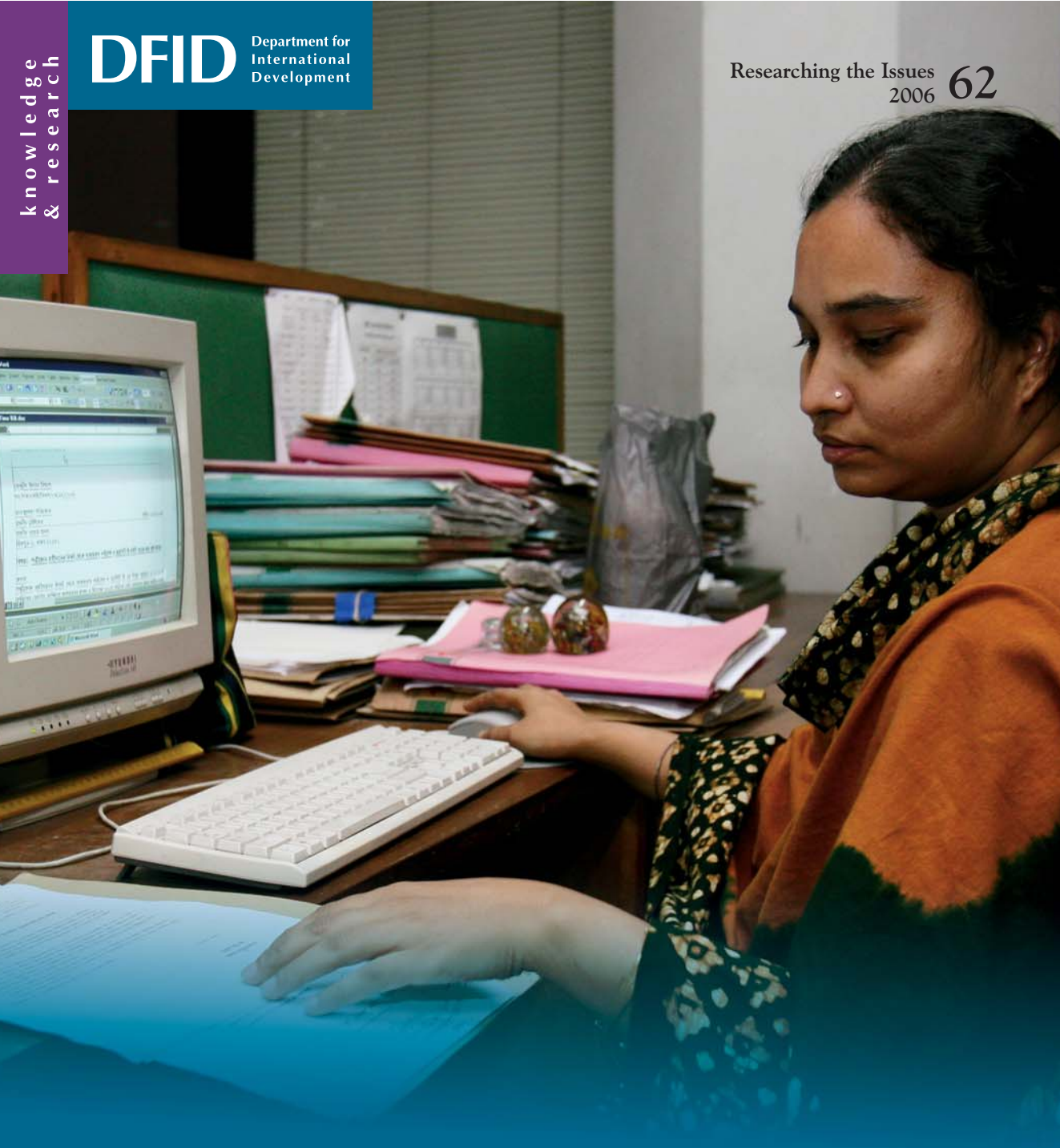

Using Distance Education For Skills Development

by Raheena Raza and Terry Allsop

Using Distance Education for Skills Development

Reehana Raza and Terry Allsop

International Research Foundation for Open Learning (IRFOL)

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Abbreviations and Acronyms

AIOU	*Allama Iqbal Open University*
APOSS	*Andhra Pradesh Open School Society*
BA	*Bachelor of Arts*
BAOU	*Dr. Babasaheb Ambedkar Open University (Gujarat)*
BBA	*Bachelor of Business Administration*
BCom	*Bachelor of Commerce*
BLIS	*Bachelor of Library Sciences*
BOU	*Bangladesh Open University*
BRAOU	*Dr. B.R. Ambedkar Open University*
BSc	*Bachelor of Science*
CBT	*Computer Based Training*
CIC	*Certificate in Computer Science*
CLP	*Certificate in Livestock and Poultry*
CPFP	*Certificate in Pisciculture and Fish Processing*
CRTVU	*Central Radio and TV University*
DEC	*Distance Education Council*
DFID	*Department for International Development*
DTE	*Directorate of Technical Education*
EFA	*Education for All*
GATS	*General Agreement on Trade in Services*
GDM	*Graduate Diploma in Management*
GNI	*Gross National Income*
GOI	*Government of India*
ICTs	*Information and Communication Technologies*
IGNOU	*Indira Gandhi National Open University*
ILO	*International Labour Organisation*
IRFOL	*International Research Foundation for Open Learning*
KOU	*Korean Open University*
LLB	*Bachelor of Law*
MBA	*Masters of Business Administration*
MDGs	*Millennium Development Goals*
MPBOU	*Madhya Pradesh Bhoj Open University*
NIS	*National Innovation Systems*
NOS	*National Open School*
NOU	*Nalanda Open University*
NSOU	*Netaji Subhas Open University*
NWFP	*North West Frontier Province*
ODL	*Open and Distance Learning*
OUSL	*Open University of Sri Lanka*
OUT	*Open University of Tanzania*
PRTVU	*Provincial Autonomous Regional and Municipal Universities*
PTC	*Primary Teachers Certificate*
SAARC	*South Asian Association of Regional Cooperation*
SC	*Scheduled Castes*
SSC	*Secondary School Certificate*
ST	*Scheduled Tribes*
UNISA	*University of South Africa*
VET	*Vocational Education and Training*
VTI	*Vocational Training Institutes*
YCMOU	*Yashwantrao Chavan Maharashra Open University*

Foreword

The present document compiles two separate but interlinked pieces of research **on the use of distance education for skills for development.** The objective of the research was to assess the outcome and effectiveness of professional and vocational programmes delivered through open and distance learning (ODL) in South Asia. The aim subsequently was to draw on this evidence on outcomes to reflect on what potential role ODL can play in low-income countries' skills strategies in a globalised world economy. The International Research Foundation for Open Learning (IRFOL) undertook the project for the UK DFID Skills for Development Project.

Open and distance institutions have now firmly been established in many developing countries. It is in South Asia, however, where they have the longest history. Whereas Africa is in the process of developing many of its ODL institutions, South Asia was the beneficiary of some of the first experiments with ODL (public) sector institutions in the world. Three out of four ODL institutions examined here have been working institutions for more than two decades. Enough time has now passed to make some assessment of how these institutions have performed and whether they have delivered on their potential. At the same time, distance education has also gained a new impetus. For one, skill development has become a key development objective to empower the poor, as well as to develop human capital in traditional areas. For the poor, mostly employed in the informal sector, the aim is to raise their productivity. Also, better skills are needed all the time. Public sector employment is under threat and increasingly workers have to compete in a competitive and saturated labour market. More important is the growing globalised labour market and the growth of service industries sourced by cheap skilled labour in the developing world. Open and distance learning institutions potentially have a role to play in meeting this need. Moreover, the growth of information communication technologies (ICTs) has further bolstered arguments that ODL can play a pioneering role in the rush towards skill acquisition. This has been added to cost and access advantages associated with ODL.

Policymakers making complex decisions regarding post-secondary education needs in their countries need more up-to-date data and analysis on ODL outcomes to make sound policy decisions. It was here that this research project aimed to make a contribution. The starting point of this project was two propositions. One that distance education may be relevant to skills development and two, that we are under informed about its outcomes and the effectiveness of its methods. The research aimed to test some widely accepted views on ODL capacity, in terms of access, outcomes and quality. It did this by drawing on existing research, undertaking new research and accessing substantial new institutional data. Three practitioner case studies, that lasted 18 months each, were undertaken in collaboration with key researchers in public sector ODL institutions in South Asia. In addition, five vocational case studies were undertaken by independent researchers to assess the role of ODL in vocational education. Up to now most of the evidence on ODL vocational experience has come from the developed world. This set of vocational case studies attempts to address this gap and covers new ground by examining ODL vocational training being delivered by the private sector to transfer in-house training in these countries.

Table 0.1 below lists all the collaborative research undertaken for this project.

Table 0.1: IRFOL Collaborative Research Projects

PRACTITIONER CASE STUDIES		
Country	Institution	Research Title
India	IGNOU	Study on programme completion and learner persistence and drop-out in the Certificate in Computing and Certificate of Teaching of English. Research Team: A.K. Gaba, S.C. Garg, A.R. Khan and S.Panda
Pakistan	AIOU	Tracer study on the job market experience of business graduates Research Team: Masooda Chaudhry and Iqbal Husain.
Sri Lanka	OUSL	Tracer study of a cohort of undergraduate students at OUSL: perceived benefits from participation in degree programmes. Research Team: L.Dayalatha, D. De Silva, C. Gunwardena, R. Ratnayake P. Ratuweera, N. Wikramanayake and T. Weerasinghe.
VOCATIONAL CASE STUDIES		
India	Yashwantrao Chavan Maharashtra Open University (YCMOU)	Case study on Prayog Parivar programme for agricultural farmers. Researcher: P.R. Ramanujam.
Bangladesh	BOU	Case study of Certification in Livestock and Poultry (CLP) & Certification in Pisciculture and Fish Processing (CPFP). Research Team: Shafuil Alam, Shafiqul Alam, Abu Nasar, Aminoor Rahman, Azad Shah.
Sri Lanka	OUSL	Case study of Certification Programme in Textile and Apparel Technology. Researcher: Gayathri Jayatilleke.
Sri Lanka*	Firm A	Case study of corporate online learning in the shipping industry. Researcher: Gihan Wanigasekera.
Sri Lanka*	Firm B	Case–study of corporate CD-ROM based learning in the insurance industry. Researcher: Gihan Wanigasekera.

Note: * Names of the private firms have not been revealed for purposes of anonymity

The study is presented in three parts.

Part A: Introducing the Studies

Part A serves to introduce the studies, with reflections on methodology.

Part B: Using Distance Education for Skills Development

Part B is the main analytical report of this study and draws upon both existing research and new research carried out for this project over a period of three years, to draw conclusions about ODL outcomes and effectiveness. Individual chapters in this section cover the key areas of concern: access, outcomes and efficiency, and effectiveness. The conclusion draws out the main policy implications of the research.

Part C: Case Studies on Vocational Education through Open and Distance Learning

Part C lays out the main conclusions from the five vocational case studies undertaken for this research project. There is a general discussion of the common themes from these case studies followed by key conclusions for each of the individual case studies. We have included a comparison of the two private sector studies as they are particularly innovative and highlight a new area of ODL growth in developing countries.

Some definitions:

Throughout this text we define distance education as 'an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner'; Open learning here is defined as 'an organised educational activity, based on the use of teaching material, in which constraints on study are minimised either in terms of access, or of time and place, pace, method of study, or any combination of these' (Perraton: 2000:13). The definition of skills development follows DFID's usage which is 'effective, work-related education and training in developing countries.' (http://www.dfid.gov.uk/) This is the definition used in this document and broadly complies with the World Bank (2002) definition which says that skill development is '… the acquisition of the practical competencies, know-how and attitudes necessary to perform a trade or occupation in the labour market.' Skill acquisition is seen as an educational process which occurs both in the formal or informal sector whether by apprenticeship or other formalised educational means.

Executive Summary

Open and distance learning (ODL) continues to gain currency for those looking to alleviate inequalities in access to skills, as well as for those who seek to prepare their economies for new challenges. Rapid advances in technology have also made ODL more attractive to policy makers trying to meet these goals. Yet, despite the rapid expansion of ODL and ODL institutions, policy-makers have limited evidence regarding the actual outcomes of the system. This report begins to fill this policy vacuum. It presents new data and research based on the South Asian ODL experience and aims to realistically analyse where ODL can contribute to skill development in the future.

Much has been expected from ODL including its ability to extend access to many groups otherwise marginalised from the skill acquisition process. The evidence presented here is contrary to this. Open and distance learning institutions in South Asia appear to extend access to young men from urban lower middle class families. Although not the poorest, this group is an important economic (and political) constituency and the possibilities of combining employment with education though ODL does allow them opportunities that they might not otherwise have for raising their skill levels. In countries like Pakistan where the institutions of higher learning are mainly found in large urban centres, ODL institutions like Allama Iqbal Open University meet a growing demand for professional qualifications from those who reside in rural areas. Specifically for women in Muslim countries, ODL universities are important vehicles for overcoming social constraints that traditionally limit their ability to travel in order to pursue higher education.

Open and distance learning institutions are better at delivering some programmes than others. Completion rates are better for certain programmes than others across the institutions in our study. This correlates with certain characteristics of programmes, such as level of programme, the level of technical difficulty and the time allowed for a student to complete. Certificate and postgraduate programmes have stronger completion rates; diploma and bachelors' programmes do not have good completion rates. Failure, as well as withdrawal, is an important factor in accounting for high wastage rates. Institutional costs per student are low, as expected, and costs per graduate can be cost efficient as compared to poorer performing conventional institutions. However, even performance against better performing conventional institutions could become competitive if completion rates improved by even a small percentage. Private costs borne by students are high and bring into question again how accessible ODL is to the poorer elements of society. Cost efficiency of ODL also crucially hinges on these institutions improving their completion rates.

Open and distance learning public sector institutions are not necessarily better at providing appropriate and relevant vocational training. Student completion rates vary considerably and poor attendance in tutorial sessions and usage of supplementary study material indicate that there are limitations to this mode of delivery. However, where ODL has been used by the private sector to deliver tailored, corporate vocational programmes through in-house training, both managers and students interviewed suggest that this is a relatively effective approach.

Students who complete ODL degrees do see benefits from acquiring skills from their courses. Non-pecuniary benefits for students are high. Pecuniary benefits come in terms of some improvement in income but are less marked than benefits relating to career promotion. There is

much misinformation about ODL programmes in the public sphere; this tends to make employers wary of hiring ODL graduates. This has a direct impact on the ability of ODL graduates to attain the added value from acquiring a qualification.

The conclusions from this study suggest that policy needs to be prioritised in a number of areas. Open and distance institutions need to streamline their programmes to focus on qualification levels and subjects where ODL produces better results. The ethos of institutions needs to shift to prioritising student completion rather than maximising enrolment. This suggests innovative thinking on cost effective student support and new ways of financing. Ultimately, for students to actually benefit from the qualifications they have acquired, ODL needs to become more widely accepted within the public sphere, particularly industry. This suggests that ODL institutions need to build bridges and collaborate more closely with public and private sector employers.

Part A: Introducing the Studies

Chapter 1: Framing the Research

1.1 Introduction

The potential role of ODL for skill development is immense. This is for a number of reasons and has particular resonance in the development community where the focus is on education and skill development for meeting the millennium development goals (MDGs), particularly eradicating poverty. To a large degree ODL's very potential has driven the sector's growth at the tertiary level. Distance education at this level has grown not only in terms of its numbers, the students it reaches and the locations it serves, but also in terms of the type of programmes it delivers. This very growth has then to a large degree generated the sector's legitimacy (Perraton, 2000). Yet despite this very little is known about the outcomes and effectiveness of distance education at this level. This theme is at the heart of this project.

This three-year research project, funded by the UK Department for International Development (DFID), has focused on ascertaining outcomes and effectiveness in a number of skill-oriented courses in South Asian ODL post-secondary institutions. The aim has been to focus on programmes that offer professional and vocational skills, to see both their impact on individuals and on the wider economy. This report builds on case studies commissioned for this project, on newly acquired data and on the broader literature of ODL to reach its conclusions.

1.2 The context: what type of skills for development?

Before contemplating where ODL can play a role in skills development it is first appropriate to ask the prior question of what types of skills are necessary for developing countries wishing to eradicate poverty, encourage economic growth and capitalise on globalisation. A skilled labour force is seen to be a critical element in how nations take advantage of economic opportunities in a globalised economy where investment and sourcing of labour is footloose. At the micro level skill acquisition is seen to be empowering for the poor as it provides economic opportunities and choices for individuals trying to improve their economic circumstances. Yet what those appropriate skills should be is subject to some debate and worth discussing briefly here.

1.3 Trends in developments in education and training

A number of factors in the broader economy are driving the policy consensus where skill development is concerned. First we identify the key drivers and then examine what the consensus is regarding policy.

1.3.1 The key drivers

What types of skills and competencies are required in the current global environment? The key drivers shaping these issues are perceived to evolve from a number of broad dictates in the global economy which are intrinsically intertwined with each other. The first is the notion that the knowledge economy has become the key engine of economic growth (World Bank 1999, 2002a). In this context, a country's comparative advantage (and subsequently economic growth) stems from its capacity to use and convert knowledge for the purposes of innovation more efficiently, rather than merely accumulating capital more efficiently. Countries thus need to

have a more articulate plan of linking their broad development strategies with their science and technology capacity and human development strategy. Key elements of such a strategy require: a supportive economic institutional regime; an educated and skilled population; a dynamic information infrastructure; and an effective innovation system of firms, research centres, universities and organisations (World Bank, 2002a). Countries now need to develop new knowledge for purposes of innovation, access global knowledge effectively and adapt that knowledge to local conditions. The skill set required, it is argued, is beyond the traditional focus on certain technical skills such as literacy, languages, mathematics and science, problem solving and analytical skills. A main part of the task is to impart a certain set of 'competencies' which encourage individuals to act autonomously, use tools interactively and to function constructively as a heterogeneous group (World Bank, 2002b:17).

The growth of ICTs is the second driver (World Bank 2002a). The very factors which have allowed for this growth, namely rapid advancements in technology and science, are also the basis of the knowledge economy. At the same time the growth of ICTs makes possible the ability to circumvent previous locational gaps between knowledge centres, allowing the potential for collaboration between the industrialised and low-income countries. Indeed the accessibility of knowledge as a result of the rapid advancements in ICTs makes their use indispensable for economies aiming to be at the cutting edge of accessing knowledge across the world. Hence having the skills necessary to access that knowledge as well as using that knowledge effectively, have become indispensable and there are real fears of a growing digital divide between North and South. The possibility of a digital divide, as well as a polarisation of skills is a growing concern within countries and across different socio-economic groups, as well as across gender (ILO, 1999: 59-62).

The third driver is shifts in how labour is sourced (World Bank, 2002a). The growth of globalisation, the implications of ICTs in terms of accessing people in real time and the push for flexible markets have combined to produce a labour market which is no longer constrained in terms of where labour is located. It is commonly accepted that industry can source services for the industrialised world from low-income countries; call centres sourced by Indians and South Africans based in their own countries are commonplace for consumers in industrialised countries. Economic immigrants, where they serve the economic needs of the industrialised world, are welcomed and the brain drain of the more highly skilled is a growing phenomenon in the context of a growing global economy. Skill development can no longer be limited by national economic goals or needs, but now caters to a global market where individuals with the requisite education and access can see the world as a global job market.

A key up-and-coming driver is the growth of delivery systems for education which claim to be able to deliver skill training on the global stage using the most advanced technologies. The General Agreement on Trade in Services (GATS) will surely speed up this movement (Hawkridge, 2003). The players generating these approaches have overwhelmingly been the private sector based in advanced countries, but increasingly include governments in low-income countries who see borderless tertiary education as a means of addressing their budgetary constraints in education. An important implication here is that students no longer need to travel abroad to acquire skills, a positive constraint on the brain drain phenomenon. At the same time consumers (and their governments as of now) of borderless education have only limited ways of

holding providers to account as to whether the product they are buying is of adequate quality, is recognised and is appropriate for their needs.

Finally, the underlying implication of all these various drivers is that knowledge now has a very short shelf life. No longer is it safe to assume that, for any one individual, acquiring skills can be restricted to a particular time period. Rather the key implication of the knowledge economy is that skills depreciate more rapidly and hence there is a need for constant upgrading of skills throughout an individual's life cycle (World Bank, 2002b).

1.3.2 What types of skills are required?

What are the implications of such economic changes for policy on skill development? The major themes are summarised below (see also World Bank, 2002b).

- The emphasis remains on increasing access and improving the quality of education. A common level of basic literacy, preferably to the secondary level, is considered necessary to function in a knowledge economy. Such a curriculum should emphasise both the usual skills of numeracy and literacy, but should also emphasise problem solving and analytical skills with a strong emphasis on foreign languages.

- Individuals need to be able to function autonomously. This implies skills that encourage individuals to take initiative rather than to be led, to be able to identify tasks and accomplish them, and to exercise their rights and responsibilities appropriately without the need for external monitoring.

- Information and communication technology skills are critical not only for the purpose of overcoming the digital gap that exists between industrialised and low-income countries but also for the purpose of continually upgrading ICT skills as technology evolves. Skills transfer needs to encourage a familiarity and comfort with the new technology, allowing instantaneous communication across time.

- Knowledge economies require the ability to create, synthesise and adapt old knowledge and apply and analyse new knowledge. Learning henceforth needs to shift away from its emphasis on rote learning, information transfer, and teacher-directed learning. This implies a change in how material is taught and delivered. Overall there is less need for procedural knowledge and instead individuals need to be taught cognitive skills and need to be encouraged to be curious to learn as well as experiment.

- Finally skill acquisition has to be delivered continuously throughout an individual's life, implying changes in the means and sourcing of learning.

1.4 Is there a consensus?

This growing consensus is discussed below.

1.4.1 Skills, knowledge economies and growth

A fundamental element of the push towards knowledge driven growth emphasises the importance of human capital development. Knowledge driven economies to a large degree are a function of developing human capital to a sufficient skill level to innovate, adapt and propagate knowledge. The pressure to invest in human capital has increased and broadened. No longer is it sufficient just to prioritise investment in primary education, as recent studies suggest returns to higher education are increasing which is a reversal of the earlier studies which emphasised the higher returns to primary education (see Bennell, 1996; World Bank 2002a). A similar reconsideration is also occurring in vocational education. Some evidence suggests that returns depend on the level of economic development, the availability of private sector jobs and the match between job description and the training received, rather than the orthodoxy that returns are predictably low (Bennell and Segerstrom, 1998).

The link, however, between investment in human capital and productivity (growth) has been highly contested, most recently by Wolf (2002). Returns to education, argue critics, are impossibly difficult to measure and may not reflect skills acquired during formal education processes but rather reflect innate abilities. Education may serve more as a screening device which filters out the able from the not able rather than reflecting returns to investment in the right kind of skill. Wolf (2002) also makes a broader point - that economic arguments for education are functionalist and take away from the merits that exist in extending education regardless of the economic implications. Nevertheless, despite the criticisms and doubts about what these returns represent, private returns to education remain high. Many families and individuals in low-income countries are fully aware of this and seek to invest in higher education.

It is also important to highlight that investment in education is only part of the story. A whole range of supplementary institutions needs to be in place in order to generate the benefits from developing skills. Economies require a whole infrastructure which is able to transform knowledge into actual products. This includes broader macroeconomic policies, the existence of firms that are able to convert knowledge into products and the right kind of incentives to encourage firms to take the necessary risks to innovate. This set of institutions is sometimes referred to as a national innovation system (NIS). The East Asian economies have also shown that doing away with planning may be premature. These economies maintain integrated systems where they have centralised control regulating the flows of students to certain skill areas and which place a large emphasis on numeracy and literacy (Ashton, 1999:256-60). There have been significant shifts over time. For example Korea and Japan have moved out of labourpower planning while Singapore continues to maintain certain elements of it. Recently Singaporean planners have focused on how to make their labour force more focused on generating creativity and innovation rather than being good adaptors of technology. This is in keeping with the dictates of the shifts in the knowledge economy.

1.4.2 Skill polarisation

There are also concerns that the new economies will create a polarisation in skills as well as in the distribution of the gains from economic growth. The fear is that knowledge economies will become the domain of the advanced capitalist and East Asian economies generating high skilled and higher productivity jobs for them while low skilled jobs (and lower wages) will be farmed out to the low-income countries. There is no doubt that there are benefits from routine production jobs, i.e. call centres, data processing, etc, being sent abroad but questions arise about the cumulative repercussions of such a growth strategy. One issue is how many people can be employed through these job transfers from the industrialised world? Are they the solution to employing the multitudes of the poor in developing countries or are they employing only a small segment of the population, typically English speaking, which is already in high demand in many sectors? There is an implicit assumption that knowledge based economies will generate economic benefits for all which ignores the fact that most jobs in low-income countries remain low skilled and will continue to be so for the foreseeable future. With close to one billion illiterates it is not difficult to see that many of them will continue to be trapped in low skill sectors for the foreseeable future. There remain crucial questions about how many low skilled people can be absorbed by this growth strategy (ILO, 1999: 217-218). Some argue that there are inherent contradictions between the two policy planks of the international agencies, i.e. low skills for poverty reduction and high skills for growth (Tikly, 2003: 557). Tikly argues that 'On the surface the kind of generic skills advocated by the [World] Bank appears intuitively appealing. The problem is that the analysis is based on the reality of globalisation in the so called 'high skill' economy and fails to take account of the quite different growth paths pursued by different African countries' (Tikly, 2003: 555).

1.5 More relevant skills for development

What type of skills should be encouraged at the post-secondary level? Realistically, it will be the advanced capitalist countries which will be able to take advantage of the knowledge economy, with the East Asian countries close behind. A country like India, with its strong research and academic institutions, and large literate middle classes, is on the cusp. It may be able to take advantage of certain niche areas at the high end of the skill spectrum, such as programming, and to benefit from the transfer of a large number of routine production jobs. Nevertheless even here a large number of individuals will be caught at the low end of the skill spectrum for the foreseeable future.

So what types of skills are required for development? At the most basic level, improving basic literacy and numeracy remains important, as has been recognised by the continuing focus on the goal of achievement of education for all (EFA) by 2015. This is not only important from the perspective of levelling the playing field, but also because large complex economies require an overall level of literacy and numeracy. It can also be argued that with the penetration of new technologies a basic requirement is that a significant percentage of the workforce should be computer literate (Wolf, 2002).

The second element of a skill development strategy suggests encouraging skills that will improve the productivity of the poor. The informal sector remains the key employer of most of the poor

in the developing countries. What kinds of skills should these be? For the most part, the focus here has been on vocational education and training (VET). Yet its success has been variable. A recent review for the International Labour Organisation (ILO) has argued that most conventional VET programmes have failed and there is currently a training crisis. This has happened because most training has been of poor quality, inaccessible and irrelevant (Bennell, 1999:5). More appropriate VET is required but questions remain as to how best this can be delivered.

The third element of a skill development strategy should focus on improving the professional skill base of the country for the purpose of carrying out the task of general development. More recent debate in education and development has recognised that while it is important to prioritise primary education, its development at the expense of higher education has had high costs. A better educated labour force is important for not only improving the productivity of key economic sectors, but also for upgrading quality of service delivery, including better governance, and improved education and health services (World Bank, 2002a).

Open and distance learning has been used to deliver education at all three levels highlighted above.

1.6 ODL and its potential role for skill development

Open and distance learning is now seen as a legitimate means through which to develop skills. The bases for this are numerous. Firstly, there are the arguments for its potential advantages including wider access and cost efficiency. Secondly, its rapid expansion in the past three decades suggests that there exists a ready-made infrastructure which can be capitalised upon to extend skill development. Lastly, the more recent advancements in educational technologies suggest that ODL may be the solution for overcoming the gap between those who have had access to education and those who have not. Yet how effective ODL is remains an open question, and as little data exists to verify the claims made about it. As we noted above, ODL has been used to deliver education at all levels of education. This report predominantly attempts to address the issue of ODL effectiveness at the professional level, and where there is evidence, at the vocational level, based on the South Asian experience.

1.7 ODL: its potential advantages

The advantages of ODL are potentially numerous and it is worth briefly highlighting them now as we shall return to them throughout the report.

1.7.1 Access

Open and distance learning as a delivery system offers flexible learning on a flexible time scale and provides learners with autonomy in terms of time, technology and material. In addition many ODL institutions have developed policies of 'openness' with regard to entrance requirements, offering opportunities to cohorts of students without access to conventional institutions. Open and distance learning offers opportunities to individuals who are disadvantaged because of their location or gender or economic constraints. For instance ODL

can deliver education at the 'doorstep' so that learners do not have to physically leave their home environment. This has clear advantages for communities located in isolated regions with few structured learning opportunities. Additionally, if certain cultural or religious norms limit women's mobility, ODL can deliver education to their households, although that of itself may not be a neutral intervention. This potentially has huge advantages for many societies. In the case of students who are unable to access conventional systems because of economic necessities, most obviously because of their need to be in employment, the flexible system allows students to learn in their own time, pace and location. Also this delivery mechanism is the most obvious means through which to partake in lifelong learning.

1.7.2 Cost efficiency

Perhaps the strongest selling point for distance education, which has appealed most to education planners in the low-income countries, has been its potential to lower costs. These cost advantages arise from the very way through which distance education is organised and delivered - the centralised production of teaching material, the subsequent delivery through media or post, and selective student support (Perraton 2000:118). Thus ODL has high fixed costs but low variable costs, which are best taken advantage of when ODL institutions are of sufficient scale and scope. Thus, if ODL institutions are able to capitalise on these economies of scale, they can be cost efficient. For the planners confronting shrinking fiscal budgets and increasing demands for post secondary education, ODL may seem like manna from heaven.

1.7.3 Improving quality

Where evidence does exist which supports ODL institutions' role in improving quality is in-service and pre-service training. Here, supplementing existing conventionally delivered material and providing pre-service and in-service training for different professional categories, predominantly teachers, do seem to improve quality. In terms of the latter, much of the evidence is indirect, based on the assumption that better completion rates translate to greater effectiveness (see Perraton, 2000: 80-81).

1.8 ODL: its scale and scope

Open and distance learning has gained some of its legitimacy from its rapid expansion and resulting visibility. The initial growth of distance education began in the industrialised countries as correspondence courses, with a particular focus in the late 19th and early 20th centuries on programmes delivering professional, vocational and technical skills (Rumble and Moran, 2004: 9). Experiments with distance education in low-income countries came about in the post-independence period and took various forms. Some initial experimentation was in pre-service and in-service teacher training undertaken through a number of donor initiatives in the 1960s. These began with UNESCO's UNWRA agency which sought to train refugee teachers in Palestine and were further replicated in a number of African countries (Perraton, 2000:63). In South Africa, the first distance education university was set up in 1951, evolving from a correspondence course. In India, Delhi University began offering correspondence courses in 1962 through its School of Correspondence Courses and Continuing Education following the recommendations of a committee set up by the Planning Commission to look at distance education opportunities. This was subsequently extended in 1968 with the introduction of

correspondence courses at the University of Patiala resulting directly from the financial constraints facing the Indian Government in their desire to expand tertiary education (Ansari, 1992: 31-35). The advancements in media technology also gave impetus to distance education. These technological innovations suggested a 'quick fix' method of overcoming the huge gaps between the industrialised and low-income countries. Radio and television were used in rural and community development programmes in order to transfer skills across a range of subject areas (Rumble and Moran, 2004:100).

Real impetus for ODL growth in low-income countries came with the creation of the UK Open University in 1969. Subsequent to its establishment, governments in other countries began to fund ODL universities resulting first in the establishment, among others, of Allama Iqbal Open University (AIOU) in Pakistan in 1974, the Korean Open University (KOU) in 1972, Central Radio and TV University (CRTVU) and Provincial Autonomous Regional and Municipal Universities (PRTVU) in China in 1979, Open University of Sri Lanka (OUSL) in 1980, Indira Ghandi National Open University (IGNOU) in 1985, and Bangladesh Open University (BOU) in 1995. India now has nine open universities, including IGNOU, while China has three radio and television universities. Although, as mentioned above, South Africa had the first distance education university - University of South Africa (UNISA) - subsequent growth of distance education at the university level in Africa has been much slower. Distance education however has been used extensively in Africa for teacher training, alternative secondary education and VET. Newer institutions solely dedicated to distance education are the Open University of Tanzania (OUT) and the Zimbabwe Open University (Z0U), both opened in 1993.

Early introduction of distance education often saw single mode (face-to-face teaching) institutions adapt to dual mode (judicious mixes of face-to-face and distance approaches) delivery. Recently, the dual mode approach has expanded exponentially as more single mode conventional institutions recognise the need to realise returns on existing investments in programme development. This has been a particularly rapid process in India where at least 64 conventional universities have changed to dual mode (Distance Education Council, 2001: 8). South Africa too has seen a similar expansion by its single mode institutions. Other countries like Namibia and Ghana have declared their national policy to be dual mode instruction (Saint, 1999:11).

The most recent innovation has been the growth of virtual universities, the most well known of which is the African Virtual University based in Kenya. The objective of virtual universities is to harness and develop quality teaching and teaching materials to be shared with other African universities through satellite and computer technology to shore up existing delivery through conventional means. A further innovation has been the creation of corporate universities where existing corporations and their training arms offer training programmes in keeping with their organisational priorities. Finally the current negotiation of GATS has meant that cross-border education is becoming increasingly common, combining both market liberalisation and advancement in new technologies.

Table 1.1: Importance of Distance Education in Seven Asian Countries at the Tertiary Level

	Total Higher Educational Enrolment (000)		Distance Education Enrolment (000)		Distance Education as percentage of Total Enrolment (%)	
	1985	1995	1985	1995	1985	1995
CHINA	3515.5	5826.6	1048.1	1422.9	29.8	24.4
INDIA	3145.8	5275.7	193.7	664.6	6.2	12.6
IRAN	184.4	1048.1	4.5	118.5	2.4	11.3
ISRAEL	116.1	198.8	11.9	27.3	10.2	13.7
SRI LANKA	59.4	63.7	9.9	20.6	16.7	32.4
THAILAND	1027	1220.5	569.9	456.3	55.5	37.4
TURKEY	470	1174.3	99.1	308.8	21.1	26.3

Source: Perraton (2000)

The number of students studying through distance education at the tertiary level has also expanded. Table 1.1 shows enrolment figures for both total enrolment and enrolment in distance education at the tertiary level for selected countries between 1985 and 1995. By 1995, enrolment in distance education accounted for almost a third of total higher education enrolment in Sri Lanka and Thailand and approximately a quarter of total enrolment in China and Turkey. For all countries, except China and Thailand, this was an increase from the decade before. Despite the decline in the relative percentage share of distance education students in China, student enrolment increased in absolute numbers, accounting for 1.4 million students.

1.9 Educational technology and ODL

Another main driver of ODL has been the potential of technology in ODL delivery and its scope for overcoming shortcomings in existing educational systems and materials. These shortcomings are of two kinds, one of quality and one of inequality of access to education.

Since the invention of the printing press in the 15th century, technological innovations have often been drivers in the organisation of educational delivery. A more recent and less successful technology has been television which was seen in the late 1950s and 1960s as a likely radicalising force in education. Now computer based delivery is seen to have the potential to play a similar role. Digitisation has meant convergence between different previously discrete types of technologies indicating that existing systems of information delivery can and are becoming multi-purpose (Perraton and Creed, 2001). Growth of the internet has led to potential global access of individuals to each other and to institutions which can be accessed for educational and other purposes. The rapidly reducing costs associated with mobile phones and palm-top computers have huge implications for delivery of education. Nevertheless, in low-income countries ODL still predominantly uses the print medium for delivery.

1.10 A summary of the issues and the way forward

For policy-makers in low-income countries looking to upgrade the skills of their workforce, ODL institutions potentially have significant roles to play. As a means of delivering education, these institutions theoretically have a number of advantages, including cost efficiency and the ability to access students at the margins. Also in many low-income countries these institutions have established strong footholds with extensive infrastructure and reach. A preliminary step in determining what role these institutions can play in future skills development is by collating past evidence. This is what this report seeks to do by collecting evidence on outcomes and effectiveness of ODL education in South Asia. South Asia is a good place to gather this data, both because of the length of time ODL institutions have been established in the region, and because it accounts for the largest numbers of ODL students in the world. The aim is not only to seek out past experience with outcomes, but also to reflect on what these successes (and failures) suggest about ODL institutions' ability to delivery skill development in the current global environment.

In our next chapter we begin by outlining the project, the research objectives and the methodology. In Part B, we lay out the evidence we have gathered on ODL institutions by different measures, including: access; outputs and efficiency; and finally impact and quality of these outputs.

Chapter 2: Measuring Outcomes in ODL Institutions

2.1 Introduction

Many of the programmes that ODL institutions deliver in low-income countries, including South Asia, are professional and vocational programmes which explicitly aim to develop skills for development. These courses cover such programmes as bachelors' degrees in commerce, business administration and computer science. In addition, there are shorter, more vocationally oriented courses which aim to upgrade skills and target the less well off. These courses cover areas like livestock and poultry management, textile and apparel, skills in entrepreneurship, basic electronics, and skills for car maintenance. More recently, there has also been a burgeoning in private sector delivery of vocational courses, either delivered in-house to upgrade employee skills, or to third parties. In low-income countries these programmes are at an early stage of development, but nevertheless offer some insight as to how different institutional forms may affect ODL outcomes. It also points to a growth area in ODL and may be a key way in which skills development is delivered in the future. What we need to know is how successful ODL institutions have been in the past and what contribution they have made to meeting the skill development objectives of these countries.

2.2 The project: The use of distance education for skill development

Our research project began with two propositions namely that:

(i) Distance education is relevant to skills development;

(ii) We are under-informed about its outcomes and the effectiveness of its methodologies in this area.

Governments and policy makers are interested in finding out answers to particular policy issues. For instance does ODL really facilitate marginalised communities having access to educational programmes and does it really offer the means to "catch-up" by including those left out from the education process, especially the poor? There are also of course questions about costs which have serious implications for public expenditure. For example, can ODL transfer skills at lower cost than conventional institutions? What are the costs if one compares the cost per graduate rather than cost per unit of those enrolled? And, can ODL feasibly deliver skills that are more vocationally oriented given that such courses require the development of practical skills? Finally, what role can ODL play in the skills needs that have been highlighted as being necessary for the future?

We offer an eclectic approach to finding answers to some of these questions, focused on gathering evidence and analysing data. We took an institutional perspective and focused on programmes which would be classified broadly in the area of skill development. We drew on past research and new research conducted through this project, most of which was undertaken ex post (as opposed to research integrated into the project cycle which is more optimal). Specifically, the research addressed the following key hypotheses:

- ODL is able to deliver to groups at the margins;

- ODL system costs are lower per output than those of conventional institutions;
- the quality of learning outcomes/achievements of the completers is equal to, or better than, that of those who complete programmes in the conventional system.

Our approach to the research was centred on entering partnerships with local institutions and collaborating with researchers already working on ODL in several South Asian countries. The aim was to combine the local with the global. Through their involvement in comparative and parallel research projects in a group of institutions, researchers benefited from membership of a specialist international research community as well as their own institutional community. The institutions that we chose to work with were all based in South Asia. Our aim was to look at ODL outcomes and effectiveness and where better to begin but in the region where the expansion of distance education has been most extensive. Out of the nine most populated countries in the world the five located in Asia all have ODL institutions. Three of them are in South Asia. Not only are the institutional mechanisms in place to deliver education through distance education, more importantly ODL institutions represent a critical element of each government's human resource strategy. Student enrolment is large as is the range of their programmes. Moreover, they have existed long enough for us to collect data based on their experience and to draw policy conclusions. The research projects were driven by research questions and concerns identified by local researchers which matched our broad framework of the outcomes/effectiveness agenda. Simultaneously, IRFOL commissioned a set of comparative case studies which looked specifically at vocational delivery through ODL.

2.3 How have outcomes been measured before?

How did we go about measuring outcomes in ODL for skills development and what are the appropriate ways of measuring the related issues of efficiency and effectiveness? In recent discussions such as those in the Monterrey Conference of 2002, the focus has been on evidence-based policy and 'managing for development results'. These are related issues, and here we set out some of the terms by which we examined the evidence on ODL.

It is important to distinguish between outputs and outcomes. Outputs are defined as the products, capital goods, and services which result from a development intervention while outcomes are defined as the likely or medium term to long term effect of an output (see OECD, 2002). However, depending on the specific time horizon an output can also be defined as an outcome. For instance, graduates may be an output in the short term, while the outcome could be defined as better human capital development. Alternatively, however, in the short term graduates may be the outcome while the output may be the establishment of an ODL institution of higher learning. The key issue regarding either is not to mistake the completion of an activity (students graduating or the establishment of an ODL institution) as implying better human capital development or alternatively producing graduates (see Kusek et al, 2003: 5). Throughout the report we use the terms inter-changeably.

Policy-makers' interest in issues of outcomes in ODL can be examined at two levels. The easier level is to address questions which measure outcomes relative to the goals/objectives set out for institutions. The harder question addresses whether these goals could be achieved more

efficiently or effectively. A distinction is also made between effectiveness and efficiency, terms which are often used inter-changeably in the literature. Efficiency is invariably related to how resources are used. Effectiveness on the other hand relates to objectives (OECD 2002) and how well they have been achieved. The optimal approach would be to describe a direct link between efficiency and effectiveness which would link usage of resources to desired goals and objectives. As Lockheed and Hanushek (1988: 21) state, 'Only when changes in resources are related to changes in outcomes is it possible to discuss effect on efficiency.' There are also differences in outputs which need to be noted. Simply put, outputs can be measured in terms of number of students enrolled, graduates, schools built or teachers trained. However, achieving such targets is a far cry from actually transferring the skills necessary for economic development. Hence, a preferred measure of outcome is learning outcomes, i.e. net improvements in skills (Lockheed and Hanushek, 1988).

Assessment of outcomes and related issues of efficiency/effectiveness in ODL institutions remains at a lower level of sophistication. The inability to examine these issues at a more complex level is particularly limiting given the complexity of ODL delivery and the range of factors that relate to its effectiveness and, that ODL students are often more voiceless, more marginalised by their distance (UNESCO, 2002) than are students in conventional institutions. Researchers and policy makers are for the most part limited in their ability to carry out studies by both the nature of the delivery system and the data maintained. In the meantime researchers have pursued a number of paths in order to measure outcomes and related issues, most of which have evolved from the evaluation literature.

Woodley and Kirkwood (1988) outline a number of approaches to examining these issues, implicitly advocating a more eclectic approach because of the very nature of ODL. The approaches they identify as possibilities include a systems approach, a course evaluation approach, a summative evaluation, cross-sectional studies, and development studies. Given our more macro-level concern, the systems approach as well as cross-sectional studies are of particular interest, beginning with basic measures and then moving on to use a combination of measures and techniques to look at patterns and causes in efficiency and outcomes. Where outcomes are concerned, a number of techniques have been used including longitudinal in-depth interviews and inventories, mail surveys, etc. A systems approach also examines how well programme aims have been met, as well as policy and organisational evaluation, all using a range of eclectic social science methodologies. Cross-sectional studies examine a similar component or innovation across a number of programmes within an institution or across institutions. Here the aim is to draw out what common patterns or aspects there are to these programmes. Such cross-sectional studies also draw on a common set of social science techniques.

Rumble (1981: 66-67) offers a planner's approach which looks at outcomes at two levels. The first level is to measure the overall performance of the institution against its aims and objectives (the ideal). At the second level the institution should be examined for internal efficiency. Rumble (1992: 86) goes on to identify a number of variables against which to judge ODL systems. These include: opportunities for access to education and training; completion and dropout rates; the quality of output; and cost-efficiency and cost-effectiveness. These, he argues, are important factors in the success and failure of ODL. Other authors like Keegan (1996) emphasise quantity of learning achieved, quality and status of learning achieved and relative cost.

Authors who have gone on to look at these things empirically have looked at specific variables or alternatively have carried out studies with an institutional focus. In terms of the latter, the literature is dominated by studies of institutions in the industrialised world (see Woodley and Parlett, 1983 and Powell, 1991, the exception being work done on IGNOU (Reddy, 2002). Most work on ODL institutions in low-income countries has focused on elementary stages of the typology laid out by Woodley and Kirkwood (1988).

2.4 What is the project measuring?

One of the starting premises of this project was that we were under-informed about the outcomes and effectiveness of ODL and as we observed above, very few studies exist on outcomes in ODL institutions. Our approach here takes Woodley and Kirkwood's (1988) emphasis on eclecticism in techniques while focusing more on the variables identified by Rumble (1992), re-orienting the discussion as described below. Keegan's (1996) emphasis on quality and quantity of learning are broadly outside the scope and referred to only indirectly. In our report we looked at three factors across the South Asian ODL institutions, as some objectives are common across all three ODL institutions. These are:

- ***Access:*** The ODL system of learning is seen to be accessible to marginal groups. 'Open' suggests access to all regardless of time and place. 'Distance' implies access to those individuals/groups who are isolated from centres where conventional higher education institutions are found. This would conventionally be included in the effectiveness category. However, separating this out is important, as it is one of the major characteristics attributed to ODL systems.

- ***Outcomes and Efficiency:*** As a first measure, ODL institutions should be able to ensure that sufficient numbers of students are completing programmes, minimising dropout and failure rates. ODL institutions are also commonly associated with cost efficiency. They have high fixed but low variable costs. Thus if ODL institutions are of a sufficient scale and organised in ways that capitalise on economies of scale, they are potentially cost efficient.

- ***Quality:*** Finally ODL institutions should be able to provide an education that is on a par with conventional institutions of higher learning in terms of quality of degree and graduates and market acceptability.

These three characteristics formed the basis on which outcomes were to be measured in this research project and the evidence obtained is laid out respectively in Chapters 4, 5 and 6.

2.5 What makes measurement in ODL difficult?

Problems of measurement are familiar to those who have previously attempted to do comparative work with ODL institutions. These have been summarised in Rumble (1997) and are highlighted below:

- ***Quality of Data:*** There are three issues that limit the comparability of data. One is that different ODL institutions use different methods of data collection. A related problem is that definitions on which data is collected vary between different institutions. Finally, not all variables are collected by all ODL institutions, so that comparisons across the board cannot occur. Issues of comparability are particularly problematic in the context of costing exercises, as methods by which accounts are maintained vary significantly.

- ***Differences in Institutions:*** Another issue that complicates comparisons of ODL institutions is that they vary considerably in terms of teaching methods, level of student support, regulations governing student admission and progress, technology, the way in which staff are hired (in particular the balance between permanent core staff and those hired on a casual basis) and the balance of tasks (research, teaching, consultancy etc.) that staff are involved with. The subject mix of these different institutions also complicates comparisons.

- ***Variation in Outputs:*** In comparing outcomes, a key concern is whether the outputs produced by differing institutions are of similar quality. In the context of ODL, are the institutions producing comparable graduates? Are the graduates valued equally in the market?

However, more fundamental factors than differences in data descriptors impede research work on ODL institutions. One such factor is the lack of organised data, particularly data capable of tracing students through their long and often arduous path through an ODL programme. Longitudinal data is generally very poorly maintained, suggesting a lack of institutional commitment to ensuring programme completion. Even if data exists, accessing it from data units is extremely difficult. Providing data for research or evaluative purposes is not seen to be a central part of the role of these units, a factor fuelled by the limited research and evaluation culture at these institutions. This is a product of the complexity of the distance education system as well as the limited funding allocated to such a tasks (UNESCO, 2002: 57).

Box 2.1
Data Management Centres at ODL Universities

Because of their central role, data management centres within the open universities are extremely powerful departments within the university context. Indeed they have the capacity to hijack the whole process of research and evaluation. Often this is not deliberate but a product of a number of factors. Demands made on these units are heavy while at the same time, these units tend to be under-staffed and under-skilled. Often the programming skills required to maintain systems are known to a few staff members, making them indispensable to the whole functioning of the institution. There are also bottlenecks in upgrading technology. Historical data is maintained on old systems and is poorly maintained, often making it inaccessible. Technology that would make institutional data more accessible to a broader audience outside those who manage data is often not put in place because of financial constraints or other government bottlenecks. There is also the problem of a lack of communication between the data units and others, including those involved with research and evaluation. There is little appreciation of why research is conducted and its importance to the institution as a whole. Often, even if data is collected on a number of variables seen to be critical for researchers, i.e. caste, income etc., this data is not inputted into the system because of both a lack of personnel and the lack of appreciation of the importance of these variables.

2.6 What is included in this report?

There are a number of sources on the basis of which this report was written. The four main sources are:

(i) **Institutional data**

This comprises data gathered across a number of programmes from data management units within the South Asian ODL institutions during the project period. This is a key contribution of this report as IRFOL was able to access data previously unattainable. We refer to this as **institutional data**.

(ii) **Practitioner case studies**

Three key pieces of research were conducted by researchers at IGNOU, AIOU and OUSL in collaboration with IRFOL on specific topics relating to issues of outcomes and effectiveness. Each of these studies was conducted over a period of eighteen months and utilised a combination of methods, including analysing institutional data, carrying out surveys and conducting focus groups. Each of these studies, although limited in terms of generalisability, took forward some new area in ODL research. The AIOU study focused on the job market experience of business graduates; the IGNOU study was a longitudinal study of the reasoning behind students' dropout; and the OUSL study attempted to examine benefits of enrolling in ODL programmes, regardless of whether a student had

completed or not. We refer to these as the practitioner case studies, prefixed by the institution it concerns. The studies are drawn upon in the text.

(iii)**Vocational case studies**

IRFOL commissioned five case studies, which are introduced in the next chapter – Chapter 3 - of this report. Three were undertaken in public sector ODL higher education institutions. The two private sector studies were particularly innovative, the first covering the experience of online learning in a private sector shipping firm, the second examining employee experience with stand-alone CD-ROM based learning in an insurance company. Names of the private firms have not been revealed for purposes of anonymity. We refer to these as the **vocational case studies**, prefixed by the institution it concerns. Summaries of the five case studies are presented in Part C. Full versions can be obtained direct from IRFOL on request.

(iv)**Previous research and grey literature**

We also drew on previous research that has been conducted on South Asian ODL institutions as well as other grey literature. We have already noted the limitations of the institutional data maintained by ODL institutions. A common means through which researchers address this problem is by collecting data by surveys. As is well known, poor sampling and low response rates often hamper surveys. In ODL surveys response rates are even lower. This is for a number of reasons including: the lack of institutional data means most recent contacts for the student is difficult to acquire; students are often located in isolated areas with poor postal systems making delivery of surveys difficult and finally poor record keeping means that students perceived to be active are often not. Hence we have placed more emphasis on institutional data where we have had access to it, and drawn selectively on the data from surveys. We have distinguished between the two in the text.

Chapter 3: Introducing the Vocational Case Studies

The DFID Skills for Development Programme in relation to which this research was originally commissioned, aimed to support innovative and knowledge building projects which can be used to pilot new approaches to skills development work. One innovative way through which skills acquisition can take place is by open and distance learning (ODL) approaches in the area of vocational education. Programmes have mushroomed in this area and the key question to be asked is whether or not they have the potential to provide flexible delivery systems to facilitate skill acquisition and lifelong learning (in the area of vocational skills) and also lead to improved opportunities for escaping the poverty trap. The case studies that have been documented up to now are mostly based in the developed world (Moran and Rumble, 2004), and few such programmes have been documented in the developing country context. This collection of case studies aims to fill the gap and hopes to capture some of the innovations that are taking place. The choice of case study approach has already been discussed in Chapter 2. Essentially, these studies were an appendage to the main study, with a restricted budget. The researchers argued that, as a way of giving early insights into understanding the topic, carefully selected case studies, in the public and private sectors, would be able to generate sufficient common understandings and problematic issues to serve as a basis for more detailed work in the future. We believe that approach to have been justified by the findings which are reported below.

The total number of case studies that were examined was five (a sixth study was commissioned from the Allama Iqbal Open University, but the lead researcher became seriously ill and therefore work had to be indefinitely suspended) and covered three South Asian countries: India, Bangladesh and Sri Lanka. They included both public and private institutions and examined non-formal, semi-professional and professional vocational programmes. The International Research Foundation for Open Learning commissioned the case studies from research consultants familiar with the respective institutions and sector. A list is given in Table 3.1 below.

Table 3.1: Details of Case Studies

Institution and Case-study	Institutional Type	Target Audience	Researcher
Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik, India Prayog Parivar programme for farmers	Public sector university	Agricultural workers and land owners	Dr. P. R. Ramanujam
Bangladesh Open University (BOU) Dhaka, Bangladesh Certification in Livestock and Poultry and Certification in Pisciculture and Fish Processing	Public sector university	Agricultural workers and rural youths	Nasar Md., Aminoor Rahman, A. K. M. Azad Shah, Md. Shafiqul Alam and Md. Shafiul Alam

Institution and Case-study	Institutional Type	Target Audience	Researcher
Open University of Sri Lanka (OUSL) Colombo, Sri Lanka Certification Programme in Textile and Apparel Technology	Public sector university	Semi-professional workers	Dr. Gayathri Jayatilleke
Sri Lanka Firm A* Corporate online learning in the shipping industry	Computer-based training in a private firm	Semi-professional, junior management and executives (all administrative workforce)	Gihan Wanigasekera
Sri Lanka Firm B* Corporate CD-Rom-based learning in the insurance industry	Computer-based training in a private firms	Junior management and executives	Gihan Wanigasekera

* the names of the private firms have not been revealed to ensure anonymity.

Brief summaries of each case study are given in Chapters 8 and 9. Chapter 8 includes the three public sector studies, while Chapter 9 summarises the two private sector case studies, both based in Sri Lanka. Chapter 10 picks up some of the common themes and points of interest across all the case studies, and provides some concise conclusions across the whole study.

Part B: Using Distance Education for Skills Development

Chapter 4: Access

4.1 Introduction

The 'open' characteristic of ODL makes it an attractive vehicle for delivering education to many governments and international agencies. The lack of constraints in the learning process potentially offers opportunities for different types of learners who have difficulty accessing conventional learning where they may be limited to a particular place, and/or are constrained to particular periods of time and place.

Governments trying to meet growing public aspiration for qualifications, and growing pressures to incorporate marginalised communities and to improve overall literacy as well as meet the new demands for lifelong learning are easily tempted by these likely advantages. Combined with the cost advantage, governments often see ODL as a way of resolving the gaps left by the years of limited investment at the post-secondary level.

Open and distance learning institutions have also seen this as their raison d'être. Recognising the pressures on government and the push on the part of international agencies to capture those left behind, ODL institutions have been quick to capitalise on their potential to access those on the margins. Their potential lower costs also support the access argument. Lower cost per student enrolled implies that more students can be enrolled for the same amount of money.

At the same time, the heterogeneity of ODL institutions' client base has been used by them to justify their variable performance in terms of outcomes. After all it is argued, how valid are measures such as completion rates when the students enrolled are from such varied backgrounds? Is not exposure to education itself intrinsically worthwhile? Hence before moving on to look at outcomes we want to look at the evidence on how well the Asian ODL tertiary institutions have done in accessing these different target groups.

4.2 The claims

We now explore the specific claims made by the South Asian ODL institutions.

4.2.1 The key target groups

We can broadly categorise the groups that ODL institutions particularly cater for in the following manner:

- women;
- marginal communities such as scheduled caste (SC), scheduled tribe (ST) or particular ethnic groups;
- employed learners who either are not able to forgo an income to partake in higher education (low income earners or the poor) or those who are upgrading their skills while working.

Any single learner may fit into more than one of these categories.

For **women** the advantage of ODL is its potential to overcome barriers which they confront when accessing education (and other assets). Such barriers include:

- cultural - norms and traditions maintained with regard to the role of women in society;
- attitudes - perceptions regarding gender roles and capabilities enforced through home, schooling, and general views in society;
- lack of pre-qualifications - lack of basic skills, particularly those related to the sciences, which undermine women's enrolment through the education cycle;
- situational - these include family commitments, lack of partner support, financial, living in isolated regions, and fees;
- and institutional - these are inherent in how educational programmes are set up and delivered (Evans, 1995: 3-4).

Situational and cultural barriers can intersect to limit women's mobility to attend education centres.

ODL's advantage is its potential ability to overcome the situational and institutional barriers, and where there is a policy of 'open access' it can overcome the pre-qualification constraint. How effective ODL is in overcoming these three barriers, very obviously, depends on the first two which are culturally and historically driven. So, if there is no government or societal commitment to including women and equalising opportunities for women, ODL despite its potential advantages may achieve very little. Evidence from some recent case-studies edited by Kanwar et al (2001) on the experience of Asian women learning through ODL supports this and highlights that institutional and situational constraints continue to undermine women even when studying by this approach. Raza (2002), based on the cases edited by Kanwar et al. (2001), concludes that: (i) women lack the confidence to seek out learning opportunities, depending on the particular woman's educational attainment; (ii) women depend on informal support structures to manage during the course, both from other women and from male members of their families; (iii) networks matter in terms of providing financial support and access to information about programmes; and, perhaps most important (iv) they seem to suggest the synchronous demands of education and family life that women have to undertake during a ODL course can be very demanding. This suggests that policy makers should be cautious in assuming that the benefits of ODL are automatic, and recognise that supplementary institutional support needs to accompany ODL for it to deliver its potential benefits.

Open and distance learning has also been promoted because of its potential to reach marginal communities which are isolated, ostracised or challenged. Other groups, beside women, fall into this marginal category and include: communities discriminated against on account of ethnicity, religion or caste; groups isolated by their socio-economic class or their regional location; other communities isolated by civil war or environmental displacement or suffering from physical disabilities. The barriers that confront these groups are not dissimilar from those confronting women. For instance cultural and attitudinal barriers, or norms or traditions, are key impediments in inequality of access for those discriminated against on the basis of caste in India, religion in Pakistan, or ethnicity in Sri Lanka. Situational barriers of income and location are often features that can overlap with marginalisation. Both features can be compounded through other institutional barriers which embody such discrimination.

Given how numerous these individuals are who are located at the margins, the clear advantage of ODL has been its ability to meet the educational needs of these groups at a lower cost and in large numbers (Mayo 1989). Further, ODL's capacity to deliver at the point of demand to individual learners is seen as extremely attractive to governments dealing with disparate populations or those groups who governments wish to target despite their location. In situations where people are displaced, ODL may serve as an effective delivery system where most institutional structures are inadequate or have been destroyed. Sceptics though remain. Gandhe (1999) has argued that in the Indian context ODL providers have had limited impact on the marginalised, while a UNESCO (1992) study argued that there are few differences between the audience of ODL and conventional institutions.

Lastly, ODL is seen to be an appropriate means for accessing **employed learners** who may need to upgrade their skills but cannot afford to give up full-time work. Indeed in a time where learning is seen to be a lifelong process driven by fluidity of labour markets in a globalised economy, continual access to learning opportunities and constant skill upgrading may be the way of the future. Firms out-sourcing to third party countries or penetrating new markets are also using ODL to skill and homogenise their work force in order to deliver a globally reliable product. How far ODL has gone in attaining these opportunities for existing workers is still open to question.

4.2.2 Claims made by South Asian ODL institutions

These institutions have made different claims about their aims and objectives. The ODL institutions in South Asia emphasise, to a greater or lesser extent, a number of goals, including the importance of ODL in reaching the disadvantaged, its potential to contribute to human resource development for their country's development needs, its ability to provide opportunities for skills upgrading and its capacity to offer educational opportunities for conventional face-to-face cohorts. Different institutions place their emphasis on different objectives.

Allama Iqbal Open University (AIOU) in Pakistan places emphasis on those unable to access conventional education and the masses, i.e. the disadvantaged. The institution states that its objectives are 'to provide facilities to people who cannot leave their homes and jobs in such manner as it may determine' and 'to provide such facilities to the masses for their educational uplift as may be determined' (AIOU Vice-Chancellor's Report 2002-2003:3). There is also a particular emphasis on teacher education and women's education (see AIOU profile in the on-line information centre of ICDL, the International Centre for Distance Learning of the UK Open University: www.icdl.open.ac.uk).

In India, Dr. B.R. Ambedkar Open University (BRAOU), the first Indian ODL university, aims to provide 'equality of educational opportunities for higher education for a large segment of the population, including those in employment, women, and adults who wish to upgrade their education.'(see ICDL profile). The Indira Ghandi National Open University (IGNOU) is similarly explicit in its objectives. The University Act (1985), under which it was formed, states that the university shall 'provide not only higher education to large sections of the population, but particularly disadvantaged segments of society' while it will also 'provide national integration and strengthen the natural and human resources of the country through the medium of education' (IGNOU Profile 2001: 8).

The emphasis of the Open University of Sri Lanka (OUSL) is slightly different. It aims to provide 'a readily accessible and progressive ladder of opportunity for study to improve vocational, professional and earning potential of our clientele.' Also 'The educational programmes have been designed to meet national education and training needs and to offer opportunities to those who have the dedication and drive to succeed' (OUSL 2000). Elsewhere mention is made of 'underserved and the under-privileged' but this is clearly not the main priority.

Bangladesh Open University (BOO) was justified in its project proposal on the basis that it would strengthen the country's human resource base by increasing access to education in rural areas, providing professional and vocational education in select areas, and improving non-formal education aimed for the general population (Ali et al, 1997:14). The aims are dual - both human resource development as well as improving opportunities for the disadvantaged. This is supported by BOU's own documents which emphasise how BOU has 'opened a new horizon for the vast majority of eager learners of Bangladesh who for various reasons drop out of the conventional system' and is '...the only institution in the country which can contribute a lot in fulfilling the objective of the government regarding eradication of illiteracy from the country' (BOU, 2003).

4.3 The evidence

Below is some of the evidence on the ability of ODL institutions to reach those various target groups.

4.3.1 Women

How successful have ODL institutions been in enrolling women? The evidence here indicates that this has varied among these ODL institutions but that there has been relatively more success in the predominantly Islamic countries. Enrolment of course is quite distinct from completion. We return to the question of outcomes in the next chapter.

Table 4.1 presents institutional data across a number of characteristics for single mode and dual mode providers in India. The table indicates that female enrolment in single mode distance education institutions ranges from 16 – 33 per cent, with a mean of 24.9 per cent, which is a lot lower than enrolment in dual mode institutions. As we will go on to see, India's figures for female enrolment in single mode ODL institutions are lower than those for its South Asian neighbours.

Table 4.1: Enrolment by Characteristics of Single and Dual Mode Institutions in India

Name of Institution	Total Registration	Female	SC/ST	Rural
Single Mode[a]			Percentage	
IGNOU (2002)	262111	28.3	7.2	22.9
BRAOU (2000-01)	61625	26.9	27.1	45.1
NOU (2001-2002)	2085	16.3	12.8	62.3
YCMOU (2000-2001)	112000	20.6	13.6	
MPBOU (2001-2002)	57436	28.2	12.9	34.5
BAOU	11247	33.2	22.5	37.2
NSOU	4867	20.6	16.9	
Select Dual Mode			Percentage	
University of Delhi	120323	46.5	5.7	
Maharishi Dayanand University	31155	40.5		
ICDEOL, HP University	35657	38		35.5

[a] Single mode institutions offer courses only through distance learning, while dual mode institutions will use a mixture of distance and face-to-face methodologies.

Box 4.1
Access and Gender-Sensitive Infrastructure

The following are short case-studies taken from AIOU evaluation of the Matriculation Certificate. Although outside the direct ambit of our study, they do indicate the kind of issues women confront and where ODL can play a role. They also suggest that despite its advantages in overcoming some issues of gender mobility, challenges remain regarding organising a gender sensitive infrastructure for delivering education at tertiary level.

Case-study 5

An unmarried girl of 19 was very fond of education. She completed her middle level education in 1987 and was very keen to get admission in matriculation. Her brother however did not permit her to go to the school.

Meanwhile she heard about the distance learning system of the AIOU where a student was required to attend the study centres only once in a week. She again requested her brother for permission but it was turned down. Consequently, finding no way to convince her brother; she registered with the AIOU's Matric Education programme quietly without the knowledge of her brother but with the consent and consultation of her mother.

She got admission in AIOU in 1988 and now she is in her last semester. Living in urban area of Abbottabad, she was lucky enough to avail the facility of study meetings and tutor support. She attended tutorial meeting regularly but every time she had to request her mother to accompany her to the study centre. Her mother provided full support and willingness throughout the course except once when she had to sit in an examination hall located in the Boys' College. Her mother however very reluctantly allowed her to sit in examination and she succeeded.

She revealed that she was thankful to her mother for keeping her secret.

Case-study 6

Another girl of 25 and her sister residing in an urban area of Abbottabad took admission in 1988. Both of them enjoyed their studies very much at home and at study centres too. They attended all the study meetings together and regularly. In the last semester she got married. Her in-laws were so cooperative that she did not need to stop her studies. But the misfortune started on the very day when she had to sit in the Examination Hall in a Boy's College. She burst into tears while telling about the way her husband reacted when he learnt about this arrangement. It was unbelievable to learn that her husband became suspicious about her character.

Source: AIOU (n.d.) 'Internal Evaluation of Secondary School Certificate Women's (Matric) Project through Distance Education'

Figures for the AIOU in Pakistan show exponential growth in female enrolment and highlight the importance of ODL for women in Pakistan. Trends show that although in1990, female enrolment only accounted for 30 per cent of the total enrolment (26, 214 students), by 1995 women accounted for 53 per cent (109,617 students) of all students enrolled. This has remained steady and in 2002 a total of 194,668 women were enrolled in AIOU programmes

(data from personal correspondence REC, AIOU 2003.). The big jump in enrolment occurred in the early 1990s when female enrolment increased almost four-fold. Figures for BOU in Bangladesh also show that female enrolment has been higher relative to their SAARC neighbours, particularly India. Data available are cumulative over the whole period of BOU's existence (1995-2000), and suggest that total female enrolment across all programmes has been around 38.5 per cent (calculated from BOU data). Enrolment figures for OUSL exist only for the academic year 2000 which show that female enrolment was around 37 per cent of the total (Sri Lanka University Statistics, 2000).

What explains the popularity of ODL for women in Pakistan, Bangladesh and Sri Lanka as compared to India? To an extent, at least in the Islamic countries this reflects the ability of ODL to overcome the constraints on mobility though even here where some mobility is required for tutorials or examinations, ODL delivery may not be flexible enough (see Box 4.1). India's lower enrolment is more difficult to explain. There is first the distinction between single and dual mode ODL enrolment. The relatively higher enrolment in dual mode ODL institutions may reflect female students' desire to enrol in ODL programmes which are linked to a conventional face-to-face institution. This may have greater prestige in the market place. As to lower female enrolment in a single mode ODL institution, this may reflect different demand and supply factors where female education is concerned in India. One explanation may be that fewer cultural constraints in India make ODL a less attractive option for women who are able to access more conventional institutions.

What is the record of these institutions in enrolling women in a broad range of subjects, particularly in the area of science and technology? A key element of skill delivery for women is ensuring that skill acquisition is not only relevant for women's livelihoods but also that it caters specifically to equalising opportunities for women in a range of subject areas and does not restrict them to a limited range of subjects.

Table 4.2 presents enrolment data on selected programmes. The top half of the table presents data on academic programmes where one would *ex ante* expect women's enrolment to be lower, i.e. programmes in computer science, commerce etc. The bottom half of the table presents data on programmes in subject areas were we would on the other hand expect female enrolment to be higher. Overall our figures support the hypothesis that ODL institutions are not helping women significantly to make inroads in traditional, male-oriented programmes. Programmes where female enrolment is high are in the areas of education, nursing, library science and nutrition.

What does stand out is the low female enrolment in programmes that are more vocationally oriented in the agricultural sector, i.e. the YCMOU Diploma on Vegetable Production, and the BOU's Certificate in Pisciculture and Food Processing (CPFP). The IRFOL vocational case-studies also re-affirm the view that vocational courses delivered by ODL universities are not particularly successful in targeting women. The two vocational case-studies examined at BOU are both oriented towards agriculture and include the CPFP as well as the Certificate in Livestock and Poultry (CLP). In both the courses, survey data from one semester enrolment shows very low female enrolment. The case-study that looked at vocational training in the industrial sector, OUSL's Textile and Apparel Technology Certificate, surveyed one cohort

(2002/03) and also showed relatively low enrolment of women at around 28 per cent. It would be interesting to see if the private sector does any better in enrolling women in vocationally oriented courses. Unfortunately, the private sector case-studies do not offer figures differentiated by gender. Given the pressure on employees to participate in these training programmes it is more than likely that enrolment reflects the gender composition of the workforce.

Table 4.2: Patterns of Female Enrolment in Selected ODL Programmes

Year of data	IGNOU 2000	YMOUC 2000-01	AIOU 2001-02	BOU[a] 1995-2000
		Percentage		
Bachelors of Computer Application	17.06			
Bachelors of Commerce[b]		31.8	16[c]	15
Certificate in Computing (entry level)	27.48	31.9	18	15
Certificate courses in vocational subjects		9.6		
Bachelors of Education	5.1	31.3	67.3	45
Bachelors of Science in Nursing	89.1			
Bachelors of Library and Info Science	58.7	49.3		
Certificate of Food & Nutrition	66.6			
Diploma course in Veg Production		8.5		
Certificate in Pisciculture & Fish				3

Note: [a]BOU data is cumulative for years 1995-2000
[b]Data for BOU is for the Certificate of Management
[c]Data from Spring 2000 enrolment.

Source: India data from DEC 2001
AIOU data from Annual Report 2001-2002; IRFOL-AIOU practitioner case-study
BOU data from BOU data division.

One exception to this general trend in female enrolment is the BSc programme at OUSL. A survey study by Jayatilleke et al (1997) on students' characteristics in a number of OUSL courses (see also Senaratne et al, 2001) overall reinforces the view that male enrolment outweighs female enrolment across OUSL programmes. The exception is the BSc course. Here female enrolment was 58.8 per cent as compared to 40.9 per cent for men (based on a response rate of 85 per cent for that programme). This is in contrast to conventional institutions in Sri Lanka which have lower female enrolment across all programmes. The authors speculate that it may be explained by a large number of non-graduate teachers in science who may have opted for a distance education programme to acquire qualifications while in employment. Further, this may be because of a link with a BEd programme that OUSL offers. In this context it is worth noting that promotion and salaries in many public sector jobs in low-income countries, including teaching, are linked to attaining additional qualifications. This would provide an incentive for teachers (who tend to be predominately female) to enrol in such skill upgrading.

Box 4.2
ODL and Overcoming Basic Skill Gaps for Girls

Despite the poor post-secondary enrolment figures we have seen in some of the South Asian ODL, other research carried out by IRFOL (Fentiman et al.2004), suggests that ODL tertiary educations may have been playing a role in helping girls achieve secondary education and qualifications.
A number of ODL institutions in South Asia (BOU and AIOU) offer programmes for secondary level qualifications as well as certification for some basic teaching qualifications. Other independent institutions exist which solely focus on basic schooling, for example the National Open School (NOS) in Delhi, and the Andhra Pradesh Open School Society (APOSS). In Andhra Pradesh alone the APOSS works with around 12,700 Muslim girls who have dropped out of formal schooling, in their Urdu centres. At BOU, around 49,000 girls have enrolled
for the Secondary School Certificate (SSC) with 14,760 girls having completed it between 1995 and 2000. This of course is a cumulative completion rate of only 30 percent, raising questions about the quality of tuition and the ability of students with poor basic education to be autonomous learners.

4.3.2 Marginal communities

There are a number of categories against which one can measure ODL's capacity to access those on the margin. The key ones are the ability of ODL to reach those located in the rural areas which are associated with poverty and low productivity, and second, of particular relevance in the South Asian context, the ability of ODL to cater for those who are excluded because of ethnicity, caste and tribal affiliation. Other communities who are also on the margin are people with disabilities and those who have been displaced because of war and disasters.

Where the urban/rural divide is concerned, this varies by institution and by programme type. Table 4.1 above provided figures in some of these categories for the Indian ODL universities. They indicate that there is considerable variation between institutions. For instance at IGNOU, Dr. Babasaheb Ambedkar Open University (BAOU) and Netaji Subhas Open University (NSOU), the student body is more urban-based compared to other ODL institutions in India. IGNOU's low rural enrolment (22.9 per cent) as compared to the other universities may reflect the fact that regional ODL institutions are better structured for accessing these rural communities, given local knowledge and delivery of their courses in local languages, rather than a failure on IGNOU's part to access them. Where OUSL is concerned, students are predominantly located in two regional centres located at Colombo and Kandy, the first and third largest cities in Sri Lanka. The IRFOL-OUSL practitioner case-study includes some institutional data for the BSc programme. In the whole cohort who enrolled in 1994/1995, the majority (71.3 per cent) enrolled in the Colombo centre followed by Kandy (17.6 per cent). The figures for the LLB are survey-based and indicate that 71 per cent and 21 per cent respectively were enrolled in Colombo and Kandy. This data can be misleading as it is likely that some students travel to these centres from rural areas, although discussions at OUSL suggest that most students are urban based. The centre data does tell us that enrolment at OUSL is located at these two centres as opposed to the other two in Matara and Jafna. The latter two

regions are associated with poorer economic development, with Jafna being the region where the civil war has been fought. There is however some evidence that courses at lower levels, specifically the Foundation Course in Social Science, did enrol large numbers from the rural areas (see Gamaathige and Dissanayake, 1999: 77).

Data for AIOU is limited to the IRFOL-AIOU practitioner case study based on business graduates. The institutional data on enrolment is taken for Spring Semester 2000 and provides data by key characteristics (see Table 4.3). Given the orientation, i.e. business graduates, of the study we would predict that most of the students would be urban based and that is what we see. Other programmes at AIOU do have a more rural constituency.

Table 4.3: Characteristics of AIOU Business Students, Spring Semester 2000

	BCOM	BBA	MBA
Total Students Enrolled	686	503	465
Percentage of which are			
Female	16	10	15
Urban	81	90	95
Sermi Urban	2	2	1
Rural	17	8	4
Rural and female	1.3	0.6	0.2

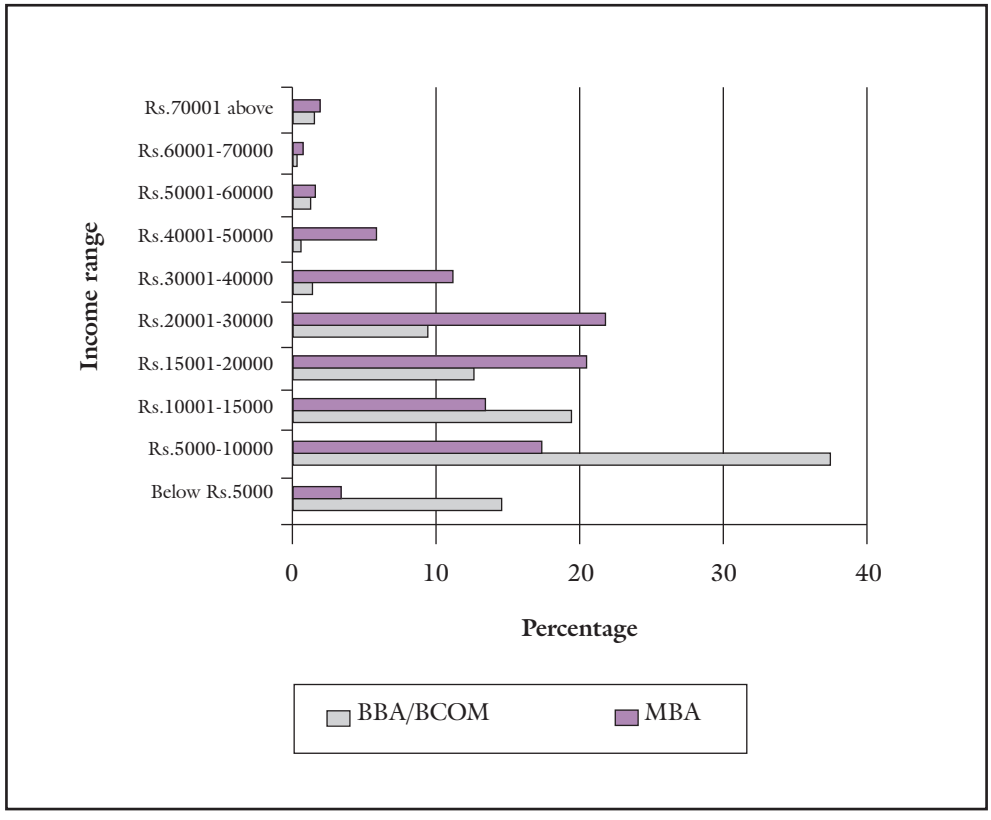
Source: IRFOL-AIOU practitioners case-study

For all these programmes - the BCom, BBA and MBA - the majority of the students are from the urban areas. The BCom degree has a relatively larger enrolment in the rural areas, more than likely because it is the oldest of all three programmes and the most familiar. There is very limited female enrolment in the rural areas. The survey reveals something about the socio-economic background of these graduates (the survey data from BCOM and BBA programmes were analysed together). In relation to parental literacy, mothers of students in all the programmes have roughly the same level of academic achievement. Where fathers are concerned 41 per cent of BBA/BCom as compared to 45 of MBA fathers have postgraduate qualifications, while 43 per cent of BBA/BCom fathers are illiterate as compared to 34 per cent of the MBA fathers. Figure 4.1 shows the average family income of the students who responded to this question (50 per cent for both groups) and indicates that for the most part the BBA/BCom students tend to be from relatively poorer backgrounds than those doing the MBA. However, the average family monthly income of AIOU business students across the board is significantly above the average monthly gross national income (GNI) for Pakistan which in 2002 averaged about Rp.2000 a month ($35) confirming that these students are from relatively wealthier backgrounds.

Data for BOU is from the IRFOL-BOU vocational case-study and reveals that enrolees are largely rural which is not unexpected from an agricultural-oriented course. Here 89 and 51 per cent respectively of the students from the CLP and CPFP courses are from the rural areas. Figures on income of these students do indicate that they come from low income families. However, it is not wise to assume that students from rural areas enrolling in these types of courses are automatically poor. Figures from the IRFOL-YCMOU vocational case-study, another agricultural-oriented vocational programme, indicate that students can be quite wealthy.

Student profiles of those enrolled in the YCMOU Agricultural Certificate on Gardening reveal that they are mostly well qualified (44 per cent had degrees while 56 per cent had either finished Class 10 or Class 12 level) and are medium sized landholders (5-10 acres of land).

Figure 4.1 Family Income of AIOU Business Graduates



Source: IRFOL-AIOU practitioner case-study

Issues relating to ethnicity and caste are of varying levels of contentiousness in different South Asian countries. In Sri Lanka, where the civil war has revolved around the issues of ethnicity and access to economic opportunities, access to education is a key aspect of this. The inability of OUSL to access regions affected by conflict, as we noted above, already indicates their limited role in overcoming some of these inequalities. Jayatilleke et al. (1997) gives us some insight on the ethnicity of those enrolled across a number of courses and showed that overwhelmingly courses are dominated by Sinhalese students who account from 78 per cent to 91 per cent of those enrolled across all courses. This is followed by the Tamil and Moors whose representation varies with the specific course concerned. For instance, the Moors are highly represented in the Certificate of Tourism (10.9 per cent) which is not surprising given their dominance in the commercial sectors. Alternatively the Tamils account for 13.7 per cent of the BSc graduates. OUSL enrolment for both Tamils and Moors is much lower than conventional universities and at par with these communities representation in the population as a whole (78 per cent Sinhalese, 18 Tamil, and 7 per cent Moor). Evidence from the IRFOL-OUSL practitioner case-study also supports these figures. Table 4.1 above provides some figures for

caste and tribal groups in the Indian ODL universities. Again IGNOU figures are relatively lower than those of the other institutions but other institutions like BRAOU seem to have made major inroads in enrolling students from the scheduled tribes and scheduled castes.

4.4 Adult employed learners

A key advantage of ODL is seen to be its flexibility allowing learners to combine employment with education. The evidence from the ODL universities in South Asia does support this as a large share of learners enrolled in these institutions also work simultaneously. From the survey of the IRFOL-AIOU practitioner case-study 70 per cent of the respondents in the BBA/ BCom programmes indicated they were working while studying. The figures are higher for those who did the MBA programme (91 per cent). Students interviewed also indicated that that the ability to combine employment with education was a major advantage of the AIOU system. Institutional data from the IRFOL-IGNOU practitioner case-study reveals too that a large share of those enrolled (70 to 83 per cent depending on the semester) in the Certificate in Computer Science (CIC) were also employed while undertaking the course. Given the short length of the course (six months) and its ease (as it is an entry level course) this is not surprising. Other programme wise data is given in Gaba's (1999) study on business graduates at IGNOU. Here three-quarters of the students who responded to the study's questionnaire were working while undertaking the course. Responses from the IRFOL-OUSL practitioner case-study similarly show that the majority of those who enrolled were employed. Two of the practitioner case-studies (OUSL and IGNOU) specifically asked about what factors affected completion or non-completion. The pressures of employment on studying were not a significant factor in either case in students' decision to dropout. Open and distance learning students in South Asia do need to work. This indicates that while they may not be of the poorest income group, neither are they from the privileged class of students who are supported throughout their higher learning experience.

4.5 Conclusions

What can we conclude about ODL institutions success in improving access to post-secondary education for different groups? We can say for the most part ODL students tend to be urban, male and not on the poverty line. Few of them are from ethnically or socially marginal groups. These are of course broad conclusions and there are exceptions to every case. However this generally supports the view of Perraton (2000) that current ODL institutions tend to cater to an existing constituency that government have been unable to accommodate through conventional face to face universities. However there are areas of success. Distance education does seem to be enrolling a significant number of women in Muslim societies. Where ODL is particularly successful is that it provides access to students who need to combine their studies with employment.

Chapter 5: Outcomes and Efficiency

5.1 Introduction

This chapter focuses on the outcomes of ODL programmes. When defined by completion rates, pass rates, wastage rates and dropout rates, these indicators are often seen to be crude measures of effectiveness. Criticisms of such approaches are two-fold. Firstly, such measures of output fail to separate out the innate differences in students in terms of their ability and other socio-economic parameters. Secondly, crude output measures do not account for the benefits that accrue to students who do not complete the programme. The latter argument is commonly made within the ODL context where practitioners argue that given the characteristics of ODL students, even if students fail to complete they may benefit from participating in the learning process (see Raza, 2004:210).

We, nevertheless, start with such measures because even this type of data is hard to gather within many ODL institutions. We look at some of the data collected and examine how it adds to what we already know. Such figures are a useful starting point for measuring cost efficiency and in carrying out comparative work with conventional and dual mode institutions. Section 5.2 briefly lays out the definitions used in this report, Section 5.3 examines outcomes against outcomes of conventional universities and Section 5.4 looks at the evidence we have gathered from South Asia, while Section 5.5 presents evidence on cost efficiency.

5.2 Definitions

Outcomes of ODL programmes can be defined in numerous ways including completion, graduation and pass rates. A number of complementary terms for examining outcomes in ODL also exist, including dropout, withdrawal, failure, and wastage rates. **Completion rates** in an ODL institution are defined as the completion of a programme or course as a percentage of the intake over a given period of time. This is to be distinguished from **graduation rates**, which are measures of the actual numbers of students who go through convocation process and acquire a qualification. Often there is a time lag between students completing and graduating. The other measure is **pass rate**, which refers to course or programme assessment, specifically the number of students out of the total entry or those who sat the exams, who actually pass examinations. In the education process, students drop-out for a variety of reasons, few of which are completely understood. Woodley and Parlett (1983) break down meanings of dropout as follows. **Withdrawal rates** refer to students who have registered but failed to sit the examination at a particular stage of their course and this withdrawal can be voluntary, involuntary, or unavoidable (Woodley 2003). **Failure rates** refer to students who sit examinations but fail. Hence, the overall wastage rate includes students who fail and withdraw.

These issues can be examined at two levels, either at the level of individual courses or at programme level. Predominately the focus here is on programme data. One immediate problem here is a dearth of figures on programme completion, by type of programme, and by type of student. This difficulty is intrinsic to the nature of ODL systems. Open and distance learning students enrolled in programmes tend to have a longer time to complete than those in conventional institutions. In some cases the period for completion is left open indefinitely. Thus, for instance, at IGNOU, students for bachelor programmes have a maximum of eight

years (three years minimum) to complete, while at OUSL there is no time limit for completion. Even at institutions where completion endpoints are fixed, students may be allowed to re-enrol. In these circumstances, data maintenance at ODL institutions is more complicated. Students are enrolled for long periods, enter and exit at numerous points, and little effort is made to keep student data up to date. Despite their mandate, most South Asian ODL institutions are not able to trace the paths of their students over time to see how many complete and dropout. Most studies that exist have focused on looking at these issues at the course level because this data is easier to acquire. These data limitations are problematic across most ODL institutions whether in industrialised or low-income countries.

Researchers have pieced together completion rates on selected programmes across institutions where data is available. A recent study completed by Reddy (2002) on IGNOU completion rates (or as the author calls them, pass rates) is a rarity. Also extremely rare are institutional studies that systematically examine characteristics of students who complete. What is common are studies that examine characteristics based on surveyed samples. Data on characteristics of students who enrol does exist, some of which was referred to in the last chapter.

5.3 Comparisons between outcomes of ODL and conventional institutions

How do outcomes of ODL institutions compare with those of more conventional tertiary institutions? This is a key question for policy making and for determining how economic resources are distributed between these types of delivery systems. The question has particular resonance when one considers that governments often see ODL as the solution to a number of problems they face, including the growing demand for more higher education and lifelong learning. For instance, the Government of India (GOI), in its Tenth Five Year Plan (2002-2007) aims to greatly expand ODL institutions in India with the goal of enrolling 40 per cent of all tertiary students in ODL institutions by 2007 (see GOI 2001). The validity of such a strategy depends very much on the impact of these institutions relative to conventional institutions.

5.3.1 Share of total graduates

ODL institutions have large numbers of students enrolled but little is known about what contribution they make to the human resource needs of the economy. Some figures from Pakistan and Sri Lanka offer some insight. Table 5.1 shows the percentage share of individual universities in the cumulative five-year (to 2001) total of graduates by degree at Pakistani public sector tertiary institutions. The table covers the most of the general public sector institutions (12 out of 17 institutions in the public sector as defined by the Handbook: Universities of Pakistan 2001) as these remain the primary deliverers in the tertiary sector.

Over this period, AIOU accounted for 7.8 per cent (42,576) of all bachelor degrees produced by these institutions, 1.7 per cent (2,032) of masters' degrees, 13.8 per cent (280) of M.Phil degrees and 0.4 per cent (2) of the PhD degrees produced. Although AIOU's output is not comparable to the largest tertiary institutions - Universities of Punjab and Peshawar - it compares well with the second tier institutions the Universities of Karachi and of Bahauddin Zakariya at Multan, in Pakistan.

Figures for OUSL relative to the total graduate output for Sri Lanka for 1999 (Table 5.2) reveal that the contribution of OUSL is higher for postgraduate level programmes, accounting for 31 per cent of arts graduates (including education) and 32 per cent of management graduates. However, a note of caution is needed where these relative percentages are concerned. For example, in the latter case, although the relative percentage of the OUSL contribution is high, in absolute numbers this only means 13 students. The OUSL's contribution at the undergraduate level is not very significant except in terms of law graduates.

Table 5.1: Percentage Share of AIOU Graduates in Total Pakistan Graduates 1996 - 2001

Institution	Bachelors	Masters	M.Phils	PhD
Allama Iqbal Open University	7.8	1.7	13.8	0.4
Gomal University	1.4	2.6		
Bahauddin Zakariya University	11.3	7.3	2.9	4.4
International Islamic University	0.2	0.5	0.4	0.4
Islamia University	2.1	8.9		
Qauid-e-Azam University	0.0	2.9	38.1	26.5
University of Azad Jammu and Kashmir	0.6	1.7		
University of Balochistan	5.8	8.7	11.2	2.2
University of Karachi	15.8	5.7		
University of Peshawar	9.6	15.7	9.0	18.9
University of Punjab	45.2	42.1	24.7	47.1
University of Sindh	0.2	2.3	0.0	0.0
	100	100	100	100

Source: Handbook: Universities of Pakistan 2001

Table 5.2: Percentage of OUSL Graduates Compared with Total for Sri Lanka (1999)

Undergraduate Level	Arts	law	Management	Science
Number of undergraduates at OUSL	33	135	0	224
Total undergraduates in Sri Lanka	3646	460	741	2571
OUSL as % of total ungraduates	1	29		9
Graduate Level	**Arts**	**law**	**Management**	**Science**
Number of graduates at OUSL	592		13	2
Total graduates in Sri Lanka	1905	1	41	91
OUSL as % of total ungraduates	31		32	2

Source: Universities of Sri Lanka Statistics

BOU is a relatively new institution and most of its programmes are in various stages of development. In comparison with other public sector universities BOU only produces graduates at certificate, diploma and degree level. BOU produces 41per cent of the total number of graduates at certificate and diploma level, but at degree level it accounts for only 2.1 per cent of all graduates (Bangladesh UGC, 2001).

5.3.2 Pass rates

Next we briefly look at the pass rates of students' examinations and find that ODL pass rates are comparable to those of conventional institutions. Table 5.3 provides figures on pass rates for those students who sat BCom and BBA degrees in selected universities including AIOU. The figures are taken for a small number of universities but indicate that AIOU pass rates are equal to conventional institutions. For the BCom programme, AIOU figures are the same as that of University of Karachi and better than the aggregate performance of all bachelor programmes at the University of Punjab, these two being highly regarded institutions in Pakistan.

Table 5.3: Comparative Pass Rates in Pakistan

	AIOU[a]	GOMAL	U. of Karachi	U. of Sindh	U. of Punjab[b]
Year of Data		1999	1999	1998	1999
B.Com					
Total who sat exam	239	87	15717	156	137905
Total pass-rate(%)[c]	31	44	31	39	26
BBA					
Total who sat exam	313	80		259	
Total pass-rate(%)	45	59		53	

Source: Handbook: Univerities of Pakistan 2001

[a]AIOU data taken from IRFOL-AIOU practitioner case-study

[b]Figures for all bachelors programmes offered by the university

[c]Figures are for those who appeared for the exam rather than enrolled.

Pass rates however only indicate how students fare in a set of examinations. The more comprehensive measure of student outcomes is completion rates - how many of the intake actually complete the programme (or course). Below (section 5.4) we go on to examine some new data on ODL completion rates within programmes by institutions. Comparable completion rates for conventional institutions do not exist. One estimate we have for India indicates that completion rates for first degrees in conventional institutions is approximately 55-60 per cent (Ansari 1994:83). However, the data here indicates that completion rates in ODL varies significantly with programme level and subject, suggesting that comparison against conventional completion rates will have to be more carefully made to reach any policy conclusions.

The evidence from South Asia on ODL comparative performance is quite respectable. First, the data here point to the fact that these institutions are key contributors to total graduates produced nationwide. Secondly, the evidence we have on pass rates suggests that although slightly lower, they are comparable with conventional face-to-face universities. Two further

points can be made about future research. More disaggregated completion rate data is required from conventional institutions, with breakdown by programme and subject type. Aggregated examination data does not tell us anything about differences between the learning outcomes of distinctive delivery systems. This research is required. The evidence from Indian dual-mode institutions is that these institutions produce a lower proportion of first-class and second-class degrees than conventional institutions (Ansari, 1994: 82-3). This may also be true of single mode ODL institutions, but we need evidence on this.

5.4 Programme outcomes from ODL institutions

Here we begin to look at outcomes within ODL institutions, particularly at completion rates and throughput. Through this project a lot of new institutional data was collected and all attempts were made to ensure that the data was comprehensive across level and subject matter of programmes. This data provides new evidence against which to gauge previous conclusions on ODL delivery.

5.4.1 Some previous conclusions on ODL outcomes

What evidence and policy conclusions exist on programme completion within ODL institutions? Perraton (2000: 98-117) in a recent overview of the first three decades of ODL in the low-income countries claims that the evidence is mixed. There are successes like the Chinese experience where more than 80 per cent of the enrolled students were completing courses in the 1980s against which half of the programmes he examined (thirteen in total) have a pass rate less than 20 per cent. Of the remainder, only two have pass rates above 50 per cent, one of which is the Chinese example quoted above. He concludes:

- shorter courses have higher completion rates, as do postgraduate programmes;
- completion rates for degree programmes are little above 10 percent, which indicates that ODL institutions in higher education are failing to meet the aspirations of a great number of their students;
- student dropout rather than failure explains these poor graduation rates.

Data in a recent study on completion rates of all IGNOU programmes by Reddy (2002) broadly supports Perraton's (2000) conclusions about which programmes are more successful, i.e. that postgraduate and certificate programmes have relatively higher pass rates than bachelor or diploma programmes. Reddy's (2002) method for calculating completion rates is complicated by his lack of access to data. Completion rates are not taken as a percentage of a given year's intake, but as a percentage of all possible students who could have completed regardless of intake year. Although the approach is internally consistent, the aggregation of enrolment for a number of years biases the result. Below we attempt to correlate output with intake for a number of IGNOU programmes for which we have data.

However, Reddy's comprehensive institutional data warns against reaching simplistic conclusions given the variation in outcomes even within programme levels. IGNOU data indicates that even within masters' programmes there are variable completion rates. For instance, completion rates for the Masters of Library and Information Sciences are better than

programmes like the Masters of Computer Science and MBA. There are broad correlations between programmes that are more technical in nature and in relation to completion, the more technical the course, the lower the completion rates. Where short courses are concerned, the data suggests that the certificate programmes (minimum six months, and maximum two years) have better outcomes than diploma programmes (minimum one year and maximum three years). There is also a variation in performance within professional courses, thereby questioning the assumption that professional programmes across the board are likely to attract more motivated students. Lastly, the one comprehensive institutional study on dropouts by Woodley and Parlett (1983) on the UK Open University (UKOU) experience concludes that wastage rate in undergraduate courses in a given year is lower in beginner level (foundation) courses and in social science courses. This further supports the view that a programme's technical difficulty matters.

5.4.2 New evidence from South Asian ODL institutions

This research project acquired new data on completion rates across a number of institutions. We begin with IGNOU. The data, although selective as it only covers certain programmes, offers a more accurate calculation of completion rate over a defined period of time for a single cohort (see Table 5.4). The data is limited to tracing students over only six years which is less than the maximum period allowed by IGNOU for the bachelors' degree programmes (eight years) but is more than the maximum period for the certificate (six months to two years), diploma (one to four years) and postgraduate diploma and masters' programmes (one to four years).

Broadly the trends of this IGNOU data follow those of Reddy (2002), but indicate that numbers in his study may be biased downward with IGNOU completion rates being slightly better than he finds. Completion rates for masters' and postgraduate diplomas are the highest of all programmes while completion rates for certificate programmes are slightly better than for the diploma. The programme that has the worst outcome is the bachelors' programme, which does not compare well with the one figure we have for completion in conventional institutions (55-60 per cent). A more detailed examination of individual bachelors' programmes indicates that completion is higher in the non-science or non-management programmes, for example, the BA (14.4 per cent) and the BLIS (39.2 per cent), the exception being the Bachelor of Tourism Studies (4.8 per cent). The BLIS higher completion rate may be linked to the fact that it is possible to complete the course within one year (maximum 4 years). There may be a link between length of courses as well as ease of subject matter. The worst outcomes are for the BCom (2.9 per cent) and BSc (4.5 per cent) degrees. Whether such patterns of completion based on subject matter exists for other programme levels cannot be gauged from the data gathered by IRFOL. Reddy's (2002) analysis however, does suggest that this is so. A slight rise in completion date is likely as students reach the eight-year cut-off point but these numbers are not likely to be significant as they are unlikely to have accumulated the necessary credits along the way.

The data from OUSL supports the view that completion rates are higher for postgraduate and certificate/diploma programmes. OUSL is more successful than other regional ODL institutions in its bachelors' programmes. Tables 5.5 and 5.6 present completion rate data by level of programme for intake years 1994 and 1995 for a number of programmes offered at OUSL. The focus on 1994 and 1995 (for some courses the intake year is taken as 1996 depending on the

Table 5.4: Completion Rates for IGNOU

Programme	Intake for 1996	Year 1 1996	Year 2 1997	Year 3 1998	Year 4 1999	Year 5 2000	Year 6 2001[a]	Total completed	per cent of total Intake	Period of Completion
CERTIFICATE										
Certificate in Food and Nutrition	2432	381	108	121	0	0	0	610	25.1	6 months to 2 years
per cent completed in each year		15.7	4.4	5.0						
Certificate in Guidance	628	90	39	8	1	0	0	138	22.0	6 months to 2 years
per cent completed in each year		14.3	6.2	1.3	0.2					
Certificate in Tourism Studies	833	60	29	10	1	0	0	100	12.0	6 months to 2 years
per cent completed in each year		7.2	3.5	1.2	0.1					
DIPLOMA										
Diploma in Computers in Office Management	1507	65	198	105	43	17	4	432	28.7	1 to 4 years
per cent completed in each year		4.3	13.1	7.0	2.9	1.1	0.3			
Diploma in Nutrition and Health Education	977	11	20	27	23	10	2	93	9.5	1 to 4 years
per cent completed in each year		1.1	2.0	2.8	2.4	1.0	0.2			
Diploma in Rural Development	1777	60	110	70	55	10	1	306	17.2	1 to 4 years
per cent completed in each year		3.4	6.2	3.9	3.1	0.6	0.1			
Diploma in Tourism Studies	1969	14	50	104	46	9	2	225	11.4	1 to 4 years
per cent completed in each year		0.7	2.5	5.3	2.3	0.5	0.1			
BACHELOR PROGRAMME										
Bachelors of Arts	9816	0	0	0	470	746	193	1409	14.4	3 to 8 years
per cent completed in each year					4.8	7.6	2.0			

Bachelors in Computer Applications	2661	0	0	0	24	0	52	76	2.9	3 to 6 years
per cent completed in each year					0.9	0.0	2.0			
Bachelors of Commerce	4018	0	0	0	78	177	61	316	7.9	3 to 8 years
per cent completed in each year					1.9	4.4	1.5			
Bachelors of Library & Information Science	1249	28	189	146	110	11	6	490	39.2	1 to 4 years
per cent completed in each year		2.2	15.1	11.7	8.8	0.9	0.5			
Bachelors of Science	2358	0	0	0	22	63	20	105	4.5	3 to 8 years
per cent completed in each year					0.9	2.7	0.8			
Bachelors of Tourism Studies	1280	0	0	12	21	24	5	62	4.8	3 to 8 years
per cent completed in each year				0.9	1.6	1.9	0.4			
POSTGRADUATE(PG) & MASTERS										
PG Diploma in Computer Science [b]	2453	3	73	205	75	68	0	424	17.3	1 to 4 years
per cent completed in each year		0.1	3.0	8.4	3.1	2.8	0.0			
PG Diploma in Distance Education	516	22	111	36	0	4	0	173	33.5	1 to 4 years
per cent completed in each year		4.3	21.5	7.0	0.0	0.8	0.0			
PG Diploma in Higher Education	494	0	0	15	12	0	1	28	5.7	1 to 4 years
per cent completed in each year				3.0	2.4	0.0	0.2			
PG Diploma Journalism & Mass Communication [c]	1257	48	100	111	68	19	3	349	27.8	1 to 4 years
per cent completed in each year		3.8	8.0	8.8	5.4	1.5	0.2			
Masters of Arts in Distance Education	47	1	7	1	3	1	0	13	27.7	1 to 4 years
per cent completed in each year		2.1	14.9	2.1	6.4	2.1	0.0			

Source: Data from SRE, IGNOU

Intake data from Reddy (2002)

[a] Data for 2001 for June graduation only (does not include December graduation)

[b, c] Intake data for these programmes taken from IGNOU Annual Report 1995-1996

Table 5.5: Completion Rates for Selected Programmes for OUSL, 1994 entry

Certificate /Diploma Programmes	Year of Entry	Intake	1994	1995	1996	1997	1998	1999	2000	Total Complete	Percent	Period of Completion
Certificate in Pre-School Education	1994	581	359	10		8	2	1		380	65	1 year minimum
per cent completed in each year			61.8	1.7	0.0	1.4	0.3	0.2	0.0			
Certificate in Professional Eng	1994	2817	130	146	30	27	9	4		346	12	1 year minimum
per cent completed in each year			4.6	5.2	1.1	1.0	0.3	0.1	0.0			
Certificate in Entrepreneurship & Small Business	1994	840	211	18	21					250	30	1 year minimum
per cent completed in each year			25.1	2.1	2.5	0.0	0.0	0.0	0.0			
Certificate in Wildlife Cons.												
per cent completed in each year												
Certificate in Tourism	1994	72	16	2	3					21	29	1 year minimum
per cent completed in each year			22.2	2.8	4.2	0	0	0	0			
Diploma in Technology	1994	1524		2		3	6	14	14	39	3	2 year minimum
per cent completed in each year				0.1	0.0	0.2	0.4	0.9	0.9			
Diploma in English												
per cent completed in each year												
Diploma in Management	1994	776		47		30		13	13	103	13	2 year minimum
per cent completed in each year				6.1		3.9		1.7	1.7			
Bachelor Programme												
Bachelors in Technology	1994	83					4	1	1	6	7	3 year minimum
per cent completed in each year							4.8	1.2	1.2			
Bachelors of Arts												
per cent completed in each year												
Bachelor in Nursing	1994	74			21	21	6	3	1	52	70	2 year minimum
per cent completed in each year					28.4	28.4	8.1	4.1	1.4			

Post Graduate Programmes	Year of Entry	Intake	1994	1995	1996	1997	1998	1999	2000	Total Complete	Percent	Period of Completion
Masters of Technology	1994	11	1	5			1			7	64	1 year minimum
per cent completed in each year			9.1	45.5								
PG Diploma in Technology	1994	46	1	11		1	1	1	0	15	33	1 year minimum
per cent completed in each year			2.2	23.9	0.0	2.2	2.2	2.2	0.0			
PG Diploma in Management	1994	34	4	5		2	1	0	1	13	38	2 year minimum
per cent completed in each year			11.8	14.7	0.0	5.9	2.9	0.0	2.9			
Postgraduate Diploma in Education	1994	1376		714		120	49	12	4	899	65	2 year minimum
per cent completed in each year				51.9	0.0	8.7	3.6	0.9	0.3			

Source: Data from Computer Centre, OUSL

Table 5.6: Completion Rates for Selected Programmes for OUSL, 1995 entry

Certificate /Diploma Programmes	Year of Entry	Intake	1994	1995	1996	1997	1998	1999	2000	Total Complete	Percent	Period of Completion
Certificate in Pre-School Education	1995	334		223	5	1	1	1		231	69	1 year minimum
per cent completed in each year				66.8	1.5	0.3	0.3	0.3	0.0			
Certificate in Professional Eng	1996	117			39	11	1	0		51	44	1 year minimum
per cent completed in each year					33.3	9.4	0.9	0.0	0.0			
Certificate in Entrepreneurship & Small Business	1995	607		173	14		2	0	1	190	31	1 year minimum
per cent completed in each year				28.5	2.3	0.0	0.3	0.0	0.2			
Certificate in Wildlife Cons.	1995	56		10	6		2	0	0	18	32	1 year minimum
per cent completed in each year				17.9	10.7	0.0	3.6	0.0	0.0			
Certificate in Tourism	1996	48		8	12					20	42	1 year minimum
per cent completed in each year				16.7	25.0	0.0	0.0	0.0	0.0			
Diploma in Technology	1995	779					1	5	6	12	2	2 year minimum
per cent completed in each year							0.1	0.6	0.8			
Diploma in English	1995	35			4	3	1	0	0	8	23	2 year minimum
per cent completed in each year					11.4	8.6	2.9	0.0	0.0			
Diploma in Management	1994	776		47		30		13	13	103	13	2 year minimum
per cent completed in each year				6.1		3.9		1.7	1.7			
Bachelor Programme												
Bachelors in Technology	1995	138					1	6	7	14	10	3 year minimum
per cent completed in each year							0.7	4.3	5.1			
Bachelors of Arts	1996	63					9	10	13	32	51	3 year minimum
per cent completed in each year							14.3	15.9	20.6			
Bachelor in Nursing	1996	67				13	8	4	4	29	43	2 year minimum
per cent completed in each year						19.4	11.9	6.0	6.0			

Post Graduate Programmes	Year of Entry	Intake	1994	1995	1996	1997	1998	1999	2000	Total Complete	Percent	Period of Completion
Masters of Technology	1995	4		1						1	25	1 year minimum
per cent completed in each year				25.0								
PG Diploma in Technology	1995	31					6		0	6	19	1 year minimum
per cent completed in each year							19.4	0.0	0.0			
PG Diploma in Management	1995	54		2		2	1	0	1	6	11	2 year minimum
per cent completed in each year				3.7		3.7	1.9		1.9			
Postgraduate Diploma in Education	1995	589				329	60	22	6	417	71	2 year minimum
per cent completed in each year						55.9	10.2	3.7	1.0			

Source: Data from Computer Centre, OUSL

data) is because it is the earliest two years for which we have data, hence allowing examination of student outcomes for the longest period possible. For OUSL, of course, there are no time constraints on completion. The minimum duration for each course is given in the tables. However, by 2000, the last year for which we have completion rate data, the 1994 and 1995 intake students have had seven and six years studying.

Across the programmes OUSL's outcomes are good and fare favourably when compared with their regional counterparts. Certificate programme completion is superior to that of diploma programmes, as we saw with IGNOU data. Certificate programmes for both years have pass rates in the 30 plus percentile (except for the Certificate for Professional English) and are as high as 65 per cent for the Certificate for Pre-School Education. The diploma figures are not so impressive with the Diploma in English performing relatively better. There are lower completion rates for the Diploma in Management and Diploma in Technology.

Completion rates for postgraduate programmes are quite good but are more variable. Overall enrolment levels are quite low in these programmes except for the Postgraduate Diploma in Education. Completion rates for the latter are also more consistent, unlike the other three programmes. The intake data suggests that completion was much better for the 1994 cohort than for the 1995 cohort. OUSL completion rates for bachelors' degrees stand out in the regional figures. They indicate that high completion rates in bachelors' degrees can be achieved but that this is more difficult to achieve in science oriented programmes. The institutional data does not offer a comprehensive picture for all degrees as it excludes figures from LLB, BSc and combined programmes offered with the BSc. Some insight into the latter can be gathered from the IRFOL-OUSL practitioner case study as well as from Table 5.6. There is a high completion rate for the BA as well as for the BSc of Nursing. The figures are low for the BSc of Technology. In light of the earlier discussion, what explains the relatively better performance of the BSc of Nursing over the BSc of Technology? One explanation for this may be that the BSc of Nursing is the only programme of its type in Sri Lanka. Previous to OUSL initiating this programme in 1994, nurses were only eligible for certificates offered by the Ministry of Health. For motivated learners wishing to upgrade their qualification (and move up the pay scale) this is the only programme on offer. Figures from the IRFOL-OUSL practitioner case study further support the conclusion that achieving completion in science-oriented programmes is more difficult. Institutional data for the 1994/1995 BSc enrolees only reveals that 21 per cent had completed by 2003. Institutional data from the LLB was not available, but both communications from the law faculty and the IRFOL-OUSL practitioner case study indicate that completion is high for the LLB (survey response indicated that 47 per cent had completed).

Table 5.7: Cumulative Completion Rates at BOU 2003

	Launch Year	Total Learners	Successful Learners	Percentage Completed	Minimum Years to Complete
Certificates and Diplomas					
Certificate of Education	1998	7348	1592	21.7	
Certificate in English Language Proficiency	1994	11834	2507	21.2	
Certificate in Arabic Language Proficiency	1996	2045	446	21.8	
Certificate in Pisciculture & Fish Processing	1999	356	192	53.9	
Certificate in Livestock and Poultry	1999	446	209	46.9	
Certificate in Management	1995	1401	40	2.9	1 Year
Diploma in Youth Development	1999	150	37	24.7	
Diploma in Computer Science Application	1998				
Bachelor Degrees					
Bachelors of Education	1992	49969	26230	52.5	
Bachelors of Arts/Bachelors of Social Science	2000	13708			
Bachelors in English Language	1997	2172	67	3.1	
Bachelors of Agricultural Education	1997	7506	740	9.9	
Masters and Postgraduate Diplomas					
Masters in Education	1999	4917	N/A		
Masters of Business Administration	1998	858	N/A		2.5 years min, 6 years max
Graduate Diploma in Management	1995	12623	123	1.0	1.5 to 2 years

Source: Bangladesh Open University at a Glance, 2003.

The data for BOU is more limited in terms of progression, offering only the cumulative output for BOU in 2003 (see Table 5.7). Insufficient time has passed since the launching of some courses to gather comprehensive outcome data, which limits the possible scope of conclusions. The data reveals that certificate programmes have fared relatively better than other programme types. Completion data on diploma and postgraduate programmes are limited, thus restricting what can be said about them while completion rates for the bachelors' programmes are low (with the exception of the BA in Education). Certain aspects of the data need highlighting. Firstly, despite the time that has passed since the launch of the Certificate of Management (1995) and the Graduate Diploma in Management (GDM) (1995) and their short completion expectation, few students have completed these programmes. Cumulatively completion was 2.9 per cent and 1 per cent respectively to the end of 2003. This does not bode well for these programmes. And again suggest that these types of programmes do not fare too well under the ODL system. The more vocationally oriented certificate courses, specifically the CLP and the CPFP, do have higher completion rates.

Box 5.1
BOU Vocational Certificates

The IRFOL-BOU vocational case study focuses on the Certificate of Pisciculture and Fish Processing (CPFP) and the Certificate in Livestock and Poultry (CLP). BOU launched these two certificate programmes in January 1999 through the School of Agriculture and Rural Development. These certificates aim at training the unemployed, youth, women and those people interested in being self-employed. The programme is a semester long (six months) and has two intakes a year. The programme is delivered through printed text, television, radio, audiocassettes and face-to-face tutorials though the core of the programme is text-based with tutorial support. Each certificate has a theoretical and practical content (60 per cent) and (40 per cent respectively). Certification is through BOU and not through government agencies.

Cumulatively between January 1999 and December 2002, the following were the outcome figures:

	Completed	Dropped out	Failed	Wastage
CLP	47.5 per cent	42.5 per cent	10 per cent	52.5 per cent
CPEP	55.1 per cent	36.3 per cent	8.6 per cent	44.9 per cent

Relatively performance on the CPEP programmes was better. The evidence here indicates that student drop out explains the high wastage rate rather than failure. Cost per student was calculated to be 2.800 Tk. ($48) And 2980 Tk ($51)*, respectively for the CLP and CPFP programmes. Figures for cost per successful student were 6,148 Tk. ($102) for the CLP and 5,286Tk ($90.5) for the CPFP.

A combination of survey and focus groups of students, tutors, and employers was carried out. The study concluded the programmes had been effective in enrolling rural students and those who were unemployed. Where it had failed was enrolling women, as over 90 percent of the sampled students were men. Interviews with a number of employers/funding agencies indicated that through the programme, students significantly increased their knowledge and skills. One noted 'the CPFP programme is very suitable and effective for those workers who have no opportunity to get conventional training.'

Of concern are the high dropout rates. Some of the recommendations of the study included strengthening sustainability of programmes and making programmes more attractive to clients, as well as liaising with government and NGOs to improve financing, and linking up learning with entrepreneurial opportunities.

* in current US$

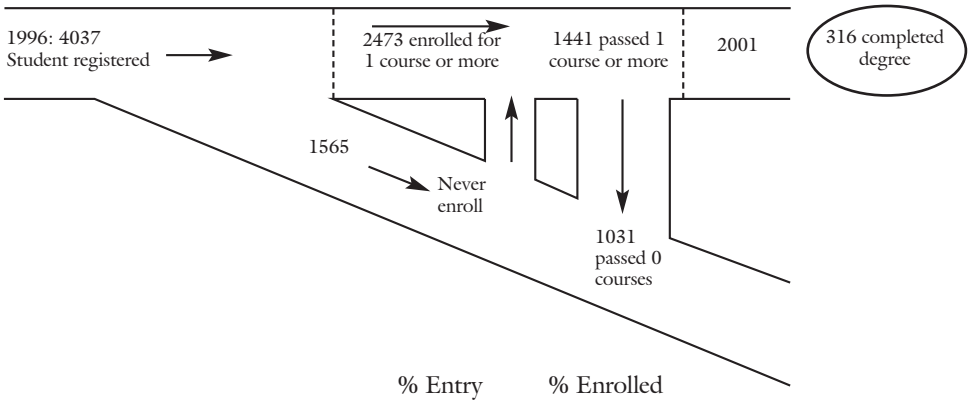
Source: IRFOL/BOU vocational case-study.

So far the focus of the analysis has been on aggregated completion and pass rates. Other data collected gives a more micro picture of wastage/dropout for selected programmes. Figure 5.1 presents throughput data for the BCom at IGNOU for the intake year 1996. The data captures where students stood in 2001, allowing five years for completion (of the maximum eight years). The data is presented using Simpson's method of looking at throughput at the UKOU where he examines course dropout. Here we look at throughput in one programme. However, Figure 5.1 offers only a snapshot rather than a portrayal of the flow of students in and out of the programme.

The IGNOU figures indicate that 4,037 students registered for the programme in 1996, with 7.8 per cent completing within five years. As a percentage of those who actually enrolled, 12.8 per cent completed. Of the total students who registered, 39 per cent never enrolled in a class. Of those who did enrol, 41 per cent never passed a single course. Total wastage or dropout as percentage of total intake was 65 per cent. Added to those who managed to complete (7.8 per cent), the total number of students who where left active was 27 per cent in 2001. These students potentially could still complete.

Figures from AIOU, although not as comprehensive, indicate a similar magnitude of failure to complete. The AIOU data does not include the number of students registered but only those who enrolled. It indicates that a total of 149 students enrolled in autumn 1997 in the BCom programme. AIOU offers an unlimited period for students to complete and the programme requires a minimum of two years for completion. Completion data from October 1999 (two and half years after enrolling) indicates that 58 per cent of the students had achieved no credits, while 9 per cent had completed.

Figure 5.1: IGNOU: Throughput for the Bachelor of Commerce Degree, 1996 Cohort



	% Entry	% Enrolled
(i) Never enrolled (withdrew)	39	
(ii) Passed zero credits (failed)	26	41
(iii) Completed	7.8	12.8
(iv) Wastage rate/Dropout (1+2)	65	

Source: Data from IGNOU SR&E

5.4.3 Some conclusions

The data here reveals that ODL institutions at the tertiary level are potentially significant contributors to human capital development. This varies by country. In Pakistan, ODL institutions contribute most at the degree level and the MPhil level; in Sri Lanka the contribution is greater at the postgraduate level and in Bangladesh it is at the certificate level. Only limited comparisons can be made with the performance of conventional institutions, but it appears that pass rates on exams are generally lower at ODL institutions, but not significantly so. The evidence on completion is however not so good and here ODL institutions need to improve.

Completion rates are better for certificate programmes and postgraduate programmes. Outcomes within each of type of programme do vary. A number of variables correlate with completion. There is the technical difficulty of the subject matter (the higher mathematical component of science and business programmes), the level of the programme (whether it is a certificate or a degree course) and finally the length of time allowed to complete the programme. Technical programmes have lower completion rates regardless of the level of the programme. Programmes which allow a longer time for completion also have lower completion rates. With respect to the level of the programme and completion this is more complicated. Certificate programmes and postgraduate programmes do better than degree and diploma programmes. This may be because of the shorter length of the courses and the better match of materials for the skill needs of entering students. Regarding the former shorter courses are likely to seem more attainable given their shorter time horizon. As to the latter, materials may be easier to design for certificate and post graduate students because of their homogeneity of skills and experience. Certificate programmes for example are for entry level students and assume that students have no specific qualifications. Alternatively for postgraduate programmes qualifications are assumed. In both these programmes material may be easier to design as opposed to that for the more heterogeneous students entering the diploma and degree programmes where variation may be greater in relation to knowlege, skills and experience.

Bachelors' degree programmes do the least well. Completion rates are uniformly low, with science and business related programmes particularly poor, the only exceptions being the BLIS and the BEd degrees.

The data here does suggest that although withdrawal is a significant contributor to high wastage rates, failure too plays a significant role. This varies across programme type and institution. Focusing policy in this area is likely to achieve the highest return as we are dealing here with active students already enrolled in the system.

Different outcomes at different institutions, levels of programme and subject matter suggest the need for more disaggregated analysis. Research needs to focus on outcomes and at different disaggregated levels.

5.5 Costs – cost efficiency and cost effectiveness

Costs matter at two levels: to the institution and to the student. Planners within ministries of education, administrators within ODL institutions and international agencies are all concerned with variations in institutional costs when determining the optimal allocation of funds to conventional and ODL institutions. Students remain concerned about the private costs they bear for the education they undertake.

5.5.1 Institutional costs

The theoretical arguments favour distance education. This is based on the nature of production in distance education that allows for the substitution of capital for labour through technology, to deliver education at a distance to larger audiences at a lower cost. On the assumption that the quality of education delivered is equivalent to that of conventional institutions, ODL is seen as a cost efficient solution (Perraton, 2000:118). In distance education the ratio of fixed cost to variable cost is much greater than in conventional face-to-face universities. Variable costs change with the number of students while fixed costs decline as more students are enrolled, resulting in economies of scale and lower per unit costs.

Cost per student enrolled and cost per graduate are quite distinct measurements. For the most part, cost data that exists is based on the number of students enrolled rather than the number of graduates produced.

Where cost per student is concerned, ODL institutions are invariably cost efficient. Where cost per graduate is concerned, much more evidence is required and depends very much on the number of students completing programmes. There is also the question of cost effectiveness and this depends on the equivalency principle actually being attained in terms of quality of graduate, i.e. that an ODL graduate is regarded as equivalent to a graduate from a conventional face-to-face university. There is further discussion of this in the next chapter.

Another advantage associated with ODL is the lower opportunity cost, in terms of income forgone. Students can continue to earn an income while studying, which may be impossible while studying at conventional institutions. This has both private and social benefits.

Previous evidence suggests that cost advantages do exist per ODL student enrolled. This is true for dual mode institutions as well as the large open universities. Ansari (1994: 80), in his examination of a number of dual mode institutions in India, finds that the cost for the distance learning element varies from 2 per cent to 23 per cent of the conventional system costs but warns that these cost advantages should be measured against the lower completion rates of those undertaking distance programmes. Naidu (1994) offers some detailed figures for both IGNOU and a number of the state open universities. These comparative figures are based on recurrent costs. Consequently, these figures are likely to understate costs for open universities because of the lower recurrent costs in ODL as compared to conventional universities. For 1991/1992 (based on the nominal exchange rate of $1= 27.55 Rp.) as a percentage of conventional institutions costs, per student costs at IGNOU were 37.7 per cent (Rp. 2046 or $79), at YCMOU 40.4 per cent (Rp. 2214 or $86) and at BRAOU 14.2 per cent (Rp.777 or $30). The low figures for BRAOU's costs (Naidu, 1994: 65) may reflect declining variable costs as

institutions reach a steady state after they have been established. Naidu (1998: 84) goes on to calculate unit costs per student based on fixed and variable costs for IGNOU for 1994. His calculations with fixed costs reveal that per unit costs were equal to Rp. 2363 per student or $92, not significantly different from the previous estimates based on recurrent costs. This suggests that the cost figures based on recurrent costs are likely to be close to economic costs.

Some would argue that cost per graduate is a more relevant measure for costs. These figures are very difficult to determine for two reasons: (i) completion figures are often not available; (ii) relating student completion with cost over time is difficult because of a lack of detailed data sets. Ansari (1994) and Naidu (1994) have given one estimate of cost per graduate for IGNOU as Rp. 6000, or $233, for students completing within three years. Given that the similar cost for a conventional university graduate completing in the minimum period is Rp. 16,428, or $637, the cost of ODL graduates looks very favourable. However, this is the most favourable comparison to choose as rarely do students complete in three years as we saw in Section 5.2. Once wastage is factored in, costs rise.

Naidu (1994: 66) examines costs per graduate at IGNOU and at conventional universities at different wastage rates (see Table 5.8). The table lays cost per graduate at different levels of wastage rates for IGNOU against other conventional Indian universities. Combined with the figures for degree completion from Section 5.3 this gives us some insight as to what level of wastage IGNOU can maintain while still being relatively cost efficient against conventional institutions. Our figures for completion at IGNOU (see Table 5.4) reveal that completion for most degree programmes, except the BLIS, are between 4 and 15 per cent. Based on Naidu's figures and combined with our new data on completion this indicates that cost per graduate for IGNOU on average falls between Rp.30, 000 ($1164) - Rp.60, 000 ($2328), and above. For IGNOU to be cost efficient against conventional universities, wastage rates at conventional universities would have to be in the range of 50 per cent and above where costs per graduate in conventional Indian universities reaches Rs.30,000 and above. Ansari's work (1994: 82) shows that completion rates in the Universities of Delhi, Annamalai and Bombay are respectively 54.6 per cent, 88.7 per cent and 69.4 per cent. If average completion rates in conventional institutions are at the higher end of these figures, ODL institutions are not cost efficient. They are cost efficient however if completion rates on average are at the lower end of the range that Ansari reports. Interestingly, Naidu's figures suggest that a small improvement in completion rate at IGNOU could significantly improve its cost efficiency relative to even those conventional institutions with higher completion rates. For example the cost per graduate for a conventional university with only 20 per cent wastage is approximately Rp. 20,000. To become relatively more cost efficient then this, IGNOU would have to improve completion rate to 30 per cent (i.e. wastage rate of 70 percent) which would take cost down to Rp. 20,000 per graduate. Given that at the bachelor degree level, IGNOU's best completion rate (with exception of BLIS) is 15 per cent, this would suggest that IGNOU would have to improve its completion rates by an additional 15 per cent.

Table 5.8: Cost per Graduate of IGNOU and Conventional University at Different Wastage Rates

Wastage rate (per cent)	Cost per graduate (Rs.)	
	IGNOU	Conventional Universities
0	6,000	16,428
10	6,667	18,253
20	7,500	20,253
30	8,471	23,469
40	10,000	27,380
50	12,000	32,876
60	15,000	41,070
70	20,000	54,760
80	30,000	82,140
90	60,000	164,280

Source: Naidu 1994:66

5.5.2 Private costs to students

Where costs to students are concerned, the overwhelming focus has been on student fees, the most obvious component of costs incurred by students. Students at ODL institutions pay a higher fee than if they attended conventional institutions. This partly reflects the fact that ODL institutions bear a larger burden of self-financing than do conventional universities which are more heavily subsidised by governments (see Perraton, 2000: 186; Ansari, 1994:78). Indeed the pressure by ODL institutions to expand enrolment may be partly explained by this.

However, fees are not the only costs borne by students in ODL. There are a composite of other costs, both fixed and variable, that students bear, and these including transportation costs, communication costs, private tuition costs and costs for equipment. A recent study completed by Naidu (2000) on the IGNOU student experience over a number of courses is revealing. The study, based on a survey of sampled students in four courses (BA, BSc, Masters of Computer Application, and Postgraduate Diploma in Higher Education), indicates that fees account from 26.1 to 45.0 per cent of the total annual cost borne by students. Students also bear substantial costs for accommodation, food and other incidental costs which range from 19 to 56.4 per cent of total annual costs. These costs are surprising given the fact that ODL is a largely non-residential mode of delivery with limited face-to-face teaching. Essentially, students bear the costs for maintaining communication with IGNOU. Part of these costs are compulsory for participating in elements of the programme, i.e. attending practical sessions, visiting student centres, counselling and taking examinations. On occasion these costs entail visiting the central offices in Delhi because students do not receive the required documentation for participating in their courses or do not receive their exam results.

Combined with the relatively high fees, these costs can add considerably to the private costs borne by ODL students undermining further the argument that ODL institutions provide access to the poorer elements of society.

5.6 Conclusion

The aim has been to analyse new data on South Asian ODL institutions. The analysis has confirmed various hunches regarding ODL delivery, with some added qualifiers. The positive dimension is that ODL institutions are important players in human resource development. In that sense these institutions have achieved part of the task set for them. This has been despite their relatively poorer performance, suggesting that there is a huge as yet unrealised potential in these institutions. Completion rates vary, depending on programme level, subject matter, and length of programme. There are some successes like postgraduate and certificate courses, and some failures like undergraduate degree programmes, particularly in management and sciences. However OUSL's relatively higher success at the degree level does indicate that poor degree completion can be improved. It is a valid policy question to ask where within bachelors' degree programmes that effort (and resources) should be directed. Wastage is a grave concern including high withdrawal and high failure rates. Cost efficiency if measured in terms of per student enrolled is high, but low in terms of cost per graduate. In combination with this set of completion data for IGNOU and the previous costings undertaken by Naidu (1994), the analysis suggests cost efficiency for graduates is comparable to India's more medium tier institutions as compared to those that have high completion rates. However, a marginal improvement in completion rates could change even this. Private costs borne by the student are high. These are not just fees, but a range of other costs. The latter makes intriguing the question as to what cost benefit calculus encourages students to enrol in ODL institutions.

Chapter 6: Quality of ODL Output

The focus of this chapter is on quality of ODL output in the South Asian context. As stated elsewhere in this report, attaining gross outcomes in terms of enrolment, completion and cost efficiency is of limited relevance if it does not generate the necessary skills for development. This chapter moves on to look at the impact on and quality of ODL student and graduates. In this chapter the focus, in the context of ODL programmes, is on student achievement, student satisfaction, employability and other non-pecuniary benefits. Of interest here are the aggregate benefits to individuals and society. This chapter, more than the previous ones, draws on the research carried out by IRFOL's collaborative partners in the practitioner and vocational case-studies. These outcomes are examined from the perspective of students and employers in Sections 6.1 and 6.2 respectively.

6.1 Students

The potential benefits that can be enjoyed by ODL graduates are not distinct from those enjoyed by those who attend conventional institutions. Overwhelmingly the benefits are seen to be economic and have resonance in low income countries where improving employment and income are key development concerns. Non-economic benefits are also seeing a re-awakening of interest as the externalities of exposure to education are receiving renewed attention due to the benefits for governance and developing a civil society. The latter can be enjoyed regardless of whether or not students complete a particular programme.

6.1.1 Employability and Income

The relationship between education and earning is seen to be positive. Numerous studies over the past decades have concluded that private returns to education, at whatever level, are higher than social returns. Also, although primary education receives the highest returns, those to other levels of education remain significant (Haddad, et al 1990). Neither are returns to levels of education static. As enrolment in primary education rises towards UPE, returns to primary education diminish, while returns for secondary and tertiary education rise. Recent empirical evidence from low-income countries seems to support this (Bennell, 1996; World Bank, 2002a). That individuals in low income countries recognise this, is reflected in the demand for more places in tertiary education, particularly in South Asia.

Is there evidence that ODL institutions have delivered on these private returns? Conventional rates of return analysis for ODL institutions are difficult to compute. The difficulty of measuring private rates of return for ODL graduates is complicated by ascertaining income earning data for ODL graduates cumulated over time (particularly if we account for the fact that discrimination may be a variable in determining employment opportunities for ODL graduates). These can however be inferred indirectly. As we saw from the last chapter, the private cost of undertaking an ODL programme generally includes not just fees but other costs, and fees are relatively higher than for conventional institutions. Conversely, the opportunity costs borne by ODL students are lower as many students can remain employed while studying. This may make net private costs lower than those for a student enrolled in a conventional institution.

These costs must be gauged against the benefits of enrolling in an ODL programme. What are the economic benefits in terms of employability and earnings? The evidence is mixed. Patterns

of career paths seem disappointing and although correlations exist between acquisition of degrees and income, it is difficult to attribute these benefits to purely acquiring an ODL degree. Moreover, there are differences between the types of degrees and returns. The IRFOL research has focused on professional programmes which are conventionally seen to be more marketable.

We begin by discussing Gaba's (1999, 2002) research which examines the experience of IGNOU graduates in the job market. Gaba (1999) sampled 1,755 (with a 24 per cent response rate) students who had successfully completed IGNOU's BA and BCom programmes. Almost three-quarters of these students were in some kind of employment before enrolling. Of those respondents who indicated that their main reason for joining the course was to get a job, 24 per cent were able to; of those who desired a promotion, 28 per cent achieved one; approximately 36 per cent of those who joined IGNOU in order to pursue higher education, were able to. Overall the largest share of those who were sampled continued in higher education. Some of the aspirations of students at the onset of joining IGNOU were met.

In terms of the importance of the IGNOU experience for career change, the evidence is not very clear. The pre-employment and post-employment patterns of those surveyed (pp.37), indicate that 74 per cent of IGNOU students were in some kind of employment before joining IGNOU. After graduation, the percentage in employment (whether full time or part-time) fell to 23 per cent, with a large share of students (33 per cent) staying in higher education and another 32 per cent occupied in the 'other' category. These figures, lower employment after graduation, are not so contrary if one examines the stated objectives of these students *before* they enrolled at IGNOU. Indeed these objectives are quite revealing in terms of suggesting that individuals, even in low-income countries, pursue education for other than purely economic reasons. Out of the students surveyed by IGNOU, 43 per cent enrolled to continue in education; 14 per cent enrolled to get a job; 10 per cent for promotional purposes; while 6 per cent enrolled for social reasons. In light of this, the outcomes after graduation are quite positive. The more micro analysis of juxtaposing each individual student's objective against his/her outcome is not so encouraging. For instance, of the students who wanted to get jobs, only 13 per cent were able to do so. Similarly of those who wanted to continue in higher education, only 36 per cent were able to do so. This does suggest that these figures are masking a mismatch between expectations and opportunities, part of which is a level of under-employment.

IRFOL's AIOU practitioner case-study sampled graduates of BCom/BBA degree and MBA programmes who completed their programmes during 1998-2001. A total of 463 and 417 students were surveyed for the BCom/BBA and the MBA programme respectively. The response rates were 33 per cent and 47 per cent, which are high response rates for ODL research in the low income country context. The data from the study also supports the conclusion that ODL graduates are unable to fulfil their career aspirations and travel difficult career paths.

Table 6.1: AIOU Students' Perception of Influence of Degree on their Career Development

BCom/BBA					
Experience of career development	Better pay, extra increments	Promotion to a higher grade	A new occup-ation	Increased professional status	Achieved management status
1. No it has not happened so far	22%	28%	26%	15%	23%
2. Crucial/ Important	7%	7%	4%	19%	7%
3. They helped	31%	16%	16%	25%	12%
4. Not important/ Don't know	4%	6%	7%	5%	5%
5. No response	36%	43%	48%	36%	53%
MBA					
Experience of career development	Better pay, extra increments	Promotion to a higher grade	A new occup-ation	Increased professional status	Achieved management status
1. No it has not happened so far	23%	25%	27%	12%	19%
2. Crucial/ Important	15%	12%	9%	25%	13%
3. They helped	28%	28%	13%	36%	23%
4. Not important/ Don't know	5%	5%	6%	3%	3%
5. No response	29%	29%	44%	25%	41%

Source: IRFOL-AIOU practitioner case-study

Table 6.1 presents AIOU graduates' impression of the impact of the qualification on their career path. Perhaps one indication of how students feel is the low response to the question. Of those who replied almost a quarter felt that the degree as yet has had little impact on their pay, promotion, new occupation, and management status. This is across the BCom/BBA and MBA graduates. Students' view of the impact of their qualification varied. Both the BCom/BBA and MBA graduates indicated that they saw improvements in their professional status (44 per cent and 61 per cent respectively) followed by improvements in their pay increment (38 per cent and 43 per cent respectively). However, where the impact was weakest was in relation to promotion and shifts to new occupations. This was less so for the MBA graduates. When students were asked separately about career mobility, 36 per cent and 50 per cent of the BCom /BBA and the MBA graduates respectively said that they had seen some upward mobility in their careers. In both groups, 25 per cent of those sampled stated that acquiring the degree had no impact on their careers while 15 per cent and 3 per cent remained jobless.

The evidence in relation to salary increments indicate that gains, if they are attained, vary depending on the programme. For undergraduate programmes income gains are not categorical. However, graduates of the MBA programme do see a financial gain with significant numbers of students shifting out of the lower two income bands (under Rp. 20,000 or under $344 in nominal exchange rate) to the top two income bands (over Rp.20,000). For instance, at enrolment only 19 of the students earned an income over Rp. 20,000. At the time of this survey the figure had jumped to 44. The jump to these significantly higher income bands suggests that these salary increments reflect more than inflation adjustments (inflation in Pakistan between 1997 to 2003 rose by 50 per cent). Whether these gains can be directly attributed to the MBA is difficult to gauge mainly because many of those enrolled in the

programme were executives with substantial work experience. Pay increments may be returns to higher productivity acquired through experience rather than knowledge embodied in the MBA qualification per se.

The IRFOL-OUSL practitioner case-study examines the perceived pecuniary and non-pecuniary benefits of OUSL graduates. The response rate for the LLB was 19 per cent and 12 per cent from the BSc students. Here the evidence does indicate that incomes improve upon attaining the degree. The better recognised LLB programme delivers a slightly higher reward in terms of income than the BSc. The relative success of the OUSL law programme is likely to be the result of the fact that OUSL is one of the few institutions in Sri Lanka that offers this qualification. For those students who complete there are clear benefits. After qualifying, all graduates moved to the top two income bands. There were gains for all LLB students even if they had failed to complete. However, as the shifts are not large between income bands for non completers and dropouts this may purely reflect inflationary adjustments in income rather than real improvements in overall income.

Box 6.1
Recognition of AIOU Degrees

Despite the fact that AIOU degrees are recognised by the University Grants Commission in Pakistan (now Higher Education Council) there is a widespread distrust of these degrees in the wider public. Below is a partial quote from a judgement on a Writ Petition submitted in the Peshawar High Court by an AIOU student who had completed the Primary Teaching Certificate (PTC) and who was not able to apply for PTC job in Swabi North West Frontier Province (NWFP) because of his qualifications. The quote below is from the judgement, quoting the lawyer of the respondent in the case, Education Department, NWFP. The case was won by the Education Department.

The Additional Advocate General for the NWFP Education Department contended that the education department selected the candidates who were trained and possessed the certificates from the provincial institutions which are better equipped in imparting institutional training in theory as well as in practical while Allama Iqbal Open University is an open university and training is given through correspondence in theory only and no provision is available for the practical skill and training, therefore the Education Department gives preference to trainees of provincial institutions rather than those of Allama Iqbal Open University with regards to the untrained teachers working under PTC cadre…..The learned counsel further submitted that those who were trained at provincial colleges attended regular classes which shows their interest towards their profession while on the other hand Allama Iqbal Open University student were part time students, continuing their education in their spare time while doing other things. It is further submitted, that Allama Iqbal Open University's students are those students who failed to get admission in regular courses due to lack of merits. He insisted that no doubt the certificates obtained by the petitioners are duly recognised by the University Grant Commission but admittedly they lack institutionalised training and practical teaching aspect of the training. (sic)
Provided by the REC Centre, AIOU

Income gains relate to how well-recognised degree programmes are in the market place. All the open universities covered in this study are publicly owned, carrying the implicit guarantee that their degrees are recognised by the national certification bodies in their respective countries. However different ODL institutions and their degrees are perceived differently. For instance OUSL students feel that OUSL degrees are of equal value to conventional university degrees. This is supported by a number of studies including the research carried out here (see also Gamaathige and Dissanayake, 1999). Acceptance in the market can be quite a different thing. Box 6.1 and the IRFOL-AIOU practitioner case study reveal that there is little knowledge of how ODL courses are delivered and consequently a prevailing scepticism about the quality of the degree. Vested interest may also influence the perception of distance education degrees. For instance, in the NWFP, existing private and public colleges, the latter often championed by policy-makers within government, often resisted AIOU in its attempts to introduce courses. The outcry also affected how the broader public perceived ODL courses. These perceptions had direct implications for employment opportunities, earning potential and other benefits (see Box 6.1).

6.1.2 Non-pecuniary benefits

Students enrolled in ODL programmes, when surveyed, overwhelmingly state that their objectives in joining ODL programmes are non-economic ones. This is quite at odds with the broader perception that economic needs drive the desire for access to greater educational opportunities. Gaba's (1999) study on IGNOU students hinted at the varied aims of students starting out on the BCom/BA programme.

Evidence from the IRFOL-OUSL practitioner case-study also indicates that there are multiple non-pecuniary reasons for students joining degree programmes. When OUSL students in the LLB programmes were asked what their expectations were at enrolment (where students could mark more then one expectation), securing a job was ranked fifth compared to - improve knowledge; widen experience in life; improve self image; and improve public image. As to actual attainment students ranked - improving knowledge; achieving self-confidence; improving self image and public image; widening experience in life; and making up for lost opportunities - higher than acquiring knowledge relevant to the job. Indeed developing a new career and enhancing their income ranked 10th and 11th in terms of what expectations had been achieved. If one compares this to the objectives they started with, the OUSL experience seems to have delivered a satisfactory outcome. Similarly, students of the BSc programme noted their top five achievements as being - acquiring knowledge; self confidence; improved public image; widen experience; and improved self image. When asked about how the programme had changed their personalities, the students stated that they had become more responsible (55 per cent), they had acquired new goals (54 per cent), they were able to communicate better (53 per cent) and had become tolerant of the views of others (51 per cent).

There are unexpected benefits from completing degrees as well. Evidence from the IRFOL-AIOU practitioner case-study indicates that degrees are an important means of screening candidates in the marriage market (both for men and women). In that context, AIOU is an important means through which candidates who otherwise have missed opportunities to enter conventional universities have opportunities to acquire degrees. Acquiring a qualification and subsequently gaining employment is seen as an important prerequisite for men wanting to get

married. One AIOU student noted, 'a bachelors' degree (at least) has been proved as a status symbol. If we have it we can have a pretty good match/hand of a girl for marriage'.

How do ODL students feel about the quality of their learning experience through distance education? Students for the most part indicate a reasonable level of satisfaction. For example, IGNOU students indicate that they find the experience of attending ODL programmes a positive one. Satisfaction levels for the BOU vocational courses were reasonably high. When students were asked about the course and material of the CLP and the CPFP, 89 per cent and 70 per cent respectively gave it a rank of excellent/good.

6.2 Employers

Another means through which ODL quality can be gauged is from the views of employers, although there have been few such studies. We have drawn here on the IRFOL-AIOU practitioner case study and the IRFOL vocational case-studies as well as past research on IGNOU and OUSL to reach some conclusions.

6.2.1 Perception of the system and quality of graduates.

The study by Chandra et al (1998) on OUSL is one of the earliest studies on employers' views on ODL in South Asia. The objective was to find out employers' views on OUSL and its product; 17 out of 25 employers responded. The study found that although employers were aware of the OUSL (96 per cent) and claimed they had knowledge of how such programmes were delivered (64 per cent), on more detailed questioning this was found not to be the case. This reinforces the impression that the public perception of the ODL system, including the perceptions of employers, is weak. When asked about recruitment only 56 per cent of these employees said that they recognised OUSL qualifications, 18 per cent did not and the rest did not respond to the question. Where quality was concerned, 17 per cent of employers thought that OUSL graduates were better; 17 per cent thought that OUSL graduates were similar to other universities while 17 per cent thought that OUSL graduates were of lower quality. The rest did not respond to the question. Overall, OUSL graduates are reasonably well received in the market place, supporting students' own views about OUSL degrees. Relative to other ODL institutions in the region, OUSL acceptance in the market place is positive.

IGNOU graduates do not fare so well. Gaba (2002: 108-109) supplemented his tracer study of graduates (Gaba 1999) with an employer survey based on a survey of 17 employers who advertised in Indian papers during July-August, 2001. Here, contrary to the positive response of the IGNOU graduates surveyed in relation to their job market experience, 67 per cent of employers felt there was no interaction between distance education institutions and industry with only 8 per cent of the employers saying that they would hire students from the ODL system. Selective interviewing of employers in Pakistan, and the experience of AIOU students when undertaking a job search, suggest that employers are sceptical about degrees attained though ODL. Students of the MBA degree indicate that they have to explain the ODL system to employers; others indicate that employers' poor opinion of the system means that they see few benefits after acquiring the degree. Sceptical employers however do note that once they have overcome their doubt and employed AIOU graduates, they find them good workers.

It is worth reflecting on employers' view regarding vocationally oriented courses delivered through ODL. The IRFOL vocational case-studies covered three public sector cases and two private sector cases. The latter looked at delivery of courses through in-house company intranet sites as well as through stand-alone computers. To some degree, the very fact that proprietors of firms choose to invest in training indicates that they perceive there to be clear future benefits. Proprietors can also tailor the training for their specific needs. They also have the ability to monitor training, with a greater possibility of ensuring that the necessary skills are transferred. Of the two firms, the managers of the firm specialising in shipping did indicate that they had achieved greater labour productivity through improved ICT skills resulting from the training package, with resultant better administration. Management at the insurance firm felt that they had yet to see the benefits.

Employers raised queries about the effectiveness of the publicly delivered ODL vocational courses. They questioned the appropriateness of distance education to deliver training in practical skills. One human resource manager in the textile industry in Colombo noted 'I have a feeling that the theory component in the OUSL certificate programmes is too much. What we expect from the trainees is to work in the industry and if they have mastered the basic skills then it is more than adequate.' Others see the delivery of practical skills through ODL as adequate (see IRFOL-YCMOU vocational case study) but argue that the learning process is not adequate in generating the necessary communication skills.

6.2.2 Output productivity

There is little to say about the impact of ODL graduates on productivity as studies that examine this directly do not exist. One indirect indication of productivity is wages. From what we have seen in Section 6.1.1, there is a correlation in terms of an increase in income and the acquisition of an ODL degree but whether this is due to the ODL approach is difficult to gauge. More studies are required that examine these issues explicitly.

Evidence from the private sector vocational case-studies does indicate that training tailored to specific company needs can have a positive impact on the productivity of the firm, as mentioned above. Other vocationally oriented courses which aim to encourage self-employment through micro-entrepreneurship, e.g. the Certificate in Gardening at YCMOU, are inadequate in themselves. Skills are only one element in a composite of factors that can improve productivity. Critically, what is required is institutional support and microfinance, which combined with the right skills, can produce positive results.

6.3 Conclusion

What can we conclude about the impact on, and the quality of, graduates produced by the ODL institutions in South Asia? The evidence does support the perception that completing a degree can have economic benefits. This is despite the fact that in many countries degrees from ODL institutions are not well recognised in the market place. Whether these gains are solely attributable to acquiring the qualification is difficult to say. Students who do not complete do not benefit as much. Students do see many of their own non-pecuniary aspirations met. As these include aspects like confidence, tolerance, broader knowledge etc, this can be regarded as a

positive gain from the ODL educational experience. Employers overall remain wary about ODL systems and about employing ODL graduates. This is common across South Asia, but less so in Sri Lanka. The exceptions are the private sector firms which are able to tailor training programmes directly to their perceived needs and to monitor the training delivery and outcomes.

Chapter 7: Conclusions and Policy Implications

7.1 Introduction

Low-income countries will continue to need to respond to the needs of a large number of individuals caught at the low end of the skills spectrum. Many of these countries already face high levels of unemployment while underemployment and low productivity continue to be issues in both the informal and formal sectors. At the other end of the spectrum, there is a continual need for professional skills development to meet the functional and administrative needs of most growing economies. These countries are trying to compete in a globalised and constantly changing market place. Many low-income countries now seek to take advantage of the recent growth in out-sourcing of service industries from the developed economies. Those who aim to be successful in this particular market will have to consider how their skills development strategies correspond with the needs of these industries, with the proviso that only a limited number of countries will be able pursue this increasingly competitive path.

Open and distance learning is one among several education methodologies that governments can use to develop skills. Many expectations rest on the methodology's potential advantages. These advantages include the ability to access individuals and communities on the margins; its low cost and its ability to deliver a quality product of standard similar to conventional institutions. With the growth of ICTs, ODL has become an even more attractive option for many economies. Now many believe that the advances in technology fortify and expand existing arguments for ODL delivery in skills development. ICTs can increase access to information and facilitate communication as well as allowing modelling of scientific and technological phenomena. All this allows for better delivery of education material and better learning outcomes. The growth of ICTs should allow students to access better quality, reasonably local ODL institutions, whilst also providing students with the means to access the best knowledge bases anywhere in the world.

Yet, what do we know about ODL and its ability to actually deliver? What insights can we offer based on three decades of ODL experience in South Asia? Can ODL really overcome existing inequalities within economies and society, or does it actually mirror or even reinforce existing inequalities? The evidence suggests that in certain areas, ODL has met expectations but in others, it has not. Where it has not, there may be room for improvement. A realistic evaluation of where ODL has been successful, and policies that aim to replicate these successes, will better serve those seeking skill development.

7.2 Extending access

Open and distance learning institutions often promote the view that their aim is to cater for the poor and the marginalised. Indeed these arguments may serve as a means for legitimising these institutions as well as justifying their expansion. The evidence from South Asia regarding the ability of ODL institutions to provide access to these groups is mixed. Nevertheless, although those who have benefited are often not those that ODL systems often claim to help, these beneficiaries have important roles to play in the overall economy.

The evidence here suggests that ODL in South Asia broadly caters to the same clientele as do conventional institutions, i.e. predominantly lower middle class urban-based men. There are, however, certain differences between conventional and ODL students. Those students who enter ODL institutions are likely to be marginally poorer and less well initially qualified, and are also likely to be drawn from the large pool of those who were unable to attain places in conventional institutions. Even the vocational programmes that we examined, whose orientation is supposedly towards those sectors where poorer members of society work, had enrolees who were typically from families where the income was well above the poverty line. Students again were mostly men in the age group of 20 to 30 years.

Open and distance learning institutions have been quite successful in enrolling women in Muslim South Asian countries. The open characteristics of ODL programmes are clearly able to overcome certain situational and cultural constraints that women face in such societies, particularly those that constrain their mobility. Yet, even here we see that simple changes, like holding examinations in non-male environments, can make a huge difference to the acceptability of the ODL approaches in these societies. In countries like India, where situational constraints are less of a factor, the indications are that women may be choosing institutions of higher learning by some other criteria. The evidence supporting this is not yet strong, and much more research is required on choice matrices of students. However, if for instance, women in Muslim societies do not objectively have a choice, while women in India do, there may be implications for the quality of ODL delivered to these women, with Muslim women losing out.

Does ODL have any particularly advantage in overcoming gender biases that permeate subject areas? The evidence we have gathered from South Asia suggests that ODL does not play a significant role in helping women enter traditionally male dominated subjects like science and commerce. Where female enrolment is high, it is in those areas where we would traditionally expect women to have higher visibility, i.e. in subject areas like education or nursing. This may of course reflect cultural and situational barriers, which are society wide, and there is no reason to assume that ODL will have a particular advantage in overcoming these societal constraints. However, these may be overcome by ODL if the approach is part of a larger package of incentives attacking these particular barriers. The Sri Lankan example where OUSL was successful in achieving high enrolment of women in its BSc programmes, benefited from the government's explicit strategy of linking qualifications with higher economic returns and promotions. This encouraged many women who were teaching science to enrol.

A number of factors suggest that ODL may be an effective means of delivering professional skills development for life-long learning. If predictions are correct that in the 21st century employees will need to continually upgrade their skills through their employment lifecycle, ODL may be a means through which this can be done. Its primary advantage is that it allows individuals to work at the same time as upgrading their skills. In surveys carried out here, this was seen to be a major advantage of ODL systems. If we presume that, in a university environment, professional skills development is likely to occur mostly at the postgraduate level, the evidence on outcomes, which shows that completion rates are better at that qualification level, further bodes well for ODL delivery of life-long learning.

ODL does provide greater access, even if it is not benefiting those conventionally considered marginalised. Even if ODL institutions are only successful in enrolling lower middle-class men, this is an important economic (and political) constituency; ensuring that they become productive members of the workforce would itself be a great contribution to the economy. However, enrolment of these groups is not sufficient to ensure that productivity is achieved. Urgent attention needs to be directed at ensuring that more students complete programmes, and that those who are completing are achieving the necessary learning competencies required in the current globalised economy. Even for women, it would be too easy to become complacent. There is no doubt that ODL is overcoming certain barriers by providing Muslim women with more access to education; this is in itself an achievement. However, it would be a disservice to these women if policy-makers failed to ensure that these women receive a quality education that transferred real skills to them.

7.3 Investing in outcomes

The South Asian data does indicate that ODL has been playing a significant role in human resource development in these economies. When compared to conventional universities, ODL institutions make a significant contribution in producing graduates, as the comparative data on pass rates suggests that ODL institutions can broadly achieve similar pass rates. Of course, figures on pass rates tell us only a little about transference of competencies and learning outcomes, and on this, we need more research. Nevertheless, these figures do suggest that policies-makers can consider ODL approaches as a viable alternative to other delivery systems.

Yet success varies across ODL institutions and the type of programmes they offer. Evidence here reinforces what others have noted, that success with programmes varies across subject matter, level of programme, and timeframe under which ODL programmes have to be completed. The variability in completion rates has an impact on cost efficiency as high wastage raises the cost per graduate. The issue of costs also arises because the actual number of ODL programmes in these respective institutions has grown relentlessly; some of these programmes manage to enrol only tiny numbers of students each year with completion being a far off objective.

The data here reveals a clear and distinct pattern of where ODL institutions in the past have been more successful in getting students to complete. Much of the data from South Asia confirms some of what we already know. Completion rates are better at the two extremes of the education cycle, either at the entry level or, on the other extreme, at the postgraduate level. Where they seem to be universally poor is at the intermediate level of qualifications, specifically bachelor and diploma programmes. Here wastage rates are very high. Even across these courses there is variation depending on the technical content of the programme or the timeframe given for completion. Vocational education delivered through publicly owned ODL institutions also raises a number of concerns; student completion rates vary considerably and poor attendance at tutorial sessions and usage of supplementary study materials indicate that there are limitations to this mode of delivery as evidenced in the small number of case studies we examined here. This is quite distinct from the delivery of vocational skills through the private sector. Again, based on the evidence of a limited number of case studies, it appears that private sector providers are much better at targeting their programmes to their specific skill needs and ensuring that their students complete.

For policy-makers there are a number of implications from the evidence gathered here. Although we know which variables broadly correlate with less successful completion, we need to know more about the nature of those relationships. For instance, what aspects of technically oriented subjects limit their transference through ODL? Is it those aspects of the subject that require systematic practice? Also, we need to disentangle effects of different characteristics of programmes in explaining differential outcomes. For instance, to what extent are the higher completion rates in certificate programmes explained by their short time frames and how much is explained by the level of difficulty of the material? Answers to these questions will lead to better designed courses and hopefully better outcomes.

Next, based on this evidence, how should policy makers use ODL in their tertiary education systems? Governments first need to direct ODL institutions to work toward orientating ODL programmes to areas where they are most successful. In the rush towards ever-larger ODL programmes, little attention has been given to the question of where ODL institutions best perform and where they do not. There is a need to take stock and consolidate existing programmes. Delivery of programmes should be prioritised to those areas where we know ODL has been more successful, specifically either entry-level courses or post-graduate level courses in non-technical subject areas. As postgraduate programmes fall into lifelong skills programmes, they should be emphasised both because of the better completion rates achievable at this level, and the fact that ODL is an attractive delivery system to those students already employed.

Delivery of vocational education through public sector ODL institutions has not been particularly successful. The success of the private sector lies of course in the fact that they focus on very specific objectives and only undertake such training when they see there is value added by it. It is increasingly likely, in a globalised market place where product and labour are sourced from low-income countries, that more training will be undertaken by employers themselves - through both conventional and distance methodologies, or by a combination of the two - to ensure a more homogenous product. What role does this leave for public sector ODL delivery? Broadly, the remit of public sector ODL institutions in the technical/vocational area continues to be quite traditional in areas such as poultry rearing or horticulture. In these areas, real questions need to be asked about whether these programmes are best delivered through ODL and whether other delivery systems potentially could offer better results. If the decision is made to continue to maintain these vocational programmes, much more needs to be done to ensure that these programmes are explicitly linked to the broader economy through job placement activities. Only then will these programmes offer significant economic gains to those enrolled.

Much more attention also needs to be directed towards ensuring better outputs from the system. Administrators of ODL institutions face a perverse incentive structure where it is to their advantage, both financially and politically, to show large enrolment figures as well as a wide range and number of programme offerings. Incentive structures need to be changed so that these institutions are actually rewarded on the basis of output, specifically how many students complete. This has a number of impacts, most importantly, for cost efficiency. However an incentive structure which rewards on outputs will also force these institutions to ensure better delivery and better learning outcomes, to ensure better completion, which in turn will be beneficial for students and the economy as well. Data on throughput of students

indicates that wastage rates are high, both because of dropouts and failures in assessments/examinations. Many students who enrol, never actually take a class, while many of those who do, never complete even one course.

7.4 Improving the gains from ODL training

Extending access and investing in outcomes is of limited use if the output of the system is not valued in the market place and by students. Are students getting the returns they set out to achieve at the onset of their training, whether pecuniary or non-pecuniary? Do employers value the graduates who receive degrees from ODL institutions and what can we say about the productivity of these graduates?

The evidence from students on the non-pecuniary benefits is positive. Students claim that overwhelmingly their reasons for joining ODL institutions are non-pecuniary. They value improving their knowledge base, widening their experience of life, improving their self-confidence, etc; more often than not, they prioritise these non-pecuniary objectives over economic reasons for enrolling in ODL programmes. Overall, students rank their ODL experience highly and feel quite satisfied with their learning experience. This evidence should give pause for reflection to policy makers who predominantly focus on the economic benefits of learning and encourage those who have emphasised these non-pecuniary attributes of learning. Those making decisions within ODL institutions should also consider the importance placed on non-pecuniary benefits.

The pecuniary benefits for those completing ODL courses or programmes are mixed. Students interviewed do not seem satisfied with their career progression. There is little evidence that qualifications gained from ODL institutions lead to promotions or shifts into new occupations. Results on income correlate with the types of programme. Where programmes are well established or relate to a niche area, they deliver better returns, for example the OUSL LLB programme. Other degrees that show good returns are professional postgraduate qualifications. However it is difficult to gauge how much this reflects new skills acquired through enrolling in ODL programmes and how much this is recognition of the existing skill sets of those enrolled in these programmes.

Low returns to ODL qualifications reflect a number of things demanding the attention of policy-makers. One is the society-wide perception of ODL graduates. The few studies we have indicate that employers have not valued ODL graduates very highly. This reflects both a lack of knowledge about the delivery system itself, and the lack of contact between industry and these institutions. Both these issues need to be the focus of policy attention. Governments and ODL institutions need to actively disseminate information about their education systems, the quality of their graduates and the activities these graduates pursue. Moreover, they need to reinforce the legitimacy of these institutions by recognising the value of these degrees legally and in their own employment strategies. More linkages also need to be established between industry and ODL institutions, so that industry can itself evaluate the quality of these graduates and gain familiarity with the approach. Industry should be encouraged to offer more input into programme design so that their needs are reflected in the graduates produced.

One intriguing fact highlighted in the research was the mismatch between the costs and benefits of studying with ODL. Fees at ODL institutions are already higher than those of conventional institutions; furthermore, evidence suggests that ODL students often have to bear additional costs to supplement their training and transportation needs. In the past, policy-makers would see the willingness to pay as a sign that consumers can bear costs. The question that needs to be asked is 'What is the net social benefit of such policies when consumers of ODL on average tend to be poorer then those in conventional institutions?' Policy-makers must also consider these welfare effects in devising fee structures.

To conclude, we return to the question of whether there is a significant role that ODL can play in countries' skill development strategies. We would answer with a cautionary yes, stressing the importance of due vigilance in guiding ODL delivery. We would also encourage more research to ensure that we know which factors affect successful outcomes. There is also a need to appreciate that nothing is static; this includes both the technology used to delivery ODL as well as the needs of growing economies. These factors are constantly evolving, and policy makers need to consider and reflect on this as well.

Part C: Case Studies on Vocational Education through ODL

Chapter 8: Vocational Training in the Public Sector: Three Case Studies

8.1 Bangladesh Open University

8.1.1 Context of vocational training in Bangladesh

The importance of technical and vocational education for poverty alleviation, self-employment and economic freedom has long been recognised as a priority in Bangladesh. The government created the Directorate of Technical Education (DTE) as long ago as 1962, as a directorate within the Ministry of Education. DTE has responsibility for a national network of sixty-nine Vocational Training Institutes (VTIs), which work across a wide range of subject areas to curricula and examinations developed by the Technical Education Board. The contribution of private sector institutions in this field is very small compared with that of government.

The School of Agriculture and Rural Development of the Bangladesh Open University (BOU) is the only vocational provider offering programmes in distance mode, thus allowing access to a population unable to work through VTI centres. BOU has its own structure of resource and tutorial centres which provide face-to-face tutorial support. It has offered, since 1999, two certificate-level courses, each of which lasts for one semester (six months). The courses are:

- Certificate in Livestock and Poultry (CLP)
- Certificate in Pisciculture and Fish Processing (CPFP)

8.1.2 Status of the CLP and CPFP Programmes

A key factor in relation to these two programmes is their status with respect to further studies. They offer flexible access to a range of potential students, and can be linked to further courses and qualifications.

The courses aim to create self-employment and contribute to poverty alleviation, by appealing to populations of unemployed youth, economically disenfranchised women and other vulnerable groups.

Both programmes have a 60:40 mix of theoretical and practical components. The practical elements may be carried out in the student's workplace or at a tutorial centre. Core content is provided through print materials, with supplementary radio/TV programmes.

8.1.3 Assessing effectiveness

Methodology: A pre-tested questionnaire was used with 37 CLP and 27 CPFP students. It covered the following areas: student characteristics; programme presentation; skills development; employment/promotion; and programme cost. In addition, focus groups were held with tutors in all of the tutorial centres – a total of 30 tutors were involved. A small number of course drop-outs were tracked down and interviewed.

Table 8.1: Characteristics of Students Enrolled at BOU

	CLP	CPFP
Rural students	89%	51%
Male students	97%	85%
21-30 years	68%	67%
Employed in public sector or NGO	22%	44%
Unemployed	24%	45%
No income or <10,000 Tk	38%	48%
Income 30,001-50,000 Tk	27%	26%

A population of rural, youthful, low-income students is consistently being reached. There is a huge gender imbalance which may be explained by the various physical, social and other constraints on rural females with respect to enrolment in academic institutions.

Data on drop-out and completion for eight cohorts are presented below as Table 8.2

Table 8.2: Outcomes of BOU Courses

	Dropout Rate	Failure Rate	Wastage	Pass Rate
Certification in Livestock and Poultry (CLP)	42.4%	10.1%	52.5%	47.5%
Certification in Pisciculture and Fish Processing (CPFP)	36.3%	8.6%	44.9%	55.1%

There are a number of documented cases showing increase in incomes, employability and enhanced confidence in self-employment. A number of employers identified the programmes as very effective for capacity building and appropriate for those working at field level that had no chance of getting professional training in conventional ways.

The CLP programme was very realistic and suitable for grass-roots level workers who are supporting community development through poultry farming as well as income generation.

In terms of course management and materials, a strong majority of students on both courses rated course delivery either 'excellent' or 'good': for CLP (89%) and CPFP (70%).

A strong majority of students on both courses rated print materials either 'excellent' or 'good': CLP (86%) and CPFP (63%). It was clear that large numbers – over half in the case of CLP – were not able to access the radio and TV programmes.

Around one-third of students from each course did not attend tutorial/resource centres. Of those who did, the quality of support provided was identified as often less than adequate.

A majority of students rated the number of courses in each programme to be adequate, but over half in each case wanted the duration of the programmes to be increased.

Language demands of the courses were not seen as an obstacle, but it should be noted that this population already possessed a secondary school certificate (SSC) qualification at entry, suggesting that they were not truly representative of marginalised groups.

8.1.4 Programme costs

Most students met their own expenses by one means or another. A very small number were sponsored by their employers, normally with this support being tied to commitment to continue to work with the organisation.

Table 8.3: Student Funding of Courses at BOU

Programme	Self-funded	Borrowing	Employer	Other sources
CLP	72%	19%	3%	5%
CPFP	45%	15%	4%	19%

The high level of self-financing for the CLP poultry course probably relates to the current rapid expansion of this sector, resulting in rapid returns on investment in the industry.

8.1.5 Transferability of skills through ODL

There was considerable coherence of views from tutors, employers and students. The ODL approach is considered as entirely appropriate for development of theoretical knowledge, and the materials developed for the two programmes are recognised as of good quality.

What is more problematic is the development of practical skills through the very limited face-to-face tutorials and related practical sessions. Perhaps predictably, most students recommended that both the duration and number of practical classes should be increased, with the addition of field visits, farm attachments and project work. They would, in other words, wish to have the benefits of a face-to-face course allied to the higher quality print materials provided by CLP and CPFP.

8.2 YCMOU

8.2.1 Context of agricultural vocational training in India

The non-formal system of vocational education, including open schools and universities, offers a range of programmes in areas of industry, health, agriculture. There are multiple providers of vocational education through ODL in India. In agriculture specifically, the following are the key deliverers: YCMOU, IGNOU, Punjab University, and Tamil Nadu Agricultural University. A new initiative currently being developed is a virtual university for semi-arid tropics which will use ICTs to educate farmers.

Recognition of technical and vocational qualifications is carried out by National Council for Educational Research and Training (NCERT) and the Central Institute of Vocational Education. These programmes are rarely independently evaluated. For agriculture specifically, the Indian

Council of Agricultural Research (ICAR) is responsible for regulating/maintaining face-to-face degree and postgraduate courses in agriculture as well as rural development programmes. ICAR norms are followed at YCMOU in terms of syllabi and content. YCMOU programmes are recognised by the government and treated on a par with conventional institutions.

8.2.2 Programme context

The School of Agricultural Sciences has the following three objectives:

1. To offer an opportunity for practising farmers, farm women, government functionaries and officials for self learning through a distance mode of education.
2. To offer courses in vital agro-developmental areas relevant to Maharashtra for raising production and productivity through knowledge and skill empowerment of the farming community.
3. To generate self employability among rural youth and enhance the socioeconomic status of farmers and rural youths.

In total the school offers thirteen programmes. This survey specifically examined the Certificate of Gardening but drew conclusions from the experience of all programmes. The programmes are delivered through the *Prayog Parivar* Approach which is based upon community self-help groups involved in vocational education in agriculture.

Certificate programmes run from six to twelve months and cover two components - knowledge and practical skills. The former is delivered through distance education while the latter is acquired at study centres or at students' own work areas through practical implementation. Course material uses self-learning formats through print and audio visual media. The programme is also available on diskette for those with computer access. Students do not need to have a formal education to enter and the lower level programmes are all offered in the local language, Marathi. In 2002, 449 students were enrolled in the Certificate of Gardening programme.

8.2.3 Assessing effectiveness

Methodology: the students from the Certificate of Gardening were surveyed. Fifty students were asked to complete a questionnaire in Marathi over a two-day period, with 34 responding (68%). Questionnaires focused on the following areas: personal details, the purpose of joining the programme, the quality of programmes, fees, the syllabus, course presentation as well as expectations from the programme. Interviews were also carried out with some students who had completed the programme.

Student profile of those enrolled in the programme: Out of 50 students, 34 responded (25 males, 9 females). The ages of the males ranged from 19 to 35 years but the majority of them (21) were between the ages of 19 and 25 years; in the case of women the majority of them were between the ages of 18 and 28 years. Most of those enrolled already had education qualifications, 44% had degrees while 56% had either finished Class 10 or Class 12 level. Almost all were active producers and many of them were smallholders (5-10 acres of land). Overall the students are young, educated, and from the relatively wealthier groups in the

agriculture sector. The programme cannot be said to be catering to the poorest within the rural community in Maharashastra. This of course may not reflect the population of the other thirteen courses.

Several key conclusions can be drawn from the survey. The motivation of the students included the following: to acquire more new knowledge about agriculture; to increase their productivity in their own fields and therefore to earn more income; to become progressive farmers by changing their traditional methods and techniques of farming. A few of them also mentioned that agriculture is their hobby and they wanted to experiment with new knowledge and techniques.

In terms of quality, all the respondents rated the programme as *'good' or 'very good'*. The presentation of the course material through the medium of Marathi and in self-learning format was generally found to be very useful and interesting.

In terms of the support services, the support from the study centres, regional centres, study centre coordinators, self-help group members (Prayog Parivar), the counsellors and the staff of the School of Agricultural Sciences was rated as satisfactory. Support services are, of course, always capable of further improvement.

Suggestions focused on the practical work and information sharing and included the following:

(i) The need for more practical sessions, contact sessions, visits to the progressive farmers' fields (the fields of those who had already completed YCMOU's programmes on agriculture), more interaction with agricultural scientists and progressive farmers;
(ii) That there should be more audio and video support for the print materials;
(iii) That contact sessions, interactive sessions, workshops etc. should be organized at village level;
(iv) That information about YCMOU programmes on agriculture should be disseminated more effectively through television, radio, posters and local announcements/meetings so that the entire State could know about them;
(v) That the university should consider subsidising the cost of seeds, fertilizers, pesticides, computers, and audio/video cassettes.

Overall there seems to be some confusion about the purpose of the YCMOU programme. Students found the programme useful but felt that YCMOU should also be involved more directly in extension work and providing inputs for the agriculture sector, rather than purely being an educational provider. Also, there was a strong desire for practical sessions to be held in closer proximity to the students' place of residence.

Data from other studies indicate that pass rates for the Certificate and Diploma programmes are currently around 60%.

Regarding external efficiency, the view is that YCMOU graduates, who have had previous experience, do not have difficulty acquiring jobs. New graduates do. Their strengths are seen in their practical experience, but they fare poorly in terms of their communication skills.

8.2.4 Costs and funding

The majority of YCMOU's budget is self-financed (98.5%) through fees and self-generated revenue via agricultural produce sold. Private costs to students enrolled in the Certificate and Diploma programmes range between Rp. 2000-3000 ($44-66) for lower level courses such as the Certificate in Gardening.

8.2.5 Transferability of skills through vocational education

The author concludes that transfer of knowledge certainly occurs although whether it leads to returns in income is difficult to assess because of the complex external factors that influence agricultural prices. Student responses indicate that they desire a more blended programme which includes more practical sessions. This suggests that a course largely delivered by distance education can only partially meet the needs of this student population, where the very nature of the activity has strong practical requirements. In terms of employability, the indications are that YMOUC graduates are better able to acquire employment if they have previous experience. New graduates have difficulty finding employment.

8.3 Open University of Sri Lanka

8.3.1 Introduction

The Open University of Sri Lanka (OUSL) is the only institution in the country dedicated to the delivery of programmes at various levels by distance learning. Among its programmes, only a small minority are purely vocational, the Certificate in Apparel Technology offered by the Department of Textile and Apparel Technology being one. It is one of the few courses which combine a capacity building element with distance learning techniques. A detailed study of the progress of this course since its establishment in 1998 was carried out by Dr Gayathri Jayatilleke during 2003/2004. She undertook detailed studies of two cohorts of students. This summary highlights the major findings.

8.3.2 Context of vocational education in Sri Lanka

Vocational education in Sri Lanka has a long history, with programmes being delivered from several government ministries. More recently, as we shall see in subsequent sections, training is being carried out by the private sector, with companies generating their own in-house programmes tailored to their particular needs. Nearly all public sector programmes have been, and still are, delivered by conventional face-to-face methods. The mandate of OUSL includes aims to reach populations which face difficulty in accessing face-to-face tuition. This course was created to respond to a perceived social demand, and to respond to the need to train a workforce for a newly introduced industry - Apparel Technology.

8.3.3 The Certificate Programme in Textile and Apparel Technology

The course has been developed and is delivered by the Department of Textile and Apparel Technology. The core teaching materials are presented in distance mode, using text only. They are supported by appropriate formative and summative assessment instruments. To achieve a Certificate, participants have to successfully complete three course components:

- four theory courses by distance mode;
- two compulsory days of practical sessions;
- fifteen weeks of industrial training experience.

The normal expectation is of completion within one year, with the theoretical courses and practical sessions being undertaken in the first semester and the industrial training in the second.

8.3.4 Assessing effectiveness

Of the 2002/3 cohort of students who were studied in detail, we note that a majority were male [72%]; they were predominantly in the age range 20-30, but there were some older women; nearly 60% of the students were in full-time employment, mostly in the apparel industry. They clearly saw this course as raising their prospects of promotion in their own employment through personal skill development. The programme is offered in both Sinhala and English. Prerequisite qualifications for entry to the course are GCE (Ordinary Level), but in the groups studied, a high percentage actually had GCE (Advanced Level) qualifications.

The statistics of throughput from the course are rather disappointing. A major hurdle for all the students is the necessity to obtain a certain success rate in the formative assessment elements of the course in order to gain entrance to the final examination. Aggregated figures for six cohorts of entry are given in Table 6 below:

Table 8.4: Outcomes of OUSL Course

Total course entry	Eligible for entry to final examination	Sat for final examination	Passed final examination	Percentage successful completion
345	180 [52%]	127 [37%]	85	25%

There are grounds for disappointment here from two directions – first, the overall intake to the course from six cohorts is very low, averaging only around 60 students per year; secondly, a completion rate of only 25% suggests serious wastage of resources. The most abrupt drop-out occurs as a result of failure to successfully complete course assignments which govern access to the final examination. As the study population is relatively well qualified, it appears that there must be some mismatch between the entry skills of the students and the demands made by the materials. Further understanding of this does not emerge from the study.

8.3.5 Course costs

The average cost for the certificate programme is Rs. 16474 (US$167) per student. The programme is funded directly by students' course fees. Students indicate that they either pay from their own or their parents' resources. Very few of them receive any sponsorship from their employers.

8.3.6 Skill transferability

Tutors and students consider that the theoretical components of the course are appropriate in depth and scope. Participation in the laboratory sessions is generally low, which means that students have to delay their sitting for the final examination. There is general satisfaction with the fifteen weeks of industrial training, from the students and from employers who supervise the

training. However the perception of employers is that the OUSL programmes focuses too much on theoretical concepts.

> 'I have a feeling that the theory component in the OUSL certificate programme is too much. What we expect from the trainees is to work in the industry and if they have mastered the basic skills then it is more than adequate. The theory is important for the higher positions in the industry but not for the trainees.' (Human Resource Manager)

Chapter 9: Vocational Training in the Private Sector: Two Sri Lankan Examples

9.1 Introduction

Two case studies are from the private sector. Rather pragmatically, we eventually settled for investigations of two private sector organisations based in Sri Lanka – one in shipping (Firm A) and the other in insurance (Firm B). The first is the local representative of a globalised company, the second a local company with links to a wider international environment through affiliation. Both companies have introduced in-house training programmes for their employees, using different approaches through the use of ICTs and e-learning. One consultant, Dr Gihan Wanigasekera, carried out both of the studies, which brought significant advantages in terms of, for example, comparability of instruments used, analyses undertaken.

The methodology applied across the two studies involved questionnaire studies of employees who had participated in the respective training programmes. Questionnaires were also followed up by interview with respondents. Further interviews were undertaken with relevant human resource personnel in the two organisations.

9.2 Context

The commercial sector in Sri Lanka has, during the last decade, become fully cognisant of the importance of ICT for a variety of functions, including human resource development. The infrastructure for the use of ICT in Sri Lanka is rapidly developing and the universal use of English as the medium of the modern commercial sector is simplifying. Companies like Firm A and Firm B have identified very significant advantages, both in relation to cost and efficiency, in using CBT for human resource development within their companies. In each case, the first sourcing of materials for CBT was from parent companies outside Sri Lanka, which has obvious implications for costs. It seems highly likely that locally customised versions of the materials will quickly become available as the Sri Lankan ICT industry rapidly develops its own expertise.

9.3 Systems and target populations

Firm A, as a local representative of the large European shipping company, has been expected to use wider company software to enhance the ICT capability of its entire staff in Sri Lanka. All the online learning courses used in the Sri Lanka office are available company-wide on their own global network, emanating from headquarters in Copenhagen. All employees in Sri Lanka have access to these materials on their desktops.

Firm B, which works in a very competitive business sector, has chosen to create a dedicated learning centre in its main Colombo city branch office. Staff have to travel to this centre to access the programmes, which introduce them to key elements of the insurance industry. There is no access to the materials from their own desktops. This programme is targeted at the skill development of executives and junior management.

9.4 Survey findings

The researcher has produced a comparative table which analyses the different dimensions of the programmes, along with the responses of employees of the two organisations to the survey. This is reproduced in Table 9.1 below.

Table 9.1: Comparison of Findings of the Two Private Sector Courses

Firm B	Firm A
The purpose of the programme is to enhance the working knowledge of employees with respect to major areas of business such as life insurance, due to high profitability and volume of business in this particular sector. As Firm B has a branch network, the CBT was proved to be of immense value.	As the logistics operations are moving towards e-enabled activities for speed and convenience, Firm A introduced online learning with the primary purpose of enhancing the ICT skills of its employees as well as process and soft skills.
The programme is targeted at executives and junior management.	It is targeted at all permanent employees irrespective of level or grade.
Firm B has created a fairly formal learning environment by way of providing a separate learning area and availability of technical managers/course facilitators to help students.	Employees do the learning from their desktop and help is sought from the Assistant Manager (IT) for computer support as needed.
Access is somewhat restricted as employees need to travel to the learning centre, which is equipped with multimedia computers and internet facilities.	Access to high quality IT and communications infrastructure was provided to every desk.
The courses are assigned based on the timing of the Firm B Academy programme.	An employee can see a list of available courses from their own computer desktop and register for them online.
The CBT is delivered through pre-packaged CD-ROMs operated through IBM compatible multimedia PCs and a Windows 98 operating system.	Online Learning courses are delivered through the company's wide area network (WAN) connected through lease lines from head office in Copenhagen, and accessed through corporate intranet by IBM compatible multimedia PC's and a Windows 2000 operating system.
The participants use the CDs available at the learning centre. They can log on from the point at which they finished their previous session. There are course evaluations, exercises, and tests available during and at the end of the course. There is no compulsory exam or quantitative assessment.	The participants log on to the online learning site and browse their customized online site, which shows links to corporate news, online certificate and training courses available, online reference materials, progress on the enrolled courses, results of completed courses, and other relevant corporate information. All participants take the respective online quiz-based exams at the end of their chosen courses.

The course facilitators obtain one-to-one feedback from the participants about the program. Also there is an end-of-course evaluation form to be completed by the participants.	At present, there is no established structure for formal feedback. Employees express their opinions through informal communication. All problems faced by employees are brought to the notice of the country manager by the respective departmental heads or directly by employees.
The course directors are responsible for following up on the progress of the participants. All notifications to the participants are done through emails by the course directors.	The departmental heads and the country manager have the facility to monitor the participants' progress on the enrolled courses, and obtain the statistics on the performance of every participant through the learning system at any time.
As CBT was introduced as a part of general management training, and though it is not explicitly stated, the completion of CBT may have some influence in promotions. But at Firm B, CBT completion is not considered as a major factor for the promotion of employees.	As online learning has become part of their corporate objectives, the completion of courses will be considered as a factor in the annual appraisals of employees. In addition, as mentioned earlier the employees become eligible for foreign training only if they complete all seven modules of ICDL. Thus employees could improve their job prospects by completing ICDL.
There is a participation certificate issued by the company for those who complete the Firm B Academy programme. But no separate certificate issued for the completion of CBT.	There have been some cash and non-cash rewards for those who complete the compulsory courses within the stipulated time frame. But this is not done on a regular basis. For example, rewards such as cash of Rs. 15,000, and donation of older computers were available at different times.
As one of the three modules offered was focussed entirely on life insurance, some employees who are not in the life insurance operations expressed their dislike of spending time in learning about life insurance.	As the courses offered (ICDL, APM mail, and E-Security) are common to all sections of the employees, the programme was welcomed by majority of the employees.
'CBT has not brought any measurable improvement in income as yet.' (DGM, Human Resources)	'The sales of the company have shown a growth of 300% over the last three years. With the improvement of IT skills of the employees, we were able to increase the standard of our customer service. These changes wouldn't have been possible without e-learning.' (Country Manager)
The cost for a module may be as high as Rs. 1.2 million in order to invest behind the learning and training materials, training of course facilitators, and infrastructure. Also the cost of maintaining the learning centre is borne by the company.	The network and software (operating system etc.) costs are borne by the company as part of the operating overhead and not considered specifically for the distance learning activity. The company pays a management fee to the parent firm, which covers the cost of the Learning Modules (except the paid courses), Learning Management system and the central support services.

Chapter 10: Common Themes, Conclusions and Policy Implications

10.1 Context of vocational training

All three countries recognise the importance of technical and vocational education for poverty alleviation, self-employment and economic development and regard vocational education as one means through which productivity and wages can be improved. National and state governments provide many face-to-face courses, based in a variety of vocational training institutions. Appropriate regulatory boards validate courses in all countries. Although all the public sector case studies describe in great depth the regulatory/accreditation systems in their respective countries, there is little evidence that independent evaluation for accreditation takes place for ODL vocational programmes. In the private sector case studies, this type of accreditation is regarded as unimportant as courses are tailored for in-house employees.

While BOU is the only Bangladeshi institution offering such courses in distance mode, in India and Sri Lanka there are numerous providers. Besides the single-mode open universities, there are dual-mode public sector universities as well as numerous other non-government providers. The last mentioned includes three types of providers: first, professional associations and independent research bodies offering ODL courses (e.g. All India Management Association); second, private sector deliverers which deliver for third-party foreign academic and non-academic institutions (e.g. Gurukulonline, India: CINEC IT, Sri Lanka); thirdly, private firms undertaking professional training on their intranet sites (as the two case studies we examine here). This sector is rapidly changing and evolving and needs to be closely watched. The case studies we examined are either courses offered in the public ODL universities (BOU, OUSL and YMOUC) or alternatively are in-house courses offered by private firms (Firm A - a local representative of a global shipping company and Firm B - a local insurance company with wider international affiliations). The public sector case studies were chosen in collaboration with our consultants familiar with the open universities while the private sector cases in Sri Lanka were chosen because of their innovativeness and accessibility.

10.2 Programme, delivery and technology

The vocational courses offered through the public ODL universities are, as with the other courses, predominately print-based. Each course was of six to twelve months duration and presented a mix of knowledge and practical skills development. The courses consisted of mainly self-learning print modules, but in each course, there was also supplementary audio- and video-cassette material. Tutors at tutorial centres presented practical skills to students who were able to access the national or state networks of such centres. The OUSL course also offered a 15-week training experience. Materials were presented entirely in local languages, Bangla, Marathi, and Sinhala with occasional supplementation in English.

In terms of limitations, two factors stand out. First, the poor attendance at tutorials (see BOU case-study), and the demand for more decentralised delivery of tutorials (see YMOUC case-study), indicate that students are having problems accessing the practical training of the course. Second, using technology to overcome these gaps seems of limited relevance since most students who attend these courses have limited access to audio- and video- playback technology.

By contrast, the private sector vocational courses offer computer-based training (CBT) although with different technological intensities. The Firm B course targets middle management and focuses on the specifics of the insurance market while the Firm A course is shorter (1-2 weeks) and focuses on basic IT skills. Firm B's training is on stand-alone non-networked computers using CD-ROMs while Firm A delivers its training through the company's worldwide network (WAN). Where student support is concerned, the Firm B course supplements its CBT training with residential workshops and in-house training. Also one-to-one feedback is offered to participants while in Firm A, feedback is more informal. However, in both case studies progress is monitored by the country directors or country managers, indicating continual monitoring with a range of incentives for completion of the programmes. The balance between theoretical and practical knowledge is considered to be good.

10.3 Accessibility

Where accessibility is concerned, the target audiences of the public ODL universities are very different from the private sector ones. The public ODL universities aim to improve the productivity of the very poor but the evidence here indicates that these programmes actually cater to groups who are well above the poverty line. There was expectation of a good level of literacy at entry, and in many cases the course members already had formal educational qualifications. Possession of a secondary school certificate was an entry requirement for the BOU courses, but overall it appears that the BOU courses more firmly addressed the practical needs of smallholder agriculturalists. YMOUC students also had relatively high qualifications as did the OUSL students. In all of the programmes there was a significant gender imbalance against females, which can be attributed to well-understood constraints facing female enrolment in all three countries. However, in the OUSL Textile & Apparel Technology course, the number of women who completed was almost equal to that of the men. Enrolment however appears to favour men. The courses generally appealed to the 20 - 30 year age range, a significant proportion of whom were either already in waged employment or were producers on their own land.

In the private sector, Firm B targeted junior management and executive learners whilst Firm A courses were aimed at the whole staff of the organisation. All these learners were in full-time employment while taking these courses.

10.4 Effectiveness

Public ODL courses

We begin by looking at the effectiveness of the public university ODL courses. Where we have completion data, it indicates that the outcomes can vary. Where the BOU courses are concerned (previously reproduced at Table 8.2), completion is quite respectable as compared to other ODL programmes (based on data for eight cohorts). Similar data for the YCMOU course was not available.

In the OUSL course (based on data for 6 cohorts), due to their failure to complete the course-work assessment requirements only 37% of those who originally enrolled were eligible to sit the examination, of whom over 50% passed. Nevertheless, of those enrolling, only about 1 in 4 successfully completed the whole programme to achieve certification.

Overall, students in these courses found the written course materials of good standard and their views of the distance element of the course delivery were positive. It is possible to surmise that these same text materials were very likely used by a much wider population than that enrolled for the programmes. Students on the YCMOU course would have liked to have more audio and visual material presented to them in distance mode. A large proportion of the BOU students did not access audio-visual support materials, probably because they did not have ready access to playback facilities.

Students from all courses would have wished the practical elements, involving face-to-face tuition in tutorial centres, to have been appreciably strengthened. It is easy to empathise with this wish but also necessary to recognise that operating a dual-mode programme will immediately work against the cost savings likely to prevail in a text-based, purely distance mode. Some of the YCMOU respondents additionally wished that the interactive tutorial and practical sessions could be further decentralised at the community level, thereby making them accessible to a wider group of interested parties. In the OUSL course, students identified their inability to attend sessions as a problem, as well as poor feedback.

For the YCMOU course, nearly all the course costs were met by the students themselves. Self-funding levels were lower for the two BOU courses: CLP (72%) and CPFP (45%). For both of these latter courses, 1 in 5 and 1 in 6 of the students borrowed money to pay their course fees. This seems to emphasise the different socio-economic backgrounds of the two populations attending the BOU and YCMOU courses. Few of the students in any of the public sector courses were subsidised by their employers. Students predominately self- financed their studies and argued that the low fees of the OUSL course was one of its attractive features.

The fee and costs of the four courses are summarised in Table 10.1 below, with figures converted to approximate US dollar equivalents. All the courses are subsidised.

Table 10.1: Fees and Costs for Public Sector ODL Courses

Course	*Student fee (US$)*	*Cost per successful student (US$)*
CLP	48	102
CPFP	51	90.5
Cert. of Gardening	44*	~80
Certificate in Apparel and Textile Technologies	Not available	167

*This figure is estimated as about 60% of the fee for a comparable Certificate-level course in another state institution offering face-to-face instruction.

For the BOU and YMCOU courses, there is a strong coherence in the views of tutors, students and employers that the materials used in distance mode address very well the knowledge

component of these courses. What raises more anxiety from all sources is the extent to which practical skills are enhanced. There are clearly trade-offs here between the economies introduced by distance learning, and the structures needed and costs incurred in provision of a more blended programme with more face-to-face interactions of good quality.

In terms of external effectiveness, there is evidence that the completers of the BOU courses are able to find employment. On the other hand, YMCOU completers who had previous experience were more employable than those without prior experience. Employers in the textile sector in Sri Lanka indicated that they worry about the relative mix of theoretical and practical components of the OUSL programmes. This may make them more cautious about hiring OUSL graduates.

Private Sector courses

In the private sector case studies the issues of completion, drop-out and failure are more difficult to determine. This is largely because choice in enrolling is a constrained option. For instance, in the Firm A course, the aim of the local office has been to ensure completion of the ICDL requirement by all local employees by the end of the first quarter of 2004. This means that the incentives/pressures are great to continue to completion. Dropping-out is hence not an issue. By January 2004, 58.3% of all employees had completed the ICDL course. Moreover 73% of all modules required for completion had been completed by employees. For the Firm B course, detailed data on completion rate, drop-out and failure was not available but the case-study author concluded, based on his interviews and the structure of the programme, that 'we can say that a majority of the participants completed the courses as there was good support from the Firm B Academy'. The survey showed that some participants did not complete all of the modules.

Employees' views on their experiences are similar in both firms. In terms of materials, overall, employees in both firms felt that the content of the courses was good and the objectives clear. Concerns, however, were raised about insufficient variation in learning and instructional activities. Of more concern was the view that both programmes did not generate sufficient critical thinking, creativity and problem-solving skills. Feedback was seen to be insufficient especially at Firm A where, unlike Firm B, feedback is more informal.

Interesting issues arose around learning in the work environment. How this affects employees varies depending on the technology being used to deliver the learning component. For instance, at Firm A where the course is delivered on the network and is constantly visible to employees, there is some indication of constant pressure. Employees feel that they don't have enough time to complete courses while working and often have to stay late to complete programmes. However, some employees at Firm B indicate that travelling to a stand-alone site for training has its disadvantages and they would prefer access on their desk top.

In terms of benefits, the manager at Firm A feels that the overall training in IT skills has had a positive impact on outcomes improving the firm's productivity and making everyday administration much more efficient, whereas Firm B is concerned they have not yet seen the benefits and are concerned about the upfront costs. Employees overall feel that the course is a positive learning experience but there are concerns about a mismatch between learner

requirements and course delivery, specifically that people in sales at Firm A do not feel that they need such extensive training in IT. Overall, completing courses is seen to be linked to promotion (to varying degrees) and at Firm A is also linked to income rewards. Costs of training in both firms are borne by the firm.

10.5 Conclusions and policy implications

In terms of policy, we can draw four conclusions about the vocational courses delivered through the *public ODL universities*.

First, in each of the four cases, the priority for poverty alleviation is not well thought through. Student characteristics indicate that the major beneficiaries tend to be men. Relatively high academic prerequisites for course entry work against attracting students from marginalised groups, usually regarded as the national client base for ODL. Only the two BOU courses appear to serve a low-income, rural group. This indicates that a more careful analysis is required in undertaking ODL training as a means of overcoming poverty.

Second, in all cases the courses are recognised as contributing significantly to theoretical knowledge. However, the story is less good for the development of practical skills. There is a strong student vote for more face-to-face, practically-oriented experience. As noted above, this would work against the cost advantage usually associated with distance education. Employers who were interviewed also had this perception and were wary of hiring ODL graduates. Clearly, this is of concern and needs to be addressed if ODL delivery of vocational education is to work as a viable alternative. Trade-off in costs may be worth bearing, if and only if they lead to better programmes for which people are willing to pay.

Third, completion rates on the various courses range from good (CLP, BOU) to rather poor (Certificate in Textile and Apparel Technology, OUSL). This is in keeping with some of the other evidence on completion rates which suggests that they are often not good in ODL institutions. Factors which may be contributing to these poor completion rates include the following: insufficient practical experience; inaccessible location of tutorials; as well as the poor recognition of these programmes in the market place. Improving these factors is likely to increase completion rates.

Fourth, evidence from YCMOU and BOU case studies indicates that students, who are looking to improve their self employability, see skill acquisition as only one element in the composite of factors required to be more productive. From a policy point of view, this would indicate that training should be offered as part of a wider policy package, accompanied by other institutional and financial support.

Where the *private sector* case studies are concerned, they suggest a much more favourable experience. However, what needs to be taken into consideration is that these cases cover the specific example of private sector firms undertaking tailored programmes for specific needs. These firms are able to tailor their course to their specific requirements, have a captive learner

group whose interests, in terms of promotion and income enhancement, are tied to completing these programmes and who can immediately see the benefits of their training. Costs too are covered by the firm. The following four conclusions are evident.

First, these institutional features make successful delivery much more likely. Even then firms do not achieve universal completion of their training programmes. These institutional differences and their effect on incentives need to be made explicit in policy making.

Second, even in the private sector case studies, learners indicate that they are not entirely satisfied with the delivery element of the course, and specifically identify the need for more interactive elements. Learners also indicate that courses are not designed to generate critical thinking and problem solving skills. Given the importance of these skills more research (and its implication for policy) needs to be carried out to see the effectiveness of ODL in this area.

Third, issues of student support seem to be of concern, regardless of the public/private differentiation. In combination with the fact that the pressures for completion are greater in the private sector (due to the direct link with income and promotion), this lack of support may be more greatly felt. Employees need to be more robust in ensuring that such support exists.

Fourth, and perhaps most interestingly, the cases reveal the pressures borne by workers trying to learn at the same time as working. There are clearly social implications from this which need to be made explicit in designing training programmes.

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