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Internationalisation and Social Justice: the role of Open, Distance and e-Learning

Papers by authors F - L

Bridging the gap in digital divide

Ahmad Fadlallah
Arab Open University – Lebanon
**afadlallah@aou.edu.lb**

Abstract

Cross border education is one of the main aspects of the internationalization of higher education. It encompasses a number of categories: people mobility, program mobility, institutional mobility and service mobility. The larger part of cross-border higher education takes place through open and distance e-learning (ODEL). ODEL has been thought by many as a means to promote social justice by providing equality in education and targeting marginalized and socially disadvantaged people, thus helping to break the digital divide at national and international levels. However, the high dependency of ODEL on Information and Communication Technologies and the internet in particular makes it more vulnerable to the digital divide debate and to some extent contribute to widening this divide.

In this paper, I will address these aspects, taking as a working example the cross-border education/ODEL initiative of the partnership between the United Kingdom Open University and the Arab Open University (Lebanon branch in particular).

Introduction

While the growth of population is becoming more stable in developed countries, it continues to grow fairly fast in developing countries. These countries which had around 4 billion people in 1990 and 6.5 billion in 2010, will touch the threshold of 8 billion by 2025 and 10 billion people by 2050 (UN, 2008). Figure 1 illustrates the age distribution in the populations of developed and developing countries where it is clear that the young form the larger share of the population of the developing countries while an aging population is more and more witnessed in developed countries.
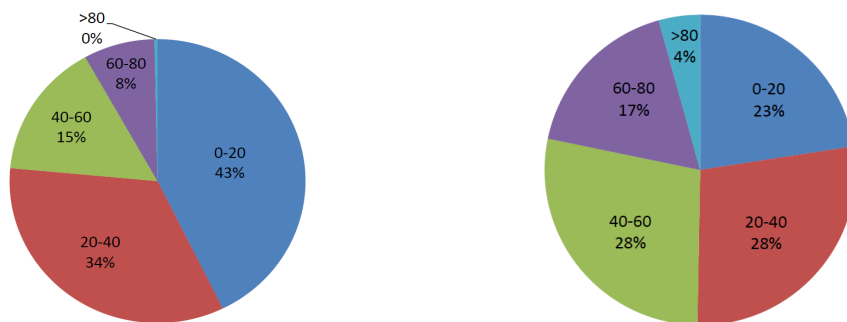
Developing countries   Developed countries
Figure 1 - Age distribution for developing and developed countries in 2010 (UN, 2008)

This growth is accompanied by an improvement of the percentage of the age cohort enrolled in post-secondary education, with actually some 150.6 million students globally (Altbach, Reisberg & Rumbley, 2009).

As this demand for higher education is continuing to grow, interest in the international dimension and delivery in higher education is also growing, as spatial and temporal lines are blurred, mainly with the aid of Information and Communication Technologies (in particular the Internet); this is mainly designated by the "internationalization of the higher education" where "international, intercultural, and global dimension are integrated into the purpose, functions (teaching, research, service) and delivery of higher education" (Altbach, Reisberg & Rumbley, 2009). Cross border education is an important aspect of the internationalization of the higher education; it can be described as:

> *"Higher education that takes place in situations where the teacher, student, program, institution/provider or course materials cross national jurisdictional borders. Cross-border education may include higher education by public/private and not-for-profit/for profit providers. It encompasses a wide range of modalities in a continuum from face-to-face (taking various forms from students travelling abroad and campuses abroad) to distance learning (using a range of technologies and including e-learning)" (Knight, 2006).*

This definition highlights three main categories of cross border education: people mobility (students or faculty), program mobility, institutional mobility; in addition one might add service mobility such as institution-building and accreditation (OECD, 2005).

The traditional aspect of cross border education is the mobility of students where the numbers of students seeking education in foreign countries was estimated to 1.8 million international students in 2000 and to more than 3.3 million in 2008, and is forecast to increase to 7.2 million in 2025 (Bohm et al., 2011). However, despite this dramatic growth in the number of internationally mobile students, the bulk of students in higher education continues studying in their own countries. This in itself creates significant opportunities for both program and institutional mobility which constitutes one of the main trends in cross-border education, where foreign academic courses and programs are delivered to students in their home country.

The last ten years have seen a growth in the scope and scale of cross border initiatives which involves higher education institutions and academic bodies that deliver their programs and courses to students in their home countries. These initiatives include branch campuses, international double degree programs, regionalization initiatives, faculty and student mobility schemes, franchised programs, and research networks. Examples are countless; for instance, Phoenix University (owned and operated by the Apollo Group company) has become the largest private university in the U.S. and is now present or delivering courses in Puerto Rico, Netherlands, Mexico and Canada. Other Apollo companies are offering courses in Brazil, India and China (Knight, 2006).

Recent developments in cross border education include education hubs, virtual mobility opportunities, and bi-national universities (Knight, 2011). Although branch campus initiatives capture the media attention, the larger part of cross-border higher education takes place through open, distance and e-learning (ODEL).

Cross border education and its ODEL subset have been perceived as a way of promoting national and international justice by introducing equal education opportunities around the globe. The course materials, prepared in highly ranked institutions/providers in developed countries will reach any corner of our planet, thus leading to the opportunity to deliver the same high-quality education everywhere.

However, as ODEL relies on Information and Communication Technologies in delivering content to students, a legitimate question should be raised about the contribution of ODEL to furthering the digital divide rather than bridging it.
In this paper, I examine these two aspects. I consider as a working example the cross border education initiative of the United Kingdom Open University (UKOU) in partnership with the Arab Open University and analyze how much such a partnership between two universities in the developed and developing countries can participate in advocating international social justice and how much it can contribute to bridging the digital divide.

Cross-Border education: Arab Open University as an example

The Arab Open University (AOU) is a non-profit organization that was set up at the initiative of HRH Prince Talal Bin Abdulaziz Al-Saoud. AOU is funded by the Arab Gulf Program for United Nations Development Organization (AGFUND). It has seven branches, in Lebanon, Bahrain, Jordan, Egypt, Oman, Yemen and Saudi Arabia.

The AOU concluded a number of agreements with the UK Open University (OU) in order to initiate structured and formalized collaboration between the two institutions, without jeopardizing the position of the AOU as an independent institution. These agreements allow AOU to adopt and adapt UKOU learning materials for its own use, to be accredited by UKOU validation services (OUVS) (first time in 2004), and award its own degrees. AOU mainly concentrates on providing business, English language and IT programs. AOU-UKOU Partnership and licensing falls into the categories of program and service mobility in the cross border education classification mentioned earlier.

The AOU aims to establish itself as a leading institution of open learning, offering opportunities for a new method of study and creating a forum for lifelong learning. The university intends to promote human resources development that is compatible with the demands and challenges of current and emerging information technology platforms and international socio-economic developments

The AOU adopts a mixture of classic learning and open learning with a mandatory face-to-face component for each course (25% - 60% of the traditional university requirements, depending on the local accreditation rules). It teaches using e-learning via the Moodle-based LMS, videoconferencing and face-to-face.

The open learning system is relatively new in the Middle East region and in particular in the Arab countries where the open learning system is not adopted in the public higher education institutions; the local validation of the introduced programs could not be obtained without the support of the UKOU. Despite these difficulties, the AOU was able to reach, in less than ten years, more than 30,000 students in the different branches, and has so far more than 12000 graduate students (AOU, 2011).

The AOU vision is that of inclusiveness to offer a high quality of flexible blended learning to all members of the society, regardless of their background and gender, providing special opportunities in higher education to disadvantaged groups of potential students (e.g. females mature, residing in remote areas). The following graph shows the percentage of females enrolled in the different branches.
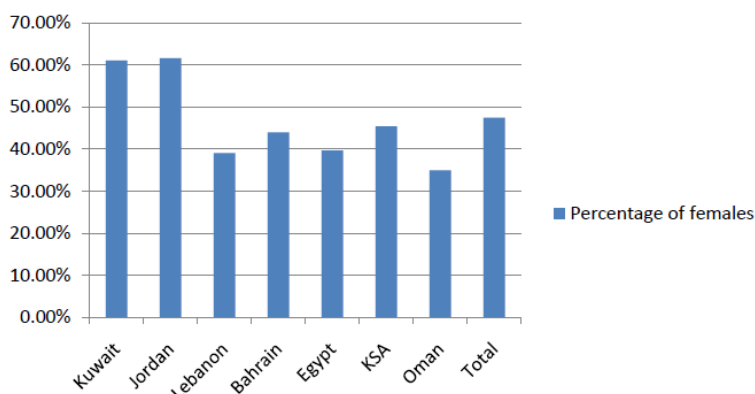
Figure 2- Percentage of female students in the different AOU branches (AGFUND, 2011)

In addition to these numbers, it is worth mentioning that 50% of the graduates are females (AOU, 2011).

The flexibility of the study sessions in the AOU constitutes an attractive point for workers who are disadvantaged by the strict timing constraints in the traditional higher education institutions. This is easily witnessed, given that 40% of the AOU students are mature (aged 25 or over), and 60% are working students (AOU, 2011).

Time flexibility is also advantageous for students residing in remote areas in the sense that they can block their face-to-face sessions into one session per course weekly and reduce their mobility frequency. Branches in larger countries have regional centers such as in Jordan and Kingdom of Saudi Arabia.

As for financial support, the relatively low fees of the AOU makes them within reach of economically disadvantaged people (especially immigrants or foreign

workers) especially when only local citizens are allowed to register in public institutions in some countries.

These facts/numbers clearly channel the contribution of the AOU to promoting social justice in the different Arab countries where its branches are located. However a number of questions are to be raised:

- Is the flexibility and openness of the "adapted" ODEL provided by AOU sufficient to claim that equality in education (and thus social justice from our point of view) is reached, even between students of the same class?
- And what about the international dimension of social justice? Can we consider that an OU student living in the UK and an AOU student have now equal education just because they are studying the same curriculum using the same materials?

ODEL vs. digital divide: who wins?

It is clear ODEL (AOU as example) was able to widen participation in higher education, and overcome the time and location barriers by allowing learners access to learning materials and activities via virtual learning environments (VLEs) that free them from time and space constraints. However, the same argument put in favor of the ODEL can be turned against perceiving the benefits when we consider the third millennium socio-economical issue: the digital divide.

The digital divide refers to the gap between those who have access to the new information technologies, the information 'haves', and those who do not have access, the information 'have-nots' (Clark, 2003). It is generally intended to mean the existing disparities between countries at a different stage of economic development with regard to opportunities to access ICT and their ability to use it for a wide variety of activities. It also refers to the same kind of disparities, within the same country, between individuals, households, businesses and geographic areas at different socio-economic levels (UN, 2006).

ODEL learning technologies deliver resources via VLEs, thus internet access is necessary, and because of increasing file size and the interactive nature of such technologically supported teaching and learning, bandwidth is critical to student time and cost. Thus the newest dimension of the digital divide is access to broadband Internet service (Prieger, 2003). The Digital balance in education (the social justice in our context) must mean that every student needs equal access to technology and the opportunity to be full participants in the digital age (Solomon, Allen, & Resta, 2003).

In the second decade of the third century, the digital balance is still far to be realized at the national level (within the same country), so how can it be done at the international level?

We will examine the different type of digital disparities we observed between students in the same university (AOU – Lebanon), and then illustrate the existing digital divide between different countries (Lebanon and UK).

A study conducted at the Arab Open University (Amaneddine, 2009) showed that around 23.7% of students do not have a high speed internet connection (I will revisit the term high speed when comparing with other countries) in the districts where they live. Around 75% among them (18% overall) do not have even fixed line services and therefore do not have dial-up internet connection at home because of their economic situation. The figure below shows the AOU-Lebanon students distribution and the DSL availability.

Bekaa West , 0.2, 10
Bint Jbeil , 0.2, 13
North , 0, 8
Hasbaya , 0, 11
Koura , 0, 11
Becharreh , 0.95, 3
Zahrani , 0, 3
Marjeyoun , 0, 14
Zgharta , 0.9, 5
Jezzine , 0.9, 14
Rachaya , 0, 5
Zahleh , 1, 22
South , 0, 2
Baalbeck , 0.5, 28
Hermel , 0, 2
Akkar , 0, 29
Batroun , 0.2, 33
Bekaa , 0, 6
Chouf , 0.3, 178
Tripoli , 0.95, 35
Donniyeh , 0, 7
Sour , 0.9, 57
Nabatyeh , 0.8, 62
Saida , 0.9, 68
Baabda , 0.95, 822
Jbeil , 0.9, 118
Beirut , 1, 758
Aley , 0.5, 428
Metn , 0.8, 500
Kesrwan , 0.8, 214
Mount Lebanon , 0.6, 222

Legend:
Baabda , 0.95
Beirut , 1
Metn , 0.8
Aley , 0.5
Mount Lebanon , 0.6
Kesrwan , 0.8
Chouf , 0.3
Others , 0.2
Jbeil , 0.9
Saida , 0.9
Nabatyeh , 0.8
Sour , 0.9
Tripoli , 0.95
Batroun , 0.2
Akkar , 0
Baalbeck , 0.5
Zahleh , 1
Jezzine , 0.9
Marjeyoun , 0
Bint Jbeil , 0.2
Hasbaya , 0
Koura , 0
Bekaa West , 0.2
North , 0
Donniyeh , 0
Bekaa , 0
Rachaya , 0
Zgharta , 0.9
Becharreh , 0.95
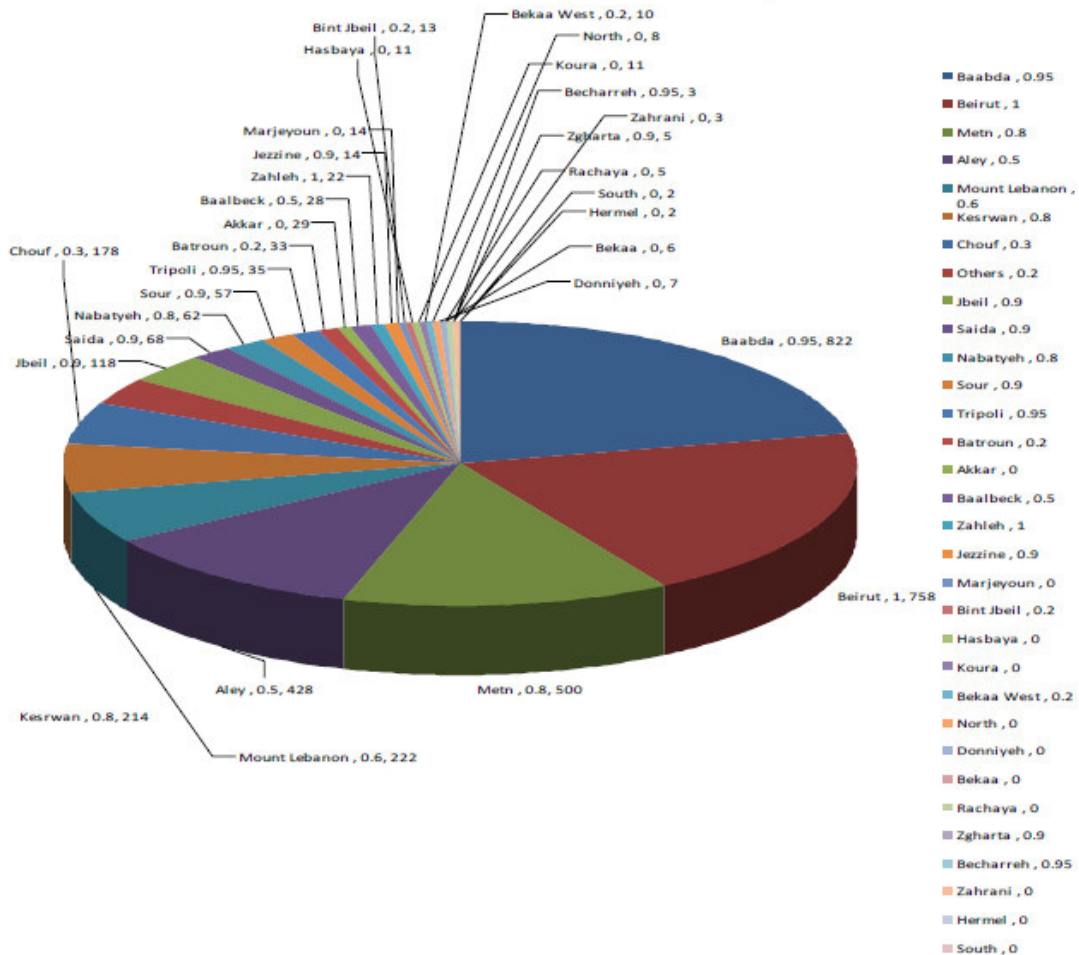Zahrani , 0
Hermel , 0
South , 0

Figure 3 – Students distribution and DSL availability (Amaneddine, 2009)

In the above figure, the first part of the legend text corresponds to the name of the city or the name of the district, it is followed by a number, and this number reflects the percentage of DSL service in the corresponding cities and villages. It is followed by the number of AOU students residing in this city (Amaneddine, 2009).

This category of students mainly relies on on-campus internet connection to access the VLEs. Coupling this fact with the low frequency of accessing the campus (less than twice per week on average), these students are disadvantaged at different levels in the ODEL system adopted in the AOU:

• They are less up-to-date vis-à-vis the course materials and extra-materials posted on the VLEs

- They participate less actively in the interactive forum discussions which play an important role in the ODEL learning process
- Their communications with tutors and their peers is limited to the face-to-face tutorials they attend
- They can dedicate less time for assignments requiring internet searches
- They are more susceptible to late submission of assignments.

In addition to these course-independent disadvantages, the impact could be even worse in the case of courses that require extra internet activities. We have considered the case of three courses in the Information and Communication technologies track in the faculty of computer sciences: one second level course and two third level courses.

- In the second level course (T209B: Information and Communications technologies – People and interaction), student are asked to do some group work project on a predefined topic during a certain period. This group work requires, among other things, students to post their contribution in a discussion forum and to comment on each other's work. The students were marked based on their forum activity. Students who do not have an internet connection (even with high GPA) showed the lowest level of interactivity in the forum and thus were susceptible to lower grades compared with other students having internet connections (25% less in average).
- In two third level courses: T324 (Keeping ahead in ICTs) and T325 (Technologies in digital media), students are required to do a lot of internet searches in their assignments about topics that were not covered during the regular tutorials. Our analysis of the quality of search done showed the disadvantage of the "have-not" category compared with the "have" category. Our investigation with the students concerned supported our hypothesis.

It is important to note that the same and even more extra "internet-access" requirements exists in other courses from other tracks, thus the disadvantage is not only limited to the course mentioned as examples.

As a conclusion, digital equality in accessing the internet is not ensured in the same country and sometimes in the same region, and has a clear and direct negative impact on the performance of the students concerned. We are not considering other aspects of un-equity such as computer literacy or gender digital divide, which are not applicable in our case since all students are required to take basic courses that allow them to acquire the minimum necessary skills for using the e-learning technology.

In the remaining part, we consider the international dimension of the digital divide. In order to illustrate this dimension, we will compare internet access "conditions" (speed/cost) in the UK (country of the UKOU) and Lebanon.

We consider a number of ICT comparison indices that are related to the internet access: the number of fixed Internet subscriptions per 100 inhabitants, the connection bandwidth and the connectivity cost.

The following graphs illustrate the number of fixed internet subscriptions per 100 inhabitants (regular and broadband connections).

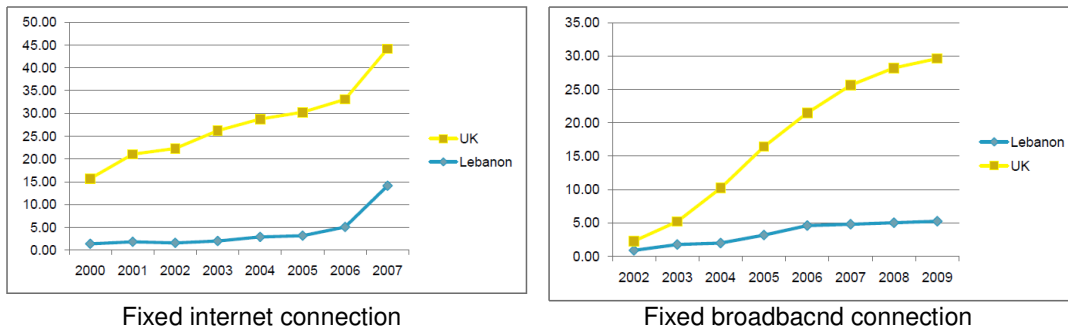| Fixed internet connection | Fixed broadbacnd connection |

Figure 4- number of internet subscriptions per 100 inhabitants in Lebanon and UK (ITU, 2011)

As for the internet connection bandwidth, the new internet access technologies (ADSL2+, FTTH, etc.) used in UK allow users to reach and even cross the 100 Mbps download connection while in Lebanon the highest available bandwidth for domestic use is 1 Mbps.

As for the cost, Lebanon has one of the very highest prices for wholesale connectivity when compared with global standards (see figure below).
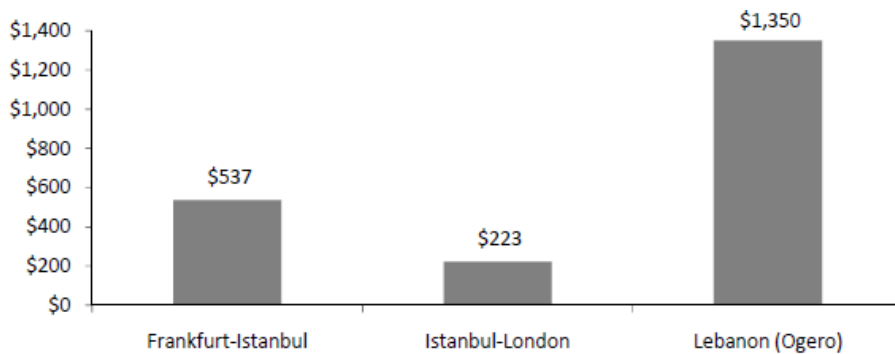
Figure 5 - comparative cost of connectivity (US$/Mbps/month) (World bank, 2009)

This digital divide is inherent in ODEL techniques and makes students in the developing countries clearly disadvantaged when compared with students following the same curriculum and using the same materials in developed countries.

This divide is furthered by the language barrier; despite the huge efforts exercised at the AOU to improve students' English level, a significant number of students still find the English level of OU material difficult and prefer to rely on the support material prepared locally (with an easier to understand English writing style) which diminish their benefits from the high quality of OU course materials recognized worldwide.

Conclusion

Cross-border education constitutes one of the main aspects of the internationalization of the higher education in the last decade. Open and distance e-learning (ODEL) get the Lion's portion in cross border education initiatives. Although it has been thought by many as a key solution in bridging the digital divide, ODEL suffers from the digital un-equity in internet access which prevents it – to a certain extent – from promoting social justice both at the national and international level, making it unwillingly contributing – in one way or another – to widening still further this divide.

The internet access barrier is one of the difficult digital divide barriers that stand in front of ODEL's role in promoting social justice at national and international levels. Before removing this barrier, one can find it legitimate to think that to profit from ODEL, one should live on the "right side" of the digital divide.

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The use of Quiz for mobile-learning: a tool for interaction in distance learning

Maria de Fátima Rodrigues de Lemos
National Service for Industrial Apprenticeship – Distance Education
Centre - SENAI
fátima.lemos@senairs.org.br

Abstract

This article describes the use of quick questions such as a yes-or-no type QUIZ through Mobile Learning to prompt Distance Course students to search for extra information about content to be taught. In addition, it is a way to interact with students so that they feel like they are close to their tutors and mediators. Within this scientific paper, the interaction of distance course students via the internet and didactic material printed by SENAI/RS (National Service for Industrial Training, Brazil) is examined.

The methodology chosen for the development of the Assistance/Support and Evaluation System which is integrated to an Interactive system, by the sending of QUIZ-SMS texts, is the Methodology of Competences developed by SENAI. The virtual environment which sends the texts is the SENAI webCourse platform, developed in PHP and MySQL (Structured Query Language), and it has the objective of optimizing the NEAD-SENAI/RS (Distance Education Centre) pedagogical team work in assisting, interacting and diagnosing students' learning difficulties in each study unit. The students feel socially included because, even without access to the Internet and higher technologies, they are able to interact through a technology they already know and that they use in their day-by-day work.

Keywords: M-learning; Interaction; Learning and Interaction among Virtual Environments.

1. Introduction

This paper describes the experience of using interactive texts – SMS, integrated with an Assistance/Support and Evaluation System for distant courses students, focusing on competences demanded by the job market. These courses are developed by the Distance Education Core (NED) team of the National Service of Industrial Learning of Rio Grande do Sul (FIERGS), and are supported by industries.

The use of quick evaluations like QUIZ, which is a way of evaluating a large amount of people through a yes-or-no, or true-or-false questionnaire, prompts interaction between students x tutor x mediators in SENAI distance courses. For an overall understanding of these interactions and the technology application it is necessary to comprehend the Methodology that supports the production of courses developed by the Distance Education Core (NED) of

SENAI-RS. This Methodology provides opportunities for continuing education, which is one of the objectives of the course developed and implemented by the FIERGS-SENAI System. It has been demonstrated to be effective in terms of making learning by competences possible, by taking into account Andragogic Theories.

SENAI is an institution with more than 60 years of experience in the professional education field, attentive to the changes in the work context. According to the current Educational Laws which set, among others, a curriculum organization focused on a competency model, National SENAI with many Regional Departments in Brazilian states, have been implementing actions that effectively contribute to building up required competences, aiming to deliver professional performance relevant to today's needs, and assuring, therefore, a professional education linked to the demands of the productive world and its citizens.

Based on this demand, subsidies have been provided for professional education activities with a competence approach, which refers to the formative and summative assessment processes for professional education purposes (SENAI, 2004). The documents which form part of the methodology of skills certification are: Sectional Technical Committees – Structure and Functioning; Professional Profile Elaboration; Elaboration of the Curriculum Drawing based on Competences; and Evaluation and Certification of Competences.

The students, object of this article, are 140 SENAI's employees from the 27 Brazilian states enrolled in the Teaching Action Course – Learning Mediation based for the Graduation Based on Competences.

2. Methodology Applied to the development of the Assistance System integrated with the Interaction Tool and Evaluation QUIZ – SMS.

The model of the Course is interactive, in which the tutors and the foundation, generalization and contextualization activities aim to support the students' performance. The tutor and the mediator are facilitators of learning, orienting the students in their studies and interacting whenever it is necessary. This interaction can be on the LMS itself, by e-mail and by instant messaging or by the Assistance and Evaluation System, developed by the NEAD's technicians, which is integrated to the LMS. The quick evaluation activities – QUIZ - are sent to the student's mobile phone via SMS. However, for a better comprehension of this System it is necessary to understand the didactic-pedagogical concept Methodology applied to the Course.

For Perrenoud (1999), competence is…" a capacity to act effectively in a particular type of situation, supported by knowledge, but not limited by it".

The Methodology of Competences is used to structure the programs of courses through a professional profile elaborated with the help of representatives of companies, government, employees' and employers' unions and of SENAI. Professional competences are understood to provide a mobilization of knowledge, skills and professional attitudes necessary for the development of

actions relevant to the quality standards and production required by the nature of the work.

The Methodology of Challenges is used in the construction of capacities and competences for the solution of real problems in a work context through a permanent articulation between theory and practice. The methodology is based on consistency between objectives and content, strategies and assessment activities and targets the professional skills professional competences intended. For the elaboration of objectives and criteria of evaluation, Bloom's Taxonomy was taken into consideration.

For a better understanding of this didactic concept and its implications in the pedagogical practice of distance courses based on competences, three learning activity goals for professional competences have been established, according to Figure 1.
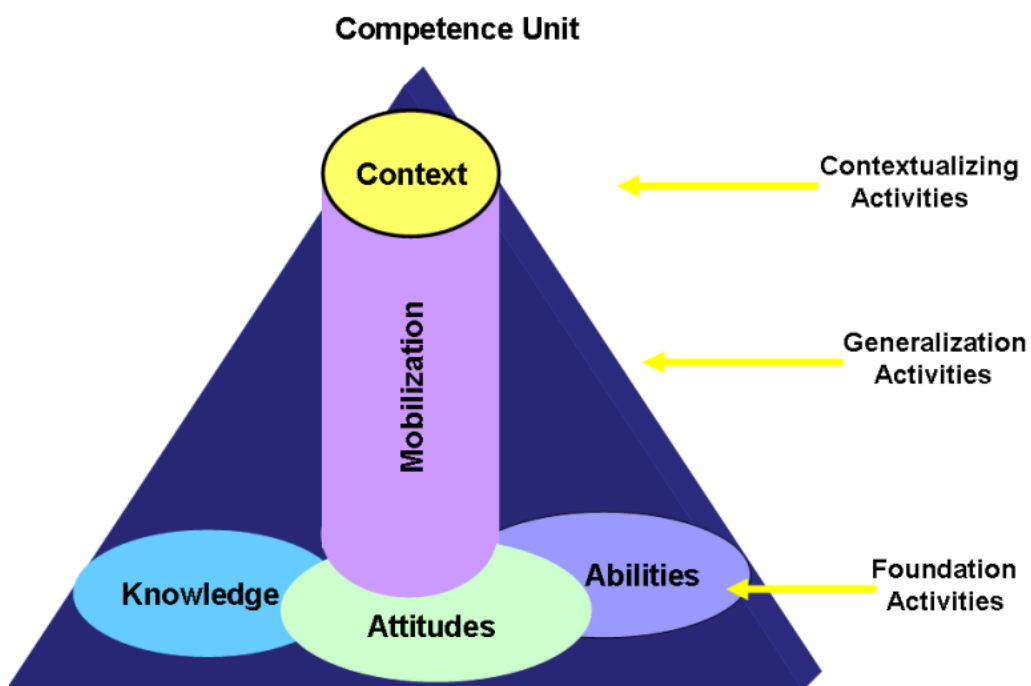
Figure1: Competence Units

Each one of these educational objectives is described as follows:

- Foundation Activities: on these activities the student practices the formative contents learned along the basic learning process. These activities support the next activities, which are the Generalization and Contextualizing ones. The foundation activities aim to develop knowledge, attitudes and fundamental skills for the most varied situations within the competence unit context. In this phase QUIZ activities are sent to the students so that they

can be prepared for the next phase of Learning Activities, which is the Generalization one.

- Generalization Activities: in these activities the student practices mobilization contents of formative contents applied to different simpler work contexts, but they allow appropriation and transference to the activities of contextualizing learning.
- Contextualizing Activities: in these activities the student practices a situation removed from the real work context. These activities are centered in the mobilization of formative contents for a specific work context, which should provide enough performance evidences to judge the student's performance.

In the Course, the evaluation of competences is a process of collecting evidence about the students' professional performance. This process is continuous and cooperative during the students' progress through their learning process, and it has aims to diagnose the learning difficulties and capacities of a group of students. In order to do this, the pedagogical course team should always have collated evidence of the learning activities of students within the online environment, through support from printed teaching material, interaction among students and with emphasis on the tutor and mediator support throughout the whole course.

We ask ourselves: how is it possible to provide assistance, evaluation and necessary interactions through a different pedagogical/andragogical process and make it adapt to the necessities and characteristics of distance course students in professional education?

In order to answer this question and so that there is an evaluation according to everything that has already been described, the Distance Education Core of SENAI/RS uses a Performance Assistance and Evaluation System integrated with the Virtual Learning Environment. Student support is based on the didactic pedagogical concept already cited and an Interactive System was integrated using text messages – SMS, sent to all mobile telephone operators existing in Brazil, which are more than six. This System allows us to support students and evaluate the competences attained through each course developed by NEAD. These courses can be distance format (via Internet in a Virtual Learning Environment or via printed didactic material), or dual mode and still they can send text messages automatically reaching the students wherever they are.

In the case of the course using Quiz – SMS, students commented on the speed of activity feedback, because the reply to the question sent is immediate. These students want immediate answers; they have no time to waste, because they are applying the content acquired in the course to their work context in real time. According to Andrea Filatro:

> "The teaching learning process will be incomplete if the student does not receive a feedback report about his practice"

Because of this, feedback about the students' activities is essential to learning development; it is after all, at this moment that students recognise content that has not been learnt and by so doing reflect on this and understand it further.

It is impossible to imagine a competence approach which is not easily sensitive to difficulties arising from the moment in which students find themselves in situations where, supposedly, they learn by doing and reflecting about the obstacles found (PERRENOUD, 1999).

These obstacles are evident through the monitoring and interaction message via personalized text messages with the student. The System is loaded with data of each activity done by the student on AVA, and can be checked by tutors and pedagogical coordinators in the form of contents, questions and study units already done by the student, such as games, challenges or formative evaluations.

The main goal of sending these activities is challenging the student to search for new information about the content studied in each QUIZ.

In terms of Distance Education one of the fundamental processes for the effectiveness of learning is the interaction between Tutor – Student, Mediator – Student, Student – Student. Taking this into account, the tool developed by NEAD is effective because students who do not have access or familiarity with the use of computers can receive electronic mail or instant messages, which most learning virtual environments make available, and this is the same for students who do have access. For this reason the team opted to use the term *m-learning*. In this case the mobile device used is what students on the course already have: the mobile phone.

3. Interface of the Interaction System by QUIZ - SMS

The system allows the tutor, mediator and the Course coordinator to send QUIZ-SMS manually whenever they feel the need of sending a quick evaluation activity and provide more individual feedback. This aims to motivate students to improve further their results, helping them in their search for knowledge and learning. The tool also sends automatic text messages synchronized with the dates indicated in the Assistance System when the students start studying at the Course.

The Assistance and Interaction System with the student has an opening screen with Login and Password, shown in Figure 2.

Figure 2 - Interface of Login screen of LMS Senai WebCourses

After accessing the System the course and group are listed, because it is through the group in which students are enrolled that they will receive text messages. Each properly registered group of students receives the text message linked to each part of the course.

The interface for marking the sending of text messages – SMS is shown in fig.3.
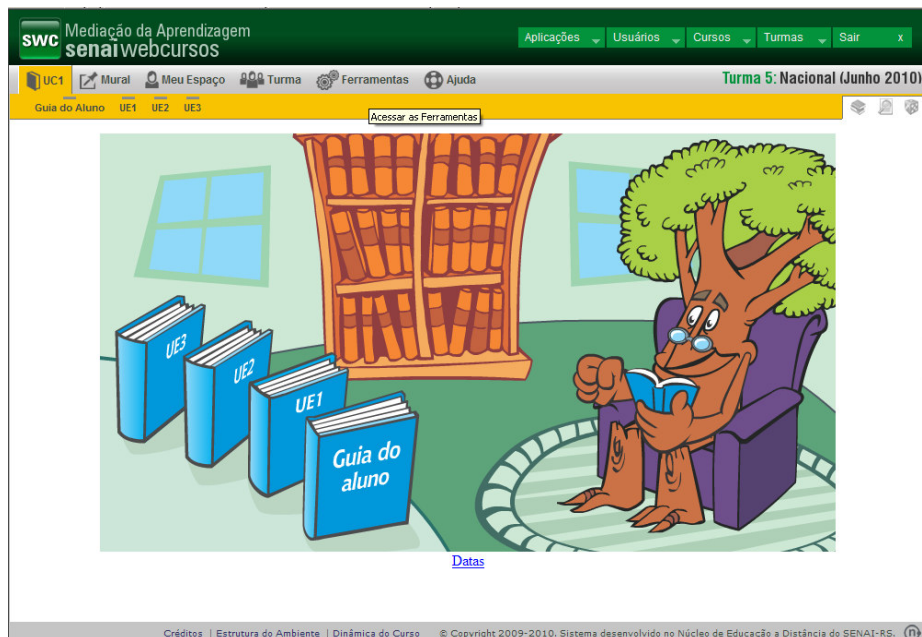
Figure 3 - Interface Groups with Integration with Text Messages – QUIZ – SMS

On the interface of text messages via SMS it is possible to investigate the Login, the student's name and their mobile phone number, the date the QUIZ message activity was sent, the type of message, its status and the text message sent, as in figure 4.

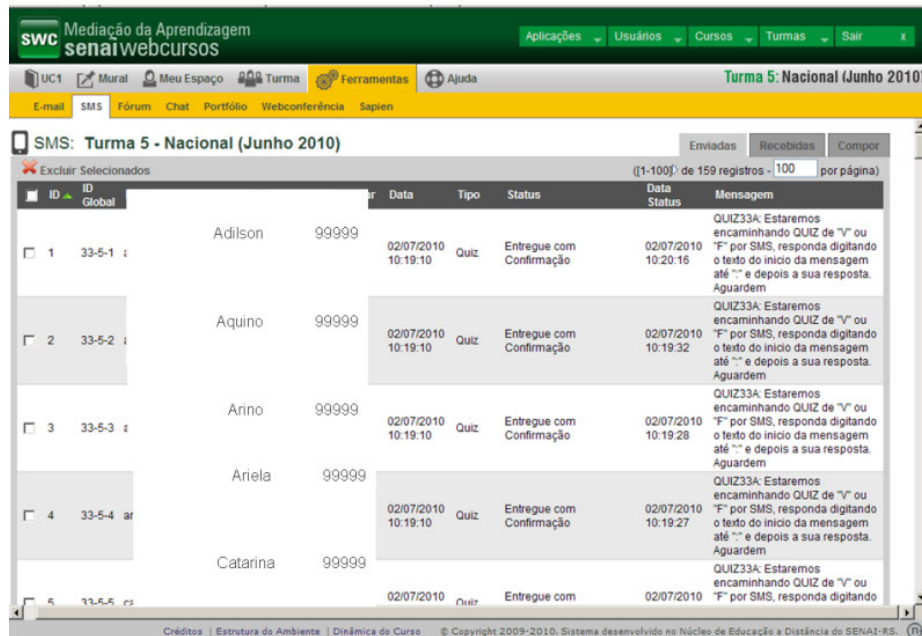**Figure 4 - Interface of interaction via text messages – SMS**

Figure 5 – Interface of Quiz – SMS

Figure 6 – Interface of answers given by students at each QUIZ sent

With this System it is possible to send a QUIZ every day or to choose the days of sending so that the student can answer it. These activities (QUIZ) are linked to specific parts of the Course. The student, then, sends the answers of these activities and the support system evaluates and diagnoses any learning difficulties. After that the System sends the student his evaluation. Through this the tutor is alerted so that he can help the student with his learning process as soon as possible; this way the student does not have to wait long for an answer to his queries.

Through this process, the System interacts in a way which does not leave the student feeling abandoned "at a distance", making it easier for everyone involved in the teaching/learning process to participate. During the course the activities are planned to provide the development of competences on an increasing level of complexity, as has already been explained. There is a time limit for delivering each activity and this is a target, so that the student organizes himself in his studies; it is from this point that automatic messages for alerts, warnings, communications and for motivation will be sent so that the student keeps exploring content, and redoes activities in the course, making his learning process easier.

With the help of this Virtual System of Performance Evaluation Management the student is permanently evaluated and reevaluated, making it possible for reflection about the teaching learning process to take place.

4. Conclusions

Based on this experience of interaction and assistance/support of students in the Pedagogical Mediation Course, it is possible to confirm that students got more involved in their learning, because they felt closer to the NEAD

pedagogical team. The System of Performance Assistance allowed the team to evaluate, assist and interact immediately with students, helping them with the construction of their knowledge. And the interaction system through mobile phones created for students a feeling of "being taken care" of - not being "abandoned at a distance ", but assisted on their way during the whole learning process throughout their course. Besides that, they felt treasured and socially included because they are using innovative technology in professional education, even if they do not have access to computers.

In some cases, students use the System of Performance Assistance while they are in the field through integration with the SMS System. The tutor's work is optimized in performance evaluation of the student wherever they are through a quick and direct interaction.

In Brazil there are more than 180 million mobile phones, and more than seven cellular phone operators. The use of mobile technology for educational purposes is one more valuable tool for teaching and learning.

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International collaboration for social justice through Immersive Worlds: the US-Mexico program *Letras para Volar*

Yolanda Gayol
Universidad de Guadalajara & Fielding Graduate University
yolandagayol@gmail.com

Patricia Rosas
Universidad de Guadalajara
rosas.paty@gmail.com

Alejandro Uribe
Universidad de Guadalajara
guanalex@hotmail.com

Abstract

Currently, the most sophisticated way of delivering distance education programs is through the use of immersive worlds, because both learners and facilitators must learn to interact socially and academically in non-tangible worlds through a de-centered and reconstituted identity. However, we believe that learning in virtual worlds should be connected to the real world, as it is the case presented here. The purpose of this study was to improve the reading habits of low-income Mexican children in Guadalajara, México, and in Los Angeles. The paper presents a competency-based course developed in Second Life and demonstrates the importance of this platform in launching an international effort between Fielding Graduate University in the United States and the University of Guadalajara in Mexico. The viability of establishing non-colonial relationships between communities of the United States and Mexico depended on the adoption of critical epistemologies using ubiquitous communication platforms in order to improve equity and social justice through participatory action research activities.

Introduction

Second Life, a sophisticated visual platform that emulates a three-dimensional world, is the culmination of over 35 years of development of real-time interaction platforms. The earlier versions were text-based Multi-User Dungeons or Domains (MUDs) (Bartle, 1999; Slator, 2007), and other later platforms include such as Multi-Object Oriented (MOOs), Multi-User Virtual Environments (MUVEs), and Massively-Multiplayer Online Role-Playing Games (MMORPGs) (Hiltz and Turoff, 1981). Since the mid 1970's, when presence was merely manifested as a green dash over a black screen, people have demonstrated a deep interest in non-tangible types of social interaction (Utz, 2000).

Today, Second Life has opened a new opportunity for teaching and learning in an engaging manner, particularly because of its unique 'sense of being there' perceived by users (Wiecha, Heyden Sternthal & Merialdi, 2010). The learning experiences developed in synthetic worlds are particularly appropriate for *digital*

natives (Prensky, 2001), since their cognitive architecture (Shahanan, 2006) may be different to those of *digital immigrants*, people who were born before the worldwide spread of computers occurring after 1995.

What is Second Life?

In 1992, fiction author Neal Stephenson wrote about an imaginary three-dimensional immersive world, or 'metaverse', in his novel *Snow Crash*. Although it seemed like science fiction at the time, a few years later the young entrepreneur Philip Rosedale created a company called Linden Labs that became the hosting company to create a virtual continent and a virtual economy through a three dimensional world. Only 11 years after Stephenson's novel, Second Life launched on June 23, 2003.

The success and pervasiveness of Second Life in education can be seen not only through the expansion of specialized literature but also through its official statistics of size, usage and transactions. Official data from Linden Labs (Linden Lab Wiki) show that during the second quarter of 2011:

- Average monthly repeated logins oscillated between 763,000 and 794,000 visits
- The size of the virtual land continued to grow and currently tops 2,060 square kilometers
- In-world' transactions in virtual Linden dollars among residents represented an actual $115 million US dollars during the measured period

While some authors define Second Life as a game (Addison & O'Hare, 2008), I contend that this Web 3.0 environment is more sophisticated than a game (Prensky, 2001). A game has plot, tight structure, heroes and villains, rewards and punishments and a set of goals, often designed using sum zero game theory. In contrast, Second Life works as an open system with few regulations and no particular plot. As every user creates his or her own in-world story, Second Life should be classified as a *user generated environment*. Varied organizations such as universities, libraries, museums, embassies, cultural centers and government agencies have adopted Second Life for teaching, learning, training and self-enrichment.

 Foundations, Development and Delivery of the Course

At the theoretical level, the course developed in Second Life and here presented was structured by considering the actor-network theory (ANT) that explains how "the more actors mobilize, the stronger and more movable the networks" (Boud et al., 2006 p. 492). Second Life has proven to be a privileged space for interactive networking.

At the academic level, this course was structured under the epistemological framework of critical pedagogy (Freire, 1971; Illich, 1973), an approach that raises consciousness of power relations embedded in spaces, discourses, images and everyday practices occurring in schools and social settings. Critical

pedagogy flattens the relations with authority by opening opportunities for dialogue and including the students' voices in the construction of meaning.

The course "Critical Pedagogy in Second Life: Recreating Social Movements in Immersive Environments" was first developed and delivered in 2008 through a Fielding Graduate University grant. At the time, the course used a Second Life-rented virtual space. In 2009, after building our own campus (FGU located in Second Life at the coordinates: 122, 27, 24), the course was delivered through a collaborative agreement with the Open University UK (OU UK). This agreement enabled us to integrate the synchronous platform of Second Life with the asynchronous open source and Moodle-based platform LabSpace (labspace.open.ac.uk/). This combination provided a rich set of learning experiences in asynchronous mode and expanded the sole option of real-time interaction provided by Second Life. With LabSpace, the students could now use learning blogs, concept mapping and discussion forums.

The instructional design used a competency-based structure organized on a tripod model that includes:

- An *overview* addressing Delors' 'learning to know', (Delors, 1999)
- A *project design* focusing on the planning and organizational competencies needed in social intervention, called 'know how' (OCDE 1999)
- An *applied moment* focusing on the 'social intervention' itself in an action-research framework that promotes equity, social justice and transcultural understanding. This course goal educates 'scholar-practitioners' through a spiral of reflection, action and reflected action. This moment is equivalent to Delors' 'learning to do'.

The *overview* portion of the course embeds a Module Zero that includes social presence and training for immersion. Raising the learner's comfort level in basic navigation and increasing their self-assurance by customizing their avatar's appearance is essential before addressing cognitive presence. Students are warned that while Second Life is built upon Caucasian values of beauty, they can choose exactly how they want to present themselves. In addition to the technical training and shaping of the avatar, Module Zero includes time for the development of a sense of belonging. After Module Zero, students discuss how international social movements were organized in the pre-digital world and how they are being organized in the post-human society (Fukuyama, 2002).

After seven weeks of synchronous meetings in Second Life and work in Moodle, the *project design* begins by having students work individually or in small teams. They look for a community that they could serve by applying projects of 'generative change,' that is, using a top-down rather than bottom-up approach.

In relation to the *applied moment*, they report the results of their intervention, which includes an evaluation of their work by the community they served. This report is done in a public multimedia presentation. Students are required to upload in Second Life visual products that can be as simple as a Power Point and YouTube, or as complex as Machinima, the Second Life cinema.

Since students choose both their own areas of interest and the community, the projects have spanned a surprising variety of activities for social change. The only requirement of the *applied* section is that the students demonstrate how their work in the non-tangible worlds provides a tangible interaction in their communities. Some past projects include:

- The mobilization of a marginalized neighborhood to petition the government for improved water quality in their community
- The implementation of community service activities led by former gang members in Los Angeles
- A role-playing exercise stressing the importance of freedom of the press by negotiating the liberation of avatars in imaginary totalitarian societies
- A discussion broaching the social restrictions of gay females in the highly religious and bonded Jewish society with military, religious and residential communities

Despite such a rich set of experiences, I want to focus on the work of a Mexican student and co-author of this work, Patricia Rosas, who participated in Second Life as a visiting research scholar. In Dr. Rosas' final presentation, she brought compelling evidence of the importance of raising reading competencies of Mexican school children in Guadalajara and invited our community of learners to support this endeavor. This presentation differed from the rest because instead of submitting a finished program, she opened a challenge for students and faculty working at Fielding.

Dr. Rosas demonstrated that reading is the cornerstone of schooling, self-directed learning and the learning process. Reading is also the primary foundation of the multiple literacies required in the Knowledge Society. However, in Mexico, reading is not perceived as a priority or even as an engaging activity. In 2010, the Minister of Education Alonso Lujambio reported that seven out of 10 children have gained neither reading comprehension nor fluency. This means that 70 percent of children read significantly below the established standard of 35 to 160 words per minute set by the Ministry of Education. Lujambio also acknowledged that the general Mexican population is reading very little compared to developed countries. On average, Mexicans read 2.9 books per year while Spaniards read 7.7 books and Germans read 12 books per year (Alejo, 2010).

Accepting the challenge, Fielding Graduate University signed a collaborative agreement with the University of Guadalajara. During the following year, I led a group of 10 members of Fielding in creating an appropriate reading model to engage children aged eight to 10 in reading activities. We organized a training program, selected a reading list, modeled appropriate reading practices, and strategized the sustainability of the program *Letras para Volar*. In addition to helping the Fielding team in the design of the program, the University of Guadalajara team led by Patricia Rosas developed a Web portal, obtained a collection of books from the National Council of Culture, organized collaborative agreements with authorities of public schools and municipalities and obtained funds to host the visitors for ten days.

The Second Life program for social change connected American and Mexican faculty and students for the purpose of serving local communities through non-formal reading strategies. It seeks to develop the children's potential through the consolidation of critical thinking and the improvement of their communicative abilities. It intentionally avoids testing and measuring reading gains, but tracks enthusiasm, engagement, collaboration and self-expression using artistic and ludic activities. While many reading programs use fiction or textbooks to encourage reading, *Letras para Volar* focuses on socio-cultural, historical and scientific non-fiction books that are enjoyable as well as instructive.

The visual aspect of the books is carefully selected to present people and scenes similar to the ethnic identities and geographic setting of the readers in order to avoid colonizing messages. Consequently, reading activities become a way to connect the children with their own communities. Unlike the public school system, *Letras para Volar* favors the affective domain over the cognitive domain and psychomotor skills over passive listening; it encourages expressiveness and joyfulness over silence and solemnity.

In order to foster a love for reading, we center the program around four pillars:

- **Reading about ancient traditions and colorful art**. This goal seeks to connect the cultural past of extraordinary early Mexican civilizations to the children's identity.

- **Reading for social consciousness and solidarity**. This goal aims to reduce the polarity of the self and the other, a feature typical of identity development in westernized cultures, and increase the concern for the well-being of the entire society beyond particular interests and individual status.

- **Reading to enjoy science and math.** Ancient Mexicans were extraordinary mathematicians, astronomers and physicians, though they are usually excluded from historical records. Textbooks often present a Euro-centric progression of science, in which the Renaissance and the Industrial Revolution are the triggers of contemporary innovation. *Letras para Volar* integrates Mexican contributions to enable a better understanding of the evolution of scientific knowledge as a transcultural process.

- **Reading for ecological protection and environmental sustainability.** In *Letras para Volar*, we attempt to instill the desire to preserve our home planet for ourselves and for future generations.

To sustain the pursuit of these four goals by the bi-national team were developed into a training manual, conceptual papers and interactive reading strategies.

The Role of the University of Guadalajara

In order to offer historical context and cultural immersion to the Fielding visitors, *Letras para Volar* was launched around the time of three significant events: the 200th anniversary of Mexican Independence, the 100th anniversary of the

Mexican Revolution and the inaugural event of the 24th annual International Book Fair. Visitors also saw important landmarks and activities of the past and the present to better envision an auspicious future for Mexican children.

In the third week of November 2010, Fielding visitors presented the reading model and strategies to Mexican faculty and students at an international colloquium that described the reading model and strategies with books and digital activities to 40 reading facilitators. The activities with physical books included reading through storytelling, writing, drawing, dramatization, "periodiquito" (small newspaper), and a 'learning wheel'. The selected books included specific criteria: they were mostly informational (non-fictional and non-textbook), engaging, age-appropriate, decolonizing and culturally situated.

The digital activities were held in a "cueva magica" (magic cave). Students at the Masters of Learning Technologies program converted legends from oral traditions into interactive multimedia stories for the children and the digital stories were placed in the *Letras para Volar* Web portal (available at: letrasparavolar.org).

Interactive activities with children occurred in two city plazas, Guadalajara and Zapopan, and two public schools, Benito Juárez and República de Panamá. A total of 760 children participated in reading activities and interacted with facilitators through an IRB-approved protocol.

The efficacy of the program was evaluated through a forum with the reading facilitators and the faculty. The results showed very positive evaluations from both the children and the reading facilitators. Among the statements made are the following:

"The wonderful fact is that you did not come to teach anything but to have a dialogue with us and this enabled us to take this tool. . . we need to take out of our heads the idea of teaching; the children know, we just need to give them their tools for them to give us their voice".

In brief, the comprehensive outcome from the first twelve months of the project includes the 760 children enthusiastically engaging in reading practices, a formally signed bi-national agreement between the University of Guadalajara and Fielding Graduate University, a new reading model and training manual, a Web Portal, a book collection, and sustained bi-national collaboration.

Sustainability and Expansion

To provide continuity to the program, a training session was held in February 2011 for 12 school principals, three teachers, 32 college students and three female volunteers. Additionally, 12 public schools in marginalized areas participated during the spring semester. The Mexican team headed by Dr. Rosas has led a total of 3,477 children to participate in weekly activities held by reading facilitators.

Letras para Volar has been further enriched by Mexican faculty using new reading strategies that utilize the characters of Cri-Cri, an iconic Mexican singer and composer who narrated stories for children through the radio in the second half of the 20th century. These new strategies were taken to Los Angeles in the framework of the book fair LEA-LA. The Cri-Cri room hosted 2,276 children in two days of activities. LEA-LA also served as a reunion for several students and faculty who participated in the pilot stage held in Guadalajara.

The activities held in LEA-LA went beyond participating in engaging reading practices: they evolved into an encounter between the root culture and the second generation of Latino immigrants, and became a source of pride and recognition for all participants.

Letras para Volar demonstrates that immersive worlds trigger a "contagious enthusiasm" by combining the ubiquitous strength of the immersive worlds with the sensed needs of people in the real world.

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The role of University of South Africa in contributing to open distance and e-learning to social justice in South Africa

Baloyi Gezani
University of South Africa
baloygp@unisa.ac.za

Abstract

Social justice in higher education would imply equal opportunity to access, participate and benefit from higher education which simply means removal of barriers thus inclusion of all those who have traditionally been excluded either by history, perceptions or structures. Because of its flexibility of programmes and forms of delivery, open and distance learning (ODL) has been acknowledged to have greater potential for reducing these barriers. However, to date, especially in developing societies, there are still a great number of people who are missing out on higher education. In this paper, the researcher shares with the participants the role of University of South Africa (UNISA) in contributing to ODL and e-learning in South Africa and beyond. A large amount of the country's budget is spent in education. According to the constitution of South Africa, education is the basic right for everyone. The Ministry of Education in South Africa has identified ODL as a system that should expand the educational opportunities and provide access to individuals who would not have had the opportunity to study full time.

The concept of Open and Distance Learning (ODL) is very broad and it can be variously defined, hence it is important to point out that there is no one absolute definition of it. However, Freeman (2004:6) defines ODL as an amalgamation of two approaches which focus on expanding access to learning. Moon, Leach and Stevens (2005:218) define ODL as the open learning approaches, when combined with distance education methodologies is often referred to collectively as open and distance learning. Commonwealth of learning (2000) defines it as, "correspondence, home study, independent learning … flexible learning or distributed learning." Unesco (2002:7) says in the ODL philosophy and practice, the terms represent approaches that focus on opening access to education, and training provision, freeing learners from constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners. However, there are common elements which almost all authors agree on in their definition, that is, combination of Distance Education (DE) and Open Learning, access, separation between the lecturer and the learner, etc.

The introduction of open distance learning (ODL) has been generally understood as a response to the new challenges of increased and diverse demands on supportive learning made on the educational sector (Dhanarajan, 2001; Ipaye, 2007; Boulard, 2005; Guri-Rosenblit, 2005, University of Botswana, 2006) and as one of the strategies through which Higher Education Institutions can manage to substantially open access to Higher Education. More Higher Education Institutions therefore expand their delivery modes to include

ODL to address the problem of access. Even though participation rates have increased, recent studies observe that many qualified potential students who would like to pursue their studies are generally still unable to access Higher Education Institutions (Dodds, Gaskell & Mills, 2008). It would appear that generally ODL is making a more significant contribution towards access to Higher Education in developed countries (Davies & Pigott, 2004). Access to Higher Education Institutions appears still to be very limited in developing countries (UNESCO, 2005).

Badat (2005 : 186-187) and UNISA (2008;3) discuss widening participation as the activities that are aimed at bringing in and supporting groups of people who are identified as underprivileged for higher education. In doing so, it takes into account the diverse needs of people in different sectors of the economy, as well as different racial, gender and age cohorts who participate in higher education.

Generally, the goal of ODL in South Africa and the rest of the world is to widen participation and to overcome geographical, social and economic barriers (Kelly and Mills, 2007:149). The Ministry of Education in South African has identified ODL as a system that should expand the educational opportunities and provide access to individuals who would not have had the opportunity to study full time. In support to widening participation for those people who did not have opportunities to participate in education, White paper 3, the National Plan for Higher Education (DoE, 2001a) advocates an increase in the general participation rate in public higher education in South Africa, with the aim of facilitating lifelong learning, developing the skills base of the country, and redressing historical inequities in the provision of education. To support the above, policies and reports were promulgated to make it a reality (DoE, 1996, CHE, 2002/2004, NCHE Report 1996). Badat (2004) adds access is even presented to people who either because of work commitments, personal, social circumstances, geographical distance, or poor quality or inadequate prior learning experiences would not have the opportunities to study full time. The South African government is widening the participation rate in higher education even in remote rural areas.

Educator and learner are at a distance from each other; hence learner's experience isolation due to separation from their institution, lecturers and fellow students (Rumble 2000:1). The new technologies in education reduce the transactional distance. ODL has been successful in increasing numbers of students but unsuccessful in throughput rates. Part of the reason is that students are isolated from their teachers. Dzakiria (2005:105) explains that in order to support the learners in an ODL environment, distance teachers must also have skills and experience to facilitate the learning process through designing and building support that will encourage learning.

The University of South Africa (UNISA) has been identified by the Ministry of Education as an ODL institution that will help in widening participation. UNISA was founded in 1873 as a university college which offered courses to learners via correspondence. According to Seletse (2002:88-90), subsequently the university migrated through the various developmental stages of distance education until in 2004 when it was constituted as a comprehensive ODL

university after amalgamation with two similar educational institutions, namely, Technikon South Africa and Vista university. The new born effectively became the dedicated, comprehensive and Mega University. Ngegebule (2003:1) adds that in 2004 UNISA had over 200 000 students. According to Key Provisional Information (2004-2008), UNISA had 286 372 students. The number of students keeps on increasing every year from 2004. UNISA has accepted its research mandate of developing knowledge, skills, attitudes and values necessary for the development of the country. UNISA has been mandated to register a diverse student body from both rural and urban area.

According to Baijnath (2011:9), the University of South Africa, for instance, with a current student intake of approximately 300 000, is obviously concerned about social justice because it is difficult to justify an intake of such large numbers without also, if not guaranteeing, then at least making good on the promise of providing access with a reasonable probability for success. Undoubtedly technology has been and will continue to be utilised but in doing so the University cannot ignore that many of its students do not own a computer and may have difficulty in gaining access to the internet.

Another issue is that changing demographics are opening up opportunities to people who were previously disallowed entry to higher education on the grounds of their economic, class, racial, religious or gender status. Contact and Open Distance Learning institutions alike are increasingly opening their doors to more and more students, many of whom, in South Africa particularly, are not adequately prepared for tertiary education. A further challenge is the way in which recent technologies are providing an alternative source of knowledge transfer (Baijnath 2011:6).

Investigation into the use of mobile phones as a learning space is therefore becoming an increasingly more important consideration for institutions such as Unisa for communities that face inequalities in the access to technology. Most students who register with Unisa are more likely to own cell phones than computers.

According to Muganda (2008), social justice in higher education would connote equal opportunity to access, participate and benefit from higher education which simply means removal of barriers, thus inclusion of all those who have traditionally been excluded either by history, perceptions or structures. The researcher will give examples of Adult Basic Education and Training students (ABET) where he is a lecturer.

Context of ABET students

The Department of ABET at Unisa offers programmes that enable practitioners to present and manage ABET programmes as well as to use, design and evaluate materials and assessment of learners. Another characteristic worth mentioning is that this department is equipped to analyse the learning needs and social contexts of the adult learner. Our intention is to train practitioners who might find themselves in one of a diversity of situations where they will be required to train adults who require a basic education. Some of our many

graduate students work in sectors such as the departments of Water Affairs and Environment, Health, Education, Transport, Labour, the trade unions and many of the NGOs both in South Africa as well as in our neighbouring countries.

About e-learning at Unisa

The introduction of e-learning in public institutions globally is crucial and it is reducing the distance in ODL. The education is undergoing major changes globally through the world.

At the University of South Africa ICT, is used in everyday lives in pedagogical situations. It is used for registration, library, access, scheduling, communication, messages, security, warning emergency, risk management, evaluation forms etc. In pedagogy we use e-learning for typing, technology, email, video conferencing, etc.

In order for students to participate in e-learning, they require access to the resources which will enable both the lecturer and student to engage effectively in dialogue. According to Mbatha and Naido (2010:65), ICTs are not only seen as impetus of change in traditional concepts of teaching and learning, but also as prime motivations behind the higher education change as the interplay of technological developments and socio-economic change, shape the processes of teaching and learning. The ICT has been recognized for the valuable role they play in developing and improving distance education methods.

Full participation in the information society is enabled by successful e-education, which, according to the DoE (2003), incorporates learner-centred pedagogy, inquiry-based learning, collaborative work and the development of higher level thinking skills. For these reasons and to achieve other policy goals reflected in the White Paper, the adoption of ICTs in schools generally (for administration and management systems) and the integration of ICTs into teaching and learning practices specifically is being encouraged.

About myUNISA

The myUnisa is a learning management system which is interactive. The need for a more flexible system came with the development of ICT. In 2008 the University introduced an ODL Policy, which changed the focus of tuition to include technology and multimedia interaction. Technologies such as telephone, multimedia CDs and DVDs, video and audio conferencing, SMSs, cell phones, e-mail and discussion forums via myUnisa have been proposed to offer new possibilities for supporting learning in distance education.

Sometimes the inability of the students to use myUnisa is an area which needs to be explored at the University of South Africa. Despite this challenge, the university has made tremendous progress in capacitating the students and the lecturers. According to Ferreira (2009), South Africa has 4.59 million internet users. There are 1 550 000 visitors to Unisa Corporate website. There are 200 000 students registered online and 196 369 students are using myUnisa to

access teaching and learning activities. The ABET students are included in these figures.

As indicated above, the University of South Africa has adopted a number of technologies to facilitate; the available technologies are not adopted uniformly throughout the various colleges and academic departments including ABET. Cant and Bothma (2010: 56) argue that, even though UNISA may officially endorse a particular learning technology, it is ultimately the lecturers within a department who determine the extent and effectiveness of the technology's use, and their respective views on these various technologies may differ. According to Cant and Bothma (2010:56), there may be some lecturers who are technologically challenged and who either shy away from or limit their use of technology solutions in their teaching activities. Other lecturers, however, might be more comfortable with certain technologies than with others, and this could result in the desperate use of technology to support learning. In addition, some of the more techno-literate lecturers may adopt one or more technologies not directly supported by the institution, such as various social media, skype, mixit, web based solutions outside of the control university, as well as other ICT solutions they may have developed themselves. Despite this, the e-learning seems to be the way to go at the university.

In rural areas the unavailability of computers, the internet and electricity are indeed major constraints. This seems to be the global problem even in the developed countries.

Conclusions

According to Sengedo (2010), Higher Education in Africa is going through revolutionary times and trying times. The number of students in universities is increasing without a corresponding increase in facilities – both human and physical.

In this context our current learning technologies provide considerable opportunities including collaborative engagement, access to various platforms of information, interaction with content and opportunities for individual empowerment. Teaching in such an environment requires that teachers/academics become comfortable with moving from traditional face-to-face classroom activities into an online classroom in which they can comfortably utilise technology to ensure quality teaching and learning experiences.

Granting that technology has potential to take education to the millions at greater speed, the questions related to availability, access and use of relevant technology in distance education need to be considered carefully, before institutions commit themselves to policies of technology and multimedia (Ramanujam 2002:11).

The literature is full with the information that there is a need to study the impact of pedagogy to learning. Most researchers argue plagiarism is on the rise since the introduction of e-learning in higher education. However, this area needs to be further researched and clarified fully in a broader perspective.

The e-learning also offers opportunities, according to Ramanujam (2002:11), the increasing use of technology in distance education has a lot of promise and also poses some serious challenges in developing and delivering the educational programmes. While technology provides opportunities for the learners of the advanced countries to choose their ways to learn, in the developing countries it proposes to increase the educational access to the masses.

There are opportunities for innovative teaching approaches. Social networking connects students across demographic spheres and it is not fully utilized for learning purposes by both the students and the lecturers. The students have access to internet in the class.

The challenges of accessibility of technology to ABET students who are scattered in the rural areas will be a thing of the past as the university is taking mobile buses with technology to rural areas. The university is living up to its vision and mission of an African university in service for humanity. The internet cafes are mushrooming in most rural villages. The University of South Africa is addressing the issue of redress and equity in open and distance e-learning in rural areas.

The large amount of most country's budget is spent on education. Recently, the South African government set aside R150 million to finance students allocating special funds to students who qualified for financial assistance in their final year of undergraduate study. This is applauded and the country is really showing commitment to social justice in higher education

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A framework to evaluate student learning capability in distance education

Shuting Guo
Northumbria University, UK
Shuting.Guo@northumbria.ac.uk

Abstract

This paper presents a framework to evaluate students' learning capabilities in distance education. The newly developed framework could potentially be adopted internationally as a key tool to firstly evaluate the students' learning capabilities and help inform instructors in aspects where students could improve. The development of this framework has been established through an extensive literature review and cross disciplinary research in the topic area. The outline of this framework consists of four main components in distance learning within which the three key stages of the learning process are incorporated. In addition, the influence of the three stages of distance education delivery are analysed into six categories of learning activities. These learning activities can be cross examined and evaluated against the five key scales of distance learning based on learning theories and educational psychology. The framework defined suggests that distance learners' learning capability should be investigated based on their experience of each scale within every group of learning activities and consideration for the characteristics of individual learners.

Keywords: learning capability; distance education; internationalisation.

Introduction

While the internationalisation of distance education (DE) becomes an important issue in the academic field, to what extent are students able to have their own learning needs considered in a multi-cultural background? On one hand, distance learners are expected to have the ability to learn autonomously (Murphy, 2007). However, on the other hand, it cannot be assumed that all distance learners have such skills (Dzakiria, 2004). Institutions need to be aware of students' current learning ability, which is significant in terms of promoting an effective learning environment. Because of the separation of teacher and learner, the learners and their learning activities are invisible to distance education. Therefore the knowledge of students' current learning capability requires relevant research. This needs to be considered based on the nature of DE, i.e., the distance.

All distance learning programme are delivered through design, delivery, and evaluation; distance learning activities are shaped by the way DE is delivered. Also, students' learning ability is affected by factors common to all learners, which have been widely researched in learning theories and educational psychology. Research on students' learning capability needs to be conducted based on the basic characteristics of DE and theories of learning to deal with

the invisibility and student diversity through the internationalisation of DE. A review of relevant literature is conducted and helps to inform the development of a framework of distance learning experience for this purpose.

Analysis of how DE delivery shapes distance learning activities

The nature of DE in a global context

Distance learning is defined as "the process whereby the student learns while separated from the tutor" (Davis, 1996, P.20) and 'learning while at a distance from one's teacher-usually with the help of pre-recorded, packaged, learning materials' (Rowntree, 1992, p.29). The 'distance' between teaching and learning produce the 'distance' between activities of teachers and learners (Moore, 1972) which is critical to developing an understanding of the characteristics of DE. Learner, teacher and method of communication have been discussed as three subsystems of DE by academics (Keegan, 1996; Wedemeyer, 1973).

Four components of DE and three stages of DE delivery

An activity within DE is 'a planned activity which comprises the choice, didactic preparation and presentation of teaching materials as well as the supervision and support of student learning and which is achieved by bridging the physical distance between student and teacher by means of at least one appropriate technical medium' (Delling 1966, p. 186). In addition, Moore and Kearsley (2005) presented a systems view of DE: 'a DE system consists of all the component processes that operate when teaching and learning at a distance occurs. It includes learning, teaching, communication, design, and management (p.9)'.

To analyse this concept, firstly, DE is a knowledge transfer system based on the nature of the separation of teaching and learning and knowledge is transferred by a variety of methods. The process of DE delivery is understood here as: a prepared package of learning content is delivered through a designed system designed to achieve educational goals. Learning content is then delivered and a support system contributes to help students with learning. In addition, evaluation methods are used to measure learning outcomes. To summarise, DE basically includes four components in a transferable system (See Figure1):

- Design and delivery of DE by institutions for the purpose of teaching
- Learners as the actor of learning
- Learning activities in a distance learning environment which are shaped by DE delivery
- Learning outcomes.
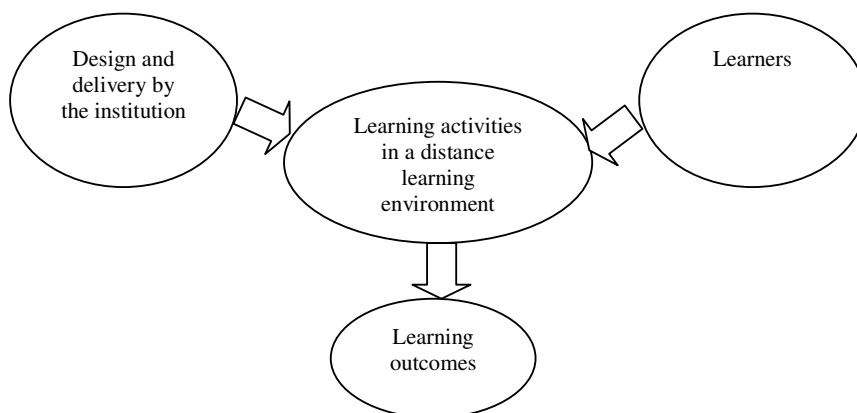
Figure 1. Four components in a distance learning environment

The left hand of the transformation process shows that DE is delivered at three stages (figure2): Stage one: design and preparing learning content and the DE system. Stage two: delivery and support of learning. Stage three: evaluation of learning outcomes.
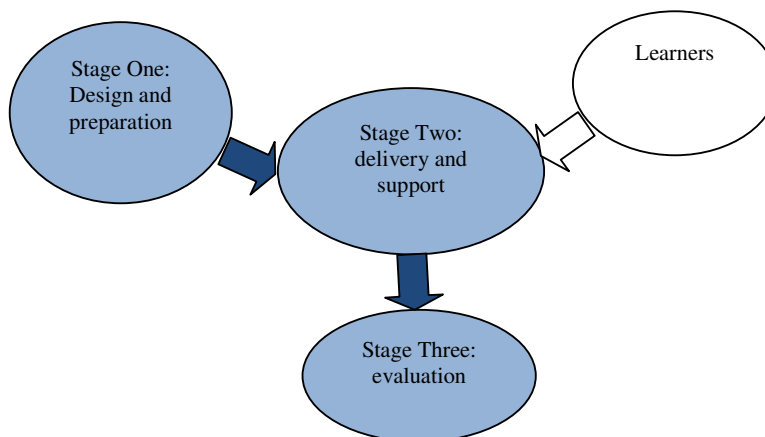
Figure 2. Left hand of transformation: DE delivery

Analysis of six groups of learning activities shaped by the DE delivery

From the right hand transformation, learners carried out learning activities based on the design of DE (first stage of DE delivery), use of technology in delivery and learning support (second stage of DE delivery) and the methods of evaluation (third stage of DE delivery). The right hand of the transformation (learning process) is shown in Figure3.
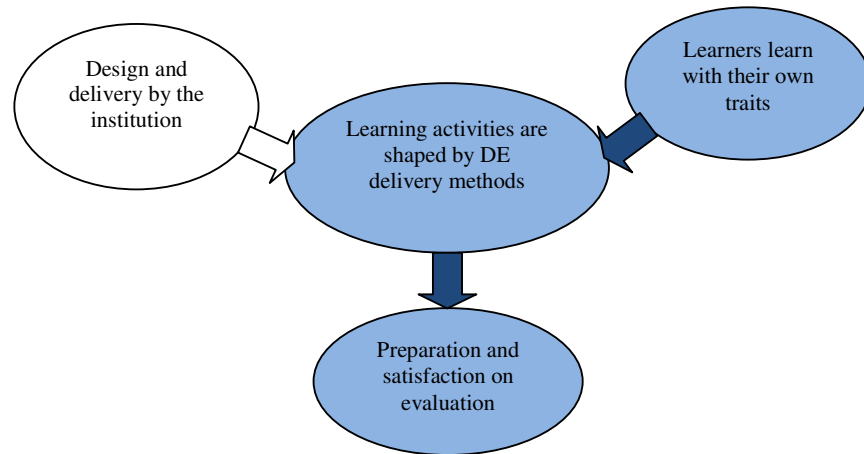
Figure 3. Right hand of distance learning transformation: the learning process

Learning activities are shaped by the three stages of DE delivery. In the first stage of DE delivery, learning material is designed with reference to the design of the curriculum, students need to complete the tasks of reading and to understand relevant learning content. At the second stage, learning support and material delivery are facilitated by using technologies. Students need to seek appropriate learning support and use technologies provided for learning effectiveness. Finally, students are required to evaluate their own work and psychologically evaluate themselves based on learning outcomes.

The learning activities are further subdivided into six smaller groups from the three stages of DE delivery as shown in Figure 4.
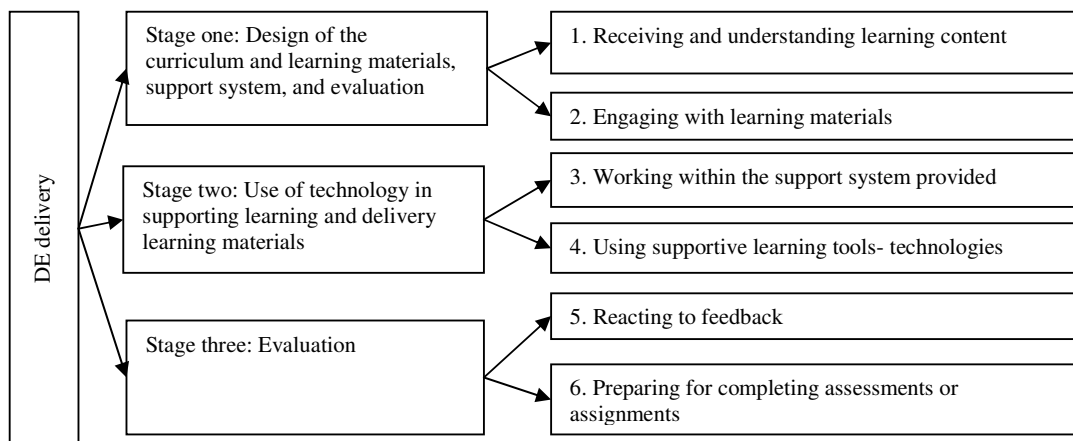
Figure 4. Six groups of distance learning activities

Analysis of five scales of distance learning experience

Learning in DE has particular features and some specific issues, for instance, feelings of isolation and lack of motivation caused by the separation of teaching and learning. In their learning experience, distance learners are alone; they have a high degree of responsibility for controlling their learning (Keegan, 1996; Garrison, 1997). How students learn on their own needs to be understood to evaluate their capability for learning. Meyer (1997) suggests that it is important to understand ''What students know about their own learning, what they think 'learning' is, and how they engage in 'learning' as a consequence' (p.491). Talbot (2003, p.18) identified that 'Learning is essentially the acquisition of new skills, knowledge and attitudes, and the recognition of how they relate to the skills, knowledge and attitudes you already posses'.Learners learn by: doing; assessment; reading feedback; learner autonomy; and reflection. To analyse how students learn in distance education environment, five scales of learning experience are defined as following.

1. Self-awareness of DE

Firstly, distance students' existing perspective on learning is formed based on their previous learning experience in school and/or universities. They need to develop an awareness that the nature of DE they are about to face is a new learning environment which will challenge their existing perspective on learning. Therefore, the awareness that students have regarding the nature of DE needs to be investigated.

2. Learning ability and learning skills in DE

Secondly, 'one of the most important skills to acquire is how to learn' (Payne and Whittaker, 2006, p.8). To achieve successful distance learning, having relevant learning skills is important (Simpson, 2002). In considering the separation of the learning act and teaching act, learners' ability to learn is essential for engaging in autonomous learning.

3. Motivation

Thirdly, referring to Slavin (2000, p.255), 'one of the most important principles of educational psychology is that teachers cannot give students knowledge. Students must construct knowledge in their own minds.' In distance learning, motivation is an important psychological factor in students' success (Simpson, 2008). Distance learners have to maintain their motivation to complete a programme successfully.

4. Use of learning strategy

Fourthly, appropriate use of a metacognitive learning strategy can contribute to the development of autonomy in distance learners and distance learners need a metacognitive learning strategy more than conventional learners (Filcher and Miller, 2000; Anderson, 2007; Zahedi and Dorrimanesh, 2008). Knowing how to implement the appropriate strategies is required for effective learning (Jones et al 1985) and it can contribute to remaining productive in a lifelong learning

environment (Weiburg and Ullmer, 1995). It is vitally important to have an understanding of how students use strategies in their learning experience in distance learning.

5. Self-evaluation

Students' self assessment can impact a students' learning experience in terms of 'overcoming isolation, promoting active learning, controlling learning behaviours, providing diagnosis and remediation, and focusing responsibility for learning on the students' (Gale, 1984; as cited in Taylor, 1998, p.319). Self evaluation therefore impacts strongly on students' further learning activities and their motivations. How students' experience reflects on self evaluation needs to be tested.

Summary

In summary, learners' perspectives on distance learning are formed based on their awareness of the nature of DE. Their capabilities for learning, use of strategies, and level of motivation will have a significant impact on their final achievement. In addition, their self-evaluation influences their level of satisfaction and this will affect their further engagement. Five scales of distance learning are classified in this paper and these need to be investigated in order to understand students' learning capability. These five scales are listed below:

1) Self-awareness about distance learning
2) Evaluation of self-capability
3) Maintaining motivation
4) Use of a learning strategy
5) Self-evaluation

Analysis of relevant factors impacting on learning experience

Research of students' learning capability requires the understanding of how relevant factors impact on learning experience and the relationship between these elements. These factors are discussed by a number of researchers who believe that to understand the characteristics of individuals can facilitate better performance of DE (Marland, 1997; Rowntree, 1992). The following learners' characteristics discussed in previous research are included in this paper:

- Personal traits: age, gender (Rowntree, 1992; Jegede et al, 1999; Tait et al, 2008); cultural background; educational background (Deimann and Bastiaen, 2010).

- Learning factors: learning ability, conception of learning (Rowntree, 1992); assessment preferences (Methrotra et al, 2001);

- Employment and unemployment, disposable income, geographical situation, special needs, e.g. disability, language, ethnic and cultural characteristics; and communications technology connectedness (Tait, 2000);

- Context variables such as subject area and type of learning environment (Vermunt,1992; as cited in Vermunt and Vermetten, 2004);

- Psychological factors, such as, motivation(Rowntree, 1992), locus of control (Jegede et al., 1999; Gaskell, 2009), satisfaction and learning goals (Clarence, 2008; Northedge, 2003);

- Social influence: their local society and environment including family, friends and colleagues (Rekkedal, 2009).

In short, learning is affected by the learners' social life, their own psychological dynamics, learning experience and their personal traits. Figure 5 is a summary based on the literature reviewed above. The characteristics of distance learners are categorised into four groups and further subdivided into smaller categories.
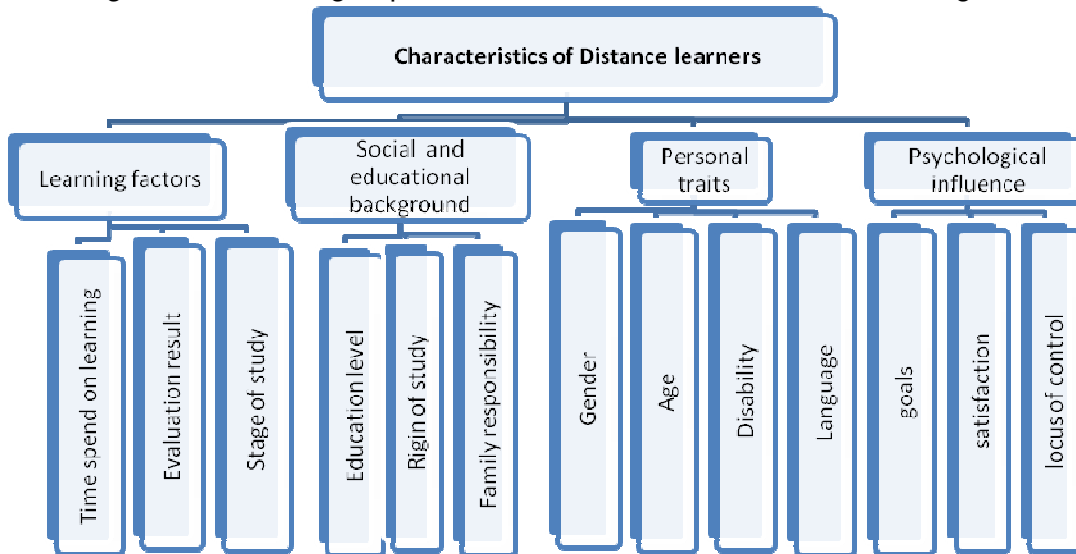
Figure 5. The characteristics of distance learners

Conclusion: a framework for the research of distance learning capability

In conclusion, existing literature in distance education, theories of learning and educational psychology have been reviewed which allow students' learning capability to be assessed from their experience. The framework for assessment is shown in Table 1.

Six groups of learning activities are located on the left column and the five components of learning processes are located on the top. Each blank cell in the middle indicates an area which can be cross-referenced between the learning activities on the left and with the learning process directly above the cell. For instance, students' 'level of motivation' and 'reacting to feedback' can be cross-referenced. In addition, the influence of relevant factors can be analysed in relation to the learning activities. Furthermore, individuals' background information needs to considered such as age, gender, disability, origin of students, language status, family responsibility, stage of study, time spend in learning and their marks.

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This paper recommends that institutions need to improve their pedagogical design based on the research of students' learning capability internationally which would significantly improve the design and delivery of DE.

Table1: A framework to evaluate students' self-contribution in DE

5 Scales measurement / Learning activities	Self-awareness	Self evaluation of difficulties	Level of motivation	Use of learning strategy	Self evaluation	Relevant factors: setting goals, locus of control, perspectives of learning
Receiving and understanding learning content						
Engaging with learning materials						
Working within provided support system						
Using supportive learning tools-technologies						
Reacting to feedback						
Preparing for completing assessments or assignment						
Individual background information	Age, gender, disability, origin of student, language status, family responsibility, stage of study, time spend in learning, marks					

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ICT realities in developing contexts and their impact on social justice

Johan Hendrikz
University of Pretoria, South Africa
johan.hendrikz@up.ac.za

Ruth Aluko
University of Pretoria, South Africa
ruth.aluko@up.ac.za

Abstract

There are many different definitions of *social justice* and themes such as *equality*, *fairness* and *human rights* resonate in its interpretation. Open and distance learning (ODL), in its parlance, is unarguably connected to the issue of social justice as it opens up educational opportunities to once-denied groups. The popular belief throughout the world is that the use of information and communication technology (ICT) in education is an almost unqualified positive development. Many examples are cited to 'prove' its positive impact, and the injustice done to students if not fully explored. There is, however, another view of this matter. The introduction of ICT-dependent education programmes in societies where (for reasons such as inadequate bandwidth, cost of internet access and hardware, and lack of electricity) it is not possible to optimise the possibilities of ICT in education, makes it necessary to ask the question whether the use of ICT is an inhibitor of or a stimulator to development. Thus, the argument could be that the inappropriate introduction and use of ICT in developing contexts is not adhering to the principles of social justice. Much money has been wasted by 'do-gooders' from first-world countries on ICT projects, especially in Africa, that have dismally failed. This paper will explore the concept of social justice in the introduction of ICT in education in developing contexts.

Keywords: social justice, equality, fairness, human rights, ICT, educational opportunities, ODL and e-learning.

Introduction

Distance education, all over the world, has been seen as a tool to open up access to education. This education mode closes the educational gap between the elite and the populace, who would probably have had no access to educational opportunities. This mode of delivery, by its very nature, uses the language of social justice. In an attempt to describe the nature of distance education, Nuan (1993:193) analyses key values (social and political) held by those who identify themselves as distance educators. One of these is that:

> "Education by distance mode serves a political end…; its very existence is directed towards increasing access to education. Distance education is

unavoidably connected to the issues of social justice, involving equity for groups and personal liberation for individuals."

Although there are diverse definitions of social justice, themes such as *equality*, *fairness* and *human rights* resonate in its interpretation. Open and distance learning (ODL), in its parlance, is unarguably connected to the issues of social justice as it opens up educational opportunities to once-denied groups, thus creating, to some extent, the atmosphere for the terms connected to the concept of *social justice* to thrive. There are historical examples to illustrate the thesis that technology may have something to contribute to social justice. These range from the technology used in printing to those used in public health, synthetic materials and household appliances (Dyson, 1997). Not only has technology improved man's life, but it has taken it over. This has been extended to the application of technology to education. From the start, media played a different role in distance education than it did when studying at a traditional university and this mode of delivery cannot completely exist without them (Peters, 2003). This has led to the concept of *generations* in distance education. However, Dyson (1997), citing Edward Tenner in his book *Why things bite back*, laments that a step forward in technology tends to bring with it an unexpected step backward (ibid). Such is the paradox of the introduction of technology in distance education. With the introduction of ICT-dependent education programmes in societies where (for reasons such as inadequate bandwidth, cost of internet access and hardware, and lack of electricity) it is not possible to optimise the possibilities of ICT in education, it is necessary to ask the question whether the use of ICT is an inhibitor of or a stimulator to development. Thus, the argument of the authors in this paper is that the inappropriate introduction and use of ICT in developing contexts is not adhering to the principles of social justice.

Distance education, ICT and social justice

Distance education has come a long way since the days in which the only medium used was the print medium. It now includes the use of radio, television, computers and mobile technology. E-learning has been defined as the delivery of a learning, training or education programme by electronic means. It involves the use of a computer or electronic device in some way to provide training, educational or learning material (Stockley, 2003). Although technology has helped to push the frontiers of distance education, a matter of concern is the issue of social justice. Ironically, a well-educated citizenry is the foundation of social equity, cohesion and successful participation in the global knowledge economy. Social justice in education implies that all students have equal education opportunities (Knudson, 2009). However, while equal opportunity concentrates on treating all people equally and providing people with equal rights, social justice targets the marginalised people in society (Tungaraza, 2004). For instance, in South Africa, 'widening participation' is understood to mean the provision of quality education for 'previously disadvantaged' groups – those with poor educational qualifications and low levels of academic literacy. Although there has been a higher participation rate in higher education (McGivney, 2001), surveys still show that exclusion remains an uphill battle

(Schuetze & Slowey, 2002). It seems that if the delivery of education is dependent on ICT, it becomes exclusive.

The popular belief throughout the world is that the use of ICT in education is an almost unqualified positive development. Many examples are cited to 'prove' its positive impact, and the injustice done to students if not fully explored (Hendrikz, 2010). Due to the enduring myths about the inclusion of ICT in education, there is a tendency to assume that the World Wide Web means that the whole world is connected to the internet, but approximately 96% of the world's population is not (Waller, 2007).

ICT in education in South Africa

Although by 2010 there had been some improvement in Africa's position with regard to internet penetration, realities on the ground show that the penetration rate in Africa is only 19%, the lowest of all regions of the world, while its broadband availability is the worst in the world (0.1%) (International Telecommunication Union [ITU], 2010). In Africa, there is only one fixed broadband subscriber for every 1000 people, while in Europe there are 200 subscribers for every 1000 people (Internet World Stats [IWS], 2010). This invariably affects the proportion of households with internet access. Ironically, this problem is not only limited to Africa as there are clear divisions based on class, race, gender, age and geography, even in the developed countries of the world (Waller, 2007). On the other hand, mobile cellular penetration is much higher, although it is still the lowest of all regions (ITU, 2010). The pictures painted above are not entirely different in South Africa (BuddeComm, 2010).

Within South Africa's educational context, the Department of Education has recognised distance education as a panacea for opening up educational opportunities to its population (Department of Education [DoE], 2001). This is with the aim of addressing past injustices. If social justice in education, as earlier alluded to, means making education available to the marginalised, then of serious concern is the professional development of teachers. It has been stressed that a nation's educational level cannot rise above the level of its teachers (DoE, 2006). Government is serious about the professional development of teachers, and many universities in the country have taken advantage of this to be involved in teacher education through distance education.

Although there is a scarcity of data on the technology status of education in Africa (Butcher, 2003), this does not mean that the inclusion of ICT in education in the continent is all doom and gloom as giant strides have been made. However, it is a known fact that ICT in education in the continent as a whole faces many challenges. For instance, citing the example of Nigeria, Olulube, Ubogu and Egbezor (2007), stress that ICT and distance education in sub-Saharan Africa are plagued by the poor economic situation, inadequate essential services, infrastructure and organisational problems, to cite a few. The problem in all developing contexts is that the distribution of ICT is limited to 'developed' pockets in these countries, further widening the digital divide. Responsible universities need to be conscious of this divide when including ICT

in their programmes. Thus, the question arises as to the extent of the impact of the ICT profile of Africa and, more specifically, South Africa, on education modes at the University of Pretoria.

The case of the University of Pretoria

The University of Pretoria is one on the premier research universities in South Africa, with approximately 40000 contact students. The University has a comprehensive IT infrastructure and officially started to introduce the use of online technology in the delivery of its contact programmes as early as 1998. The bandwidth available for the University is 60 MB, of which 20 MB is reserved for international traffic. Computer laboratories were also established throughout the University, where there are just over 5000 computers available to students in more than 100 computer laboratories. The ratio of computers to students is 7:1. Bandwidth in the IT laboratories is 10 MB. Training courses have been introduced to enable academics to optimise web-based learning opportunities and to further enrich the learning environment. Infrastructure was also put in place for them to communicate with their students via SMS technology.

The University uses Blackboard as a learning management system, which was specifically adapted to suit the needs of the University of Pretoria. This adapted learning management system is known as ClickUP. All students receive an e-mail address by default when they enrol at the University and can access the University's online environment via their student numbers, not just on campus, but from wherever they are. All contact students must successfully complete a compulsory semester course in computer literacy in their first year of study. The growth in the number of modules with online support has grown substantially in all faculties/schools since 2005 (from 37.7% in 2005 to an estimated 75.6% in 2010).

The University embarked on this e-learning strategy because the technology is available, affordable and appropriate to use. The profile of the University of Pretoria's contact students, as described above, mirrors that of any good university in a developed context. However, the profile of its distance education students differs totally.

In 2002, the Faculty of Education at the University of Pretoria established a Unit for Distance Education to manage the distance education initiative of the faculty. Thousands of teachers (specifically black teachers) had been seriously disadvantaged in the apartheid era by inadequate and low-quality teacher training programmes at inferior teacher training colleges established specifically for black teachers. Thus, the decision of the University to embrace distance education was a moral one to redress the past legacies of apartheid. Unfortunately, the teachers that are targeted with the distance education programmes teach predominantly in rural areas throughout South Africa.

Thus, the University recognised that the distance education student population differed in many ways from the contact student population. It was therefore decided that the presentation of the distance education programmes should be predominately paper-based with structured opportunities for face-to-face

sessions and other student support services within the limitations of the students' technology profile. Although the learning management system and the necessary ICT infrastructure for contact students were available to deliver the distance education programmes online, this was later proved to be inappropriate due to the students' technology profile.

As reflected in the table below, the technology profile of distance education students in 2002 and 2003 showed that almost all students had access to or owned a mobile phone, but very few had access to an e-mail address, computer or the internet.

Table 1: Profile of first-time enrolment (2002–2003)

	2002	2003
Number of students	1 760	4 306
Cell phone	95%	98%
E-mail	0	9
Computers at home or work	3%	4%
Internet	1%	3%

This profile prompted the University to start exploring ways of using mobile phones in its distance education programmes. A decision was taken to load all the programme material, with the exception of the textbooks, on ClickUP. This would not be an interactive site, but a depository where opportune distance students could access their learning material, as well as the latest tutorial letters and administrative information. Almost no students accessed the site over the years.

For the period 2004 to 2006, the profile of students with e-mail address and internet access remained very low. However, there was a noticeable growth in ownership or availability of computers for distance education students from 2002 to 2010 as indicated in the figure below:

Figure 6: Ownership of computers by distance education students (2006–2010)
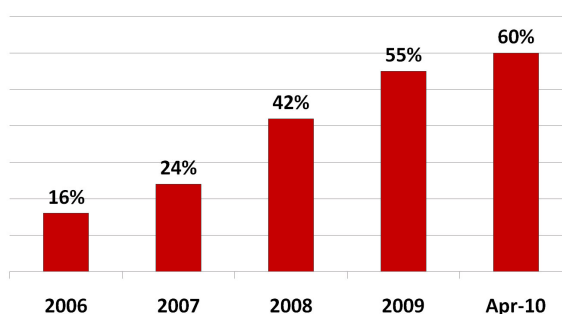
The change of this profile is challenging the University to respond by introducing appropriate technology to support distance education students. For instance, a CD-ROM, which contains general administrative and academic information, as

well as an e-library, is now included as part of the learning packages received by students. Presently, distance education programmes at the University depend on continually improved learning materials, improved support sessions, and the extensive use of SMS technology for administrative and partially academic purposes.

It is the aim of the University to continue to monitor the technology profile of its distance education students and to introduce the appropriate use of technology to suit this profile. The University foresees a time when the distance education programmes will migrate from being predominantly paper-based to being predominantly delivered online. This will, however, not happen in the near future.

Conclusion

The internet and mobile phone penetration rate, as well as South Africa's ICT development index (IDI), is reflected in the ICT profile of the University of Pretoria as a micro reflection of the reality of South Africa. The University is capable of delivering online distance education programmes, but that would exclude thousands of students from continuing their studies. The technology profile of the distance education students at the University of Pretoria mirrors the reality of the broader technology profile in South Africa and also in Africa. There are those communities – especially in urban areas – that have comprehensive and adequate ICT connectivity, while the majority of the population living in rural areas have limited or no ICT connectivity. Over the years, the University carefully monitored the technology profile of its students and introduced – in a carefully planned manner – technology that was accessible, dependable and affordable to students. This included the extensive use of SMSs and, because of the growth in ownership/access to computers, the inclusion of CDs in the learning material.

Africa needs to guard against ignorance about the realities of the availability and use of ICT. It must not pretend that it is on par with the developed world. It should avoid introducing strategies that are not in line with the realities and context of Africa. Millions of dollars have been wasted on poor ICT decisions in Africa because strategies are not aligned with the realities and context of the continent.

In order not to erode the original capability of distance education to widen access to education for once-denied groups, it is important to pay attention to social justice. Equal opportunity and social justice in education call for availability, accessibility, affordability, acceptability and adaptability (Tungaraza, 2004). It should not be about technology, but rather about how we can expand access to study and how we can improve support to our students in a way that will at least give them a fair opportunity of success. Scholars (Apple & Whitty, 1999; Butcher, 2003; Waller, 2007) have stressed the need to avoid technological determinism and technological fetishism. Rather, technology should be used reflectively and strategically to deepen the teaching and learning process (Toure, 2008). Practitioners need to understand that although newer technologies are different, they are not necessarily better. The choice of

the technology should be driven not by its novelty, but by the learners' needs and context (Bates, 2005).

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Distance education: from access to accumulation

Thomas Hülsmann
Carl von Ossietzky Universität, Oldenburg
Thomas.huelsmann@uni-oldenburg.de

Abstract

The paper constructs an argument somewhat off the mainstream distance education discourse. Starting from the syllogism on which the 'embedding discourse' is based (i.e. (i) education is good; the more, the better; (ii) conventional education cannot cope with the demand; (iii) therefore distance education has to come for succour), the paper proceeds in two steps: in the first step it revisits especially the economic promises linked to educational investment and comes to the conclusion that the costs of opting out of the educational arms race are increasing even where the benefits are decreasing for many; to the extent education is constructed as a tradable commodity or service, motives of widening educational participation have morphed from access to accumulation. In the second step the paper looks at the role of distance education in the process. It shows that distance education is optimally suited for opening up the window of market competition by allowing technological and geographical fixes in an educational system, until then largely impervious to market pressures. While traditionally distance education and open learning prided itself being in the forefront of social justice (access), it is in danger of merely spearheading the agenda of accumulation.

Embedding discourse: Why we are among the good guys

Sir John Daniel, highly influential in shaping the distance education discourse, can be taken as representative for the discourse that we distance educators are 'among the good guys'. The argument in his recent Mega-Schools (Daniel, 2010) can be reconstructed in form of a syllogism: (i) education is a good thing; the more the better[1]; (ii) the traditional educational system cannot cope with the escalating demand; (iii) hence distance education has to come for succour[2].

Economic reasons for expanding educational access

This section looks at the expansion in *higher education* (HE) and the reasons for several stakeholders to tune into its dynamics. A theoretical rationalization of the process (adding substantially to its dynamics) is derived from *Human Capital Theory* (HCT) which emphasizes the high *rates of returns to educational investment* (RORE). The figures generally show healthy RORE though not unaffected by educational expansion and the economic cycle. Thurow's *Job Competition Model* (JCM) is used for explaining why popular demand for HE

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[1] Daniel's focus in Daniel (2010) is not on higher education. However, inferring from Daniel (2006) the argument can be safely extended to higher education (HE).

[2] Similarly Rumble (2007) refers to Honderich who sees education as a necessary ingredient of a good life.

seems not highly sensitive to declining RORE. Locked in an 'educational arms race' HE seems to present itself as a captive market and as such a paradise, which providers would not want to leave anymore.

Expansion of Education I: voting with the feet

The figures are well known and widely accessible (e.g. Wolf, 2002; Perraton 2007). The system of HE has been expanded by governments and people have taken to it as ducks to the water. Why?

There are essentially economic and non-economic reasons. We may assume that the massive popular response to governments' policies of opening up HE is largely mercenary, i.e. based on expectations of upward social mobility in terms of status and monetary returns[3]: That on average higher levels of education correlate with higher earnings (and greater job security) was a discovery for which people had not to wait for Nobel-Prize economists[4].

But government policies had to open the doors to access, not least due to systems competition and external shocks: the Sputnik Shock (1957) triggered a maze of policy adjustments measures leading to a massive expansion in HE, especially in Europe. Papadopoulos summarized the situation as follows:

> *"… the overall context of educational growth, and its inevitability, was provided by the realities of the economic growth of the sixties accompanied by the growing concerns of governments to spread the benefits of this growth more equally across all strata of society, exemplified by the "fair deal" policies of Presidents Kennedy and Johnson in the United States. There was thus created a virtuous circle of supply and demand, whereby manpower-hungry economies, together with rising expectations among the population, led to an upsurge of social demand for education fed by the post-war baby boom, and sustained by national and family incomes."(Papadopoulos, 1994, p. 41)*

The post World War II expansion of education was, according to Coombs, "the greatest world-wide educational expansion in all human history - an expansion fuelled by hopes and expectations that followed the end of World War II" (Coombs, 985:3). Papadopoulos, writing from the vantage point of the OECD, which at the time found reasons to include education in its remit, remarked:

"Education is too important to be left to the educationalists." (Papadopoulos, 1994, p. 45)

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[3] Already Max Weber explained it not by "a suddenly awakened 'thirst for education' but the desire for restricting the supply of these positions and their monopolization by the owners of educational certificates". Tait, referring to the problem of the 'naïve' customer asked if "in the educational context can she or he really know what is on sale when the ability to judge derives to a significant extent from study"? (Tait, 2002).

[4] Schultz and Becker are considered as the founders of Human Capital Theory (HCT). Schultz received the Nobel Memorial Prize 1979 and Becker in 1992.

Together with the massive expansion of education (especially in the sixties) we see the emergence of a new sub-discipline of economics: the economics of education.

Economics of education: skills formation, screening or sorting?

There are few laws in the social sciences. One of them, it seems, is that on the whole the more educated are richer than the less educated. How to explain that? Why is it that the educated are better remunerated than the non-educated? According to the founding fathers of the economics of education, Theodore Schultz and Gary Becker, the missing link in this 'causal chain' is productivity (Schultz, 1961; Becker, 1964): The educated earn more because they are more productive. They are more productive due to the skills formation in formal education.

In terms of government policy this would suggest, that education can be seen as an investment enhancing the productive capabilities of the economy[5]: education is adding value to the labor force. From the vantage point of the individual participating in education is a way of value adding to one's own labour power. In this sense Schultz sees everybody as a potential capitalist who can invest in one's own talents (Schultz, 1961).

However, skills cannot simply be 'transmitted' by schools but are acquired by people of different receptiveness (which may be due to 'talent' or informal socialization in the family). Hence formal education may not *cause* productivity but *reveal talent*. This interpretation differs from HCT, not with respect to productivity as the link between education and earnings, but in the optimism to which extent human capital formation can be raised by investing in schools (or universities). If formal education is not a device for human capital formation but rather a screening device (as Screening Theory (ST) would have it) investment in formal education makes less sense.

Both interpretations are not without plausibility: the skills of the dentist are due to the medical school; but having a BA in English Language is less directly related to the productivity of the journalist. It is difficult to disentangle to which extent education forms skills or screens for talent.

The Job Competition Model (JCM) (Thurow; cited in Poltmann-Schult, 2006) specifically emphasizes the sorting function of education. Educational credentials are seen as a convenient ranking device by the labour market: In absence of very specific skills requirements, credentials are used to sort job applicants in a queue. Other things being equal, the more highly credentialed job applicants are sent to the top of the queue, those with low or no qualifications to its tail.

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[5] An early hint is due to the founding farther of economics, Adam Smith, who already linked skills formation to education: "A man educated at the expense of much labor and time to any of those employments which require extraordinary dexterity and skill, may be compared to one of those expensive machines." (Blaug, 1986, p. 154, citing Adam Smith).

Before coming back to these various models we need to revisit the question if the figures do confirm our initial hunch that 'the educated earn more'. Is it true? How to measure it? And how returns to educational investment would behave under educational expansion?

Returns to educational investment: how to measure it?

In order to find if our initial hunch (that the educated earn more) is true we need to measure the returns to educational investment. The citation from Adam Smith (cf. footnote 5) gives the lead how to do it. Investing in skills formation can be treated in the same way as purchasing a machine. Economics offers standard procedures for calculating the *Internal Rate of Returns* (IRR) to an investment in a machine:

$$C = \sum_{t=1}^{n} \frac{B_t}{(1+r)^t}$$ Spraul (2006, p. 78)	C Initial investment costs (e.g. purchasing costs of machine) B_t annual income generated by machine t time, period r internal rate of return n life time of machine Hence the cost of purchasing a machine is compared to the sum of the annualized income attributable to the machine.

The costs of purchasing of a machine (C) must be compared with the sum of the stream of benefits (B_t) over the life time of the machine (n years). But the later the benefit accrues in the future the less it is 'present value'. Hence the stream of benefits needs to be 'annualized'. The method allows ranking investment choices according to the respective IRR.

Beyond the absolute returns to investment (in terms of life time earnings) it is interesting to calculate the returns of an additional layer of education, e.g. an MA on top of a BA.

$$\sum_{t=m+1}^{n} \frac{(Y_b - Y_a)_t}{(1+r)^t} = \sum_{t=1}^{m} (Y_a - C_b)_t (1+r)^t$$ Y_b (net) income of person with higher education level b Y_a (net) income of person with higher education level a C_b direct educational cost r interest rate (to be calculated!) t time index m time of completing education a n time of retirement Spraul (2006, p. 89)	Example: $$\sum_{t=24+1}^{64} \frac{(Y_{MA} - Y_{BA})_t}{(1+r)^j} = \sum_{t=18}^{24} (Y_{BA} - C_{MA})_t (1+r)^t$$ *Left hand side:* This side represents the additional lifetime income due to the MA degree. In each period t (starting with the year of completing the MA and ending with the year of retirement) you compare the revenue stream $(Y_{MA} - Y_{BA})$; assuming you earn more with an MA (i.e. that the difference is positive) and adding the total additional income together you can calculate the 'graduate premium' accruing from the MA; however, you need to annualize the additional income by weighing it by $(1+r)^{-t}$. *Right hand side:* This side represents the costs related to investing in the MA: they consist first of all in the 'opportunity costs of forgone income' during the time of study (assuming full time studies) plus the direct costs of education (e.g. tuition).

Investing in education: What do the figures say?

Given the run for educational credentials it comes to no surprise that figures are good, both in terms of life time earnings as well as risk of unemployment. According to Anger, Plünnecke & Schmidt the *returns for a further year of study* in Germany is between 9.9% (Western States) and 9.6% (Eastern States; both for 2007). Spraul reports slightly lower figures for 2002 suggesting an increase in returns in spite of considerable educational expansion[6].

Similarly the 'graduate premium' is considerable: For example, a university graduate in 2007 earns on average 78% more than someone with less than a secondary school certificate (i.e. high school graduate). For a person who completed successfully a vocational training the difference is still 46% or 26% depending on the level of the vocational training. There are differences by subject area: The premium is highest for lawyers and managers. Qualifications in mathematics, information sciences and technology (the MINT subjects) also do well. They can expect a graduate premium of 91% (as compared to the average academic of 78%). Since 1998 the returns to MINT qualifications increased by 10%. Calculation of average life time earnings of the academic person will amount to € 456.500; while in case of vocational training the lifetime earnings amount to €162.300. (Figures are taken from Anger, Plünnecke & Schmidt, 2008).

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[6] Spraul reports 9.1% for men and 8.4% for women; for the USA the respective figures are higher: 14.9% for men and 11.8% for women. Interestingly this is the case in spite of the much higher tuition in the USA. The net-effect on income in the USA is calculated as 18.9% as compared to 4.1% in Germany.

Ammermüller & Dohmen (2004) report similar figures as Spraul (2006; 7.1%) for 1999-2000 but a comparison with 1995, where figures were 11%, suggests a decline in returns (private returns for men: Fig, 4.3, p. 61).

What we see is that there are positive returns to education though they vary in time. Of special interest is the question how returns to education behave under the pressure of educational expansion. The relative stability seems to support the argument that the educational expansion is just keeping up with the demand.

In this context the expansion of HE in the UK 1988 and 1994, discussed by Walker & Zhu, is of special interest since during this short time span participation in HE has doubled due to changing funding policies (removal of quotas and lower per student funding; Walker & Zhu 2005, p. 1). Obviously such rapid increase in graduates cannot be interpreted as demand-led. Overall, findings first of all confirm the 'usual results': "that the effect of (typically a three-year) college education on wages is large – the college premium averages around 22% for men and 35% for women." (ibid. p.8) However, the authors also find raising 'over-education' (i.e. graduates working in jobs for which they were overqualified). While even after the rapid expansion graduates, who had managed to get hold of a professional job, showed stable rates of return, the rate of returns for the others drastically declined.

Expansion of Education II: Locked in the educational arms race

In case of diminishing returns traditional HCT would assume that the motivation to invest in education diminishes and people opt out. Thurow's Job-Competition- Model (JCM) shows the plausibility of the opposite option: to make sure that you have 'more credentials than the next guy'[7]. This would explain that even where/when returns are deteriorating the rush for educational credentials remains unabated. Thurow's model starkly illustrates the price of 'opting out': those who opt out are sent to the tail of the queue. Since the sorting mechanism means that the less qualified job seekers are 'crowded out' by the more qualified people hardly can opt out. More rationally it is to add further credentials in order to move further up the queue. This means that people are increasingly locked up in an educational arms race independent of the returns.

The demand for HE is driven by carrots and sticks: high private returns and a high graduate premium are the carrot and the risk of unemployment represents the sticks. Even in times of meager looking carrots the threat of sticks is enough preventing people from opting out.

It has been observed that education is a 'positional good': it loses its distinguishing value to the extent it is expanded. Like in a soccer stadium, rising from your seat gives you a better view only as long as the others remain seated,

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[7] "'The sleaze bag operators are selling hope, security, protection, because people know no job is for life, and they're asking 'how can I protect myself?'. So we have become credential happy: the pressure for certification, to put a piece of paper on the table that says 'I've done more than the next guy.' (Watkins, CHEA)" (Cunningham et a., p. 102)

when all rise the advantage is lost. Even worse: if you remain seated you have definitively lost out (Better climb on your seat.)

The pressure on governments for widening access to higher education is escalating with the rising participation since it increases the costs of being excluded. Especially the politically vocal middle classes will continue pushing for further expansion. To this extent not only individuals find themselves locked in an educational arms race.

Education as a market: the new paradise

Expanding education puts pressure on the public purse. The high private RORE serve well as an pretext for devolving some of the costs to the learners and taking out some of the pressures from public providers. Similarly along that line it makes sense to entice commercial providers and to re-organize education increasingly as a market.

Given the sorting role of education for access to the more privileged position in society (and considering the threats of opting out) the education has characteristics of a captive market.

Constructing education as a market allows governments not only devolving *costs* to the individual. In a market the investor bears the *risks* of investment ('caveat emptor' is an old saying). The risk to the student is increasing for two reasons: the diversification of educational products and the time window within which returns can be recouped.

The mainstream argument runs like that: the knowledge society increases the division of labor in the economy; this means a proliferation of specific job profiles (bundles of skills required for a job). You may find Bachelors of Hamburgerology (Cunningham et al., 2000, p. 27), of horse riding, or turf maintenance. Moreover, the time window for recouping the educational investment is shrinking because of the innovative capacities of market driven capitalism[8]. Diversification and pace of innovation are good reasons for devolving the risks of education to the student.

While risk and costs increase for the students, the pleasurable aspects of HE are decreasing. This probably applies not only to the 'Bohemian' aspect of student life but also to the critical and reflective function of studying. Increasingly, education aims at employability and is straight-jacketed in a rigid time frame.

There is a further notable difference: while for HCT education was a means for enhancing productivity of the economy and thus indirectly contributing to

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[8] Marx was the first to connect innovation to the quest for profit (returns to investment). He used the somewhat curious formulation of 'moral depreciation' to characterize the dilemma of a capitalist having to buy new machinery and being unsure if he could depreciate his investment before being forced to invest in the latest innovation. This explains why investors are so preoccupied with time. (Marx, 1976) - Similarly investing in learning a complex programming language like C+ or Java is quite risky since you may not recoup your costs.

growth. It is increasingly constructed as an economic sector in its own right. It has morphed from a means to accumulation towards a source of accumulation[9].

The role of Distance Education in all this

Distance education evolved since the sixties, when the UK Open University was launched, in step with the historically unprecedented expansion of education. The expansion is generally interpreted as demand-led, the increasing demand being attributed to the need of the knowledge society for more qualified labor. We suggested a different interpretation which sees students and governments being locked in an educational arms race. This puts a different spin to the embedding discourse of 'education being a good thing' and, that 'the more we get of it the better'. We see the motive of access morphing to the motive of accumulation. It remains asking what the role of distance education is in all that?

The imperviousness of the education sector

Education is likely to become one of the lead industries of the twenty first century (Silver, 1992). But it is different from the lead industries in earlier centuries (textile in the 19th, automobiles in the 20th century): Unlike these industries education has been traditionally impervious to 'geographical and technological fixes'[10]: Schools cannot be easily relocated to low wage countries (geographical fixes), neither seems teaching to give much room for increasing technical efficiency (technological fixes). According to Silver, "…the imperviousness of the education industry to spatial and technological fixes (in particular relocation and automation) may be the root of a great deal of teacher bargaining power" (Silver, 2003, p. 118). Distance education, being at the forefront of using ICT, may change this: "Although teaching has been historically impervious to technological transformation, it is difficult to anticipate to what extent the Internet and other advanced communication technologies might be used to bring effective competitive pressures to bear on teachers, analogous to those automation brought to bear on manufacturing workers." (Silver, 2003, p. 119)

Seen from this vantage point the role of distance education is making education amenable to technological and geographical fixes thus opening it up to market pressures and the coercive laws of competition, from which education has been largely sheltered.

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[9] Australia, where education competes with tourism for the second place of contributing to the GNP is a point in case.

[10] The terms are taken from Silver (2002): it refers to tactics of avoiding profitability squeezes by either geographical relocation or technical innovation.

Distance education and the process of accumulation

The following figure applies a basic scheme of accumulation to distance education[11]. Constructing education as a process of production of commodities services we can depict the process as follows:

Source: Based on http://readingcapital.org/
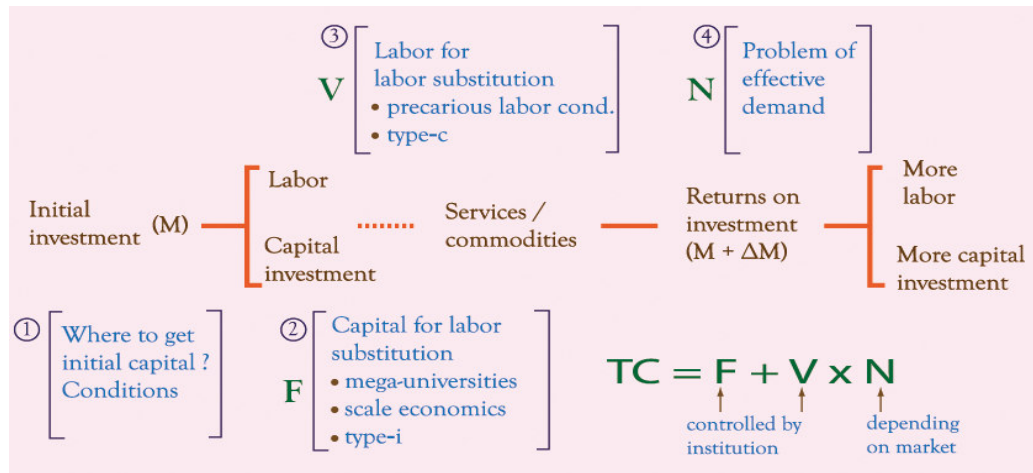
The initial investment brings together labour and capital in order to produce educational commodities / services to be sold on the market with positive returns (profits). The increased revenue allows expanding the business at a larger scale in the next cycle. Being for profit, this process can be seen as process of accumulation.

Accumulation processes encounter barriers which have to be overcome. Forced by the coercive laws of competition investors have to drive down costs. This may be done by 'capital for labour substitution'. This is one of the main strategies used in distance education: mass-media based distance education invested mainly in fixed / capital costs of course development. This allows for scale economies.

Such 'capital for labour substitution' is combined with 'labour for labour substitution': costly labour of high qualified personnel in tenured position is substituted by cheaper labour in more precarious labour conditions. Note however, that technological and organizational arrangements allow for windfall profits of innovation only during a short window of time (as long as the most efficient arrangements are not replicated). The pace of innovation is driven by the quest for such windfall profits.

To the extent the system expands it will meet the usual problem of effective demand.

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[11] The scheme is using David Harvey's scheme of depicting accumulation as represented in Marx' Capital. There is, however, little specifically Marxist in this presentation.

The accumulation scheme can be related to the total cost formula in distance education: TC=F+V*N (Total costs = Fixed costs + Variable cost per student * number of students).

Fixed costs of development are often capital costs and linked to technological fixes; variable costs are closely linked to labour costs; 'number of students' is related to expansion of education and can create overcapacities leading to an effective demand problem.

It is curious to which extent distance educators praise the efficiencies of their mode of provision as if 'efficiencies would grow on trees' and as if teaching load and increasingly precarious employment conditions are independent of the quest for efficiency. For many efficiency is associated with technological advances while deteriorating employment conditions are discussed in moral appeals on fairness. Using the accumulation scheme may be used as a telescope to identify the central set-screws once education is fully reorganized according to the exigencies of the market. Appeals to fairness are likely to offer weak resistance to the coercive laws of competition.

Conclusion: The good guys and accumulation

The argument constructed here is intentionally biased. It aims at a contrast to the praise songs of win-win situations papering over all potential trade-offs. Costs and risks are devolved to the learner who, even in times of deteriorating returns, has difficulties to opt out: Sticks are certain while carrots are increasingly uncertain.

Learners are locked in an arms' race for further credentials. The race is open ended: Distance education is, because of its flexibility, the first option for Lifelong Learning (LLL) which, in turn, is at the forefront in operating according to the exigencies of the market.

This unsatisfactory 'conclusion' is meant as an invitation to re-appraise what we are doing as distance educators beyond the necessary though more narrow discussion on technology and pedagogy.

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Cross-border delivery in Nigeria and quality assurance issues

Philipa Omamhe Idogho
Auchi Polytechnic, Auchi, Nigeria
philipaidogho@yahoo.com

Sunday Gabriel Eshiotse
Auchi Polytechnic, Auchi, Nigeria
eshiotses@yahoo.com

Abstract

Access to educational opportunities has witnessed significant facilitation, especially in developing economies where ethnic minorities and other disadvantaged groups abound. The global initiative anchored by Commonwealth of Learning (COL) in collaboration with institutions and agencies is helping to further reinforce the 'global image' schema, since learning opportunities and services are now 'exported to consumers outside normal locational influence of participating institutions'. There is no doubt that the scheme is making a huge impact and generating great enthusiasm among beneficiaries. This paper examines the challenge of quality assurance emerging from the fact that educational services may be provided in a virtual learning environment which may be within or outside the immediate physical location of the provider agency. Drawing from experiences of the Nigerian National Open University and other institutions that operate distance education in outreach centres, the paper recommends that as much as possible, internal and external moderation of course packages and resource persons be done both in the regular and distance learning centres, ensuring periodic review of programme performance and student learning outcomes to guide further action.

Introduction

Equity in access to education is a core provision of the Millennium Development Goals (MDGs) which all subscribing nations are enjoined to pursue because education is recognized as central to success of other human welfare enhancement endeavours. The Commonwealth of Learning's (COL) global initiative to democratize access to education has stimulated enthusiastic participation of institutions, governmental and non-governmental agencies.

COL prefaces its Flexible Skills Development (FSD) initiative with the declaration that resolving educational inequity is a central philosophy, and that its "activity will positively discriminate towards the previously disadvantaged in order to deliver increased equity and inclusion".

COL's discriminatory philosophy becomes justifiable in the face of the exclusion of large segments of society from government social/welfare programmes as a result of non-integration into mainstream society. Religion, ethnic politics and

geographical location are key factors responsible for exclusion of people or groups from government welfare packages (Anderson and Roit, 1996).

Cross-border education programmes become inevitable platforms to bring the benefits of education to all, regardless of location in time and space. The reality of Mcluhan's 'global village' concept of the world has profound implications for human existence. It is becoming increasingly difficult, if not impossible, to live in isolation or to isolate others from one's dealings. Thus, providers of educational services have to identify their target publics and reach them where they are, using all available supporting technologies.

Cross border education delivery

Cross-border education is educational service delivery that takes place in 'situations where the teacher, student, programme, institution/provider or course materials cross national jurisdictional borders and encompass a wide range of modalities in a continuum from face-to-face to distance learning…it is the movement of people, programmes, providers, knowledge, ideas, projects and services across national boundaries ' (Knight, 2006).

For the purpose of this paper, the term 'cross-border' shall be used to include educational operations that an institution, agency or organisation carries on outside its immediate geographical boundaries or location, not necessarily in the sense of across a national territorial boundary.

Distance learning is explained as an educational process in which a significant proportion of the teaching is conducted by someone far removed in time and/or space from the learner (Creed, 2001).

To Adebayo (2007), open and distance learning is the type of education that takes place outside the conventional school system which may be imparted without necessarily having personal interaction with students or learners. Adebayo (2011) adds that the concept of open and distance learning suggests an educational approach designed to reach learners wherever they are located, providing life-long learning opportunities without attending formal classes.

UNESCO (2002) explains open and distance learning as approaches aimed at opening access to education and training provision offering flexible learning opportunities to participants and, in the process, freeing them from the constraints of time and space.

Forms of cross-border schemes in Nigeria

Two major factors responsible for the sharp increase in the operations of institutions outside their geographical location in Nigeria are the desire to meet the educational needs of those disadvantaged by distance from "college towns" and, second, government directive that colleges seek for other legitimate means of boosting their internally generated revenue base outside government subventions. This latter factor has pushed many a college into unwholesome

approaches to marketing education, which has serious implications for quality assurance.

Federal government intervention in provision of cross-border education is expressed in the establishment of the **National Teachers Institute (NTI)** with more than 700 outlets scattered across local government headquarters in all thirty-six states of Nigeria. The broad goal of the initiative is to facilitate the training of teachers in the quantity and quality required to drive the nation's Universal Basic Education (UBE) compulsory nine year primary education scheme.

Resource persons are recruited from secondary schools and tertiary institutions (if any) in the area where the outlet is located. Reading materials are centrally produced and distributed to students enrolled in the programme.

National Open University

The National Open University in Nigeria (NOUN), though first launched in 1983, only became fully operational in 2001. With twenty–three study centres student enrolment stood at about 60,000 as at 2002, according to Adebayo (2011). Its course materials are a blend of multi-media packages that rely heavily on the new technologies.

Weekend programmes

These are designed specifically for such members of the public whose job demands preclude them from enrolling in regular, full-time programmes. In other words, learners in this group are generally of working-class type and are willing to invest their free weekend in further education. Candidates who enroll in weekend programmes are required to assemble for lectures either at the campus of the provider institution or at designated locations outside the border of the donor institution. This factor has given rise to the outreach/satellite centre concept.

Satellite centre concept

As the name implies, learning services are available outside the environment in which the provider agency is located. In this situation, resource persons are drawn from either the provider institution or sourced from 'qualified' persons who work and or live within the satellite or outreach centre.

On its own, the centre would usually be a public utility such as a primary/secondary school facility or any suitable venue hired for the stated purpose. Students are expected to buy resource materials produced by Faculty and or individual course lectures.

The mode of operation usually includes lectures for a specified period, after which the students are invited to the home campus for about two weeks of "intensive" lectures and revision, after which examinations are conducted. Unfortunately, many rogue or low quality providers (Knight, 2006) have sprung

up all over, are offering *quality* lectures and conducting examinations in blatantly inadequate environments, and in less time than can assure effective learning.

Sandwich Programme

This educational package is 'sandwiched' in the holiday/break period between terms/semesters. In other words, it comes up during holiday period when full-time students are away on end-of-term or semester break. Because it is holiday period, candidates (who are drawn mainly from teaching staff of educational institutions) are also on holidays.

The length of learning time is usually a function of the duration of the holiday. Because of this, many institutions that operate sandwich programmes target end-of-session break which is usually the longest break in the Nigerian school system, to allow sufficient time for teaching.

Sometimes, in order to avoid congestion on campus, Sandwich students are taken to locations outside college campus but within the city. Resource persons shuttle to and fro the out-of-campus centres to service their schedules.

Quality Assurance Challenge

A quality assurance programme essentially focuses on product or service quality both in the short and long run. In other words, it involves monitoring the quality of course delivery and assessment.

According to Knight (2007), it is the systematic monitoring and evaluation of the various aspects of a project, service or facility to maximize the probability that minimum standards of quality are being attained by the production process. The two key principles in any quality assurance programmes are:

i.   Fit for purpose: That is, the programme should be suitable for the
        intended purpose.
ii.   Right first time: This ensures that mistakes are eliminated from the
        process.

These principles are to assure quality of raw materials, assemblies, products and components, services related to production and management, production and inspection processes. The quality of end-product/service is determined solely by production/service users/clients/customers, it follows, then, that customer satisfaction, rather than cost, becomes a better objective reflection of quality of product/service.

Ensuring quality assurance in educational services may broadly include the following steps:
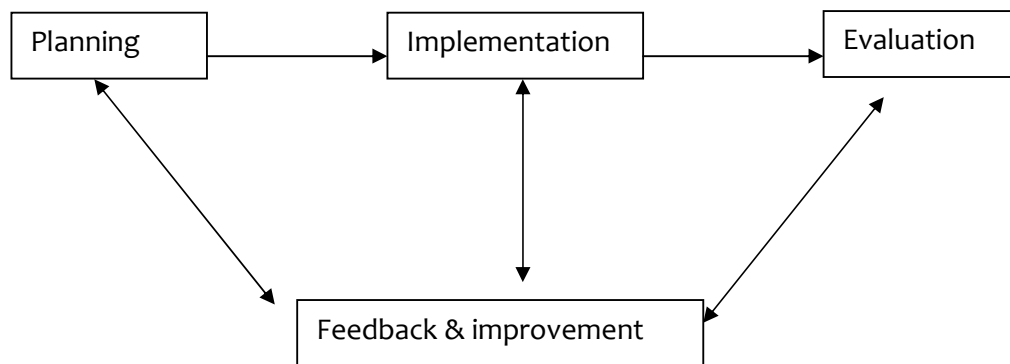
•   review of existing curricular of intended programmes
•   review of current market demands
•   review of reports from employers of labour

- development of harmonized curricular
- streamlining entry requirements with new curricular
- development of benchmarks for resource personnel.

Application of these steps, along with others not listed, engenders a behaviour pattern in operators of the system, which invariably manifests in the following four operations:

i.   Planning
ii. Implementation
iii. Evaluation
iv. Feedback (and improvement)

This is captured in the flowchart below:

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┌──────────┐       ┌────────────────┐       ┌──────────┐
│ Planning │──────▶│ Implementation │──────▶│ Evaluation│
└──────────┘       └────────────────┘       └──────────┘
      ▲                   ▲                       ▲
       ╲                  │                      ╱
        ╲                 ▼                     ╱
         ╲       ┌──────────────────────┐     ╱
          ╲─────▶│ Feedback & improvement│◀───╱
                 └──────────────────────┘
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The role of Institutional value in Quality assurance

Divinity (1992) suggests that institutions play a more explicit public role as a result of social change. To be able to fulfill this expectation, institutions need to cultivate, reflect and market distinct values which the public can buy into. Griffin (1990) states that maintenance of quality instruction and mentoring growth of students towards their full academic potential should be at the heart of an institution's value ethos. A strongly stated institutional value system will act as a check against derailing of both institution's administration and the students. For instance, Olin College in the United States has the following as part of its core values:

- Quality and continuous improvement
- Student learning and development
- Institutional agility and entrepreneurism
- Striving to minimize bureaucracy, cost and institutional inertia… and to accept appropriate risks in pursuit of opportunity.
- Quality assurance indices

Wikipedia suggests consideration of the following checklist of indices which should serve as guide to ensuring quality in cross-border education services:

- Use of ICT
- Continuous further training of staff (both teaching and technical)
- Labour-market-oriented training curriculums (to ensure that products are equipped with appropriate skills and knowledge to satisfy market needs)
- Comparison of the pedagogical efficiencies of teachers   for the same course (with a view to using the best)
- Teaching by feedback system
- Improvement of information and communication processes
- Planning tools for teaching/assignments and course schedules
- Course evaluation vis-à-vis customer feedback
- Interview/interaction with staff and course participants

Wong (2005) identified a number of areas in which problems easily manifest in pursuit of quality. Two of such areas particularly describe the situation in Nigeria. They are:

1. Misleading or dishonest information relating to course content, teaching, resources, staffing and status of recognition of courses by government and professional bodies.
2. Poor quality of courses which is seen in:
   - Lower standard of course, especially in the area of reduced or shortened content.
   - Poor or inadequate teaching resources, use of unqualified or inexperienced staff, teaching by proxy, etc.
   - Lower entry and exit requirements
   - Unsuitable teaching methods
   - Shortened course duration or fast-tracked progression.

In Nigeria, the National Universities' Commission (NUC), Nation Board for Technical Education (NBTE) and National Council for Colleges of Education (NCCE) are quality assurance regulatory bodies. Among other duties, they are empowered to:

i. Set out clear procedures for assessment of regular and non-regular programmes.
ii. Supervise and or implement the procedures

Quality assurance in Auchi Polytechnic

Concern for quality assurance and standards led to the creation of the Directorate of Academic planning in Auchi polytechnic. The office answers directly to the Rector of the institution, and handles all issues relating to creation of new academic programmes, accreditation and re-accreditation of existing programmes, allocation of courses, deployment of learning facilities, equipment and other academic matters.

The directorate ensures that courses are allocated to resource persons on the basis of primary qualification/specialization, teaching experience and other quality assurance indicators.

Courses in the institution's regular, Part-time and Sandwich programmes are taught by the same resource persons to ensure standard. Besides, common examination questions are used in classes that run on the same levels, even where they are taught by different lecturers.

Moreover, the Academic Planning Directorate, in conjunction with the Academic division of the school's Registry, ensures that the same entry and exit requirements apply to all applicants for admission. In addition, it liaises intensively with the National Board for Technical Education (NBTE), the supervisory body for TVET in Nigeria, on 'global' issues of quality and standard.

Conclusion and Recommendations

Cross-border education enjoys global recognition especially against the background of education for all (EPA) by the year 2015 initiative declared at the World Education forum in Dakar 2000 (Adegun, 2010). The rush to bring educational opportunities within the reach of disadvantaged segments of society has naturally posed certain quality assurance challenges.

As stated earlier, in the Nigerian context, it is nearly impossible to draw a line between genuine, noble desire to increase access to education and plain pursuit of profit. Provision of educational services has become big-time business and an all-comers' affair.

To ensure quality and standards in the educational offerings by institutions and other donor agencies especially in Nigeria, it is suggested that:

i. Content of cross-border education programmes be designed as response to specific observed needs of society, instead of the current mass production mentality.
ii. The programmes be designed and implemented to positively impact the beneficiaries and society at large.
iii. A monitoring team be put in place at national, regional and international levels to ensure compliance with agreed upon standards and quality. Where such teams already exist, they need to be further strengthened to deliver on their mandates.
iv. Institutions and donor agencies should evolve core values by which their products/services will be judged.
v. To curtail abuse, let limits be set for borders, outside which institutions may not 'export' their educational services.
vi. Resource personnel and materials should be of the required quality and standard to right the absurd wrongs in equity in access.
vii. Lectures and learning packages for outreach/satellite programmes should be prepared by course lecturers in the accredited regular programmes. This ensures uniformity and standards.

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ODEL, the digital divide and international social justice

Babatunde Ipaye
National Open University of Nigeria
bipaye@gmail.com

Situations and circumstances leading to the exploding demand for higher education in developing nations of the world are well known. Conventional higher institutions, universities in particular, in many developing nations cannot provide spaces for the majority of applicants. In most developing nations in Africa, conventional higher institutions could admit not more than 15% – 20% of qualified candidates. The enthusiasm for university education and the poor and very low access rate had become worrisome to governments in developing nations. Many governments have started putting in place mechanisms to widen access and thus turned to open and distance learning as a veritable way out. One of the many reasons for this was that providing more access to quality higher education will not only promote an accelerated economic growth and development but that it will also widen the scope of social justice, equity and equal opportunities for all the citizens. The decision of GATS/WTO (The General Agreement on Trade in Services, World Trade Organization) towards the end of the 90s, however, to convert and move higher education to the competitive, commodity item list, has not helped matters.

The developed nations immediately latched onto the pecuniary, cost/benefit, profit oriented and lucrative aspect of the situation. They realised that higher education as a social demand is fast surpassing the capacity of national systems in developing nations to respond adequately. The reasoning was simple and the action was fast. Here is a system not only growing in terms of access but also in terms of financial investment and trade which as of 1999 were estimated to be US$30 billion (Vlk, 2006). The education sector thus suddenly became immensely important in terms of economic power. Rather than thinking of continued donors for the improvement and development of education in developing nations, people now saw an opportunity for investment. Higher education thus became a service to be provided and treated as a commercial commodity on the pretext that doing so will provide more diversified systems, greater efficiency and improved quality. With the WTO/GATS agreements, which came into effect in 1995, the liberalisation of trade in higher education became part of the negotiations of GATS. The picture became clearer towards the end of the 2000s (2006 - 2007) when over forty-seven countries, including some developing nations, made commitments to include education in the agreement (Knight, 2006).

Carrying Capacity

As of 2007, conventional universities in particular and other tertiary institutions in Nigeria, had all surpassed their carrying capacity, i.e. they had admitted more students than they can legally, meaningfully effectively and qualitatively train. This situation which many described as unhealthy for the quality of

education provided and for effective interaction between students and lecturers had been variously interpreted. On the one hand it could be seen as lack of discipline on the part of the institutions and on the other, it could be seen as a result of extreme pressure on the institutions. Exceeding the carrying capacity means among other things that facilities will be overstretched, the laboratories and workshops will be overcrowded, lecture rooms will be overcrowded and even common items and facilities like conveniences, hostels and other municipals will be overstretched. To worsen the entire situation, there had been persistent shortage of academic staff across board in the HEIs. For example, Table 1 shows the carrying capacity of the HEIs as well as the staffing situation in 2007. A few months ago the Nigerian government established nine specialized universities. Many breathed some air of relief thinking the nine will help to absorb a substantial number from the large un-admitted candidates. But just as we were writing this, the same government came up with a pegging of the carrying capacity. A Nigerian news paper carried it this way:

> *Minister of Education, Professor Ruqayyatu Ahmed Rufa'i, speaking with newsmen after declaring open a two-day retreat for vice chancellors and registrars of the newly approved fourth generation federal universities, expressed the need to have a trim number of students in the universities in order to regulate the product of the institutions. She urged the vice-chancellors to ensure strict compliance with the Nigerian Universities Commission (NUC) guidelines on the carrying capacity of the universities set up as specialised institutions, saying, "we really want to have control so that we can have more effective teaching and quality graduates in these institutions. "The issue of carrying capacity is a directive because we do not intend to have more than we can carry. Actually, we want to start with 100 or 200 per session so that by the time the universities are on full stream, we do not intend to have more than 500 students per session," the minister declared. (Nigerian Tribune, May 5, 2011)*

Table 1: Carrying capacity and staffing situation of HEIs in Nigeria, 2007

System	Enrolment	Carrying capacity	Over Enrolment	No academic staff	No. required	Shortfall
Universities	1,096,312	715,000	381,312	27,394	50,000	22,606
NOUN	35,000	100,000	-65,000	5,220	15,000	9,780
Polytechnics/ Monotechnics	360,535	198,370	162,165	12,938	30,016	17,078
Colleges of Education	354,387	118,129	236,258	11,256	26,114	14,858
National Teachers Institute	91,259	100,000	-8,741	6,526	7000	474

Source: collated from NUC sources, NUC 2008

One interpretation and conclusion from table 2, rows three and six, is that ODL as a system may not suffer from over enrolment neither could its quality be seriously affected negatively by staff shortages especially if study materials are available in the right quantity and quality and put in the hands of students at the right time. The picture painted in Table 2 is also largely responsible for the outcome of accreditation visits to the various HEIs where the bulk of programmes earned just interim accreditation. Again, the only ODL institution in the group had a very high percentage of its programmes earning full accreditation. See Table 2 for this.

Table 2: Accreditation status of Higher Education Institutions in Nigeria 2007

System	Accreditation Status	Accreditation Status	Accreditation Status
	Full Accreditation	Interim	Denied
Universities	748 (44.8%)	810 (48.5%)	112 (06.7%)
Polytechnics	1,230 (81.3%)	333 (17.4%)	124 (07.3%)
Colleges of Education	628 (47.2%)	685 (51.5%)	18 (01.3%)
National Teachers Institute	1,469 (88.9%)	179 (10.9%)	03 (0.2%)

Source: NUC, 2008

Commodification of HE: an attack on social justice?

In the developing nations, the debate over the implications of GATS for higher education and research still continues.   While many argue that classifying education, especially higher education as a commodity,   will have some positive impact on the future of higher education in developing nations, stressing that free trade can help higher education in terms of diversifying the providers and delivery modes, broadening access, promoting competitiveness and increasing financial and economic gains, opponents reject the idea of converting higher education from a public service to a marketable commodity (Bubtana, 2007). This trend becomes more worrisome when it is remembered that many developing nations in their national education policy had regarded education as a social provision, and had inscribed therein that education shall be provided on the basis of equity and equality thus giving rise to the consideration of social justice. One of the complaints by the public in many of these developing nations is that university education in the conventional sense had been priced above the purse and economic ability of the common man.

Most governments felt that given its economies of scale, ODL on the long run may give more people the access and the affordability to university education. However, ODeL is disproving this fact because of the cost of obtaining HE online.

Business and commercial terms, like marketisation, commercialization, commodification, Macdonalisation and franchising, applied directly or indirectly to higher education by proponents of GATS, focus more on profits, dividends and gain margins and care less for social justice and anything that it stands for. Yet university education in developing nations cannot be effectively and meaningfully regarded as an index of development if it is meant for the reach of the rich only and if it is priced above the reach of the poor. But, this is exactly what most ODeL providers have done to developing nations, pricing HE above the common man and creating doubts in the minds of Government as to the quality of what is provided.

Providers of cross-border education catch in on two issues – the need to provide access recipient countries while the second will swell the purse of the providers. It had been argued that while open and distance education provides access to education for more people and widens the provision of education to the populace, e-learning and technology, on the other hand, provide access to distance education itself (Ipaye, 2007). Most providers of cross-border education, especially those who adopt the ODeL framework, rely more if not exclusively on electronic education and computer backed and assisted learning. Open and Distance Electronic Learning, ODeL, provided through cross border educational providers, therefore, had created more problems for some developing nations than anticipated. For example, the providers enter into many developing nations without 'visa' or any 'travel document'; they came without any regard to the supervisory bodies of higher education in the nation, without respect for national policies and without following any specified guidelines in terms of quality provisions and quality assurance. This way, their existence in many developing nations had been seen more as security risks than as helping to solve social problems. In many cases they had further debased the quality issue in education in given host countries as a result of their diploma mills; further, they have further worsened the already poor situation of social justice by reinforcing the concept of education for the rich and able and thirdly they have further widened the gap in technology literacy, familiarity with ICT and electronic capability. This wider digital divide has serious implications for access to higher education in particular and for the attainment of social justice which many developing nations had planned to provide through equitable education.

In developing nations, the amount of financial resources spent on higher education shows its increasing importance in terms of economic power. The fear in developing countries is that, in addition to the identified negative aspects, cross- and trans-border providers will lead to negative rather than positive consequences such as increased social costs for higher education, the return of the elitist systems and gradual disappearance of national systems that cannot compete with foreign providers. In fact, many developing nations had started feeling the increased social costs of diploma mills higher education as this had

reflected in poor skills acquisition, lower productivity, and the debasement of the ethos of academia.

Given the audacity with which many providers of cross border education enter into the recipient countries, there is no doubt that governments will require a major policy shift, revisions and provisions, to accommodate such providers. Further, if HE is to become a trade item, then there should be room for competition. Policies and guidelines must be available for all to follow, policies must be adopted to allow both the private sector and foreign providers to freely compete at national level and there must be means of enforcing such policies and guidelines. The National Universities Commission, NUC, the regulatory body for the growth and development of university education in Nigeria, had started some moves in this direction through their recent Guidelines (NUC, 2010). For example, the NUC now stipulates three types of cross-border activity which are said to be permissible in Nigeria. These are the twinning / articulation model, branch campus model and open and distance learning model (see NUC, 2010).

If all providers of cross border and ODeL are made to abide by the Guidelines and any others provided by other developing nations, who knows, principles, such as equal access and the democratization of higher education, will become policy priority in developing nations.

Ideally, ODEL should have been advantageous to the recipient country, and should have provided some positive end-results. For example, in nations having problems with access, foreign providers of cross boarder on-line education should be seen to be increasing access to higher and adult education; they should have helped to create more space in higher education and more research infrastructures, they ought to have assisted with increased mobility of students, academic staff and researchers and, by and large, should have stimulated increased competitiveness which should have led to improved quality. Further, they should be seen as contributing to the production of higher level manpower critical to the socio-economic and technological development of recipient nations. But in some developing nations, these had not been the case. In Nigeria, for example, the NUC is engaged in a running battle with un-licensed universities by both national and international, cross-border providers. At the last count, there were more than forty of such institutions currently shut down by the regulatory body, NUC. More elusive are the electronic education providers that have no campuses and no physical structures on the ground and yet have thousands of students registered receiving education which is not based on the curriculum or syllabus of providing nations nor that of Nigeria. In addition to poor quality and low standards, such providers have become exploiters of national systems, a threat to national systems that are not yet fully cut out for electronic learning and in fact a threat to national security.

Two of the major problems created by foreign providers of ODeL in developing nations thus constitute the focus of this paper. These are the abuse of social justice, thus international social justice and, the issue of widening the digital divide. Unfortunately, these are areas that supervisory bodies, monitoring groups and accreditation agencies rarely pay attention to.

Social justice and education

Social justice generally refers to the idea of creating a society or institution that is based on the principles of equality and solidarity, that understands and values human rights and that recognises the dignity of every human being (Wikipedia). Social Justice embodies essential principles of equity and access to all opportunities in society in accordance with democratic principles and respect for all persons and points of view. This principle of equality is clearly provided for in the educational policy of many developing nations. The National Policy on Education, NPE, 1977, in Nigeria for example adequately covers the issue of equality of opportunities. However, in spite of efforts by governments, many people in developing nations still find it difficult to believe that in all aspects of society, people could have equal rights and opportunities, and that everyone, from the poorest person on the margins of society to the wealthiest could be given an even playing field. ODeL providers with their mind on maximization of profits further reinforce this doubt and cynicism. Again, Governments' statements are rarely backed by their actions or by situations on ground. In Nigeria for example, Public schools i.e. schools supported by government funding etc., located in urban and rural areas alike, continue to give pictures of 'failing schools', mainly as a result of varieties of deprivations ranging from total neglect, deprived facilities, poorly trained and lowly motivated teachers, to poor funding and dilapidated buildings. Here the children of the poor go. The rich send their children and wards to private schools, in fact to international schools within the country, where high fees are charged but where the opposite of the above prevails. The facilities are available, teachers are well motivated and buildings and laboratories and workshops are standard and functional. However, this does not support equality of opportunities.

At the university level, there had been long cry for improved funding for the universities, (since the late 60s), there had been long demand for provision of required and needed basic facilities for meaningful and effective teaching and learning in the lecture rooms, but again, these had been very slow in coming and where and when they do come, they had been haphazard and intermittent. And, in fact, despite the fact that the Federal Government since 1999, had substantially increased the funding of university education, whatever was given had looked more like a drop in the ocean because of earlier decay. From 1999, Private universities started springing up; they came and continue to come, small but high quality. The rich now found an alternative to sending their children overseas and started patronising the private universities where very high fees are charged, though it is clear that the fees charged therein could not be as high as nine thousand pounds sterling. It should be noted that Nigeria and Nigerians' craze for education overseas is probably next to none in the developing nations. Statistics published by a weekly tabloid, The *Business World, in a recent publication indicated that more than* 11,000 Nigerian students were admitted to British universities in the 2009/2010; and statistics from the British Embassy showed that more than 27,500 applied for student visas (Jason Ivory, head of the visa section at the British Embassy in Nigeria). As of March 2011, between 30,000 and 35,000 Nigerians are studying in the UK, making Nigeria the fourth largest source country for international students in the UK outside the European Union. The total amount paid in fees by Nigerian students

in the UK is calculated as close to a billion pounds sterling. Only the rich can afford this.

Social justice in education implies that all students have equal education opportunities in their country. The situation described above shows clearly that this is not the case at any level of the educational hierarchy in Nigeria. Social justice also demands that all citizens send their children to school in their homeland - the situation described above does not support this. National educational policies emphasising equal opportunities in educational provisions are therefore mere paper tigers, in reality they are less than zero. Further, as noted above, e-learning provide wider access to distance education. E-Learning as used by cross border providers is computer based and internet driven. Computers are still expensive in developing nations; internet connectivity is still beyond the poor man and charges at the cybercafé are still high. Though the Communications companies like MTN, Glo, Airtel etc provide mobile internet modems, this is costly and the monthly charges are equally high. In effect therefore, ODeL in developing nations further perpetrate inequality and lack of equity in educational provisions. This also leads us go the second part of this paper.

The digital divide

The **digital divide** refers to the socio-economic gap between those who have access to computers and the Internet and those who do not, those who have literacy and skills in ICT, and those groups that have access to quality, useful digital content and those that do not. Broadly speaking, the difference is no longer necessarily determined by the access to the Internet, but any ICTs and media that different segments of society can use. With regard to the Internet, the access is only one aspect, but the quality of connection and auxiliary services, processing speed and other capabilities of the computer used, and other factors could also be part of the issue (Davison and Cotten 2003; word iQ.com, downloaded May 3, 2011). Ordinarily, the term used to apply to the North-South divide but it is more practical these days to start discussions from the view of intra-segmental, intra-institutional divides. This means that the digital divide is no longer a North – South issue per se though the gap between the two keeps widening by the day, but an intra-situational challenge. A pathetic aspect of the challenge is that the divide is becoming manifest even in universities and HEIs in developing nations. The ageing professoriate in many universities contribute to the divide; there is some sort of Science/Humanities divide; there is inter-university divide; and then the generational divide, which is slightly different from the ageing professoriate issue.

Today, very few Nigerian universities have a well articulated and standard e-learning policy, few have concentrated technology backed teaching and learning, and very few universities have a well technologically committed leadership. Few universities have the fortune of having an administration that initiates, let alone pushes technology integration or a progressive administration that can further a technological agenda. Further, a large percentage of the youth who seek university education remain technologically non-literate. A survey showed that, in Lagos, an urban city and the economic capital of Nigeria,

about 35% of applicants to the National Open University of Nigeria sought the assistance of cybercafé staff while completing their on-line application forms. Thus, a majority of undergraduates who are expected to learn on-line and be examined on-line, come in painfully unaware of basic technological skills. They are hugely deficient in typing skills, ability to work with commonly used software, and ability to navigate the internet. One of the painful effects of this is that all examinations are multiple choice questions where students are expected to merely click on the right options. Students could not be subjected to on-line essay tests requiring them to type, and write out essay answers on the computer!

Though it had been found that one of the achievements of open university and ODL in Nigeria to date is the **creation of more awareness** in the use of computers, the expansion of technology literacy and the adoption of e-learning principles and practices in teaching and learning (Ipaye, 2010), the fact remains that there is still a large percentage of educated people who are not yet computer friendly. The technology gap, the digital divide will continue to be an issue in education in developing nations for some time to come unless governments come in to massively address the cases of ICT affordability and broad-band expansion, thus combating the second generation divide that the growing use of broadband has created.

It is clear that this creates yet another type of digital divide, when students and staff in one school or university do not have the same type of internet speed and are denied access to educational content that students and staff in other schools are able to access. In today's world, having access to the internet would be comparable to having access to a library. Unfortunately, libraries have long been dead in many towns and cities and, in fact, in many schools in Nigeria and university libraries had long become shadows of themselves. Yet, the internet and libraries serve the same purpose of providing unlimited information to the masses and providing research avenues for scholars. When and if students have no access to the internet, we not only keep them from being educated, but also limit their access to free information. The digital divide still exists.

The way forward: What to do?

From all indications, it seems that developing nations have a long battle ahead with providers of open and distance electronic learning. It is certain that the unchecked proliferation of cross border electronic education will continue to worsen the situations of social justice and of digital divide. A few suggestions come to mind as to the way forward in tackling these challenges.

i.   Strong ICT policy: Developing nations should develop strong national ICT policies which will boldly tackle the problems of ICT infrastructure, availability of ICT hard and soft ware, provision of nationally backed broadband and affordability of computers and internet connectivity.
ii.   Comprehensive operational guideline: There should be broad and comprehensive but dynamic operational guidelines for operators of cross border education. This should be widely publicized. Efforts by organs like the NUC should continue in this regard and the steps taken to persuade

nations most concerned to become visible by opening their campuses, cooperating with national universities in operating such ODeL programmes and getting the Government well informed of their activities should be sustained.

iii. A functional monitoring team that can both bark and bite: Government should further empower her monitoring agencies and other bodies not only to bark at the providers of such degree mills in the countries but also bite and bite hard at such providers.

iv. Digital literacy cells: It is becoming clearer by the day that there is need for digital cells across the countries. Government should not leave the technology literacy issue to cybercafés and other for-profit agents but multiply the establishment of digital cells. Ghana had some a few years ago but research showed that some of them had died out. They should be resuscitated and other developing nations should emulate such provisions.

v. Institutional e-learning policy: Universities and other HEIs should have virile e-learning policies including capacity development, in-house and in-service training, aiding staff to purchase computers and training them to use same and encouraging staff to do some of their teaching on-line. This means that students themselves should be provided copious access to the computer, and helped to learn how to use the computer and become web-wise. The General Course in our universities on Computers and society or related general courses make little or no impact on students. The classes are usually too large, there are scarcely computers in many of the classes, rather students do theoretical computer courses and staff who teach such large classes barely have training in handling large classes.

vi. Encouraging staff who are 55+ to show more interest in technology use and shun compu-phobia. How? In-service training; computer aid; internet connectivity; and having a policy of sending mails and communications to "seniors" via the email.

vii. Communication agencies and suppliers to help track electronic education providers who operate illegally.

viii. Aggressive digital literacy campaign efforts with special focus on special groups to promote equity.

ix. Digital natives to be encouraged to use ICT and the computer and internet in a more productive manner, i.e. more for academic purposes than for games, chats and socializing.

x. Teachers urged and trained to capitalize on children's interest in the computer and the social networks and convert these into academic dividends

xi. Teaching and learning in colleges and universities should focus more on social networks and their use in education and in schools.

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Expansion in e-learning: online technologies enabling access to the upper secondary level for a more diverse student group

Sólveig Jakobsdóttir
School of Education, University of Iceland
soljak@hi.is

Thurídur Jóhannsdóttir
School of Education, University of Iceland
thuridur@hi.is

Abstract

With development of online technologies schools can now offer more flexible access to their courses and thereby enable people to have school access regardless of age, gender, and location. The main focus in this article is the results from an online learners' survey conducted in 2010 as a part of an evaluation study initiated by the Icelandic Ministry of Education, Science and Culture on online distance education (DE) programmes, particularly in the three upper secondary schools in Iceland which are the main DE providers. Online distance education has been developing as an alternative form for learning at the school level in Iceland since the early nineties. One question concerning this development is how it may be contributing to social justice. We look behind the reasons why learners choose to take advantage of this option and explore how they estimate the value of having this opportunity for alternative school access. In a broader context we are interested in the question of whether the advent of online learning has enhanced equity in access to schools in Iceland.

Background

For the last decades participation in online learning has increased among both adults and younger students. In the USA two Sloan-C reports give an overview of the extent and development of online and blended learning occurring in K-12 schools (Picciano & Seaman, 2007, 2009). Results from 2007-2008 showed ca. 10% increase in the online enrollment at this school level since 2005-2006. More than a million students were registered for at least one online course, and ca. three quarters of all K-12 school districts offered an online or blended course. The online learning option was serving needs of different types of students, who were taking online courses from different types of providers. The authors reported that online learning appeared to be a lifeline for small rural school districts.

Also in Iceland online distance learning has developed fast. With the advent of the Internet in the early nineties online distance learning became a feasible option for enabling students in rural districts access to formal education. The Iceland University of Education in Reykjavík was the first to offer distance education for teachers in sparsely populated districts in 1993, taking advantage

of the Internet however also including campus-based sessions (Jóhannsdóttir, 2010). One year later in 1994 Akureyri Comprehensive College (VMA), located in rural North Iceland, became a pioneer in offering online courses at the upper secondary level. All teaching was done via email with now face-to-face sessions. The programme was initiated to make access to formal education at the upper secondary level available for people in sparsely populated districts and to enhance equity in access to upper secondary education in Iceland (Ágústson, 1999; Matthíasdóttir & Hermannsson, 2003).VMA was for about eight years the largest provider of DE at the secondary level in Iceland with several hundred DE students studying online. Women and people living close to the school formed the majority of the student group, however students living all around Iceland and abroad were enrolled (Matthíasdóttir & Hermannsson, 2003).

Increasing demand for online distance learning made upper secondary schools in Reykjavík (the capital) soon follow suit, and in the first decade of the twenty-first century The Comprehensive College/Comprehensive Secondary School at Ármúli (FÁ) became the largest DE provider at the upper secondary level. A few years later The Commercial College of Iceland (VÍ) became the second largest provider. At that time VMA was in third place counting the number of DE students. Five more upper secondary schools offered distance education, however graduating many fewer students (Jóhannesdóttir, 2010). Planning and educational policy from the Ministry of Education, Science and Culture in 2001 and 2005 also called for an increase in distributed learning and that students would be able to study when it suited them regardless of residence/location[12]. These schools have offered most of their traditional courses online with the same requirement and credits. They have attracted a different group of students that choose online learning for various reasons. Interviews with 53 students in upper secondary schools in Iceland in 2007 indicated that many were choosing distance courses because they thought it was convenient rather than for reasons of necessity (Jakobsdóttir, 2008). After the financial crash in 2008 heavy cuts have been made in the public sector which hit upper secondary schools hard, especially concerning DE provision. Also, the quality of DE has been under scrutiny. In spring of 2010 the Ministry of Education, Science of Culture initiated an evaluation study of DE at the upper secondary level. An evaluation report was published in Icelandic later that year (Jakobsdóttir & Jóhannsdóttir, 2010). In this paper we will describe part of the results from that evaluation, describe the student group enrolled in the spring term 2010 and focus on the needs for distance learning for different groups and how the DE program appears to be accommodating those needs.

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Method

Design

This was an evaluation study with questions to be addressed provided by the Ministry of Education. Data were gathered with interviews and surveys from administrators, teachers and students and 36 course webs were analysed. However the focus here is on the student data gathered with surveys.

Participants

There are about 31-33 schools in the country at the upper secondary (high school/junior college) level with grades 11 to 14. "Regular" students are in the age range 16-20; in some schools various programs are available and more used by adult learners. In several schools younger students from middle school/the lower secondary school level, which is compulsory, have been able to take advance credits via distance. For the last few years until the financial crash this was the fastest growing DE student group in Iceland (Jakobsdóttir, 2008). Three schools were selected: FÁ and VÍ in the capital Reykajvík in Southwestern Iceland and VMA in Akureyri in Northern Iceland. These schools were chosen because in 2010 they were by far the largest distance education providers at this school level in Iceland. About three quarters of all DE students at that school level were registered there (Jóhannesdóttir, 2010). The total number of DE students registered in those schools was ca. 3223, 66% female and 34% male. For each of the schools the numbers were the following:

- 1816 students in FÁ (70% female, 30% male; mean age 25.1);
- 916 students in VÍ (61% female, 39% male; mean age 23.6); and
- 491 students in VMA (63% female, 37% male; mean age 29.1.

All of them were invited to participate in the survey and 991 did. The participation rate was 31% overall, 29% in FÁ (518 responses), 30% in VÍ (271) but 41% (202) in VMA. There was a significant difference in age distribution of students by school. In VMA in the spring 2010 there were no students in the age range 15 years and younger but 9% in FÁ and 7% in VMA. The youngest age group was from the lower secondary (compulsory) school level. Due to financial cuts for the upper secondary school level VMA had been forced to close their access to that age group whereas FÁ and VÍ had managed to keep it open at least for a while. In VÍ there was a relatively high % of students in the 16-20 year age range (51%) but only about one third of the participants in the other two schools were in that age range. Finally, relatively many in VMA were 31 or older (39%) vs. 24% in FÁ but only 14% in VÍ.

Even if the participation rate was rather low, the age and gender distribution mirrors fairly well the DE student groups in the schools. Figure 1 shows the age distribution in the student group and among the participants in the study.
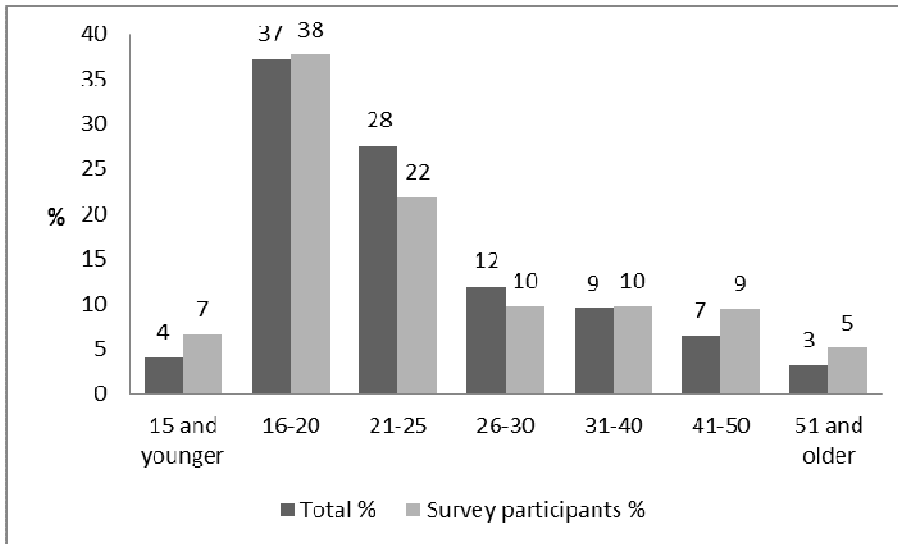
Figure 1. Age distribution for the total number of DE students (N=3223) vs. for the survey participants (N= 991).

The Ratio's of females:males among the DE students varied a bit by school but was overall 34% male, 66% female in the three schools but 26% male, 74% female for the survey participants.

The questionnaire

There were 46 questions in five sections on the questionnaire which were designed by the authors of this article. It was created using K2 the University og Iceland information/survey system[13]. Questions were asked about the general background of the participants, their study background; their experience of taking DE courses; evaluation of the DE courses; and in the last section students made comparisons between the DE program/courses and regular day-school.

Procedure

The DE program managers provided a list of the registered DE students and sent an introduction letter. The survey system was employed to email an invitation to participate to those students in mid April. Access to the survey was keyword protected but answers were collected anonymously. One reminder was sent out before the survey was closed late April.

Results

Courses and Study

Overall students were on average registered for six to seven courses in the spring semester 2010 when both day-school and DE courses were counted (mean=6.6, N=780). However, they were usually only taking one to three DE

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https://ugla.hi.is/K2/eydublad.php?sid=135&fid=3929[13] A copy available in Icelandic:

courses (86% of the respondents, 42% in one DE course, 27% in two and 16% in three. A small percentage were taking 4, 5 or 6 courses or more).

The mean number of DE credits overall was 6.4 whereas the mean for the total number of credits was 13.9. It should be noted that a full credit load in the day school would be 17-18 credits.

It was common that students were registered at another school for a regular (day school) program or taking distance courses elsewhere. See Table 1 which shows that about a quarter of the respondents in all of the schools were in a dayschool program elsewhere and an additional 8% taking DE courses elsewhere, but only 10% were taking courses in a dayschool program in the same school.

Table 1. Distribution of students' registration by school (%) in additional type of study than the DE course(s)

Additional type of study than the DE course(s)	FÁ %	VÍ %	VMA %	Total %
DE course(s) at a different upper secondary school	8	9	8	8
Dayschool in the same upper secondary school	7	8	18	10
Dayschool in a different upper secondary school	25	27	23	25
University	1,2	2,2	0,5	1,3
Lower secondary/Middle school	13	10	0	10

Figure 2 shows how 431 respondents were distributed from all the upper secondary schools in the country taking advantage of the online programs run by the three main providers. In addition, the students from the lower secondary level (15 or younger) named 39 Icelandic schools (from a total of 174 schools).
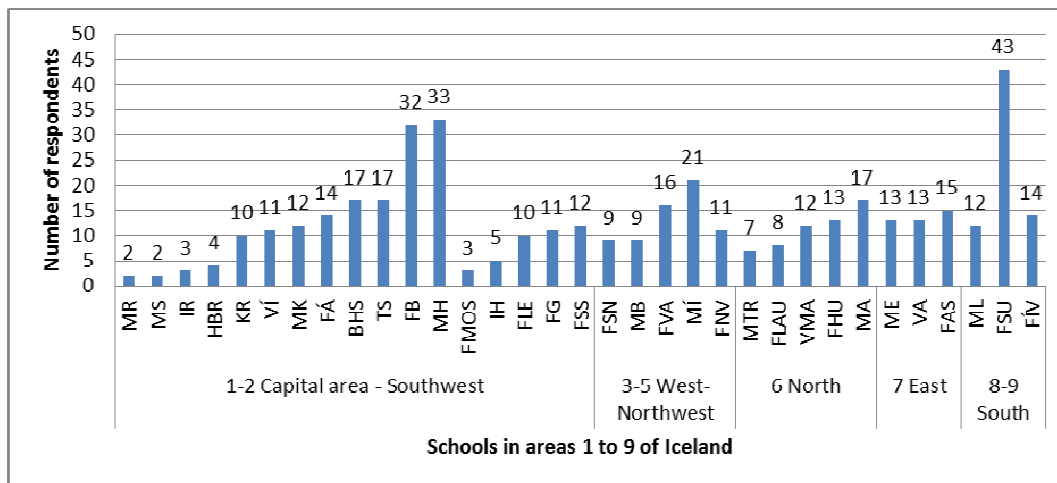

Figure 2. Number of DE students in FÁ, VÍ, and VMA reporting additional study (dayschool or via distance) in a different school, arranged by school and area in Iceland.

Students' residence

Overall about 6% of the participants lived abroad (difference not significant between schools). However, the majority of students in the two schools located in Reykjavík lived in or very close to the capital (59 and 57% respectively) whereas only 10% of the DE students in VMA the Northern school had students from the capital area. On the other hand, 52% of the VMA students lived in or close to Akureyri and an additional 17% lived in the adjacent areas to the west and east of Akureyri. It was clear that even if the programs were entirely provided online students tended to go to a school located closer geographically.

Employment

About 35% of the participants did not have a paid job with their study. But about a quarter reported working 1-20 hours per week on average, another quarter 21-40 hours and 16% 41 hours or more. There were differences by age and gender. A higher rate of the males worked very much while studying, 25% of the men but 12% of the women reported 41 hours or more. However, a similar % of males and females did not report a paid job (34% of the females and 37% of the males. Differences were much more pronounced by age. Few of the youngest reported a paid job. About 72% of respondents 15 or younger did not report a paid job and an additional 25% worked 1-10 hours per week. About 37-38% of respondents between16-30 did not have a paid job but only 12-14% of respondents 41 or older. On the other hand 64-65% of those 41 or older worked at least 31 hours per week, 58% in the age group 31-40, 28% in the age group 21-30, and 13% of 16-20 year olds.

Need and value vs convenience and comfort

The majority of the respondents (61%) felt they had a high or very high need for their DE study, the oldest (51+) and youngest age groups (15 or younger) felt less need than the middle age groups. In addition, about 70% of the students reported that the DE study had a high or very high practical value. Furthermore, about 52% reported they much or very much enjoyed their studies. Female respondents were more likely to value their DE studies higher than did the males in terms of practical value, educational value and enjoyment.

Most of the students (72%) felt that it suited them well or very well to study via distance and an additional 22% thought it was OK. Only 5% thought it suited them badly or very badly (57 individuals). Most of those were 25 or younger, the majority (33 individuals) at the traditional high school/junior college age (16-20). Results were similar regarding comfort/convenience.

Reasons for study

Students could choose from 17 reasons for studying at a distance. On average each student chose 3 to 4 reasons (3.6). The four most popular were: That they needed the course credits (chosen by 43%), they liked the flexibility in time (41%), it was convenient (38%), and it was possible to work while studying

(37%). The next two reasons (chosen by about a third of the respondents) were: flexibility in location (33%) and an interest in adding to their knowledge (32%). Some of the reasons can be very important for certain groups even if they are not selected by many, these include physical reasons or illness (by 4% overall) and social reasons/problems (by 10% overall).

There was a significant difference by age for almost all of the reasons. One can see the different needs and interests of the age groups reflected in the main reasons for DE study (chosen by 30% or more in each group). See Table 2.

Table 2. Main reasons given for choosing to study via distance (N=991).

Main reasons	Age groups % choosing each reason (in parenthesis for the most popular reasons order of popularity)					
	-15 (n=95)	16-20 (n=340)	21-25 (n=216)	26-40 (n=191)	41-50 (n=94)	51+ (n=50)
Advance credits – can get ahead	70 (1.)	31 (4.)	25	14	4	6
Need the credits	4	44 (1.)	56 (1.)	52 (3.)	39 (5.)	28
Flexibility in time	18	35 (2-3)	48 (2.)	55 (2.)	41 (3.)	46 (4.)
Convenient	27	35 (2-3)	41 (3.)	43 (4-5)	40 (4.)	50 (3.)
Can work with study	2	22	40 (4.)	57 (1.)	66 (1.)	66 (2.)
Flexibility in location	3	28	38 (5.)	43 (4-5)	35 (6.)	32 (5.)
Add knowledge	29	19	24	40 (6.)	57 (2.)	80 (1.)
Study at home w family/children	0	6	22	37 (7.)	16	4
Number of main reasons chosen by 30% or higher ratio	1	4	5	7	6	5

The youngest group (15 or younger) has mostly one reason for signing up for DE courses. These are often excellent students who have done well, e.g. in English or Math, are still studying at the lower primary level but take advance credits from the high school/junior college so they can perhaps go more quickly through that school level later on. Many in this group (29%) compared to the 16-25 year olds say they want to add to their knowledge. School administrators typically like this group of DE students because of low drop-out rates and because they tend to be good students. For the next two groups (16-20; 21-25) the picture is more complex and needs more varied but their main reason is that they need credits (for their diploma). These would include students who had failed a course in their day school, could not fit the course into their schedule or the course was not available at their school, at least not in the semester they needed it. The age group 21-25 tends to need the credits even more urgently – having been delayed in finishing their diploma and perhaps trying to catch up. Convenience and flexibility in time is high on their list and a reason to be able to work with their study has become prominent. That reason is the main reason for the next two age groups: 57% of respondents 26-40 chose it and 66% of the people 41-50. However, these age groups have very varied reasons for enrolling in the DE programs, especially the 26-40 years old who need a lot of flexibility while juggling work, study and family trying to get necessary credits. A prominent reason with that age group is being able to stay home with family/children as this is the main child bearing age. Finally, the oldest age group appeared thirstier for knowledge that the others. About 80% of that group lists as a reason for their DE studies that they want to add to their knowledge.

Significant gender differences appeared in fewer reasons than age differences. However, there was a highly significant difference in the reason for being at home with children, family). Overall 19% of the female respondents and 8% of the males identified this reason. In the age group 26-30 48% of the women and 17% of the men identified that reason and 41% of the women and 22% of the men in the 31-40 age range. Other reasons with significant gender difference were that it was convenient to study via distance (40% of the females, 33% of the males), flexibility in location (18% of females vs. 12% of males) and in social reasons/problems (12% of the females, 5% of the males identified that reason).

Summary and considerations

A main question of this conference is: What is the unique contribution of open, distance and e-learning (ODEL) to social justice? In the results presented here the case seems fairly clear. Students with more varied background than before can choose from far higher number of learning options than would have otherwise been possible and ODEL is definitely making a substantial contribution in increasing social justice.

- Students in the regular dayschool can organize their studies to get ahead, catch up or make up for lost time due to various reasons.
- The possibility of taking individual courses online can help students to graduate and thereby lower the drop-out rate which has been very high in Iceland at the upper secondary level in dayschool. The drop-out rate for the DE courses for the schools involved in this study FÁ, VÍ and VMA was reported to be 24-40% (Jakobsdóttir & Jóhannsdóttir, 2010) so is high as is common in distance education. However, recently published data (Statistics Iceland, 2011) indicated that less than half (43-49% depending on the program) of all students at the upper secondary level in Iceland registered as new day school students in 2002 had completed their study/diploma four years later.
- Students who have dropped-out or never started at this school level can pick up where they left off and enter the school system again even if they have increased responsibility as adults regarding family and work. Older adults have used the opportunity to acquire knowledge in different areas.
- People have access to school regardless of location or circumstances including physical or social problems or illness and can have more control of their own studies.

However, ODEL is not a magic solution for everyone. Delivery of information and communication has been mainly text-based via first e-mail and then through learning management systems in the schools involved. Much can be done to facilitate communication employing social media and increase variety in learning materials using multimedia. For some learners, e.g. with dyslexia the heavily text-based environment is probably a big problem. Also, there is a growing number of immigrants in Iceland and the education system in Iceland does not accommodate very well needs of learners with Icelandic as a second language. Perhaps many students of foreign origin register for online classes in their own country and we saw that in this study that the reverse was true. The online study option made Icelandic schools available for Icelanders located for

one reason or another abroad so another contribution of ODEL is the possibility to cross borders.

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Internationalisation of Higher Education: assessing the OER promise

Madhulika Kaushik
Higher Education Specialist, Commonwealth of Learning
Vancouver, Canada
mkaushik@col.org

Abstract

Higher education in most parts of the world today is faced with burgeoning demand, diminishing resources and the struggle to remain relevant in a world confronted with recession and economic uncertainty. Globalisation is seen to affect almost all aspects of teaching and learning. ICT in Education is bringing in unlimited opportunities for interactivity and access to knowledge resources, resulting in both learner empowerment and teacher facilitation. In the world of Open and Distance learning where good quality content and effective delivery have long been the determinants of Institutional excellence, the emerging promise of open educational resources (OER) has created a new opportunity for global sourcing of content in the search for best possible content .The entire movement of OER, has perhaps contributed more to supply Internationlisation in higher education than any other comparable development in recent times. This paper discusses the exciting promise created by OER in the domain of higher education, the opportunities and limitations as well as the barriers in the usage of OER in mainstream higher education. The paper does not cover the sustainability debate in the OER movement as the variety of support models in use are yet to offer enough evidence of the success or otherwise in the context of long term sustainability.

Introduction

The world of higher education globally has changed, perhaps irreversibly, on account of developments like globalisation, opportunities for greater access to good quality learning made possible through dynamic developments in ICT, strengthening linkages between the demands of the knowledge economies and the competitive advantage of nations, resulting in a burgeoning demand for higher education and all these leading to a certain massification of Higher Education.

These changes have created new imperatives for both providers and learners. The explosion in growth of Higher Education in the last decade has created major implications for managing Institutional quality and effectiveness. As the world of learning evolves and learners as consumers become more focused on their learning needs and support requirements, and more discerning in the face of increasing numbers of choices now available to them, providers must develop the capacity to reflect, unlearn and adapt in their bid to remain continually relevant both to their learner populations and to society at large. The development of high quality learning material and content in Higher Education

(HE) has remained a critical requirement in the pursuit of academic excellence by Institutions. The entire movement of towards Open Educational Resources (OER), in particular, by Institutions and individuals with established brand equity, has understandably created excitement in the world of HE, especially since the overt promise translates to shorter developmental cycles and lighter effort in content creation. At the same time, OER offer the possibility of far greater enrichment in content as, at least theoretically, there is the opportunity of borrowing from the best, and from a variety of sources across national borders and then adapting the content to suit learner requirements at the local level.

The terms OER, OpenCourseware, and open E content have been interchangeably used in published literature on OER and are taken to mean the open provision of content that can be used for educational purposes, primarily in a non-commercial context.

The Forum on the Impact of Open Courseware for Higher Education Institutions in Developing Countries coined the term 'Open Educational Resources', which was defined as:

> "The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for noncommercial purposes. (UNESCO, 2002)

The William and Flora Hewlett Foundation which has acted as champion of OER since 2001, defines OER as: "teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials or techniques used to support access to knowledge". (William and Flora Hewlett Foundation, 2008)

Later, confirming the enlarged scope of OERs from mere materials to encompass supporting technologies and the possible approaches to assessment and accreditation, the Cape Town declaration adopted the more expanded definition of the term 'Open' to qualify the movement towards openness in the OER journey.

> "…open education is not limited to just open educational resources. It also draws upon open technologies that facilitate collaborative, flexible learning and the open sharing of teaching practices that empower educators to benefit from the best ideas of their colleagues. It may also grow to include new approaches to assessment, accreditation and collaborative learning" (Cape Town Open Education Declaration, 2008).

The provision and availability of open courseware with supporting techniques and tools has, therefore, opened up exciting prospects for enriching curricular content, especially for resource poor countries where access to these resources

could dramatically alter the provision that the countries could offer to their aspirants in HE.

OER in Higher Education - the promise and prospects

In a world which is becoming rapidly globalized, OER offer the exciting possibility of enabling supply-side Internationalisation by allowing institutions to source their content from anywhere in the world, theoretically, where ever they can find the best degree of fit between their requirements and the type of content available. Again, since the better designed OER are available as modular and even granular content, it is increasingly possible for institutions to build balanced and relevant curricula by systematically selecting and assembling components from a wide variety of sources, to suit their own needs, of course by following the requisite attribution requirements.

The movement towards OER can introduce several potential benefits to the world of HE, chief among which is the possibility of a high degree of enrichment of content on account of the fact that the content provided by the institution is likely to be no longer limited to the intellectual and academic resources of the institution itself and can be sourced without the limitations of geography, copyright restrictions and financial capacity, the guiding factor being fitness for purpose and desired quality of content.

The other benefits which underline the promise of OER include

- Efficient utilization of intellectual and Financial Resources, and elimination of needless duplication of intellectual effort by different institutions.
- Significant cost savings and shortening of the development cycles for course offerings.
- Expansion and creation of equal opportunity for access to educational resources, at least among the digitally connected
- Greater possibilities for collaboration in the joint development of content and subsequent sharing of the same
- Sharing of knowledge from a variety of acclaimed sources may be supportive of overall academic excellence and improved quality of content.
- Provider institutions gain significantly in their respective brand equity on account of widespread usage of their resources by institutions across the world.
- As the costs and the time associated with putting in place high quality curricula diminish on account of OER usage, the feasibility of continual revision of courses to maintain their relevance in a rapidly changing world order, and the world of work becomes more realizable.
- In a very significant way, for the producers of OER, the movement addresses the inefficiencies of the commercial distribution of academic publications. Available statistics reveal that only 27% of research papers get published and only 5% of the research shared.(Kansa and Ashley,2005) As the value of research and innovation shows a multiplier effect when shared, openness and shareability through OER is the precursor to the progression in research knowledge across the community of researchers.

- Open Publication for authors also enables the widest possible access to audiences worldwide, resulting in far higher incidence of citation than physical publication.
- At the user end, OER offer the possibility of tremendous enrichment of learning resources, especially for adult learners, working professionals and those pursuing lifelong learning.

Powered as it is by the spirit of making knowledge and education available open to all those who need it, and may not be able to afford it, the OER movement has created the impetus for collaborative development of learning content , enabling institutions to pool academic and intellectual resources towards developing sizeable resources with impressive economies of scale. The African OER initiative, the Indian Higher Education policy-led developments 'National project on technology supported Learning and Sakshaat, and the COL initiative on Virtual University of Small States(VUSSC) are examples of successful collaborative efforts to bring institutional resources together for the public common good which have resulted in creating access to an impressive scale and variety of educational content.

As with any emerging movement, the undeniable promise of OER has excited many in HE. A number of Institutions and educators have embraced the creation and open offer to strengthen the supply-side component of the OER movement. Reuse and repurposing, however, has yet to provide evidence of large scale adoption by institutions. Initial studies and inputs from potential users indicate some constraints that have inhibited the mainstreaming of OERs at the user end of the equation.

Barriers that constrain the use of OERs in Higher Education

While the OER movement is a testimony to the commitment of Higher Education Institutions (HEIs) and practitioners towards widening access to their resources and working together to create a more inclusive and better quality HE system, the data available on how well the community of learners has been served by open courseware remains largely inconclusive.

An analysis of the possible roadblocks in mainstreaming the use of OERs in HE provided interesting insights in a recent and unpublished study in Asia on the reuse and repurposing of OER. Some of these include the following:

- The infrastructure from which the digital common goods (essentially public goods) like OER derive, represents decentralized non market-like institutions. As a consequence, OER seem to lack a "customer orientation" if one looks at these from a user's motivation perspective.
- Independent learners, even if they are mature adults, do not have sufficient knowledge about alternative educational resources and little expertise in evaluating the quality of alternatives that they are confronted with. The problem may lie in the dispersedness of OER as well as contextualization.
- In HEIs, usage is also limited on account of the fact that teachers and users have a low awareness of the benefits of OER and those who are

aware feel that the time and effort needed to repurpose and localize content are fairly intensive, limiting the attractiveness of the OER option. Those who may be interested in contributing their own teaching materials are often not sure of the issues related to third party copyright in their material and how to manage it. Again from a policy standpoint, institutions have not framed policies to accord academic recognition to the development of OER by teaching staff.

- Often reuse of OER based content may require use of different pedagogy and new technology in which the teachers/institutions may not readily invest.

- A large proportion of HEIs are not geared to high quality digital production and often the repurposed product may turn out to be poor quality, raising questions on the quality perception of OER usage itself.

- From the user perspective, the greatest barrier is fitness for purpose on account of contextualization. OER are produced by Institutions and groups in contexts that are relevant to their own environment and settings and may have been developed with reference to a certain set of learning needs. The users belonging to diverse contexts may find it difficult to locate OER that have the desired degree of fit between their learner requirements and the available content.

- From the consumer's perspectives and incorporation of values that could aid consumer search, selection and usage, OER have issues related to production value, for example, in packaging, branding and visualization. Consumers are also unclear about who is accountable for the quality assurance of OER content, so apart from brand equity and the institutional standing of the provider institution, there is very little information by way of quality indicators to help consumers make an informed choice. In general people remain suspicious about the quality of free resources (Wiley & Gurrell) and seek reassurance about how the materials have been peer-reviewed. However the desire for a formal peer-review system is not universally supported in the OER community though a whole range of QA processes are seen to be adapted by different providers

- Quality issues also arise on account of lack of coordination and stylistic harmonization between authors. Metadata for retrieval are also not sometimes systematically organized, creating problems during repurposing.

- At the Institutional level, especially in the Asian context, there simply hasn't been an open institution-wide dialogue, to debate on the widespread adoption or otherwise, of OER. Consequently the reuse and adoption has remained confined to the conclaves of those who are more aware or simply more open to newer developments

- From a strategy perspective, some HEIs may feel that their content is a source of competitive strength and may not want a dilution by putting it up for open access.

- In terms of design and presentation, not enough evidence of best practice models has evolved in OER development. There is little documentation of good and bad practice and very little critical analysis to guide adoption by potential user institutions

- Culturally while institutions may have become comfortable with virtual learning environments like Moodle, their willingness to create completely open access to their academic output and resources is still not discernible.
- Open Universities with very vast repositories of content could be ideal providers and users of OER. On the supply side, however, since the content is a product of course teams, individual authors do not 'own' courses and thus cannot give the same away to the community. Consortia agreements on the other hand are often difficult to negotiate.
- Technical issues like lack of broadband access and economic issues like lack of resources to invest in the required software and hardware though seemingly simple, can be very real barriers inhibiting reuse of OER.
- Again from the user's perspective, partly open OER do not really help especially if the materials are intended for adoption as courseware for academic programmes in ODL institutions to help shorten development cycles and improve cost and time efficiencies.

Towards Mainstreaming OER

Despite the vast potential of OER, barriers, technical, perceptual and policy-related, seem to inhibit the utilization and reuse of OERs by HEIs. Individual learners may have enhanced access to OER for their own education and learning but the repurposing and use of OER as components of certifiable academic programmes is still limited to a few institutions.

Open and Distance Learning Institutions in Higher Education have been at the forefront in taking advantage of emerging technologies in education to improve access, cost efficiencies and quality of teaching learning processes. As a logical extension of this tendency, it would have been expected that open universities specially in the developing world would become prime users of OER, where a paucity of resources creates a constant challenge for the development of quality content, and the long development cycles for courses and programmes have implications for the efficiency of the system. While there are instances of the reuse of OER by some programmes in some open universities, they are far from becoming a source of choice for the majority of programmes in most universities. Drawing upon the barriers discussed in the earlier paragraphs, some of the following steps would encourage the mainstreaming of OER in higher education, and especially for open and Distance Learning Institutions

- Creating large scale awareness: It sometimes seems ironic, that in the information and communication age that we live in, awareness of the potential and usage of OER is not very widespread among a majority of academics in HEIs, even in ODL institutions. If policymakers and practitioners in HEIs are committed to the goal of achieving economies of scale and operations by taking advantage of the OER movement, then it is imperative that large scale of awareness of the potential and reuse of OER be created, among open university academics through institution-wide dialogue, workshops and other means of institutional communication. Awareness related to the various forms of copyright issues accompanying OER also needs to be created to address some of the perceptual barriers discussed earlier.

- Capacity building: Capacity to develop and build a critical mass of OER is a vital requirement of the mainstreaming of their usage. Fortunately, training possibilities both online and face-to-face are now available and supported both technically and financially, which should be taken advantage of by institutions and individuals seeking to adopt OER meaningfully.
- Understanding user-side motivations: Creating and making available high quality open education resources is one part of the equation related to the emerging internationalization of Higher education through the OER movement .The other part is to do with understanding user motivations in adopting OER both by institutional and individual consumers. At this stage in the OER movement, there simply isn't enough research evidence to help understand the behavior of educational consumers in terms of search identification, acquisition and usage of OER. As in the case of diffusion of any innovation, there is a need to create a body of knowledge, through research, to have an idea about the adoption behavior and user motivations related to OER not only to ensure a better degree of fit between user needs and the educational resources but also to guide practice in the development and availability of the same.
- Developing viable models of sustainability and quality assurance: As has been mentioned earlier in the paper, the Open Courseware development is not a revenue stream for education institutions. While the availability is good news for user institutions, those engaged in production and provision of open courseware need to find mechanisms to financially support long-term sustainability either by way of research grants or long-term project funding. One model used in India, is by way of government funding of large scale collaborative effort by major institutions to create a common pool of Highly demanded Technical and professional educational resources .Other examples include that of VUSCC and the projects like those supported by Flora Hewlett Foundation but long term solutions beyond project funding cycles need to be looked at. Similarly, the lack of quality assurance or best practice models has been seen to inhibit OER reuse. Some exercise in identifying best practices or benchmarking of quality material may aid search and identification by users.

The promise and the potential of the OER in improving access to quality higher education, across the world, without the barriers of geographical boundaries and the irksome limitations of IPR are indeed undeniable. OER can contribute to the creation of genuinely inclusive knowledge societies and lead to Globalization of higher education in the true sense of being able to seek resources and find markets anywhere across the globe. To realize the full potential of the movement both time and sustained effort are required before OER become part of the higher education mainstream.

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Transnational education and the dilemma of Quality Assurance

Bruce King
University of South Australia
Bruce.king@unisa.edu.au

Abstract

Transnational education is at a fascinating point. On the one hand, over two decades there has been progress towards an increasingly professional approach to the delivery of programs offshore. This has essentially been about the exercise of greater control over transnational engagement. On the other, the nature of pedagogy in higher education has been transformed by technological developments which are moving inexorably in the direction of greater flexibility. This freedom from constraint will become the demand of all students, including those studying in international programs. The fundamental disjunction between these two trends constitutes the dilemma for quality assurance in transnational education. How can standards be imposed and tested for in highly flexible educational delivery across national and cultural boundaries?

This paper reflects on how this situation has arisen, interpreting the trends as diametrically opposed movement on a continuum from private entrepreneurship to public control. It acknowledges that the discussion pushes ahead of much current practice in transnational education but takes the view that anticipating problems is better than reacting to their occurrence. It considers what options there might be for institutions committed to delivering quality transnational programs by posing questions that need to be addressed.

The paper reflects an Australian perspective, although the trends and issues discussed have wider applicability in the delivery of cross-border higher education.

Introduction

This paper seeks to depict and consider the implications of a tension emerging in transnational education (TNE) between increasing professionalism over delivery and concern for quality assurance on the one hand and, on the other, a movement towards greater flexibility and freedom from constraint in the delivery of higher education. It presents an Australian perspective – although the issues and trends discussed have wider applicability – reflecting the author's direct experience but legitimated in part by the disproportionately large involvement in TNE of that country's universities[14].

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[14] "Of the countries that do publish data on offshore enrolments, the most recent available figures show that UK institutions taught 388,135 students offshore (in the academic year 2008-09), Australian enrolled 125,987 (2008) and New Zealand enrolled 1,385 (2004) (Banks et al. 2010; Catherwood & Taylor 2005: HESA 2010)." (McBurnie & Ziguras, 2011: 19)

The two trends might usefully be thought of as diametrically opposed movement on a continuum from private entrepreneurship to public control. Concern for quality is represented as a progression towards control; teaching and learning arrangements are moving in the opposite direction towards individual freedom of action. Shifts in approaches to quality control are considered first, followed by changes to educational delivery. Finally, the implications of the tension between the two for institutions committed to quality TNE are considered.

Quality control and TNE

In just over two decades, the Australian Government has moved through three quite distinct approaches to the control of quality of higher education provision. For years, there was a form of quality control exercised through funding powers. As the primary source of university income, government was able to regulate places and programs by the allocation, or potential withdrawal, of funding. Through extensive reporting arrangements, it was possible for Commonwealth officials to exercise considerable oversight of such indicators of quality as recruitment, retention, progress and performance rates. International involvement was primarily construed as aid, following on from foundations laid with the Colombo Plan. (DFAT, 2005).

This changed when, in the late 1980s, the Government permitted recruitment of international fee-paying students, provided fees were set at a level to provide full cost recovery. (Dawkins, 1988). This had two related consequences: first, universities pursued international recruitment as an alternative revenue source, and second, the government lost the influence – and to some extent control over quality – that followed from its role as sole provider of funding. Ultimately, events led the Government to move – a decade later - to the second phase in quality control, the establishment of the Australian Universities Quality Agency.

Over the same period, universities were energetically pursuing international recruitment, driven by a reduction in public funding particularly under the conservative Howard Government (Gallagher, 2000: 5.) The income from fee-paying international students increased by 145% from 1992 to 1999 (Gallagher, 2005: 13).

Some DE institutions, explored a transnational alternative to on-campus recruitment whereby students from less wealthy backgrounds could enrol in Australian programs without leaving their home countries. This avoided the financial burden of relocation and living expenses overseas. Partnering with local institutions overseas to provide services at local cost levels reduced prices further and allowed students a degree of local and contextualised support. This form of international recruitment saw rapid growth and peaked in 2008 with 93,596 international students enrolled in Australian universities but studying offshore, i.e. nearly 32% of all higher education international enrolments. (AEI, 2010).

Surprisingly, this remarkable growth was achieved as the result of initially amateurish and uncoordinated efforts. Sometimes it resulted from contacts made by individual academics with overseas colleagues but partnerships were

also pursued by enthusiastic, self-identifying entrepreneurs. The arrangements they put in place – which sometimes failed to gain the support of the discipline based academics whose labour was being marketed - were characterised by:

- being more reflective of the negotiating parties' concerns than university policy;
- demanding of academic time, with frequent travel to the country concerned;
- poorly costed but highly remunerative to those involved; and
- essentially unscaleable approaches to administration, teaching and assessment. (King, 2004:78)

Some institutions also failed to provide an adequate policy framework, appropriate project management expertise (including costing), adequate market research, clear institutional priorities for international delivery, clarity about the reward structures and support for the entrepreneurs, any understanding of the need for prompt decision-taking, or an understanding of the commercial context involved in providing educational services. So quality control was that exercised through the personal judgment of the individuals involved. The priority was on securing partnership agreements offshore. Program and delivery quality could be considered later.

But things changed, reflecting concerns about quality, at national and institutional level in both provider and recipient countries.[15]

In Australia, this resulted from the way TNE delivery from Australia developed and but also reflected other aspects of international education. Some private English-language schools, had engaged in activities (including going bankrupt) that were damaging Australia's reputation. (TDA, 2003:9). Legislation in 2000 required providers to be registered but it did not cover TNE because of the difficulties of legislating for practices occurring offshore. (Woodhouse, 2011: 36-37).

Universities had attempted self-regulation and in 1990 established a code of practice for teaching international students but it was another five years before there was a similar code for TNE. (Woodhouse, 2011: 36-37).

Meanwhile, Australian institutions vigorously pursued partnerships overseas. Singapore, Hong Kong, and Malaysia, (followed later by China and Vietnam) were the early consumers of TNE and the scale of foreign involvements provoked their governments to regulate provider access and quality of programs.

McBurnie and Ziguras (2011: 23) comment:

"…there has been over the past two decades a trend for countries to open their markets to mobile foreign providers, while making regulatory frameworks more comprehensive and quality assurance requirements increasingly demanding."

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[15] International developments (e.g. the General Agreement on Trade in Services) will not be considered here. They established an ethos within which governments tend to operate[15] , but rarely impinged on a nation's determination to regulate transnational provision of education (Ziguras & McBurnie, 2008:11).

The Australian Government introduced a second phase in its approach to quality assurance with the establishment of the Australian Universities Quality Agency (AUQA) which, since 2001, has conducted audits of all Australian universities. Early concerns about transnational activity led AUQA to incorporate this within its reviews. Its mandate was to determine fitness for purpose rather than insist on compliance but its findings were taken seriously – and had consequences for reputation - through the publication of its institutional reports. In relation to TNE, AUQA had raised issues relating to contracts, quality assurance systems, differences between home and offshore delivery, and concerns expressed by governments in key market countries. (Clayton, 2011:46-7).

In 2005, the Government launched "A National Quality Strategy for Australian Transnational Education and Training: A Discussion Paper" (DEST, 2005). This had an impact on all Australian TNE providers encouraging greater maturity towards quality assurance offshore. (Murray, 2011:83). Operations became increasingly professional, with significant resources directed to securing market intelligence, conducting due diligence on potential partners, and balancing recruitment between countries to limit exposure to local difficulties and minimise risk. Some, like the University of South Australia, determined through detailed analysis that the return on investment warranted a reduction in the number of their partnerships. (Murray, 2011: 86-7; Banks, et. al, 2011).

However, the third phase, the most dramatic intervention by Government, has yet to be fully implemented. In 2008, the Bradley Review of Australian universities recommended the establishment of a new regulatory authority, the Tertiary Education Quality and Standards Agency (TEQSA) which will register and audit institutions against certain minimum standards relating to governance and management, compliance with qualifications protocols, information provided to students, teaching and learning, and research. (Bradley, 2008; Clayton, 2011; DEEWR, 2011).

TEQSA will be responsible, inter alia, for implementation of "a transparent process for assuring the quality of learning outcomes" in all teaching contexts, including offshore. (Bradley, 2008: Recommendation 19). These will be expressed as core learning outcomes rather than measures of input and process. (Australian Learning & Teaching Council, 2010:1). Remarkably, this unprecedented level of public control over educational delivery standards has been broadly supported by Australian higher education providers, both public and private. (Bradley, 2011).

Changes to educational delivery and TNE

Distance education played a significant role in the movement of newer Australian universities to TNE for at least the following reasons:

1. TNE was seen as a marketing edge for institutions with distance delivery experience.

2. Cost savings would attract those who could not afford to attend on-campus.
3. Services provided at local prices meant further savings for students.
4. Study resources maintained the integrity of Australian programs but allowed local tutoring.
5. TNE emerged as an option when Australian distance education was at its most influential, with the recent establishment by Government of National Distance Education Centres with a mandate to provide delivery services to other Australian institutions. (King, 1999: 267-269).

What distinguished distance delivery at the time (post 1988) was that individual subjects were constrained by a high degree of central control within institutions? Typically, study materials could not be produced outside the auspices of a central distance education unit, there were templates that effectively specified elements of the materials provided and instructional designers who assured materials reflected a systematic approach to supporting learning. Editors and graphic designers vetted materials for accuracy and provided a high level of presentation. Learner support and administration was often centrally provided. Distance education resources, because of their tangible nature and public dissemination were seen as having the potential to reflect – well or poorly - on institutional reputation. In short, while academic activity was at one level highly supported by other professionals, at another it was much more regulated than work undertaken in conventional face-to-face teaching.

Much of the quality of distance delivery was thus associated with systems established to ensure distance students were treated well, involving recruitment, admission and enrolment, counselling and advice, production of learning resources, distribution of study materials, and day-to-day non-academic administration and support. The impact of communication and information technologies has seen this break down. What was distinctively provided to distance students became mainstreamed as flexible delivery for all became the norm. Tasks formerly requiring professional expertise were now possible from an individual academic's desktop, affording considerable autonomy of action in teaching.

The technology, too, has given students much more agency in their own learning. It is now possible for them to access information, relate sources, incorporate open source material, engage with their fellow students, teachers, and others outside the academy with an ease and at a rate formerly impossible. Considerable research effort has gone into the development of tools to support new technologically-mediated learning, e.g. the second-life movement, and important efforts are being made to reconceptualise teaching in this environment (e.g. Anderson, 2011; Laurillard, 2011; Lee et al, 2011; Farley, 2011). Underpinning what is technologically possible is an intellectual shift – the movement from teacher controlled to student managed learning. While TNE is typically delivered to countries with more structured and conservative approaches to teaching it is implausible that the students involved will not press over time for the advantages available to their counterparts in other countries.

In contrast to the growing regulatory environment directed to embedding and strengthening quality in TNE programs through greater control discussed

earlier, when we look at teaching and learning, it is evident that things are moving rapidly to quality as a product of individual teacher – and potentially, student – judgement.

How will the tension between mandated control and autonomous action be resolved?

How do you impose teaching and learning standards in programs delivered offshore, that will increasingly be exposed to the flexibility afforded by mobile technologies and pressures for greater student agency in their own learning? The short answer – the same way we do it domestically – is too neat, ignoring as it does the difficulties generated by cross-cultural, second language, and third agency partners in teaching, apart from the obvious problem of domestic approaches not yet being realised. Of course, no acceptable response in relation to TNE can be less comprehensive than that applying domestically.

Former practices can constrain our perspective. Quality improvements in the past have often been about improving processes (e.g. delivery resources to students in a timely manner) or fostering teacher ability (e.g. professional development directed towards cross-cultural understanding). These measures are directed towards improving *inputs* to the student experience. Improving learning standards means changing *outputs* - measurable learning outcomes.

Learning outcomes differ in various ways: e.g. by discipline, level of study, whether they relate to disciplinary understanding or generic abilities, or involve securing improved student performance or absolute mastery of specific competencies.

It seems probable that discipline experts could identify acceptable minimum levels of student performance against all such variables. Questions that then occur in TNE contexts include:

- How do learning standards take account of differing cultural contexts and second language environments?
- How do learning standards in different professional areas recognise local legislative requirements, e.g. accountancy standards, conditions surrounding legal practice, etc.?
- Are learning standards exclusively summative or can they address incremental improvements in students' skills, knowledge and understanding and who would assess these?
- How are learning standards reconciled with different rates of student progress and attainment?
- How do learning standards deal with collaborative projects and assessments particularly when these involve students in different countries?
- Can learning standards acknowledge student-initiated or generated content, including use of open source materials, particularly when these derive from different cultural contexts?
- Can we reconcile learning standards with growing pressures to extend the capacity for student agency in determining learning?

Answers to these questions are not canvassed here, as they are proposed to stimulate discussion.

It is the firm view here that one element in any answer must relate to the nature of university education, which serves not only to provide individual benefits, but also social. Society needs competent surgeons, lawyers, engineers and so on. The nature of higher education is that it involves a contract, between student and institution, and both parties buy into a set of agreements about expectations. To this extent, at least, some of the freedoms of new media are constrained as students surrender part of their freedom of agency to achieve the endorsement and legitimation of university assessed accomplishment. But this does not mean that the questions above go away.

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Looking the gift horse in the mouth and harnessing it: social justice, distance learning and OERs

Helen Lentell,
Fellow in Distance Education, University of Leicester, UK.
hml13@le.ac.uk

Abstract

OERs are learning resources that are freely available online, and licensed in such a way as to enable them to be used and repurposed worldwide. As such they have often been presented as altruistic gestures towards development from providing institutions. However, providing institutions in the north don't necessarily make these available simply for the betterment of the south, and the assumption that these resources can simply be represented as is, counters what is known about sound open and distance learning (ODL) course design and development. This article explores the motivations of providing institutions, looks at what has been learnt from utilising and repurposing OERs in a number of contexts, and concludes that OERs do make a sustainable contribution to development but within what is known about good ODL systems.

Introduction

OERs have had a good press in recent years. It is suggested, among other things, that they hold out the potential to bring down the walls of academia, making knowledge available to those who, for whatever reason, have been excluded and disadvantaged. The rhetoric surrounding OER initiatives has suggested that the providers are making a huge contribution to society and much of the language surrounding the potential of OERs resonates with the values articulated by the professionals of distance education. But ten years have now passed since MIT made its historic announcement to make on-line versions of all its courses free and since then thousands of educational resources have been made available on the web. To what extent do these developments impact on access to education and social justice? To what extent have OERs made it possible for scarce resources (trained and qualified educators and university places) to be scaled up? In other words do OERs promote the ODL mission?

The South African Institute of Distance Education (SAIDE) notes that there is a natural synergy between the existence of OERs and distance education, since 'distance education requires ongoing investment in the development of learning resources. Using OERs in the development process should help to shorten the time and reduce the costs of development'. This is indeed the potential for ODL of OERs. The argument of this paper is that whilst recognising the potential of OERs they are not the silver bullet for scaling up educational provision. OERs may offer a significant contribution to initiatives to expand provision but on their own they are not sufficient. There are many other critical components for successful, high quality, sustainable distance education. These components are well known but somehow always seem to get ignored or forgotten in the

enthusiasm and over promotion of a new technology, approach or product. Without recognising that the contribution of OERs to distance learning sits within a wider distance learning system[i] these too may go the way of other educational initiatives that have promised much but delivered little.

(The definition of OERs is wide and all embracing including different kinds of digital assets: full courses, course materials, content modules, learning objects, collections, even books and journals that reside in the public domain or have been released under an intellectual property licence that permits their free use or re-purposing by others. Definitions often also include the software tools that support the creation, delivery and use of OERs. For the purposes of this article an OER is taken to be a course module or a full course. Taking this as the working definition is based on the recognition that thousands, if not millions of learning objects exist in the world, but accessing and making use of these objects is highly problematic. Complete courses, or at the very least complete modules, are far more likely to impact on widening participation in higher education by assisting less advantaged institutions utilise the resources of more advantaged ones. Thus another judgement underpins this article – education is more than the delivery of knowledge and information. It is a formal and structured learning process that is assessed and accredited. Having access to bite sized OERs does not solve the problem of scaling up educational provision. (Although – and this is not the subject of this paper – having access to the resources of others might improve the teaching of particular topics.)

Why have universities in the developed world made OERs available?

Sharing resources and courses is not a new idea in distance learning (or indeed face to face provision). The Commonwealth of Learning for example has long seen sharing as core to its mission; with e.g. all its training toolkits and STAMP (Science, Technology and Mathematics Programme) and PREST (Practitioner Research and Evaluation Skills training in Open and Distance Learning) course modules freely available to all. But what is new is the willingness of many campus based universities, often very prestigious ones, to provide free access to undergraduate course materials – including syllabi, lectures and assignments - to anyone with an internet connection. At first there was an idea that there was a lucrative market for such materials but after the ill fated attempts of Columbia University and the Oxford, Princeton, Stanford and Yale partnership to sell content collapsed, the motivation of universities has been largely reputational i.e. marketing. OERs have enabled universities to achieve strategic objectives that have little to do with teaching and learning. Universities have always been engaged in outreach, marketing, distinguishing themselves from competitors, lobbying government, alumni relationships, and applying for funds and grants generally. But OER projects have allowed universities to use courseware as a means of advancing these aims and enabling those outside the university to see what the university wants to show about its teaching. This is made possible by harnessing the internet. Thus OERs have become core to the way University Ltd markets itself. A very different use of educational resources than the academic creators of the course might originally have had.

We should not be surprised that this has happened given the wider context of higher education - an absolute growth in student numbers, increased

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globalisation and commercialisation of education, a disproportionate growth of less selective, less prestigious universities and the extraordinary increase of funded research in the utilisation of new technologies in education. In this context universities have become much more highly differentiated. Elite institutions for example, whilst recruiting a declining share of the overall student market, are not concerned about increasing their market share but ensuring the continuance of their special position in the hierarchy of universities. It is what makes them special and more desirable. OERs provide such universities with the potential to build a powerful presence on the web that is highly visible whilst presenting a humane face to the world. Dr, Ramamurti Shankar, a participating professor in Open Yale Courses, is quoted by Walsh in 'Unlocking the Gates' as saying: "We can't admit everybody to Yale, but we can give this to everybody absolutely free" (Walsh p.11). By "offering course content but not university credit to the wider world these elite institutions maintain their value proposition – residential experience, interactions with faculty and students, and their prestigious degrees" (Walsh p.22). A fine balance between altruism and self-interest one might say!

But it is not just the 'elite' institutions that can do this. Less prestigious universities concerned to recruit students can make their content freely available as the Interactive MSc at the University of Westminster has done. Stannard reports that in 2010 there were 25 students on this course, "yet an average of 2,500 unique users from all over the world consume the course's OER content, which was released under the Joint Information Systems Committee/Higher Education Academy OER pilot project called UKOER. It is well-branded, well-targeted content and each month those 2,500 unique users are just a click away from being directed to the MSc course that the content is linked to. Numbers have been rising over the past three years, with an almost 60 per cent increase in numbers on the course since the project started" (Stannard 2010). Indeed a major reason for Joint Information Systems Committee (JISC) funding for such OER projects has been to stimulate demand for UK HE as it is "crucial that our education system continues to compete on the international stage by investing in innovation, research and increasing the availability of online resources" (http://www.jisc.ac.uk/aboutus.aspx)

Do motivations of OER providers matter? Taking ownership of OERs.

Although universities have taken very different approaches to developing OERs[ii] - what appears to be common to most initiatives is that they are created as a result of the availability of intellectual resources at the university at which they are developed and not by a specific need of identified learners, i.e. they are provider led and not learner led. A key lesson ODL professionals know is that if a course is to be successful it is designed for identified learners. But perhaps with OERs this does not matter – the resources are out there to use. Other universities, including ODL providers, can adapt them for their own use. But this is not as straightforward as might initially be assumed. In considering the value such resources might have to ODL and access to higher education it is instructive to revisit a review by Keith Harry of the print and audio-visual courseware of the masters in distance education materials of the World Alliance in Distance Education (WADE) member institutions Athabasca University,

Canada; Deakin University, Australia; and the Open University in the United Kingdom. This review was commissioned by The Commonwealth of Learning (COL) in 2003 with the purpose of considering how these materials – freely gifted to COL – might be used singularly or in combination in the creation of a Commonwealth Masters in Distance Education (CMADE).

Harry compared the three courses using the following criteria: credit structure, number of course components (e.g. modules, AV, and the extent of their integration into the whole course), number of study hours, programme target group and assumed prior prerequisites, pedagogical methods, student support, course web sites, assessment policy and practice, adaptability of courses, and the updating of the courses. These courses were so different and followed very different design models. Embedded copyright was also a major concern. Could COL afford to get permissions for academic work embedded within the gifted programmes? Harry's main conclusion was:

> *"that a course produced by Athabasca University is a very different entity from a unit produced by Deakin University, and that a course produced by the Open University is a different entity again..... the differences between the courses produced by the three institutions are so significant that the originally envisaged process of creating a CMADE programme based substantially on existing materials is likely to prove more complex than the creation of a new programme. A significant logistical question must also be considered if any part of a CMADE programme is based on existing materials. This concerns the future updating, revision and replacement of materials. Given that the three masters programmes are all to a greater or lesser extent being continuously updated and revised, consideration would need to be given at an early stage as to whether and how such changes in the originating institutions' programmes would be reflected in the CMADE programme" (Harry 2003).*

What the review reminds us about is that there are major policy issues surrounding the use of OERs in other institutions that make their own awards – as most developing country universities do. These include pedagogical issues, but also policies regarding the award of credit – e.g. hours of study and assessment. These are not the same across the world – the Bologna Process notwithstanding – and are designed and built into courses. Nor is the updating issue a minor one given that most OER developments have been undertaken with special project funding from bodies like the Hewlett Foundation and JISC – funding which is not guaranteed for future developments.

Harry's major recommendation was that rather than attempting to create a CMADE programme based to a significant extent on existing materials, "COL should establish a course development team to create its own programme. The existing materials from Athabasca University, Deakin University and the Open University should be used by the proposed team principally as resources to draw upon rather than as building blocks" (Harry 2003).

The CMADE did not take off. But the conclusion of Harry's work on the reusability of the MADE courseware drew attention to the need for a focus on

repurposing, adapting and customerising such resources – so that OERs were viewed as a tool rather than the finished expert product. (This has been the approach of the hugely successful, ever growing, TESSA (Teacher Education in Sub-Saharan Africa*) resources – where created resources become part of an ever growing 'pool' for new projects. If this approach is going to be achieved it needs an investment in the training of staff from universities in developing countries and a community of practice among users. It was the vision of the late Robin Mason in the SideCAP (Staff Improvement in Distance Education for Caribbean, African and Pacific universities) project to achieve this. The SideCAP Project was a European Union (EU) funded project as part of its ACP-EU Cooperation Programme in Higher Education (EDULINK). Starting in 2008 five universities were involved in the project namely the:

• Open University, UK (OU)
• University of the Highlands and Islands Millennium Institute (UHI), Scotland
• University of Mauritius (UM)
• University of the West Indies (UWI)
• University of the South Pacific (USP)

The overall objective of the project was to provide 'learn by doing' (Lentell 2008) opportunities to improve the quality of teaching, support and technology implementation for distance education by repurposing existing open content teaching material and adapting it to local contexts using appropriate technologies. The USP department involved was CEDT (Centre for Educational Development and Technology now CFDL - Centre for Flexible and Distance Learning), the department that had responsibility for instructional design. The CEDT proposal was that the USP project would focus on the repurposing of OER study skills resources so that USP would have local and adaptable exemplars of a variety of key skills resources which could be continuously repurposed according to the particular needs of courses in development whatever the discipline or level of study. The idea was to utilise the UK OU's Open Learn resources. This proved impossible – so well designed are OU materials that it was too hard to strip out what was required, although Open Learn certainly demonstrated what USP wanted to achieve – an exemplar resource. In the end less ambitious, stand-alone OERs on study skills from another university were utilised as the core resource to be adapted. The two USP staff involved in the project gave the following assessment of the project:

> *Lesuma-Fatiaki reported that, "The knowledge and skills gained from this project will greatly assist in developing USP courses with the use of OERs. I look forward to sharing this with my colleagues at USP in exploring the incredible array of OERs that are available worldwide." Louise Vakamocea added that "the exciting part about the materials being developed is that they will enable USP students anywhere around the Pacific to engage in online self-directed activities on the process of (for example) essay writing. Currently this has only been accessible through face to face tutorials and study guides" (USP 2009).*

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The experience of the Virtual University for Small States of the Commonwealth (VUSSC) is also instructive. COL/VUSSC has put major emphasis on capacity building as the EDULINK project did, and as OER Africa is doing, in order that that those institutions that use OERs have the skills to collaboratively develop and repurpose learning materials. For COL building capacity and confidence begins with an easy to use instructional design template (COL 2006) to help authors create a structured framework within which to develop and share course creation. This does not replace the instructional designer who works with subject matter experts to identify what students need to learn and who guides and project manages colleagues on:

- Developing objectives and ensuring content matches those objectives
- Revising and rewriting content to shape it for learning needs
- Structuring content and activities for student learning
- Creating media to support learning (e.g. visual aids for face-to-face, various multimedia for e-learning and online)
- Developing assessments
- Adapting instructional materials created for one format to another format (usually this is adapting materials from face-to-face to e-learning)

Indeed recognition of the need for design and team work brings new focus to the role of the instructional designer within ODL – for a number of years a role that has been diminished by ideas that e-learning technologies have made this role redundant and academics can do it all themselves with bit of upfront training. This view has resulted in many academics turning their back on the potential of e-learning technologies.

COL is now actively promoting with Commonwealth small states the solution to one of the issues that made re use of the MADE courses so hard – the Transnational Qualifications Framework for the Virtual University for Small States of the Commonwealth. That is a recognised and common system for accreditation for VUSSC courses that will help establish credibility and facilitate the movement of courses and learners between states, and will thereby establish commonalities on module and level descriptors.

What needs to be done?

The motivations of providing institutions do not matter if it is accepted that OERs are not the finished product but are resources that can be adapted, developed and contextualised and made one's own. This means that a premium has to be placed on staff development and the development of communities of professional practice. These set challenges since finances and human resources may not be readily available to deliver and support staff development. And in the South Pacific, as in many developing countries, once trained, staff become highly mobile, leading to a never ending need for this activity. Developing and sustaining communities of practice become all the more important in such contexts. Of course, if what is understood by OERs is just another mechanism to cut costs by appropriating free content, OERs' potential to contribute to improving education will be lost and will be consigned to the long list of fads that have plagued education for so many years and have cost

developing countries so dearly. If OERs are seen as the rich nations 'doing betterment' projects on the poor – they will be rightly condemned for 'not having been invented here' and yet another example of the role of education in neo colonialism.

To capitalise on the potential of OERs puts the focus clearly on institutional leadership and management – (a scarce resource with respect to distance learning in the developed as well as the developing world) – that understands that ODL is different to face to face education and requires different policies, systems, infra structure, quality assurance processes and institutional culture and that old ways of doing things are no longer adequate or relevant. If this is recognised the OER movement might reinvigorate the ODL mission – access to education as a human right.

[1] This paper does not address the critical elements of tutoring and learning support – core to successful ODL systems.

[1] E.g. MIT opted for all its courseware and Open Yale for a selection of its best courses, and Carnegie Mellon Open Learning Initiative asked willing professors to redesign their on campus courses. The UK OU's Learning Space gives access to modules but not whole courses. And there are now university contributions to iTunes and YouTube which frequently include special events like guest lecturers and not just the video capture of regular lectures.
[1] Personal conversation (9th June 2011)with Professor Jeremy Levesley Head of Department of Mathematics, University of Leicester, UK

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Facilitating social justice and educational equity via open, distance and e-learning - a practical exploration from the Open University of China

Li Yawan
The Open University of China

Abstract

China is a large country with a vast territory. There are more than 56 nationalities, and more than 1.3 billion people scattered across different parts of China. Though the Gross Domestic Product (GDP) in China has increased over the past years, it will take time to keep up with advanced countries in knowledge building. Further improvements to people's quality of life and economic development depend very much on education. The way to enable education to be accessible to all kinds of people wherever they are can be various and ODL has been considered as one effective way to facilitate social justice and educational equity in China. Over more than 30 years, the Open University of China (hereafter OUC) has designed educational programs, which enable education to reach less developed areas and particular groups of learners. Achievements have been obvious through the implementation of programs and feedback is positive. This paper will look at the programs to see what has been achieved and examine further the strategies for contributing to a learning society on the part of OUC.

When the Open University was established in the United Kingdom, the philosophy of openness was introduced for the first time in higher distance education institutions. Following that, many countries developed their own open universities and tried to give impetus to educational democracy within their own territory. Even at the initial stages, open and distance education in China has been intended to support the diversity of learners in both urban and rural areas, especially those who cannot enter into campus-based educational institutions for one reason or another. Through a 30-year practical exploration, the Open University of China (OUC) is approaching its goal step by step. Here, the author will look back on what they have done and look forward to their great missions ahead.

I.   China's major issues in promoting higher education

China is a developing country and needs to promote its economy through large scale education to increase the quality of the workforce. According to some statistics, the entrance rate of young learners into higher education institutions is comparatively lower compared to that in developed countries. Though, there are more than one thousand higher education institutions, most of them are located in the big cities. The uneven distribution of higher education institutions results in less development of education in the less developed areas. We have observed the fact that the western part of China covers half of its territory, but the number of higher education institutions can only account for 10.1 percent.

People from remote areas prefer to go to big cities for higher education, but are then reluctant to go back to less developed areas to promote economic development when they have graduated from university. Some people with special needs could not find appropriate venues for their study. Also, we have noticed another phenomenon: the capacity of higher education institutions is limited, but the number of potential learners is extremely high. Particularly when people realize that education can improve their living condition and change their working circumstances, they aspire to degree programs and certificates. That is why open and distance education has been developed very rapidly in recent years in China. Open and distance education has offered opportunities for many working adults: by the end of 2010, more than 7 million tertiary-level graduates had been turned out and more than 50 million people received its training programs. Open and distance education has freed the contradiction imposed by gaps in demand and supply and contributed a great deal to the development of mass higher education in China.

II.   Practical exploration of the OUC: Achievements and problems to be further considered

Open and distance education has to cope with a large number of students when the OUC designs a variety of educational programs. First of all, there is the necessity to develop relevant learning strategies to support different groups of students. Secondly, resources should be sufficient to support different demands. Thirdly, the method and technology should be suitable. And fourthly, learning has to be effective and fruitful. Over the past few years, a number of educational programs addressing different people have been designed and implemented; their success demonstrates that our input has been worthwhile.

Meeting the needs of rural areas
By some statistics, there are around 940 million people in the household register record in rural areas in China. However, the educational level in rural areas is not high enough. There are 330 million people who reach junior high school level, 55 million with senior high school level, and only 6.6 million with tertiary education level. The above figure indicates that there are increasing demands to increase the overall educational standards in rural areas through ODL. It is true that one of the projects "One student for every village" started in 2004. By offering vocational specialisms in accordance with a pre-market survey, we have constructed a course platform for the students. It begins with planting, breeding and management and based on it we have developed other relevant courses. Combining diploma with non-diploma courses and practical training, rural students can accumulate their credits and acquire their corresponding certificate or diploma, which will help them to be better off. It is very important to use a technology-supported strategy to support rural students when we offer the projects. The learning package includes not only printed materials and learning guidebook, but also VCD and formative assessment brochure. The course platform can be easy for them to access to obtain materials and tutorials. Now more than 270 thousand students have registered for different programs and courses. According to some statistics, by the end of 2010, we offered about 112 courses and 18 specialisms in the ten fields of

study for particular projects. What we mean to do in the near future is to reach the goal of training one student in one of all of the 640 thousand administrative villages in China.

Supporting disabled people

Disabled people are always regarded as disadvantaged groups. Owing to physical deformity or psychological obstacles, there are restrictions for them in receiving higher education in the regular higher education institutions. Sponsored by the China Consortium of Disabled and the OUC, The Education College for the Disabled was set up in 2002. Based in Shenzhen, there are 31 teaching venues which conduct programs. Based on surveys of the special requirements of different groups, , the OUC has forged very effective ways to support disabled people with physical, hearing or oral impairments, One features worth mentioning here is the independent learning resource package, which emphasizes specified teaching design and a careful selection of multiple media to meet the particular requirements of disabled people. For those with hearing or oral impairments, we add sign language to the general content explanation of the courseware and to support people with physical impairments we make full use of the web-based learning environment in case it is inconvenient to attend face-to-face tutorials. We have set up multi-media distant tutorials instead of face-to-face lectures for disabled students studying at a distance and provide one-to-one guidance for their hands-on experiments. We encourage e-communication, e-discussion and other collaborative learning activities so that learners can maintain their motivation and keep on fulfilling their learning objectives. We have offered two bachelors level programs of social work and advertisement, four programs for associate degrees in design and production of digital media, accounting, English language and social work. By the end of 2011, more than 1683 students will have graduated and there are 6388 active current students.

Making education available for minority groups

In order to facilitate education for minority groups, the OUC forged close relationships with those provinces where minority groups are resident. In 2002, the OUC made joint efforts with the Tibetan University and established the Tibetan College of the OUC. By the end of 2010, this was providing seven programs at bachelors degree level including law, Chinese language and literature, administrative management, accounting, English, computer science and technology and business management and five programs at associate level including law, administrative management, accounting, nursing and for a modern secretary. More than 2000 students have completed their programs and more than 5000 students are still working with the college. However, there is one critical issue facing students from minority groups, that is, the language obstacle in understanding and communicating. Though the national standard language is prevailing in most parts of China, there are some areas where bilingual language teaching is needed, especially in the areas where people from minorities could not understand the contents of some general teaching materials or cannot make good use of the teaching facilities. One of the surveys made in Xinjiang Autonomous Region indicates that the average ownership of computers by some high school teachers is only a little more than 26%, and those teachers who frequently make use of computers are only 14%. Therefore,

when the OUC considers its policy of developing distance education in minority areas, especially offering teacher-training programs, they need to develop bilingual languages programs.

Designing programs for military personnel
To realize the goal of improving the quality of the whole nation, not only civilian, but also military personnel need to be included. According to statistics from 2010, more than 70 thousand minority soldiers and officers have fulfilled educational programs designed by the OUC. More than 156 thousand have registered for relevant programs. There are three military colleges now and 537 teaching venues or study centres have been set up with two bachelor-degree level programs of law and administrative management and nine associate degree programs of law, administrative management, real estate management, distribution management, business management, computers and its application, electronics and IT, digital-control technology and automobile. In the evenings or at the weekends, the soldiers and officers make use of the technology-supported environment to learn scientific and technological knowledge, taking advantage of distance learning to enlarge their knowledge and improve their skill and competences. The programs provided by the OUC have equipped them with necessary capabilities not only at present, but also for their further career.

Supporting less developed areas
A project for aiding 100 counties to develop distance education has been conducted since 2004 by the OUC. The objective provides financial support from both OUC and local government in the construction of infrastructure where resources are limited. The OUC has invested more than 10 million RMB Yuan for those county-level working stations to purchase facilities and equipment and for training quality teachers to offer guidance to distance learners. It has created a very positive impact in terms of facilitating the process of informatics in those areas.

III.   The Vision for ODL development in China

The OUC has done much to make use of a technology-based learning strategy to support different learners and there is much evidence to indicate that many people have benefited from these educational programs. However, if we expect to meet all social members' needs, there are still many issues which need further consideration.

First of all, distance institutions are now facing much more diversified groups of students. They are different from those studying in campus-based conventional universities not only in their learning style, but also in their learning requirements. In order to make learning more relevant and effective, the OUC has to undertake more investigation into the students' current conditions and especially to look more carefully at their difficulties and demands. We have to be aware of students' load-bearing capacity since work pressure is severe and the time allocation for study is rigidly confined. So, when we develop our course materials, we have to construct the materials in module style, which seems to be more convenient and adaptable for students. When we produce learning

content, we need to think about what is really useful and relevant to students for their present position and further career development. Addressing some of the special conditions of our students, we need to pay particular attention to the media selection which may be easier for them to obtain and be affordable for them to possess.

Secondly, we have to develop further a national learning platform to support different regions and learners where anyone can obtain the quality materials they would like. Government, both central and local, should give policy support. And all of the distance education institutions should work together to construct and share content through collaboration. Joining together good materials from different sources is valuable and appropriate for the Chinese context. In this way, we can expect to retain cost effectiveness and avoid the repeated construction of resources within the country.

Thirdly, we particularly need to improve the quality of distance education delivery in less developed areas. In addition we need to focus on training more qualified teachers to perform the role of distance education facilitators. Those teachers should be familiar with the principles of distance learning and know how to use various kinds of technologies to support their students. They should be not only familiar with how to support distance learners, but also encourage them with great passion and enthusiasm to perform better. Through their commitment and appropriate facilitation, we are sure that distance learners can be successful and obtain real benefits from open and distance learning.

Fourthly, we need to stress action research not only to make a study of delivering technologies for learning resources to the diversified groups of learners, but also to explore the combination of using technology with proper methodologies. We need to study further of how to enable our learning resources to meet the needs of different people who may expect to acquire or obtain a diploma or a degree. We need to further consider how to construct credit banks and learning passports to connect every learning achievement to life-long learning profiles. The National Outline of Medium and Long-term Education Reform and Development sets out the goal of realizing lifelong learning and constructing a learning society. The OUC will surely continue to fulfill its great mission and play an important role in this process.

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