

TOWARDS OPEN DISTANCE LEARNING FOR FUTURE: PRACTICES AND CHALLENGES IN SRI LANKA

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Abstract

The greatest challenge in the 21st century for higher education is the recognition of relevance, which is the need to adapt to the immediate needs of the society by produce an employable or employability graduate. ODL has the potential to provide higher education while the personnel remain in employment to continue servicing the market. It is a form of education that combines the world of work with learning with mutual benefit. The Open University of Sri Lanka is now moving towards the 5th generation ODL technology supported by a combination of online-and blended teaching and learning techniques. Today it caters to a student population of about 40,000 learners who offer courses through the Faculties of Education, Engineering, Natural Sciences, Health Sciences, Humanities and Social Sciences and Management Studies. Together they offer about 67 study programs. The ODL as a mode of learning has the prime objective of facilitating learners who were mostly unreached education or employed, who were denied tertiary, adult or lifelong education due to the various barriers that prevented them from continuing education. While for these groups of students technology is an effective strategy to overcome such barriers, the use of sophisticated technology which imposes additional barriers to pursuing education, should be considered with care.

Keyword: Open Distance Learning, Innovative Education, Employability and Entrepreneur Education

Higher Education and Open Distance Learning in Sri Lanka

Due to the emergence of online providers and campus institutions offering online programmes, open and distance learning (ODL) is no longer the preserve of open universities. The field is much wider than it was 30 years ago, and technology is increasingly contributing to the death of “distance.” says Asha Kanwar (COL, 2017). Today challenge for higher education is the recognition of relevance. Through the universities, need to prepare individuals to contribute to the social and economic development of the country which can be fruitfully achieved if the graduates are provided with the relevant skills and the knowledge. It is in this context that higher education needs to be defined as a public service that which contributes to cultural, economic and social development within the context of pluralism and cultural diversity.

It is accepted that higher education, in any given society, whether developed or developing, has to play a role in the production and transmission of knowledge. Knowledge is universal and has become the heritage of the mankind. To convert universities into knowledgeable institutions, the institutions in the sphere of higher education need to be encouraged to perform an active, creative and innovative role to help change society.

Democratic Socialist Republic of Sri Lanka is an island nation in South Asia with a population of 21.2m (2016). The current per capita income of Sri Lanka is USD 3760 and over the last 5 year period the economic growth had been around 5%. The Sri Lankan system of university education began in 1921 with the establishment of the University College, which in 1942, was elevated to the status of a fully-fledged University, which, at its inception, accommodated only 904 students. The University of Ceylon was elitist and exclusively residential in character. It became outmoded when the impact of the Free Education Scheme came to be felt in the country.

The impact of the Free Education Scheme came to be felt in the sixties and seventies, and the University system. Sri Lanka established provincial Universities to expand the opportunities for higher education. These universities are new, and their infrastructure not yet developed, even though the new system broke away from the mould of the conventional university. They introduced new courses which have been organized on the basis of the concept of employability. Present policy strategy is to produce an employable competent graduate, who can find employment in whatever field he or she undertakes to study.

Higher Education in Sri Lanka is a subject at national government. There are 15 national Universities including the Open University of Sri Lanka, 3 Campuses and 17 affiliated Institutes offering Diploma, Degree and Post Graduate degrees. These Higher Educational Institutes are governed by an Act of Parliament (Universities Act No. 16 of 1978). University Grants Commission (UGC) under the Ministry of Higher Education is the apex body of the Universities in Sri Lanka. While the Universities are empowered to maintain quality of their higher education programs through the Senates by the Universities Act of Sri Lanka, the University Grants Commission too has evolved a system of external Quality Assurance Reviews at Institute and Subject Levels for Universities, Campuses and affiliated Institutes.

Open distance learning has become a policy option for a growing number of countries. ODL has the potential to provide higher education while the personnel remain in employment to continue servicing the market. It is a form of education that combines the world of work with learning with mutual benefit. In other words it is possible to receive early benefits as the learner progresses with her/his studies. Besides the economic advantage, distance education may have a more immediate social impact. It is a means to satisfy missed opportunities and improve one's training for the job. In other words, it may give the learner a feeling of satisfaction and personal fulfillment. In modern society, higher education has become a critical rite of passage. It marks maturity and gives capacity to engage the world out of school. Higher education is an important element in the formation of character, in providing skills and "to nurture a reflective quality", the capacity to think and formulate thoughts independently, to analyse and evaluate situations critically even before one becomes a producer and creator of knowledge.

Open and Distance Learning in Sri Lanka

Sri Lanka's burst into Open and Distance Learning commenced about more than 40 years ago with the establishment of the Sri Lanka Institute of Distance Education in the late seventies for the grant of diplomas. However the establishment of the Open University of Sri Lanka in 1980 with the absorption of the Sri Lanka Institute of Distance Education. Sri Lanka was also the first country in the South Asian Region and seventh in the world to establish an Open University. 'University for All', the Open University provides a ladder of opportunity to 40000 students representing varied social classes, age groups, ethnic groups, religions and languages.

The vision of the Open University of Sri Lanka (OUSL) is "To be the premier Open and Distance Learning institution in Asia through excellence, efficiency and equity in lifelong learning." OUSL enables students to enroll at Foundation Level and then obtain higher credentials even up to the PhD level.

University education become more & more severely competitive and the government resorted to standardization mechanisms in an attempt to facilitate the admission of students from rural and underprivileged areas. While the number of students admitted to conventional university free education was less than 6% of the relevant student cohort. However the important difference between theory and practice as far as the concept of Distance Education and Open Learning was concerned in Sri Lanka was the fact that Sri Lanka had a huge number of school leavers who had not had the practical opportunity to read for a Sri Lankan University Degree in any field, even if they had the money unless they went abroad. The demand for higher education provision continues to grow annually and supply cannot meet demand. In 2015 only 17.14 percent out of the 60.46 percent students satisfying minimum entry were selected for Universities in Sri Lanka.

There are approximately more than 10,000 Sri Lankans going abroad on annual basis. Demand for international education and qualifications continue to grow. An increasing number of foreign and private institutions in Sri Lanka as a significant market, as they seek to diversify. They are also establishing more courses run jointly with Sri Lankan institutions in-country, and / or promoting distance or open learning methods.

There is also demand for postgraduate studies in the research fields. Graduate output from Sri Lankan universities for the year 2005 were 12,545 (first degree) and 4,589 (postgraduate) and these were increased for the year 2015 as 29,545 first degree and 7,513 postgraduate. Out of these, a considerable percentage of graduates preferring research programmes have also increased. In addition, some of other Universities have introduced new undergraduate courses in online system. However, there are no postgraduate courses in these fields and, as a result there is further demand for research programmes abroad. MBAs have become very popular with professionals, but they generally demand for distance learning / affiliated courses, due to the high cost and employed people.

One of the main issues confronting the higher education sector in Sri Lanka is the limited access to higher education. This issue is presently addressed by capacity building of the Open University of Sri Lanka and popularization of Distance Education. Issues concerning quality, need for regulatory framework and mutual recognition of higher educational qualifications, which are common in the region are shared by Sri Lanka as

well, with the growing presence of Cross Border Higher Educational Institutes. Strategies to address these issues are under consideration. Maintaining and upgrading the quality of university education keeping up its past reputation, positioning the Universities among the best universities in the world are challenges to be faced by Sri Lanka in the next few years.

Contribution of Open University of Sri Lanka (OUSL)

Sri Lanka too faces problems in producing globally competitive knowledge workers necessary for the economic take-off. When the knowledge economy expands, the need for higher-order skills deepens. Sri Lanka is not yet ready to produce skilled workers in the scale that is required. Sri Lanka university system recruits less than 17 percent of those who have acquired the minimum qualifications necessary for admissions. This may be around 5 percent of the relevant age cohort. The graduate output is not only abysmally low but, they are also not employable. This mismatch too is ironical.

Meanwhile, of those who fail to get admission to local universities, many join the labour force while the more fortunate among them go abroad for higher education. Yet another group looking for distance education programmes. Many of those who go abroad for higher studies wish to remain in those countries, while some who come back possess qualifications that do not fit the needs of the industry. Thus the challenges before us can be summarized in terms of expanding educational opportunities to those who are keen to follow study programmes (expanding access), making sure that those who are deprived of access due to socio-economic considerations are accommodated (ensuring equity), ensuring that the quality and relevance of training are assured through concrete measures (guaranteeing excellence) and achieving all three of them at a cost that is affordable to the country (improving efficiency). These concepts in brief are cogently captured in the concept of “the iron triangle” in higher education.

The concept of “iron triangle” is based on the presumption that university education can flourish only in an ambience of vibrant community of residential students. The model dislodges the myth that ‘iron triangle’ is necessarily valid. The recent developments of information and communication technology have made those assumptions still more questionable. There is an abundance of evidence to prove that the iron triangle can be broken using Open Distance Learning (ODL). The British Open University (OUUK) which maintains competitive ranking with the universities in UK is one such example. Sri Lanka replicated the same model by establishing the Open University of Sri Lanka (OUSL) in 1980.

The secret of success of ODL is fivefold. First, it combines educational technology to minimize the distance between learners and teachers. Second, it inculcates in students the science and art of self-learning. Third, it helps the working population to complete accredited undergraduate and postgraduate degree programmes while working. This gives them invaluable exposure to the ‘world of work’ making the educational package offered a cost saver to them and their employers. Fourth, as self-learners ODL students are trained to seek and acquire new knowledge. Fifth, the emphasis on quality enhancement of study programmes makes ODL students more competitive in the eyes of governments and donor agencies.

In 2020 the Open University of Sri Lanka (OUSL) marks its 40th Anniversary, having pioneered the mission of Open and Distance Learning (ODL) in 1980. One could say that it was started as an experiment in line with global trends. Today it has refocused its attention on 'excellence'. The OUSL has broken barriers to teaching Engineering Technology, Health Sciences, Management Studies, Education, Social Sciences and Natural Sciences through the distance mode of education. It has successfully taken the message of ODL to the periphery.

Helped by a network of regional centres that are equipped with class-rooms, state of the art IT laboratories, seminar halls and libraries Open University of Sri Lanka as a national institution dedicated to tertiary education is now committed to increasing its outreach so that learners from wherever they come from can successfully engage themselves in diverse educational pursuits. The 40th Anniversary celebrations are used to take these messages further into the countryside.

Three important characteristics are peculiar to the OUSL. Firstly, the institution is committed to the UNESCO enshrined concept of 'university education for all', providing life-long education for those who have the necessary aptitude and commitment. When knowledge doubles so fast, learners must update their knowledge continuously. The OUSL provides a ladder of opportunities from foundation courses to postgraduate degrees through diplomas and undergraduate degrees to achieve this goal. The attributes mentioned above ensure the 'equity' goal of higher education which forms an important pillar of our vision.

The second pillar of OUSL vision is excellence. The OUSL is dedicated to quality enhancement continuously from the point of view of "fitness for use". The OUSL underscores the importance of quality enhancement of her curricula, syllabi, assessment methods, learning support, institutional planning and employability of her graduates. It uses the QAA toolkit of the UGC, ODL-QAA Tool-kit of the Commonwealth of Learning (COL) and the COL-RIM evaluation criteria to improve quality of academic products and services.

The third pillar of OUSL vision is to increase efficiency in the sphere of resource utilization. This includes, the physical infrastructure including land, buildings and equipment scattered throughout the country and the human resources of the total workforce of about 850 persons directly on roll and another 1000 who work as consultants and tutors. The capabilities of these resources have to be marshaled to the optimum.

Use of Technology by OUSL (DE TO OER)

Today's higher education administrators, who must balance the fiscal pressures of running a large organization influenced by external forces such as rankings and increased competition for students and faculty and internal stresses produced by boards and accrediting agencies who are demanding more transparency, accountability, and tangible evidence of success, are best served by seeking continued innovation in curricular programs, delivery mechanisms, support services, and operations.

Innovation processes in education must be seen in its complex social conditioning. This implies: correspondence education system complex vital social needs; internal

consistency of its parts, and evaluation of the Company, each of the structural elements; education focus on the progressive development of society; that young people need in education, its social orientation.

In terms of socio-economic crisis changed the place of higher education in the system of values in life Sri Lankan student's focus on specialty and forms of education, installing the future professional activities. Education is becoming a pragmatic utilitarian value. Priority among universities now young people is given to economic, management, legal, and humanitarian. At that dominates the desire to get an education as possible, good timing to take the most favorable place in the material sense.

Innovation processes should be carried out today in all educational institutions. New types of educational institutions, management systems, new technologies and techniques - a manifestation of the huge potential of innovation processes. Competent and thoughtful their implementation contributes to the deepening in it for positive change. Innovation for 'Learner-Centered' Education. With the emergence of smart phones, eBook readers, 'Podcasts' and 'Vodcasts,' Internet and low-cost computers, as well as solar electricity, cell phone access, and other technologies, comes the opportunity to provide education to assist individuals and communities in places under-served by traditional educational institutes. Technology and other innovations enable educational design and delivery to be adapted to the needs and environment of students enrolled in Open and Distance learning (ODL) and traditional educational programs. Thus, technology can also help programs shift to a 'learner-centered' approach to education. In an environment in which the postal system is slow or unreliable, traditional ODL can face challenges in program delivery. Today Internet and email has enabled changes in the design and delivery of ODL in many parts of the world.

Today, educators have the challenge of monitoring changes in technologies, determining if they apply to learners living in 'the real world,' and seeking ways to use technologies to complement and support instructional methodologies and practices. The opportunities are immense, but there are also technological limitations in many parts of developing countries. Barriers to technological innovations for supporting education include inadequate telecommunications bandwidth, lack of trained support staff, and the cost and the availability of simple telephones, cell phones, computers, and electricity.

OER-integrated teaching and learning

The term Open Educational Resources was first introduced at a conference hosted by UNESCO in 2000 and was promoted in the context of providing free access to educational resources on a global scale. Open Educational Resources (OER) are 'teaching, learning and research materials in any medium digital or otherwise, that reside in the public domain or have been released under an open license that permits no cost access, use, adaptation and redistribution by others with no or limited restrictions' (UNESCO, 2012). OER may include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. OER can be used freely and openly in the teaching-learning process and the enhanced openness through OER empowers teachers and learners to become more creative

and innovative in their educational practices (Cape Town Open Education Declaration, 2008).

OER have many positive impacts in the teaching and learning process. Using the tools offered by new ICT, integration of OER will not only increase capacity for teaching training system but also offer opportunities to enhance articulation between theory and practice and to support teachers more effectively to become reflective practitioners (Thakrar, Zinn & Wolfendon, 2009). In an analysis of reflections of teachers participated in a case study in Sri Lanka, the results indicated that integration of OER in their teaching and learning process has provided opportunities to overcome their obstacles, to become enthusiastic participants and involve actively in teaching and learning processes (Kugamoorthy & Rajini, 2016). In addition, OER have many benefits including free and open availability and accessibility over the Internet and as few restrictions as possible on the use of the resources. There should be no technical barriers, no price barriers and as few legal permission barriers as possible for the end-user. Unlike other traditional educational materials which are protected under conventional copyright terms, OER have an open license which allows the end user to use, modify and share them at no cost. Open licenses permit the users to retain, reuse, remix, revise and redistribute the OER materials (Wiley, 2014).

ICT and OER-integrated teaching and learning: Supporting social change among teachers Therefore, teachers can use OER in a productive way to create their own materials and use them to provide innovative teaching and learning experiences. These innovative experiences may bring about changes in the behaviour of students and to promote their social relationships. OER could support lifelong learning and personalized learning and will move the power over learning from the institutions to individual learners. Quality of learning experiences can be improved through facilitating learner centered, self-directed, peer to peer and social learning by the integration of ICT and OER. Therefore, integration of ICT and OER will not only facilitate the teaching-learning process but also build a learning community with enormous social skills in the conflict affected countries.

Drive for e-learning education in Sri Lanka

Information literacy amongst academic staff responsible for the development and implementation of e-learning is crucial. Lack of staff awareness about information skills, lack of understanding about constructivist-based pedagogy and lack of training opportunity for academics are also barriers for the use of e-learning. Moreover, this study found that learning theories, pedagogy, and even e-learning are not yet incorporated into the curriculum in Sri Lanka (Namali Suraweera, Chern L. Liew and Jocelyn Cranefield 2012).

In other contexts, e-learning has been used as a solution for problems similar to those faced by Sri Lankan education for example, increasing equity of access to education. The e-learning is capable of widening access to education of improving social and educational equity of reducing cost, improving quality of learning, providing flexible learning and maintaining interactive learning. It seems e-learning has the potential to address the issues of tertiary education in Sri Lanka. There is still a lack of research that indicates what factors affect the use of e-learning in information management education in the Sri Lankan context.

OUSL has developed more detailed criteria to monitor the quality of its e-learning services because, to OUSL, e-learning is not a supplementary mode of education but a main form of ODL especially at graduate level. OUSL opened a totally online lifelong education. To meet the need to oversee QA processes and pursue continuous quality improvement of these new e-learning programmes and online services, the Center for Educational Technology and Media (CETme) was created. This centre develops all the e-learning courses utilizing digital materials produced by the Centre for Educational Technology and Media Development and supports faculty in delivering e-learning courses. It also carries out e-learning course evaluations and monitoring activities based on specific QA measures.

E-learning is increasingly being looked to by many ODL institutions as an economical way of expanding their services, widening opportunities for students around the world, and making effective use of the emerging technologies. In fact, quite a few ODL institutions have integrated e-learning components in their ODL services. However, most of the institutions investigated in the study have not developed a separate QA system for e-learning. It appears that quality assurance schemes for e-learning content and practice are still at the early stages of development. The emerging good practice of OUSL's QA for e-learning indicates that it is necessary to give a role to internal and external experts, students and the public in voicing their opinions about quality of e-learning.

The overall attitude towards adoption of e-learning is not discouraging though it is not very favorable among some of the learners and the teachers. Besides developing knowledge and skills in e-learning it might be necessary to adopt social marketing to popularize e-learning to address attitudinal gaps. The lack of favorable attitude towards e-learning among some of the teachers may be due to lack of confidence in the application of online learning approaches as well as lack of rewards for achieving better results through e-learning. If the university adopts e-learning to a higher extent than at present, there might be greater scope for making e-learning more popular among a larger population of learners so that opportunity for higher education can be further extended to peripheral areas. Sivalogathan, V. and L.P.S. Gamini (2017)

Extending Learner Support Services

In order to improve chances on the labour market, the skills base of students must be extended. When considering the improvement of subject specific and personal skills in relation to the three cycles of Bachelor, Master and Doctorate, the dialogue and involvement of employers should be promoted, in order to effectively devise and innovate curricula. However, caution must be exercised with the adaptation of curricula to prevent universities from becoming proprietary knowledge providers to firms and/or or taking on the role of existing professional training centres.

The innovation driven economy requires students to (i) generate, judge and validate knowledge, (ii) satisfy the need of human capital on the labour market, and (iii) push value creation by new endeavours and/or ventures, (EC, 2004). The universities must indeed strongly promote that students are equipped with knowledge, skills and attitudes that all individuals need as a foundation for lifelong learning.

In as far as universities of the past have operated with non or semi-permeable borders to societal stakeholders. Universities must be inventive when it comes to satisfying labour market demands and the needs of the innovation driven economy. To adapt to a world altered by technology, changing demographics and globalisation, in which the higher- education landscape includes new providers and new paradigms, innovation and flexibility from institutions are needed.

Inclusion and Social Mobility:

Adopting ODL as a policy option is ostensibly to increase access to higher education especially by non-traditional learners. These may be those who may not have adequately met the admission standards set by residential universities, or they may be mature entrants or others who wish to enhance their qualifications. Most may be studying while working but some may be unemployed or women at home. The learners may be doing so out of interest or for recreational purposes; others may need to improve their qualifications either as part of work requirements or for professional purposes.

Herein, higher education aims to provide for more equitable access in terms of costs, entry qualifications and flexible learning opportunities. Education can enact a strategy of more inclusion (CEPS, 2009; Go8, 2009). An inclusive higher education strategy enables disadvantaged groups to enhance their educational attainment throughout first and second cycle study programmes, and improve their social and professional mobility. The aim is to fully take part in and benefit from a successful economy and obtain a set of competences which act as foundation for further learning as part of lifelong learning.

In order to promote access, the university is required to undertake a marketing campaign by media setting out available courses, qualification requirements and the support available to interested candidates through an affordable fee scheme. Next the institution must seek means of making the registration processes, and assessment for admission easy so as to assist an interested candidate make what may turn out to be the most crucial decisions of his/her life. In any case, ODL institutions benefit from mass enrolments as they can achieve thereby economies of scale and become financially viable.

Continuous and Professional Education:

Higher education connects with the labour market by delivering students with the so required high level skills and competences, while simultaneously driving the dialogue on curriculum development with external stakeholders (Mincer, 1962). The lifelong learning mission of the university under discussion, the organisation provides for continuing education and professional training and develops joint programmes in collaboration with dedicated professional education and training institutions employability prospects.

University academics should be no less qualified than academics in residential universities. Indeed, as educators, academics in distance education institutions need a qualitatively extra dimension. They must have a passion for and commitment to distance education as a mode of learning delivery, empathy with their learners and skills to participate in a learning mode that demands just as much in terms of creativity and

professional expertise from the academic as it does from the student. Besides, academics in distance learning institutions must engage in research in their own discipline but should be constantly researching effective educational delivery models for their learners. This process obviously goes to the extent of assessing the impact or reception of the graduates of the institution in the workplace, perceptions by industry as well as the progress of the university's alumni. External quality assurance and assessment is essential for the success of a distance education institution. The EQA model should be simple and strictly adhered to across the institution; generate confidence and a sense of achievement. It must also seek to achieve international best practices.

Innovation and ODL Delivery:

Higher education connects with entrepreneurship and innovation by delivering students that are not only educated in subject matter but also have essential skills and competences to adopt or drive successful developments. Such universities excel in programmes aimed at the coaching of innovation and feed the lessons which they have learned back into the curriculum (WEF, 2009). Simultaneously, opportunities for new economic activity and entrepreneurship provide for new research domains and teaching horizons.

Obviously everyone who attends a university is desirous of success and the completion of studies within a reasonable time. In distance education this is necessitated by several pressing factors. There are different levels of success. One must believe that university studies have value even if a student does not succeed in the examinations. The fact that one underwent studies will forever have an impact in the learner's development and intellectual ability. But that is not good enough. The institution should aspire to crown its achievement by awarding the degree nothing is complete until that event.

Learners should be carefully counseled about study load especially at the beginnings of distance learning courses. An assessment of their time and resources must be undertaken and on the basis of hours available to be devoted to study, advice can be given on an appropriate study load. Once a learner has been registered and properly counseled, the institution should then take responsibility for monitoring progress, application, undertake regular assessments and the student should then complete the course programme within a reasonable time.

Institutional Support:

Multilingual Open Educational Resources for Independent Learning: a new generation of OER with a strong focus on development and delivery of quality-assured materials for off-campus target groups. Open technologies to make learning and higher education more accessible (Boticario et al., 2006). To serve the call for employability skills and competences, along with the increasingly individualized needs of the 21st century, Open and Distance Teaching Universities (ODTUs) experiment with radically new and flexible placement practices. As regards the cooperation with public and private organisations, professional bodies, chambers of commerce, and social partners. Moreover, the typical organisational and administrative characteristics of ODTUs prevent the implementation of traditional placements.

It is an 'open' virtual platform, a social and technological infrastructure which delivers professional entrepreneurship services and takes full advantage of Web technologies. It caters for relational symbiosis and scale advantages by providing virtual office space to tenants, communication facilities, collaborative support tools, virtual business and financial coaching support, IT infrastructure and web development services, access to e-content, access to incubator tenants, access to external stakeholders, and other types of social and entrepreneurial support.

Universities in Sri Lanka, both conventional universities and OUSL, tap from a mix of different public and private financial sources, which is reflected in the different institutional profiles, their missions, strategies and business models. One of the main challenges of today's universities is managing an increasingly diversified portfolio of activities with increasingly limited access to state funded financial resources. Only universities that will be able to identify their costs 'in full' will be able to determine whether they can operate on a financially sustainable basis and prove what is needed on a reliable and verifiable basis.

Entrepreneurship and Employability:

Throughout the economic systems, general school-level education and training is noted to increase with economic development, however post-school quality of entrepreneurship education and training is seen as inadequate in almost all innovation driven countries. The innovation driven economy strongly depends on entrepreneurs (Drucker, 2001). Entrepreneurship is one of the important drivers of economic growth, productivity, innovation and employment. Bosma et al. (2009) identify agricultural, manufacturing and innovation driven economies. In agricultural or factor driven economies the notion of entrepreneurship is one of necessity: it is exercised to generate and maintain an individual income, herewith avoiding the risk of unemployment. In manufacturing economies or efficiency driven economies the notion of entrepreneurship is one of opportunity: it is exercised by the recognition of a good opportunity, which implies more income and a way of obtaining more independence. In service economies or innovation driven economies, the notion of entrepreneurship is one of possibility. Although modern societies are in need of innovation to sustain their economy, the individual and financial necessity of actually becoming entrepreneurial seems diminished.

In Sri Lanka concerning future labour market imbalances and expected shortages in skills and competences. Globalisation, greying populations, urbanisation and the evolution of social structures, together with the growing importance of information and communication technologies, biotechnologies, nanotechnologies and green technologies, have accelerated the pace of change in the labour market and associated requirements for skills and competences. Labour markets and the skills people need are evolving ever faster and future jobs are likely to require higher levels of education and a different mix of skills, competences and qualifications (EC, 2009).

Indeed society paces onwards and requires more and more complex skills; workers accordingly should be able to participate in lifelong learning and be able to adapt to a variety of new tasks over their working lives. Next to domain-specific knowledge and expertise, workers more and more require the acquisition of transversal skills and

competences such as analytical skills, self-management and entrepreneurial skills, which are transversal and transferable in the changing environment. Public authorities, education and training providers, students, social partners, as well as regional and local actors must join hands in contributing to the design of more efficient education and training policies. (Sivalogathan, and Abeysekera, 2017).

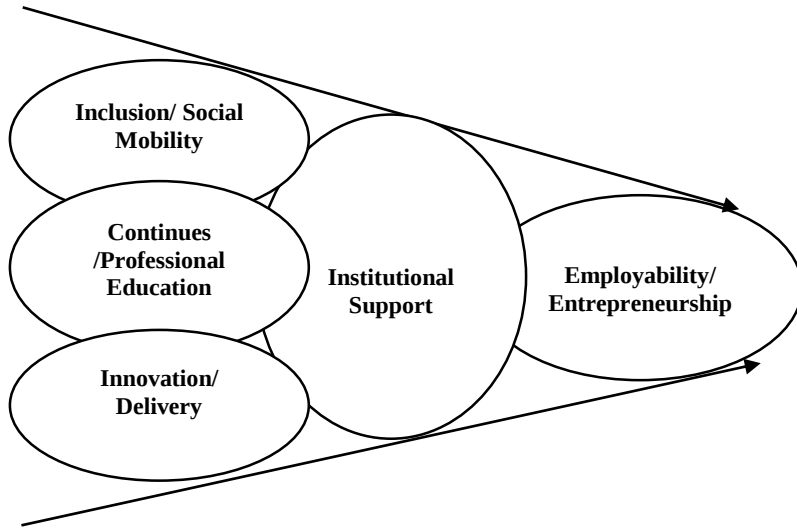


Figure 1: Strategic Model for ODL Innovation Practices

Programme Delivery and Learner Support System

Keeping in line with the Open University of Sri Lanka's ODL based education, the OUSL using multiple resources and techniques to achieve the degree programme outcomes and intended learning outcomes of the course modules. A blended learning environment with extensive use of ICT tools used in a student centric learning environment. The course curriculum is structured to achieve the expected knowledge, skills, attitude and mindset with strong support from the teaching/learning strategies.

The Open University of Sri Lanka has taken considerable strides in development of blended and online learning over the last 37 years and would build up its teaching learning environment making use of the available resources and expertise while adding on other technology based tools available. The OUSL uses its in house developed "myousl" student management system as the student management and administration tools. The open source virtual learning environment (VLE) Moodle which is used by the Department and other faculties of the university. Use of an open source environment would allow the faculty to integrate other tools which will be useful for education especially OER, web and mobile based platforms and services. This environment would also facilitate creative learning and teaching approaches, such as 'flipped classrooms' and related approaches which enables the delivery of lecture content, assessment and feedback online, and shift toward more interactive learning in the face-to-face environment. OUSL would also use

new digital resources, online learning activities and content that are available through MOOCs (Massive Open Online Courses) from world renowned universities.

During the teaching/learning process faculty would focus on developing our own digital content as well as exploiting the availability of web based open educational resources (OER). OUSL also focus much more on leveraging technology in the service of providing flexible access, active and collaborative learning tasks, varied and creative assessment tasks including those that engage students in creating sharable digital content, and adaptive and personalized support that meets diverse student needs. The traditional lecturing would be modernized with the use of prerecorded content, online assessments, interactive classroom techniques, interaction using social media, and the use of e-portfolios. This will enable us to maximize the value of face-to-face interaction in blended learning approaches. We will ensure that all learning events and tasks in all courses, including lectures, engage students in active learning.

In addition to the assessments used in the course modules to achieve the active learning, a special module is used for action based knowledge, skills and attitude enhancement in last year with a common module Research Project and CSR (Corporate Citizen Responsibility) project to achieve the specialization specific objectives with social responsibility. In addition an independent study also will enable students to enhance the critical thinking abilities further through application of the skills and knowledge gathered every year. The OUSL committed to achieving excellence in all its learning, teaching, and assessment activities and to developing a student centered culture that encourages innovation, promotes student integration and continual reflection.

Programme delivery & Learner Support system

Printed Materials: The central element in this teaching system is a series of printed texts that every student receives. These fulfil several purposes, the print materials are equivalent to face-to-face lectures and motivate questions and activities are interspersed throughout the text. The intention of these questions is to help the students in thinking independently while developing analytical skills.

MYOUSL Account: MYOUSL is an integrated learner support system which is hosted in Open University Management Information System (OMIS). This facilitates students to get access to their personal details, financial position, and examination results. Further this can be utilized for apply final examination, share course materials and create discussion groups. In addition to that myousl consist communication facilities such as SMS facilities and facility to send announcements.

NODES: It is a cloud based system which aims at educating under graduates, graduates and professionals. Using moodle cloud system able to provide lectures through video conferencing simultaneously with 20 different centres (It will be expanded further in future),online examination, data repository which can be utilized by industry practitioners and student related courses By launching National Online Distance Education (NODEs) access centres in every regional and study centres of the Open University of Sri Lanka, we can reach peripherals of the country.

Online library: Our main website comprises of this online library facility, where staff and students can search for book, past year question papers and research journals, using their login ID and password from any premises.

Audio, Video materials: Audio – visual devices enliven studies by enabling the student to watch video films and relevant material and provide an opportunity to listen to audio cassette presentations by Open University staff and other experts in the specific fields. Audio visuals are thus an important teaching aid for the self-learner.

Communication Channels: In addition to MYOUSL portal, NODES services and online library facilities, SMS service and Online Notice board are available under main website. This is purely for the purpose of message delivery regarding any academic activity.

Day Schools: While printed course materials and audio visuals form the main components of the study packs in the distance education system of the OUSL, day schools are conducted from time to time at Regional and Study Centres. These day schools are primarily for discussions, clarification of problems, and are often conducted by academic staff of the OUSL as well as visiting academics from other universities, academic institutions and the like.

E-Learning: Keeping in line with outcome based education in context on Open and Distance environment at Open University of Sri Lanka, using Moodle and other multiple resources and techniques as Learning Management System (LMS). Moodle was built with elements and tools that embody pedagogical understanding and the organization and design of Moodle's interface supports learners and learning tasks with all the standard features of a LMS that supports a content-driven learning model. This can be considered as one of the competitive advantage for the OUSL and core-competency as well. The OUSL has accommodate new technology and e- learning activities that are available through many recognized online forums and MOOCs (Massive Open Online Courses) from world renowned institutions.

Challenges in Implementation of ODL Technology

The models of distance learning can be considered as a family of co-existing 'generations' each still having valuable contributions to make to the study life of global distance learning. It is imperative to ensure that technology-driven distance education proposed by the later generations of ODL does not alienate the already disadvantaged students from pursuing higher education. In Sri Lanka, the strengths of teacher training programmes in the distance mode to train teachers who lacked professional qualifications, mainly used print materials while the OUSL used supplemented these with audios. The introduction of newer technologies occurred in the OUSL with the establishment of a state-of-the art Media House donated by JICA for in-house production of multi-media learning materials.

In 2003, the Distance Education Modernization Project, (DEMP) supported by the Asian Development Bank and the Government of Sri Lanka embarked on an ambitious project on Online Learning at post-secondary education level. The overall goal of the

DEMP was to increase socio-economic growth by developing a modern, high quality human resource base through online education, to raise quality and enhance capacity with the aim of setting up and managing a distance education network that provides assistance to develop curriculum content, training, mentoring, peer group support and interaction and maintenance of hardware and software. The project provided expertise, capacity building, technology transfer, equipment and software and recurrent costs (Gunawardena, 2008). Online learning developed the model of Flexible Learning as not only was the Internet being used for delivery of the programmes, for transmission of assignments and provision of feedback but it was also envisaged that social learning would take place, through chats, virtual canteens, discussion forums etc. Thus in two Online Learning programmes in Sri Lanka, Gunawardena and Karunanayake (2008) found that Cooperative Learning was the norm in communications.

Teachers and students in the post war contexts or so called conflict affected fragile environments experience extra ordinary challenges even for the basic education delivery. These challenges keep them away from the use of technology-enhanced education. These aspects negatively affect students' cognitive, physical and psycho-social well-being, which in turn negatively affect their learning. Teachers are directly affected by conflicts and crisis. Their own education and professional development may have been disrupted and resulting in low levels of content knowledge and teaching skills (USAID, 2013). Kelegama (2010), in a report on post conflict reconstruction in Sri Lanka, mentions that, education of most of the students in conflict affected areas was disrupted due to displacement, loss of family members, psychological impact, loss of school materials and the destruction of school buildings. Further, he suggests that providing educational infrastructure including teaching and learning aids is an essential action that should be considered regarding the conflict affected groups. His ideas reveal that provision of teaching learning materials is also an important action to promote educational gains of post conflict regions.

Higher Education, in the context of current developments in Sri Lanka, is of paramount importance for economic and social development. The main challenge before Sri Lanka as in the case of many other developing countries in the region is how to increase access to higher education while at the same time increasing relevance and quality of educational programs and to improve skills of the undergraduates so that they are gainfully employed. Today, in the global context, challenge before all countries, especially South Asia, is how to expand higher education, as this sector, due to a variety of problems including that of fiscal constraints, face numerous problems which demand new policy initiatives. Higher education system of Sri Lanka therefore needs to be reformed to make a noteworthy contribution to both development and change in the country. New policy initiatives and a reform strategy is being planned and adopted with a view to reforming the system on the basis of both local and global considerations.

Best Practices

Best Practices and Awards

The OUSL secured the Gold and Silver awards at the 32nd Annual Conference of the Asian Association of Open Universities, (AAOU 2018) in Hanoi Vietnam. Mr. W. A. R. Senevirathne (Dept. of Management Studies, OUSL) and Ms. H.C Dassanyake (Dept.

of Management, University of Sri Jayawardanapura) won the Gold award for the best paper titled Can E-Sevicescapes Improve Student Management. Evidence for the Open University of Sri Lanka. The Silver award was won by a joint paper presented by A.M.P.B. Abeyasinghe (Dispatch Division), B.G Jayathilleke (CETME), B.C.L Attapattu (Civil Engineering), L.P.S Gamini (Department of Management Studies). The event was attended by a large delegation of paper presenters from the OUSL.

The Faculty of Education of OUSL launched a website “Digital Education Leaders in Action” June 2019. This is in relation to the research project conducted on the implementation of the Commonwealth Digital Education Leadership Training in Action (C-DELTA) Programme in Sri Lankan schools, supported by the Commonwealth of Learning (COL), Canada. The key aim of this research project was to develop capacity among school teachers and promote the adoption of digital education environments in schools. It was envisaged that the participant teachers of this research project would develop their competencies in adopting and promoting C-DELTA in their schools by improving their digital education leadership skills, thus becoming effective professionals who can cater to the digital education environments in their institutions. The website captures the teachers’ reflections on their journeys, reported in the form of “stories”. A research dissemination seminar was also held afterwards, with the participation of practitioners from educational institutions. This research project was implemented by a five-member team, under the leadership of Prof. Shironica P. Karunanayaka, Dean, Faculty of Education.

OEPPGateway@OUSL is your window into Open Educational Practices at OUSL. It features novel initiatives by OUSL staff in collaboration with partners around the world. These initiatives include research projects and resources on various types of open educational practices including open access to education, open learning, OER integration and open scholarship. The aim is to support capacity building, research, and promotion of scholarship in relation to open educational practices.

The OUSL won the Gold and Silver medals in the Best Practices Awards category at the 31st Annual Conference of the Asian Association of Open Universities (AAOU 2017) in Indonesia. The Gold medal was won for the research paper titled, “Development of a Hybrid Learning System to Enhance ODL: Printed Course Material Amelioration via Smart phones by W.R.de Mel and Mr. M.R. Mohamed Haroon of the Department of Mechanical Engineering, Faculty of Engineering Technology, OUSL. This paper develops a Hybrid Learning System (HLS) in the field of ODL. The Silver medal was won by the paper titled, “Development and Testing of a Mobile Application through Design-based Research,” a joint paper presented by the members of the Centre for Educational Technology and Media (CETMe) and the Faculty of Health Sciences, OUSL.

During the years 2005 to 2008, OUSL was to achieve recognition of its excellence in two particular fields. The faculty of Education won an international award of excellence for a study programme and a national center of excellence was established at OUSL in the field of English. In 2008, this innovative programme won OUSL’s first international accolade when it was awarded the Commonwealth of Learning Award for Excellence in Distance Education at the Six Pan-Commonwealth Forum in London. The Faculty of Education of the Open University of Sri Lanka has taken a huge step forward in proactively

integrating ICT and OER in its educational programmes for the professional development of teacher educators in the country. This is initiative of the Faculty of Education marked an important beginning and step in the right direction. It help to transform OUSL and to usher it into a new era of a learner and learning centered education and where it is competitive with international standards.

Teachers' professional as well as social behaviours have been positively changed by the OER-integrated teaching-learning practices. Initially they were reluctant to come forward, not confident to express their ideas, not ready to work with others in teams, less interactive and shy. But ICT and OER integration has significantly changed their social behaviours. They joined together in teams and conducted workshops, published books, created OER in their mother tongue and shared them with the others. Teachers became socially active through the integration of ICT and OER in their teaching-learning process (Sasikala Kugamoorthy and M. Rajini, 2017).

An undergraduate student in Mechanical Engineering at the OUSL, became the winner of South Asian SOFE (Speak Out For Engineers) Competition 2017, organized by the Institution of Mechanical Engineers (IMEchE) UK. The competition provides young engineers with an excellent opportunity to demonstrate and develop their verbal and visual presentation skills and competence in public speaking.

The Open University of Sri Lanka has filed four Patents at the National Intellectual Property Office (NIPO) in August 2017. Though the staff and students of the university have filed Patents in the past, this is the first time the OUSL has become an applicant to file Patents. A team of senior academics from the OUSL and other senior scientists have filed a patent application for "A process of producing a cross-linked cellulose and acrylic acid grafted super absorbent copolymer using a domestic microwave oven for agricultural applications."

The OUSL organize a "3D Printing Camp" for the first time in Sri Lanka with a team of Soft Robotics Research Group of the OUSL. This camp focused on school children under the guidance of the Ministry of Education in line with the "Global 3D Printing Day". Which was considered as the foundation of Sri Lanka's futuristic trends in 3D Printing. "3D printing" originally referred to a process that deposits a binder material onto a powder bed with inkjet printer heads layer by layer. More recently, the term is being used in popular vernacular to encompass a wider variety of additive manufacturing techniques. In fact, it is a novel technology that is yet to be embraced by the emerging fields of Soft Robotics Technology in Sri Lanka.

Students and staff of the Department of Management Studies of the OUSL have carryout CSR activities keeping in mind that 'Life is all about Learning' every year. The most important facet in life should be learning with emotional intelligence. This is mostly about learning by understanding, by helping others, because you have been given a chance, a rare chance to be a human. Corporate Social Responsibility (CSR) is the economic, social, ethical and discretionary commitment of a business for the wellbeing of stakeholders, society and the environment. CEMBA/CEMPA, the programme that opens the door for professionals around the country to gain necessary skills, knowledge and also competencies also open the door for the same to serve the community they live in.

Developing a policy handbook at national level

To realize their visions and fulfill the mandates, all the ODL institutions have developed policies, management guidelines and organizational bodies which oversee or carry out the policies. Major policy development areas include academic affairs, personnel, admission, assessment, finance and resource allocation, quality assurance, and services. The OUSL has developed a rather comprehensive handbook or manual listing policies and guidelines in all major policy areas.

ODL policies at different levels determine the kinds of ODL practices. The ODL policies at institutional, national and international levels provide the directions and guidelines for the everyday operations and managements of any ODL activities and initiatives. To meet the needs of a rapidly changing environment for ODL, existing policies must be appropriately revised and new policies need to be developed. In doing so, an ODL institution must take a comprehensive, systemic approach rather than a piecemeal approach.

The University Grants Commission (UGC) disburses funds, formulate student-admission criteria and sets administrative guidelines and norms for Sri Lanka University. In 2001, a QA project was initiated by the Committee of Vice-Chancellors and Directors and UGC with World Bank assistance to develop and implement a comprehensive QA system for Sri Lanka higher education including ODL. As results of this collaborative work, the Academic Procedures Handbook was completed in 2003 and updated in 2015 as a complementary to the QA Handbook. Countries which have relatively small numbers of higher education institutions can adopt this model of policy development of Sri Lanka. As seen in the case of OUSL, the policy manual which was developed at the national level has been used as guidelines for assuring the quality of ODL services. This national-level policy will result in a significant improvement in the quality of education in general and ODL in specific.

Learner's Support Services and Teaching

Learner's support system lies in the heart of any ODL activities. It is important for an ODL institution to offer opportunities for its students to connect with the institution and thus to develop valuable learning experience. Typical forms of student services in recent ODL include: face-to-face and/or online tutoring and counseling, telephone or email services, digital libraries, and mentoring. With the development of ICT, ODL institutions are able to offer individualized and interactive student services faster and easier than ever. Some examples include 24 hour telephone or email help desks, e-counseling, e-tutoring, and tutoring sessions via video-conferencing.

OUSL provides one-stop comprehensive student services through the nine regional and 21 study centres throughout Sri Lanka. The role of the central regional education services centre is to be a one-stop centre in providing support services to OUSL learners in collaboration with regional and study centres. These centres provide students with academic support and other services via face-to-face tutorials, coordination, and telephone sessions with tutors. Online services such as online interactions, updated digital library in Sri Lanka, and email-based supports are also provided.

Since the quality of student support services is heavily depending on the academics/tutors' performance, OUSL operates a rather unique system whereby senior academics/lead tutors that are effective and active are selected to support other visiting academics/tutors. Currently more than 100 senior academics/Lead Tutors are working at the all regional and study centres. The senior academic/Lead Tutors' distinctive role is to support other visiting academics/tutors in both the face-to-face and online pedagogy. Here they are required to monitor the tutors during the face-to-face interactions as well as their online discussions. An online feedback form will allow the Lead Tutors to key-in the results and tutors can view the feedback. The results are also captured and stored in the Tutor Teaching Database for Deans to view for decision making processes. It is the duty of any ODL institutions to reduce or eliminate existing or potential barriers to ODL activities of students. In this regard, providing high-quality, just-in-time services for ODL students is essential. The concept of one-stop services shows ODL students ways to reach academic goals faster and more effectively. OUSL's case provides other ODL institutions with an opportunity to review their various student services from the perspective of one-stop services.

Conclusions and Recommendations

The systems and procedures that the OUSL employs permits student to rearrange their academic activities to suit what they want, where they want and when they want. These are questions that impose traditional barriers to higher education. We do not insist on entry level qualifications other than being adults and possession of basic literacy. The foundation and certificate courses impart the preparatory knowledge necessary to undertake higher level programmes at Diploma and at Undergraduate Degree levels. For the past three decades, the OUSL experimented and tested ODL methodologies to identify what is best for Sri Lankan learners. OUSL passed this consolidation stage and are currently moving towards the phase of rapid expansion to cater to the higher educational needs of the country. The staff and the leadership of the OUSL are ready to undertake this venerated responsibility to help build a new Sri Lanka.

The OUSL has already established a firm foundation for online education and the institution is currently moving albeit slowly towards achieving the goal of transforming the delivery of a larger share of the courses into online mode within the next five years. There are several gaps in knowledge and skills as well as attitudes among the learners and the teachers that have to be addressed to make online education effective and efficient (Sivalogathan, V. and L.P.S.Gamini, 2017). The University must follow the international benchmarks in e-learning noted above and take pro-active decisions to address the gaps vis-à-vis the international benchmarks. In this endeavor the University must aim at optimizing its strengths and the unique advantage of being the nation's leading ODL institution. In conclusion one might note that there is a need for greater alignment of institutional strategies and ICT based learning supported by effective leadership to ensure benefits of e-learning to all the stakeholders.

Some of the inherent advantages of the ODL system include its commitment to enhancing flexibility in terms of recruitment of students, scheduling of study time, place of study, admission requirements, credit transfer, and use of web-based learning with the help of on-line tutors. The Open University of Sri Lanka is now moving towards the next

generation ODL technology supported by a combination of online-and blended teaching and learning techniques. Today it caters to a student population of about 40,000 learners who offer courses through the Faculties of Education, Engineering, Natural Sciences, Health Sciences and Humanities and Social Sciences and Management Studies. Together they offer about 67 study programmes. The ODL as a mode of learning has the prime objective of facilitating learners who were mostly disadvantaged due to gender, age, lack of formal education, residence in remote locations or employed, who were denied tertiary, adult or lifelong education due to the various barriers that prevented them from continuing education.

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