E-learning Solutions for a Changing Global Market.
An Analysis of Two Comparative Case Studies

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Abstract. *This paper investigates the models and acceptability of e-learning to the emerging student markets for higher education institutions (HEIs) from the more developed countries (MDCs) and seeks to evaluate the differing models of delivery from a practical and a socio-economic perspective. The research also investigates the impact of the shifts in population growth and the subsequent impact upon the levels of demand from students in less developed countries (LDCs) for HE. In addition, through case study review methods the logistical and quality factors affecting e-learning are critically evaluated, looking at the aspects of academic rigor, plagiarism and the methods of managing the originality and authenticity of student work. Similarly, the research considers the viability of situations where the education provider may never physically meet the students through the exclusive use of Virtual Learning Environments (VLEs), and the possible credibility issues that this may present to institutional and awarding body reputations.*

Keywords: *digital divide, models of e-learning, e-learning, technology, pedagogy, demographics, Africa, Bangladesh.*

> *"Technology does not cause learning. As an instructional medium, online technologies will not in themselves improve or cause changes in learning. What improves learning is well-designed instruction."*
> *(Jasinski, 1998)*

Introduction to the research study

This paper firstly has provided the context of the research study that has led to the investigation of models of e-learning. The context is shown as a changing global market place that is warming to the idea of e-learning solutions. Likewise, a critical review of e-learning conceptual models is followed by an evaluation of two case studies, both of which are higher education institutes but one is in the private sector while the other is UK government funded. This research then acknowledges alternative approaches to e-learning and identifies emerging e-learning solutions. The paper, prior to a critical analysis of the case studies, reviews aspects of effective e-learning. The final section of the paper concludes the research by confirming the significant implications of the research and recommends the use and further interrogation of the identified e-learning driving factors and enabling factors affecting e-learning solutions.

Introduction to the context of the study

Following the significant changes in 2012 to the tuition fee model in use in England and Wales, concerns exist and continue to be debated about the long-term future of the traditional taught degree and models of university attendance (Watts, 2010; Wilkins, Shams & Huisman, 2013). There are many factors of a political, economic, social, technological, legal and environmental nature that impacts the development of any organization and these are expanded in this paper in sections 1.2 and 1.3. It is with this as a motivation that some institutions are actively investigating different modes of delivery that may improve both the efficiency and accessibility of Higher Education (HE) through innovative and alternative methods of program delivery.

Hence, this research identifies various conceptual and implemented models and modes of e-learning and incidentally scopes the virtual learning place to provide a view of what is currently available to the global student population. Two case studies are critically reviewed assessing their response to the macro environmental changes and expectations of the global learner. The case studies are a public sector higher education institute and an independent privately owned higher education institute. Both these HEIs have been assessed by the relevant UK government bodies that overseas higher education in the UK (see reports QAA, 2015, 2016).

The University Centre at Blackburn College (UCBC) is a provider of Higher Education (HE) within a Further Education (FE) setting with a student population of approximately 2,550 full-time students. Through the original "East Lancashire Institute of Higher Education" and latterly the dedicated "University Centre" the college has been delivering higher education programs since 1964. The UCBC has longstanding partnerships with several University partners who provide both validation and verification and who award degrees under their own charters, which are delivered at UCBC.

The Organisational Learning Centre (OLC) is a provider of higher education and professional qualifications with a student population of approximately 350 mature learners [age = 24+]. The college has been delivering higher education since 1998 with accreditation to deliver higher national and postgraduate level qualifications. In the UK the college works in partnership with HE and FE partners and outside the UK they work closely with private institutes that get involved with delivery and student recruitment to their blended learning programs.

Global market factors driving e-learning developments

There is a variety of factors that affect the "market" and with it the demand for "affordable" and "accessible" education. This, in turn, has led providers to develop models of delivery that are compatible with demands of changing student perceptions of the cost and value of higher education, and in the UK this is demonstrated by the reduction in applications and uptake of places in the years following the increase in the fees payable by the student (Dearden, Fitzsimons & Wyness, 2011; Wilkins et al., 2013).

Arguments relating to cost are considered to be driving some young people in more developed countries (MDCs) to question the current value and applicability of learning provided by HE qualifications. Similarly, there are attempts to measure the value or return on investment of an undergraduate degree, both in career development and fiscal terms. Similarly, this cost of access to HE is balanced against the perception of value and the international credibility of the awarding body or institution. This perspective is seen as a driver for international students to seek qualifications from what are seen as more credible institutions and awarding bodies, and economics drives the search for lower cost pathways to such providers (Gaskell & Mills, 2014; Hazelkorn, 2015).

Effectively, the drivers for the development of e-learning are various and varied. More and more countries and thereby institutions are competing for students from the same group of countries. Global international student mobility flows are changing in two ways: Firstly, with the economic and political balance of power shifting towards the emerging economies in the East, mobility patterns are beginning to change in this direction as well (Habib, Johannesen & Øgrim, 2014). Secondly, the regionalization of international student mobility is accelerating, effectively meaning that more and more students who study abroad will do so in another country, but stay within their own geographic region (Jessop, El Hakim & Gibbs, 2014). Global competition for students (and especially for the best among them) will most likely intensify in the future. This competition between providers does not only take place globally but also regionally and nationally.

As a consequence of the declining birth rates in high income MDC countries (Becker & Kolster, 2012), it is evident that the Asian, African and Latin American areas will contribute 97% of the global population growth to 2030 (Ilieva, 2012). These higher birth rates, larger populations and comparative lack of local higher education capacity are seen as key drivers for the growth in global student mobility,

however, this demand is often restricted by average family incomes in these developing countries being insufficient for many students to be able to study abroad. Thus, the growth in e-learning or the reduction in face to face classroom contact time has led to the development of 'blended' learning strategies in an attempt to bring the learning opportunity and experience closer to the home of the student and at a significantly lower cost.

Quesada and Aust (2009) refer to some key demographic drivers that influence the growth of e-learning. These include the changing population profile of many LDCs, for example, in Costa Rica, the largest section of the population are the 15 to 30 year old, and many countries have a similar population profile with large numbers of under-25s such as Vietnam, India, and Bangladesh, to name just a few. Also, evidence of the growth of e-learning is illustrated by the large numbers of enrolments for many US-based on-line degrees awarding universities, e.g. the University of Phoenix has over 187,000 students and the University of Maryland has over 40,000 students enrolled on on-line programs. The University of Massachusetts has seen on-line enrolment quadruple since 2001. By 2025, there will be over 7,000,000 globally mobile fee-paying students (Hudzik & Briggs, 2012), twice as many as in 2009, and yet this group is currently but a fraction (2-3%) of the total number of students currently enrolled in the world's universities (177,000,000).

Exploring market factors for HE e-learning

To access more of these students, education providers will have to explore the potential for on-line delivery. By early 2008, 10% of US students will be enrolled in an on-line degree program and the global market for e-learning is believed to be worth $63,000,000,000 (Quesada & Aust, 2009). The number of streams worldwide is 15 billion (AccuStream iMedia Research, 2014); there are more interactivity, more community publishing, and greater access to open source systems such as *Moodle.* There is a greater range of tools that will improve the e-learning product such as voice recognition, better translation software and better synchronous communication tools such as *Skype* and *Facetime*, and finally, greater access to improved mobile devices such as i-phones and tablets. To review some of the socio-economic and socio-political dimensions of this issue, those that particularly affect LDCs, examples are drawn in this section from the continent of Africa (in particular the sub-Saharan region and Bangladesh.

In Africa, for instance, the growth in e-learning is potentially part of the solution for dealing with the educational challenges there (Hollow & ICWE, 2009; Keats & Schmidt, 2007). The importance of e-learning in Africa is its potential as a force for development (Hollow & ICWE, 2009) and 'catching up' with advanced digital economies. There is also the potential for increased educational opportunities and for innovative pedagogic styles of delivery and finally, the potential for increased connectivity and networking, and bridging gaps between African states and MDCs and also between urban and rural communities. There are real challenges as well,

not just in terms of improving bandwidth, an issue for most MDCs, but in providing electricity to poor, rural areas. E-learning may be a solution for the development of some communities in Africa, but it is dependent on other forms of development and is dependent on donor funding, as there will not be the income incentive to encourage the commercial attention of most HEIs from the MDCs. Mobile learning (M-learning) is seen as an important dimension of on-line education across the African continent, this because of the high adoption rate of mobile technologies in Africa's developing countries (Shapshak, 2002 as cited in Brown, 2003) and the fact that an expensive infrastructure for access is not required. However, within a recent study of e-learning practitioners across Africa (Hollow & ICWE, 2009), only 1.5% of respondents indicated that mobile phones were their main source of e-learning. This is evidence of the need to not focus on technology-driven agendas but rather on the real needs of the client population (Hollow & ICWE, 2009; Unwin, 2008) and relevant educational outcomes linked to sound pedagogic practice (Hollow & ICWE, 2009; Meredith & Newton, 2004). However, it was evident from the study that dealing with issues of connectivity and in particular bandwidth, electricity supply, donor funding to support infrastructure, and a focus on training leading to employment were seen as the key priorities to ensure the growth of e-learning in Africa.

In Bangladesh, e-learning is seen as an important alternative for educating masses of people for many socio-economic reasons, for example, the opportunity for higher education is limited due to both finance and institutional capacity (Hossain, Morshed & Jewel, 2013). E-learning is not new in Bangladesh and the first example is the Bangladesh Open University, established in 1992. E-learning may bring about many positive contributions to Bangladeshi society such as improved attainment (Means, Toyama, Murphy, Bakia & Jones, 2009), increased access to higher education (Kerkman, 2004) as high specification IT hardware is not necessary for most on-line courses and costs can be kept affordable. The development of skills and competence for the growing number of knowledge-based societies is a further consideration (Bates, 2009; Bejinaru, 2017). However, there are disadvantages as in many parts of Bangladesh, financial constraints mean that access to even basic technology infrastructure is limited and the specter of a growing digital divide is evident in Bangladesh as it is in much of Africa (Omwenga, Waema & Wagacha, 2004). There remains a huge percentage of the Bangladeshi population that have no access to the digital world (Akbar, 2005; Alam, Kabir & Elizabeth, 2003; Hossain et al., 2013).

Barriers to implementing global e-learning

There are also a range of socio-economic and cultural factors which limit the progress of e-learning in Bangladesh and comparable nations and these would include the lack of infrastructure, the lack of knowledge and training for academic staff, as well as a lack of capability as much academic staff have themselves been educated in the traditional methodologies (Akbar, 2005; Fallon & Brown, 2016; Omwenga, 2004) and e-learning is not an important agenda for a national government (Akbar, 2005; Karmakar & Wahid, 200). There is a limited culture of e-

learning so students drop out due to lack of peer support, feedback, encouragement and many other human factors. It is these latter factors, which restrict e-learning from being the transformational force many have predicted (Hossain et al., 2013). Finally, much of e-learning has been driven by technological development rather than looking closely at just how people learn (Connolly, Jones & Turner, 2006; Langley, 2007; Moore & Sweat-Guy, 2006) and what they need to learn (Karmakar & Wahid, 2000; Moreira, Pereira, Durão & Ferreira, 2017) resulting in high drop-out rates in Bangladesh and many other countries (Hossain et al., 2013; Vaughn, 2003). The high rates of non-completion are also the focus of Davies and Graff (2005) where the optimism of many proponents of e-learning has failed to take into account issues of language and how much e-learning provision is in the language of former colonial powers. Therefore, creation and application of e-learning programs requires the management to take into consideration costs related to translation of learning materials when delivered to different international markets. There is also a personal, motivational, self-discipline and 'maturity' barrier to overcome and this makes e-learning less suitable for younger students (Clark & Mayer, 2016; Hvorecky & Rebro, 2004).

E-learning (and its sibling, m-learning) may yet be a solution to poverty alleviation in LDCs such as Bangladesh and many countries in Africa but the necessity for underlying fiscal and organizational reform in academic institutions means that there is much progress to be made at the national and international political level! There are many examples of small and localized projects resulting from institutional links and partnerships (Alam et al., 2003; Moreira et al., 2017) but these do not have the scope or capacity to resolve major issues such as the growing digital divide. According to a study by the Australian Institute for Social Research based at the University of Adelaide in 2006 it would be those on a low income, unemployed, aged 55 or over, without high school education, women, the populations of rural and remote areas, those with disability and those that cannot speak English- this is indeed a huge constituency (Australian Institute for Social Research, 2006). The role of e-learning in widening participation and reducing poverty remains largely untested and inconclusive (Godard, Selwyn & Williams, 2000; Sims, Powell & Vidgen, 2008). It is also a debate that is far removed from the advocacy of e-learning as a solution to meet market-driven demands within the MDCs.

A critical review of conceptual models of e-learning

The concept of e-learning is defined as "the use of electronic media for a variety of learning purposes that range from add-on functions in conventional classrooms to full substitution for the face-to-face meetings by online encounters" (Guri-Rosenblit, 2005; Levy & Ramim, 2017). Effectively, e-learning is an evolution of what is now known as distance learning. Such distance learning has been in existence in the UK HE sector since the opening of the Open University (OU) in 1971, as the culmination of an evolutionary idea dating back to 1926 for a wireless University. The arguments for the accessible methods and patterns of study used to

justify this first break with the traditional University HE model are similar to those used to support e-learning.

There are many definitions and descriptors of e-learning, such as Morris and Rippin (2002) who consider e-learning to be simply the convergence of hardware, software, users, and location, yet little consideration is given within that model to the connectivity and interaction of learners, whereas Sloman (2001) considers this to be the most critical element. Rosenberg (2001) forms a definition of e-learning based on the criteria of networked learning, the use of technology and the use of new paradigms of training and learning. Collis and Moonen (2001), Sasikumar (2008) and Chandler and Heidrich (2015) refer to flexible learning and a movement away from 'situated learning' towards 'a range of options' and a concept of learning that is 'Anytime, Anyplace and Anypace'. Due to development of both synchronous and asynchronous communication tools (Anytime), the options due to Blended models of face-to face delivery, delivery using electronic platforms or the use of podcasts (Anyplace) and 'Anypace' as a consequence of unitized curricula and new models of self and peer-assessment.

Laurillard (2006, 2013) has taken the view that universities must seek a more constructivist approach to teaching and learning to embrace the requirements and expectations of the modern learner for greater quality. The 5-stage Model of e-learning of Salmon (2005) with the emphasis on 'constructivism' and technological modes of delivery was a highly utilized model, describing how the learner progresses on a journey from 'novice' to independent online learner through the stages of (1) Access/ Motivation; (2) Online Socialization; (3) Information Exchange; (4) Knowledge construction and (5) Development.

However, the e-learning ladder of Moule (2007) is now seen as a progression in conceptualization away from the familiar 5-stage Model of e-learning of Salmon as the e-learning Ladder describes not so much a progression from Instructivist to Constructivist learning but rather a menu of learning opportunities, facilitated both by modern technology, and also, modern paradigms of learning theory. The 'sides' of the ladder include essential support factors such as means of access, group work, IT skills and access, levels of ability, for example. The 'rungs' represent a range of learning strategies as previously mentioned in a non-linear and flexible progression.

There can be no doubt that the drivers of the e-learning Revolution are (1) technological development and changes in society, including globalization and the Information Society, and (2) E-learning as a tool for change such as 'borderless education' and 'personalized learning' and the reality that for most HEIs, their community of customers is far beyond the city, region or country that they are based. Also, the drive towards e-learning is not just initiated by the dispersed nature of the new customer base, but a drive towards interactive or constructivist teaching, a model of learning which is seen as more sustainable, effective and consequently more desirable.

The e-learning solution: Evaluating case study 1

As outlined earlier in this document, e-learning has a variety of differing definitions, from those looking at e-learning as the use of technology in the learning environment (Morris & Rippin, 2002; Rosenberg, 2001; Sloman, 2001) to those that look at the situated learning perspective (Collis & Moonen, 2001; Sasikumar, 2008) and in describing the approach to e-learning taken at University Centre Blackburn College (UCBC) the latter of these two definitions is applicable to UCBC.

For its domestic operations, UCBC has an e-learning strategy that is mapped to the Higher Education Funding Council for England (HEFCE) e-learning strategy from 2005-12 and the institution has developed e-learning in line with the following objectives:

(1) To meet the greater diversity of student needs;

(2) Increase flexibility of provision;

(3) Enhance the capacity for integrating study with work and leisure through work-based and   home-based learning and;

(4) Develop approaches to individualized support for planning and recording achievements.

That strategy draws specific reference to "Enhancing Learning and Teaching through the Use of Technology: A Revised Approach to HEFCE's Strategy for e-learning (HEFCE 2009)", which questioned the definition(s) of e-learning, and alludes to the possible ambiguity of the term when used to describe a variety of activities to which the label can be attached. The use of technology in the learning environment is widespread and provides some form of virtual learning in most of the courses on offer through UCBC and the 16-18 provision within Blackburn College. The e-learning Strategy 2009-12 continues to support the model of the practitioner being key to effective learning, and this is supported by the Joint Information Systems Committee, a dedicated cross college team, and from their research it was identified that "Learners lack the critical and evaluative skills required to interpret online information" and require practitioner support to assist them in developing such attributes in order for them to become effective learners in both traditional and e-learning environments. The evolution of e-learning within UCBC has been a central part of the Teaching, Learning and Assessment Strategy (TLAS) which identifies the framework for both systems and approach across the college, and links the e-learning strategy to the college's wider Instructor Lead Teaching (ILT) strategy and vision described as "IT enabled community where innovation in new teaching and learning approaches can succeed, communication systems are enhanced, and information sharing benefits the whole college" (Sharpe, Benfield & Richard, 2006, p.136).

At Blackburn College and University Centre, the 'blended' approach and movement from 'situated learning' is embraced within the concept of the Learning Wheel, based on Collis and Moonen's (2001) holistic model, which has four elements of Learning, Assessment, Communication and Collaboration that may utilize modern technological innovation, or high quality traditional strategies which may be paper-based or face-to-face. The key area of importance is not whether e-learning is

taking place but rather high quality learning that is constructivist in approach. The overarching e-learning strategy as outlined in the UCBC e-learning Strategy 2009-12 which was written to coincide with the opening of the new UCBC facility is intended to ensure that the new facility and resources were harnessed effectively by the staff and used to further the students' experience. From that strategy, a standardized or template approach to e-learning was developed and implemented, primarily as part of the basic curriculum planning for all HE course and modules. This requirement was cascaded across all Schools within UCBC and required course leaders to create a series of online resources for each course offered in UCBC.

The primary e-learning resource used at UCBC is the Moodle which is a Virtual Learning Environment (VLE) described as a Course Management System *(CMS)*, also known as a Learning Management System *(LMS)*. Moodle is essentially a free web-based package that education institutions can use to create a tailored VLE. In UCBC, the designated course leaders create a student home page for each individual program, and from this "parent" course page, the individual module tutors are required to create a page for each specific module linked to a pedagogic framework with 3 stages or "modes" of development of the framework for e-learning called the "modes of engagement" (Sharpe et al., 2006). These 3 modes codify how the application and integration of e-learning should be implemented to ensure consistency of delivery and learner experience. Mode 1 establishes the foundations for building a positive relationship between the educational institution and learners. The fundamental purpose is to provide a system that delivers a range of modules at satisfactory levels and encourages the student engagement. Mode 2 considers student progression and development by focusing on communication, collaboration, assessment and learning content. Communication seeks to provide an e-learning environment that establishes effective communication flows between student-tutor and student-student, communication channels that also help with the collaboration between students in group projects and tasks. The category of assessment assists learners' development by assuring that teachers continually provide learners with formative and summative feedback. Learning content focuses on providing learners with the opportunity to access a wide range of quality sources that help learners to enhance their learning skills at individual and group levels and be able to improve the quality of academic outcomes. Mode 3 is expected to effectively utilize the capability of the Virtual Learning Environment through the provision of course learning materials, communication, assessment, and monitoring and to ensure a consistent structure and experience for students via the VLE. The e-learning strategy and philosophy at UCBC consists of six key areas that are informed by the overall teaching and learning strategy, the academic infrastructure and program/award requirements:
a. Students experience and engagement;
b. Curriculum design;
c. Assessment;
d. Employability;
e. Learning environment and resources;
f. Staff excellence in academic and professional practice.

From the perspective of "Students experience and engagement, e-learning is seen as a tool to empower learners through the provision of an online learning space which can be tailored to meet individual learner needs. This is invaluable in meeting some of the legislative requirements for inclusivity and meeting the college's mandatory requirements of accessibility under the Disability Discrimination Act (DDA), which is now superseded by the Equality Act 2010 (UK Government, 1995, 2010).

From the UCBC e-learning strategy, a concept evolved that is entitled the "Learning Wheel" model. The model has four distinct areas of active learning:
(1) Collaboration;
(2) Learning Content;
(3) Assessment and;
(4) Communication.

From the "Learning Wheel" a set of "Learner Entitlements" have been developed which are mapped to clearly identify what this provides for each learner. The nine Learner Entitlements are as follows and shown in the table 1 descriptors.

Table 1. Learner entitlements at UCBC

	Descriptor of learner entitlement
1	Learners will be able to access learning and teaching from outside college at times to suit the student
2	Learners will be able to contact tutors for help between set times
3	Learners will be able to submit work remotely where the course allows it
4	Learners can continue to learn during periods of agreed absence
5	Staff and Learners can bring their own hardware and social media site to their teaching and learning
6	Where desirable, Learners will use their own software and hardware to access teaching and demonstrate learning
7	Learners will have access to a range of specific and wider learning resources in support of their specific and general learning
8	Learners will have a sense of learning being tailored to meet their personal needs and preferences in collaboration with course tutors
9	Each learner will have access to online personal learning space

The use of the VLE and development of e-learning resources support students in their learning "off-campus" ensuring that they have access to a suite of learning materials including e-books and e-journals. The design of the curriculum is expected to accommodate the use of available technological enhancements to standardize much of the curriculum information using templates and pro-formas. This is intended to develop the use of Instructor Led Teaching by both academic staff and learners and thereby develop capability and what is described as "banks of reusable learning objects".

Assessment through the VLE is a key element of the system in use, which facilitates electronic submission of written assessments remotely, and promotes the effective use of the anti-plagiarism system known as *TurnItIn*. Students can use this system

proactively as a means of ensuring their work is correctly referenced and that they have effectively cited the sources used. The less palatable aspect of the use of this system is its capability to clearly identify plagiarism, and although this problem remains a reality amongst a small percentage of students, the threat of being caught by the software offers a clear disincentive. Academic staff is encouraged to fully utilize the feedback tools that *TurnItIn* provides in order to feedback to students using a feature called *Grademark* and a choice of standard or tutor prescribed rubrics and consistent language through a system of predefined *Quickmarks.* What such a standardized approach delivers is the ability of management to measure the performance and compliance of both students and the academic teams in the specified process, and similarly enables measurement of a number of key areas that have the potential to affect quality and consistency. Where the use of the VLE impacts quality is in its ability to empower managers to ensure that the learning experience is consistent across courses, departments and the center as a whole. From this consistency in delivery, structure, and resources, the learner experience is replicated across the center in a consistent manner.

The e-learning solution: Evaluating case study 2

In contrast to the earlier presented case study 1, The Organisational Learning Centre (OLC), case study 2, is a private higher education institute and therefore it is independent of direct government control. Case study1 is influenced heavily by the HEFCE, but OLC is not influenced by HEFCE directly, but only through delivery of partnership HE programs that are UK government funded or government supported through the Student Loan Company (SLC) system. However, regulatory frameworks are still present for case study 2, as they are assessed for quality of provision by the UK government appointed Quality Assurance Agency for Higher Education (QAA), and as such program design, delivery and student assessment must follow the QAA codes of practice for HEIs. Furthermore the e-learning program that is currently being promoted and delivered by OLC is a Pearson EDEXCEL Higher National Diploma and hence all criteria of development, design and delivery of such programs must come under the scrutiny of their External Examiners and Quality Control Policies, Pearson (2016) and hence by the course program accrediting body Pearson EDEXCEL, under the UK Ofqual, Regulated Quality Control Framework (QCF) and since 2016 under the Ofqual Regulated Qualifications Framework (RQF).

The e-learning practices at OLC must abide by the requirements for distance learning programs set out by their accrediting body Pearson (2016). Having said that, the main ethos for OLC has been the same across all programs and that is to deliver the highest level of teaching and learning possible guided by the principle of 'learning by doing'. Albeit learning by doing is a difficult concept to translate into distance learning course, OLC has found a way of incorporating that into a blended approach of distance learning, encouraging student directed learning and face to face interventions that thus provide a blended approach. In order to fulfil the OLC ethos and satisfy regulators, OLC has developed the eight objectives of their blended learning programs:

(1) To allow global recruitment with integrity from diverse backgrounds and experience to enter the Higher National level 4 courses;

(2) Provide an increased level of flexibility of provision that caters to a multitude of learning styles;

(4) Ensure that 'learning by doing' is integrated into each delivered unit via creative and innovative methods of student participative formative assessment;

(4) Allow for the integration of study with work and leisure through work-based and home-based learning;

(5) Provide delivery methods and assessment methods that lead to individualized student interventions;

(6) Incorporate technologies of distance learning that are accessible to all students engaging in blended learning;

(7) Ensure that all blended learning programs incorporate 'face to face' activities either in country or on one of OLC Campuses and;

(8) Encourage student collaborative work through Internet group working practices.

Those eight blended learning program objectives are aligned within the OLC strategic intent to deliver the full requirements of Pearson e-learning programs. For OLC compliance to, their accrediting body, Pearson's Distance Learning and Assessment Policy (DL&AP) is important for their continued positive reputation and continued quality assurance, Pearson (2016). That DL&AP policy outlines the minimum requirements that Pearson expect must be met by centers when using Distance Learning and/or Distance Assessment wholly or mainly for the delivery of Pearson qualifications. Quality Assurance (QA) of distance learning, as defined in the DL&AP, is a subset of QA at Pearson with special focus and attention on nine quality categories:

1. Institutional Support;
2. Technology Support;
3. Student Support;
4. Student Engagement;
5. Faculty Support;
6. Teaching and Learning;
7. Course Structure;
8. Course Development;
9. Evaluation and Assessment.

From that policy and the strategy of OLC, the blended learning HND in Business program was developed and implemented, like case study 1, primarily as part of the basic curriculum planning for all HE course and modules. As this was the first blended learning program a pilot study was conducted with a small number of students [n=7] prior to the development and implementation of a fully ratified program. Many learning points were incorporated into the final design of blended learning programs and table 2 lists the technologies incorporated into the distance learning program.

The blended learning program and its Virtual Learning Environment (VLE) includes a platform called 'SYNOPSYS SOLUTIONS' which allows OLC to fulfil the requirements of the Pearson DL&AP. The OLC Synopsis software is an interrelationship data base that manages teaching and learning content and records all student interactions. Synopsis, therefore, is an integrated information system that is used to plan, schedule, aid program delivery and control the activities that embrace all aspects of dealing with current and prospective students and staff.

The use of the Synopsis software in the blended learning strategy and philosophy at OLC ensures that the complete student journey is planned, delivered, monitored and evaluated and that improvements are made on a continual basis. Like case study 1, OLC also utilizes *Turnitin* software that at OLC the primary aim is not to detect plagiarism but to encourage students to improve their own work prior to a final submission.

Table 2. Technologies used to interact with the OLC distance learners

	Descriptor of technology and activity
1	Learners access learning and teaching materials from the *olceurope* student portal and through the *Synopsis* software.
2	Learners are able to contact tutors for help between set times using emails, *Skype* calls and *Skype* conferences.
3	Learners are encouraged to assess their own work initially; prior to submitting work remotely through *Turnitin* software.
4	Learners can access teaching support material, signposted in their course workbook, at any time using additional learning materials via *Facebook*, you tube, and the *olceurope* website.
5	A calendar of virtual conference lectures is provided giving students the opportunity to attend and interact on line with the course tutor.
6	Where desirable, Learners will use their own software and hardware to access teaching and demonstrate learning.
7	Student forums are encouraged through the *olceurope* website. Encouraging and supporting the student to student engagement and interaction.
8	Learners will attend face to face sessions to enable direct contact with personal tutors, support staff, and lecturers. This enables integration with other students too.
9	Each learner will have access to online personal learning space in the *olceurope* student portal.
10	Distance learners will have access to local (to them) OLC partners that are familiar and competent in the delivery of support for the graduate level study. Local learning events will be timetabled regularly throughout the academic year.

Table 2 incorporates the lessons learned from an early pilot study that indicated that face to face meetings and local support where critical to the successful continuation and improvement of student progress. Likewise, that pilot study showed that tailored feedback and intervention from the subject tutor was an

essential part of successful distance learning. This feedback and intervention must be done in a timely and appropriate manner to ensure that opportunities for interim (formative) assessment of their evidence of learning to enable individual constructive feedback and guidance towards final (summative) assessment. To that end, use of example assignments, previous student work, helpful assignment writing hints and tips are utilized by students and formative assessment is given for short (non-graded) pieces of student work.

Alternative approaches to the case studies e-learning solutions

The evolution to full e-learning is dependent upon there being an addressable market, however, the rising cost of education, notably the increase in participation costs for students in England has led some institutions to consider significant changes to their modes of delivery.

In another more radical approach to e-learning, there is the Massive Open Online Course (MOOC) model whereby course materials are provided with open free access for students to study and only pay fees when they elect to be assessed formally for an award. Amongst the largest of these MOOC providers, an organization called Coursera, now offers access to 428 courses from 84 different partner institutions free of any charge (www.coursera.org, Accessed 28/11/2016) whilst another calling itself edX offers courses in the same way from another 33 university partners.

What makes this MOOC model particularly interesting is that the two organizations have been created by some of the world's most prestigious institutions, *Coursera* being developed by academics from Stanford University, and *edX* being a collaboration between teams from Harvard and Massachusetts Institute of Technology.

In essence, it is possible to enroll in a course, access all study materials online and only pay fees when the student decides they wish to be considered for a formal award. This model may be attractive to students from Less Developed Countries (LDCs) as they are able to study a program and only commit funds to the process at the point they elect to be assessed for an award. The risk with this is that they may still fall short of the required standard as there is little if any developmental feedback during the study process, a key difference from both traditional and emerging e-learning delivery models.

Aspects of effective e-learning

The rationale for defining e-learning as a standalone approach is one which questions whether it is possible for effective delivery of academic programs to take place without the traditional tutor/student/institution interaction that is absent in a purely online delivery model. Does the use of online systems such as VLEs

constitute e-learning or are institutions' merely harnessing the technology of the day to supplement traditional teaching methodologies and philosophies? It could be argued that true e-learning should be more akin to the original distance learning and/or correspondence courses whereby tutor and student rarely (if ever) meet.

Effective e-learning should include the following five elements that make an effective program (Quesada & Aust, 2009). These include content that is credible and validated, modular and unitized, accessible (to meet the needs of students from a range of abilities, cultures and language capabilities), reliable in terms of ease of download and access, and finally, content that is compatible with the range of different learning systems such as Moodle and Blackboard.

It is also evident that successful e-learning cannot ignore the desire for humans to socialize and effective social platforms will 'bind' and motivate distant learners. Learners will also expect support, feedback and prompt response to assessments, in addition to the stipulations for content as described above, perhaps in the form of podcasts, electronic appearances by guest speakers, simulations, tele-mentoring, threaded discussions and other innovative interactive learning opportunities (Meredith & Newton, 2004; Quesada & Aust, 2009). In this way, a sustainable and commercially successful e-learning product is assured.

Critical analysis and discussion of the case study reviews

From the UCBC example, it is clear that e-learning is used as part of the suite of learning resources used by the institution, and that there is little in the way of examples of delivery solely using web-based interaction which is defined as full e-learning (Salmon, 2005; Sharpe et al., 2006). Similarly, the OLC blended learning approach encourages multi-faceted learning incorporating face to face meetings but differently student's benefit from participation in local learning events.

In drawing the two case studies together, both the OLC blended learning and the Blackburn e-learning approach is based on a 'triumvirate of qualities', which can be expressed as A+B+Q, to ensure a high value educational added product is offered to the off-campus student.

Authenticity (A) real externally validated qualifications with clear progression (HND to BA)
Engagement (B) real engagement as a consequence of the establishment of communities, 24/7 asynchronous access, rapid response to assessment and rapid feedback
Quality (Q) real quality that refers to modern pedagogic practices to ensure interactivity for learners

Many factors that drive e-learning solutions for both evaluated case studies are common and the below nine points have been elicited from the data gathered from interviews, participation, and reviews of case study materials:

1. The E-learning approaches take lead from Collis and Moonen's (2001) concept of flexible learning that is free from 'situative' restrictions and Sharpe et al. (2006) 'Modes of Engagement Model' which describes as 'modes' the effective practices needed to ensure successful e-learning;

2. The case studies recognize the need for collaboration, effective assessment and a quality learning experience which results in a genuine qualification;

3. Learner support is key to the success of distance learning and this is brought about through formally recognizing within program management systems aspects of; Institutional Support, Technology Support, Student Support, Student Engagement, Faculty Support;

4. There is recognition that the drive towards e-learning is a move towards technologically enabled constructivist and interactive 'action' learning;

5. The approach is especially attractive in terms of reaching new markets with a competitively priced education product and without worries of visa restrictions, and will encourage all students (and lecturers and teachers) to embrace new flexible ways of studying and learning;

6. Although the drive towards e-learning is, in part, by political, economic and technological change, the limiting factors of access, support and effective learning methodology are crucial to client acceptability;

7. The Digital Divide is a real factor that leads to disenfranchisement of a huge proportion of the world's population. In solving this problem, the issue of e-learning as either a product that leads to profit or a necessary tool in poverty alleviation is starkly realized and is the frame of a larger socio-political debate leading to global action;

8. The quality of delivery for the HE programs offered by both case studies is controlled by the UK government appointed QAA and also by the course program accrediting body Pearson EDEXCEL, under the UK Ofqual, Regulated Quality Control Framework (QCF) and since 2016 under the Ofqual Regulated Qualifications Framework (RQF);

9. Changes to the UK HE tuition fee model have made UK full time fees, for both local and overseas students, high compared to the rest of the world and free HE is no longer available.

Those nine points can be synthesized into driving factors that are presently encouraging e-learning in the global education market and enabling factors that appear to be present within a design and delivery system of e-learning. These driving and enabling factors are shown in figure 1, which shows the e-learning solution at the center of the identified factors.
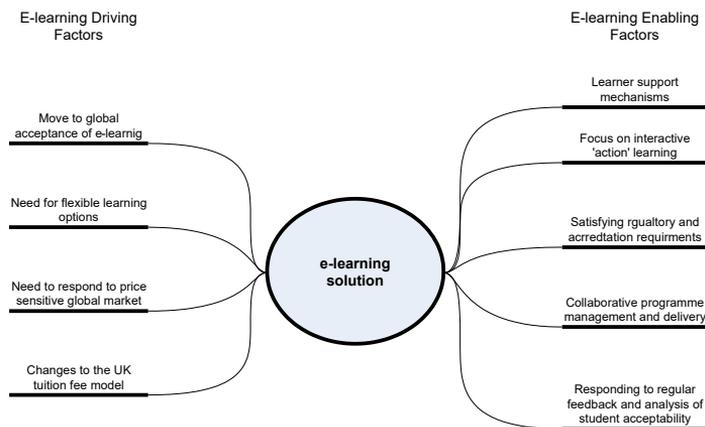
Figure 1. Identified e-learning Driving and Enabling Factors affecting the e-learning solution

It is proposed within this research that the two case study organizations have benefited from the driving and enabling factors as shown in figure 1. Those factors have been considered by the two case study organizations as important for the successful implementation and management of their individual and unique e-learning solutions. Notwithstanding the very different approaches possible to e-learning, the two case study organizations that have been evaluated within this research have both been critically aware of the driving forces for e-learning and have provided solutions that enable successful delivery of an e-learning solution based on the elements represented by figure 1.

Conclusions and recommendations

Changes in demand have led to a variety of models and offerings being brought to market by HE institutions to meet the needs of this changing market. Some of the models offered are effectively an extension of the Virtual Learning Environments (VLEs) in use in most if not all HE providers' resource capabilities. These VLEs, when used for International Learners in other countries become the backbone of program delivery, whereas, in a conventional student environment of attended classes and seminars, they are used to support the conventional patterns and process of learning. VLEs currently in use in UK HE models such as Moodle and Blackboard provide a platform from which HEIs can offer e-learning comparatively easily in terms of enabling students to access online resources and learning materials, as well as undertaking tests and providing remote student support in a conventional approach to curriculum delivery. Ironically, this approach has been in existence for over 40 years since the inception of the Open University model in the United Kingdom, whereby students undertake to learn independently, but with remote mentoring and support.

The factors that have driven UK higher education institutes to provide globally accepted e-learning have been shown through this case study research to include the four categories of; changing fee structure models; price sensitivity; the need for flexible learning and a move toward greater acceptance of e-learning. On the other hand, the responses from higher education institutes have to create enabling factors for successful e-learning solutions. Those enabling factors consist of five categories of e-learning provision including; supportive mechanisms; interactive action learning; satisfying regulatory and accreditation requirements; collaborative program management and development and the fifth enabling category of feedback and response to student acceptability.

Although the two case studies are different, in the respect that one is publicly funded and the other is a private institute, the driving and enabling factors have surprisingly been seen common across both institutes. This observation appears to indicate that the portfolio scope, student population, and size of the institute do not matter in respect of those factors when an e-learning solution is chosen. This is not to say that other factors are not present that are unique to each institute, however, the two case study reviews did not identify significant differences in e-solutions, albeit different learning platforms and software had been used, their utility and content tended to be similar. Whether these identified driving and enabling factors are present in other institutes e-learning solutions remains the subject of further research. Likewise, the presence of other factors in other settings should not be ruled out and further reviews of other higher education contexts may reveal different results. Nonetheless, the model present of driving forces and enabling forces of e-learning solutions are offered to educational researchers and practitioners alike to assess their own context of interest.

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