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Using informal collaboration to develop quality assurance processes for eLearning in developing countries: The case of the University of Botswana and The University of the West Indies Distance Education Centre

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ABSTRACT

Collaboration among institutions of higher education involves the sharing of financial, administrative and infrastructural resources with others through a formal memorandum of understanding. There are occasions where due to bureaucratic or political barriers, a formal collaborative arrangement may not be possible, however, academic partnerships may foster informal collaboration or cooperation among institutions. This paper examines one such informal collaboration existing between the University of Botswana and The University of the West Indies Distance Education Centre. The authors share the informal collaborative model used to develop a quality assurance tool for eLearning and compare approaches in eLearning course development and quality assurance procedures at both institutions.

Keywords: *Collaboration; eLearning; course development; quality assurance; developing country; blended learning*.

INTRODUCTION

Michael Moore and Kris Lambert (1996) point out that while distance education has always been characterised by communication, new technologies have made collaboration among all stakeholders in open and distance learning far easier than before. Definitions of collaboration include “an active working partnership supported by some kind of institutional commitment” (Neil 1981:25). Evidence of formal collaboration in distance education over the years exists in the form of associations and consortia such as the Asian Association of Open Universities, the Latin American Cooperative Network for the Development of Distance Education and the Commonwealth of Learning (COL). While researchers such as Moore and Lambert (1996) and Dhanarajan (1998) emphasize the many benefits of formal collaboration, particularly for open and distance learning, writers such as Moran (1990) point out that informal and ad hoc agreements can also yield benefits for institutions and individuals involved in open and distance learning, particularly in developing countries.

The University of Botswana (UB) and The University of the West Indies (UWI) share similar socio-economic environments. Similar higher education experiences and existing resources at both institutions make formal collaboration an attractive premise. Efforts have been made by the administration of UWI to establish a memorandum of understanding with UB, but this has not yet materialised. In the meantime, however, academics within both institutions have been using their

professional links with colleagues to establish informal working relationships. This paper describes one such relationship which emerged out of a joint research project undertaken by members of staff of both institutions and which has resulted in the development of quality assurance benchmarking criteria for eLearning at both institutions. The paper also examines the similarities and differences between the institutions, which reinforce the notion that a more formal collaborative arrangement would be beneficial to both institutions.

BACKGROUND

The University of Botswana's experience in use of ICT in education

The University of Botswana, through the Educational Technology Unit (EduTech) of the Centre for Academic Development (CAD), has embarked aggressively on a programme of technological transformation over the last three years (Uys, Nleya & Molelu 2003). EduTech has led the eLearning (UBel) initiative, where eLearning is defined as the appropriate blend of information and communication technologies (ICT) to enhance student-centred, collaborative and lifelong learning, combining face-to-face and web-based approaches in teaching and learning. The initiative was launched in February 2001, to transform teaching and learning through use of eLearning as a blended learning approach. A large part of this technological transformation, particularly at start up, has been development of academics in the effective and appropriate use of educational technologies. In response to this need the EduTech has developed a programme for UB teaching staff consisting of eighteen (18) workshops that lead to an "eLearning Certificate".

Substantial progress has been made at UB, with funded research for development of eight eLearning pilot courses to establish best practice models and quality assurance measures. In addition, the Academic Programme Review Unit (APRU), also in the CAD, has assisted in development and testing of standards and criteria for evaluation of these eLearning pilot courses. This research and the outcomes of this research to date have been primarily centred on on-campus learning because of the level of development that exists within the university and the lack of access to ICT for off campus students.

The Centre for Continuing Education (CCE), designated in 1994 by the Government of Botswana as the leading institution for development and delivery of part-time and distance education at the tertiary level, has been functioning separately from the on-campus eLearning initiative. Programmes offered by the CCE include: Part-time Diploma in Accounting and Business Studies through the Extra Mural Unit; Diploma in Primary Education for certificate holders; Diploma in Adult Education through the Distance Education Unit; and, non-credit courses in the Public Education Unit. Of the three units that comprise the CCE, the only unit that uses distance education strategies is the Distance Education Unit (DEU). Programmes offered by DEU are primarily a combination of print based, video and audio materials combined with face-to-face delivery. Although the basic mode of delivery of courses at the CCE may be similar in some ways to the UWIDEC mode of delivery, the level of sophistication in the use of ICT is significantly lower in the DEU.

UWIDEC's experience in use of ICT in education

UWIDEC was established in 1996 to expand the university's initiatives in distance education throughout the English-speaking Caribbean. It was thought that the addition of use of a combination of technologies could reduce cost, expand the range of programmes and improve quality in programmes offered through distance education (Kuboni, Thurab-Nkhosi & Chen 2002). Currently, the UWI offers three full undergraduate degree programmes at a distance through its thirty (30) centres located in sixteen (16) Caribbean territories. These Centres are administered

by the three campus offices located at Mona, Jamaica; Cave Hill, Barbados and St. Augustine, Trinidad. UWIDEC does not regard its use of the Web as high level and currently considers eLearning as asynchronous learning involving the blending of multimedia technology and web-based learning with the more traditional print based delivery and audioconferencing.

In an attempt to capitalize on use of technologies in educational programmes UWIDEC has conducted research on their distance education programmes and the value of the online experience. In 2001, staff at the St. Augustine, Trinidad office of UWIDEC embarked on a long-term research and development project designed to monitor and evaluate the expanded use of ICT in programme delivery and to identify and analyse the key factors required to facilitate sustained growth of eLearning in the university's distance education programme. Based on the first two phases of this research, it was projected that in order for UWIDEC to successfully incorporate web-based learning into its existing mix of course delivery methodologies, it was necessary, at least in the initial stages, to focus attention on development in three specific areas. The areas were: instructional design/course development, the training and development of course writers/coordinators (content experts) in eLearning course development and the training of technicians at UWIDEC sites to function in the area of student support (Kuboni, Thurab-Nkhosi and Chen 2002).

While the UWIDEC network provides the connectivity for the online delivery mode from 2000 to late 2004 the Web CT learning management system (LMS) was the platform on which the online teaching/learning environment was built. In 2004, based on financial considerations, UWIDEC took a decision to move to an open source LMS called Moodle for all future online course elements.

With the growing use of web-based technologies in formal education, there is a variety of emerging modalities in which the computer-networked environment is being used for instructional delivery. UWIDEC's approach to the use of the Web between 2001 and 2005 can be regarded as falling at the lower end of Eastmond's (1998) continuum of Internet-based distance education. Along this continuum, Eastmond identifies three types of Internet use. Type I, at the lower end is described as traditional distance learning supplemented with Internet activities. He explains further that this type of learning "allows students to participate in e-mail exchanges with instructors and other students, supports online research in libraries … and may also make use of online discussion groups…" (p.34).

Between 2001 and 2005 UWIDEC St. Augustine had a web-based component in eight (8) courses, which seemed to fall within Eastmond's Type 1 for Internet use. These courses were:

- Introduction to Sociology
- Caribbean Business Environment
- Industrial Sociology
- Topics in Economic Development
- Operations Planning and Control
- Current Issues in Educational Administration
- Principles of Marketing
- Survey design and analysis

The online elements of seven of these courses have been available to students since 2001 and have been the subject of a research study conducted by UWIDEC St. Augustine. (Kuboni, Thurab-Nkhosi and Chen 2001; 2002).

Comparison of the UB and the UWIDEC eLearning Approaches

Similarities

There are a number of similarities between UB and UWI in regard to eLearning approaches. One feature that both institutions have in common is that both institutions, at least until 2004, use WebCT as the Learning Management System. This feature is useful as it provides one with greater ability to compare approaches and challenges to development and delivery with a view towards sharing of strategies that work. As UWIDEC gains experience with the open source Moodle system, UB may benefit from collaboration on experiences with this system.

Both UB and UWI have recognized the need for capacity building of staff members and have organized formal training to achieve this. Both institutions have focused on instructional design principles as a foundational skill for integration of eLearning into courses and both have developed courses to facilitate increased teaching staff skills to utilize a variety of eLearning technologies. Because of the need for capacity building of staff, both institutions have integrated eLearning elements into pre-existing courses and are conducting research on best practices in development, delivery and quality assessment of eLearning courses. Results of the research and sharing results of these studies have informed the present systems of course development, delivery and quality assessment at both institutions.

A particular focus of both institutions lies on the instructional design of eLearning courses. In both institutions instructional design is seen as a sequential process, which is flexible and practical (not linear). The instructional design process for eLearning at UB and UWIDEC takes into account the context of both institutions. In this regard, the instructional designers at each institution consult with the lecturer interested in eLearning, and together they develop a course outline. The lecturer follows the general steps identified in the various models of instructional design, and completes an “eLearning Course Concept Development Checklist”, covering all areas affected by eLearning, such as content, communication, tutoring, collaboration, assessment and quality assurance.

Both institutions address student support in their staff training but neither institution has developed formal programmes for student capacity building to date, although orientation sessions for students using WebCT are being conducted at UB at the beginning of each eLearning course and orientation sessions are conducted with the distance education students in Trinidad and Tobago. Some of the islands, which form part of the UWIDEC network are yet to fully accept eLearning as a part of the UWIDEC course delivery strategy and as such are providing some resistance to efforts to take the process forward. Resistance by the Distance Education Unit at UB is also problematic. Reasons for this resistance need to be explored, however, resource limitations may be the primary reason for the lack of initiative in this area. An additional reason for resistance may well be pedagogical biases, especially in the case of more traditional thinkers, which was demonstrated in the study of online learning at UB where older, higher level professionals were more resistant to online learning (Gachago-Giannini, Lee & Thurab-Nkhosi 2004).

Differences

Facilities that promote eLearning are different between UWI and UB in that UWIDEC has synchronous (telecommunications centres) and asynchronous technology, including personal computers for twenty-five (25) students at all satellite centres (Thurab-Nkhosi 2004) while UB has only recently arranged for use of Ministry of Education facilities, including personal computers, in some of the satellites throughout Botswana. As a result, use of the Internet is nearly absent in

distance education at UB with only those students in the Diploma in Accounting and Business having access to the Internet and that access is severely limited.

Other differences that exist between the approaches to eLearning used by each institution include the staff involved in eLearning support. UB relies on an eLearning support team of three people, namely an Instructional Designer, a Graphic Designer and a Multi Media Producer for all 650 staff members, while UWIDEC relies on three (3) existing curriculum development teams, which were initially brought together for developing print-based courses. There is currently only one graphic designer, one multi-media producer, and one web developer to be shared among the three teams on the campuses at Mona, Jamaica; Cave Hill, Barbados and St. Augustine, Trinidad.

Furthermore, UB provides workshops, individual consultancy and training for lecturers interested in eLearning and the eLearning certificate. While UWIDEC provides training in the principles of course design and more recently an orientation to blended learning in the UWIDEC context, the main responsibility for training academic staff at UWI rests with a separate department, the Instructional Development Unit (IDU), which falls under the Office of the Campus Principal. Currently, the main campus is still using the WebCT LMS and as a result the IDU's training for eLearning is centred on WebCT.

At UB, after the eLearning team completes the eLearning Course Development Checklist, the lecturer then works with a multi-disciplinary development team to finalise the eLearning activity(ies) chosen. This team includes the lecturer/content expert (academic staff member), instructional designer (EduTech), online media developer (EduTech), graphic designer (EduTech), and a Library Representative. This is where the process differs at UWIDEC because the continued development of the course rests with the content expert and the instructional designer and editor, without the assistance of an eLearning development team. Furthermore, at UB, support for the development of a well-designed course is given individually and interested lecturers/content experts can seek support at any stage of the eLearning course development process. This assistance consists of training in development and publishing of online material, the development of power-point presentations or any other aspect of integrating ICT in teaching and learning (Thurab-Nkhosi, Giannini and Lee 2004).

COMPARISON OF QUALITY ASSURANCE PROCEDURES IN eLEARNING AT UB AND UWIDEC

Clearly the process used for course development and delivery described above is a very important factor in the level of quality of programmes. The similarities and differences and lessons learned from these approaches are used by these institutions in development of their guidelines for development and delivery, which are discussed in a later section of this paper. In this section similarities and differences in quality assurance procedures for eLearning courses are discussed.

Similarities

Both universities have adopted the definition of quality as "fitness for purpose" (Thurab-Nkhosi 2004; UB Academic Quality Management Policy 2003), although both UWIDEC and UB may review this definition in relation to specific distance education activities. While quality assurance systems are in place for on-campus courses both universities have been slow to develop quality assurance standards and systems of measurement for distance education courses and programmes. Furthermore, these policies, procedures and processes are overseen in both institutions by special bodies that have quality assurance as a primary mandate.

The global emphasis on a dual approach to quality assurance, with internal and external systems as the most common strategies, has been adopted by both institutions (Thurab-Nkhosi 2004; UB Academic Quality Management Policy 2003). There are, however, differences in the stage of development of quality assurance strategies used for eLearning in the two institutions.

Differences

The difference in quality assurance for eLearning courses at the two universities is essentially found in the level of the strategies in place. At UWIDEC the strategy is at a development and delivery level, while at present at UB the strategy is at the individual course delivery level. In order to maximize the lessons learned from each institution both are sharing best practices and lessons learned in the less developed area of quality assurance, i.e., individual course delivery or programme development level quality assurance is shared by UWIDEC while UB shares the lessons learned in their quality assurance in individual course delivery. These activities are discussed in the section on the collaborative model that is presently in place.

WHY COLLABORATION BETWEEN UB AND UWI?

The following information is provided to support the authors' notion that there are similarities between Botswana and Trinidad and Tobago. It was based on these similar characteristics that the authors felt that this could be an opportunity for meaningful collaboration. Trinidad and Tobago has a population of 1.3 million, only slightly less than Botswana's 1.7 million and both are considered developing countries. Both Botswana and Trinidad and Tobago are economically dependent on non-renewable natural resources, Botswana on diamonds and Trinidad and Tobago on petroleum (Mogae 2003). Furthermore, the Caribbean countries that comprise UWI are all Anglophone countries as is Botswana. Both countries, until recently, have a national/regional university with "satellites". However, because the West Indies is a region composed of many islands, UWI (with over 30 satellites spread throughout sixteen Caribbean islands) has greater dispersion of university facilities than does UB. Based in a land locked country, UB has only six "satellites".

It is likely that these two countries have more contextual elements in common than would two countries with vastly different populations or political-economic contexts. Many countries are aligned on the basis of these areas of similarities, especially with regard to quality assurance (Fourie, Strydom & Stetar 2000). It is because of these significant similarities that collaboration of the two countries was considered to be useful in learning about best practices in course development and delivery and quality assessment in eLearning.

THE UB-UWIDEC INFORMAL COLLABORATIVE MODEL

As stated earlier, the collaborative model used emerged within the context of a research project developed by the Academic Programme Review Unit at the University of Botswana to develop guidelines for best practices and an instrument(s) for assessment of quality in Web-based courses. The research team comprised the staff of the APRU, which included a visiting member of UWIDEC staff who was working on a short-term contract with the APRU at the time and a member of staff of the eLearning support unit of the Centre for Academic Development. The model involved the development of processes based on the research undertaken at UB and the application and revision of these processes at UWIDEC, based on the experiences at UB. The collaboration therefore progressed through four stages:

Stage 1: Development and conduct of the UB research project;

Stage 2: Development and pilot testing of a UB benchmarking tool for quality assurance in

eLearning course development;
Stage 3: Adaptation and pilot testing of a UWIDEC quality assurance tool for eLearning course development based on the UB experience;
Stage 4: Sharing of experiences in using the tools developed and revisions.

The following section describes these four stages as they relate to a study to develop an instrument(s) and processes to measure quality of eLearning courses.

Stage 1: Development and conduct of the research project

The purpose of this study was to use benchmarking research to develop indicators of quality in eLearning courses at UB and to use these indicators to assess the quality of eight eLearning pilot courses developed by faculty members at UB in collaboration with the instructional designer, EduTech. Based on the research findings, a best practice model and criteria and processes for assessment of future eLearning courses at UB were to be developed.

The draft instrument to be used for quality assessment was developed by the research team based on, but not limited to, benchmarking research done by the following: WebCT Exemplary Course Awards Rubric; Billings, Conners & Skiba (2001) research on quality of web-based nursing programs; the Educational Technology Unit eLearning Course Design Checklist; and, the US based Flashlight Program that conducts research on use of ICT in educational programs. Students, designers and other teaching staff of the eLearning pilot courses were asked to complete the instrument(s) developed to assess the benchmarks. In addition, ten (10) focus group discussions were conducted to obtain qualitative data on the experience of students and staff. The qualitative data were used to validate and augment the data obtained through administration of the quantitative instrument(s). Furthermore, these qualitative data were instrumental in guiding the researchers in adopting the resulting quality assurance processes.

Quantitative data were analysed using SPSS. Descriptive and inferential statistics were used to determine the significance of variables in determining the quality of the eLearning course. Qualitative data from focus groups were recorded and transcribed by research assistants. Use of a constant comparative method of data analysis was used with categories and themes of responses identified. These data were used to further define the significance of variables measured in the quantitative instrument(s) in contributing to best practice. Comparison of marks, in those courses with a face-to-face counterpart or that have been taught by face-to-face previously, were used to determine overall impact of the eLearning mode of delivery to the quality of learning and teaching. Finally, all of these data were used in development of guidelines for best practice in eLearning at UB.

Stage 2: Development and pilot testing of a UB benchmarking tool for quality assurance in eLearning course development

The 'Draft Quality Assessment for Online Learning Rubric' was initially made up of six distinct domains of assessment criteria. The domains emerged from the literature on quality assessment of web based programmes and courses, as indicated previously. The number of items in each domain is contained in brackets after the domain. The six domains were: needs assessment (2), student learning objectives and performance (2), active learning (5), online organization and delivery (14), student support (6), and student and course evaluation (11) for a total of 40 items. A balance was sought between usability, in terms of convenience and time required to assess the quality of the course and validity of the scores, of the completed assessment rubric. For these reasons, the researchers attempted to keep the number of items below 50 and developed the tool using MS Excel so that scores could be generated automatically and quickly (Appendix A).

The levels of performance to be indicated on the rubric were rated: not present (0), weak (1), acceptable (2) and exemplary (3). Each of these ratings was given a number as indicated in brackets behind the rating. The descriptors for each of the ranks for the criteria were based on reports in the literature on performance in web-based and distance learning programmes in both developed and developing contexts. The highest possible score for each domain was calculated by taking the number of items multiplied by three, i.e., domain one: needs assessment, with two items, has 2 X 3 = 6 or a possible maximum score for this domain of six. A maximum total score for the combined domains in the rubric was 40 X 3 = 120.

Pre-testing of the 'Draft Quality Assessment for Online Learning Rubric'

The 'Draft Quality Assessment for Online Learning Rubric' for evaluation of eLearning courses was tested in April 2003 on four Southern African Development Corporation (SADC) environmental courses that were developed through a regional development project (SANTREN) by one member of staff of UB staff and the visiting staff member from UWIDEC. The review was conducted prior to the courses being implemented. The purpose of this pre-test was to determine the usefulness of the rubric and to make modifications as necessary based on the reviewers' suggestions following assessment of the courses. The reviewers that utilized the 'Draft Quality Assessment for Online Learning Rubric' for evaluation of the SANTREN eLearning courses found a number of benefits and weaknesses through this pre-test of the instrument. The most apparent strength of the draft rubric was the ease of its use for determining the level of quality of specific elements of the courses assessed. Because of the multiple sources of information used in determining the criteria to include in the rubric, the authors found they were able to enhance clarity of the criteria as well as promote the quantification of performance on each of the criteria.

Stage 3: Adaptation and pilot testing of a UWIDEC quality assurance tool for eLearning course development based on the UB experience

The curriculum development teams at St. Augustine, Mona and Cave Hill, with permission from the team leader of the UB research group, reviewed the UB Benchmarking rubric and arrived at a format and specific criteria to be covered in a quality assurance tool for UWIDEC. While the UB benchmarking rubric was essentially an evaluation tool to be used at the end of course development, it was felt that UWIDEC should develop a quality assurance tool to be used throughout the course development and delivery process. The criteria used by UWIDEC were informed by international criteria established for measuring quality in distance education, a decision that resulted from the differing level of eLearning infused in distance education between the two institutions.

Based on the criteria, and the UB experience with the benchmarking rubric, the UWIDEC quality assurance tool was designed to be used during three stages of course development, namely pre-production, production and evaluation. A series of teleconferences were held to arrive at the draft quality assurance tool (see Appendix B). It was decided that this tool would be used on a pilot basis as new online courses were developed so that revisions to the tool could be done based on practical experience. To date the tool has been used by the St. Augustine and Mona campuses.

Stage 4: Sharing of experiences in using the tools developed and revisions

Based on experiences of the two institutions, the authors believe that lessons learned through research and practice at each institution could continue to be shared to develop more useful guidelines for eLearning programme development, delivery and methods to measure quality of the programmes. It is felt that sharing research findings from UWIDEC's long-standing distance education experience and UB's more developed on-campus use of eLearning strategies will benefit both institutions in their quest for further development of eLearning in these two developing country settings.

At UB, what has been learned from the eLearning pilots has been developed into Draft Guidelines for Development and Delivery of eLearning Courses (Appendix C). In addition, further development of the benchmarking rubric to include data from a revised interview schedule for focus group discussions (student and course expert) and revised student online questionnaire is being implemented and tested.
At UWIDEC the following has been learnt from application of the quality assurance tool.

Adequate Time Frame

A course must be developed within a reasonable time frame so that the tool can be applied early enough to allow for changes in the course development process. In other words, courses that are being developed as they are delivered do not allow for application of the tool and this is clearly not best practice. To benefit from the outcomes of the use of the tool, there must be adequate time for planning the course to allow for changes, questioning during the development and delivery process, reflection on the process and finally amendments when required.

Consistent application

To be effective the quality assurance tool must be applied consistently throughout the process. Application during the planning and development stage, while omitting the evaluation stage for example, devalues the tool and reduces its effectiveness. It should also be recognized that a decision to use the tool requires application to ALL courses with an online component and not just to the ones that UWIDEC may have more time to work with. This requires commitment by staff on all campuses involved in the course development and delivery process.

Responsibility for applying/using the tool

Specific individuals should be assigned responsibilities for applying the tool in order to ensure consistency of delivery. The various levels or phases of the planning and delivery process to which the tool can be applied generally determine the person(s) responsible for application. For example, during the course planning stage, the curriculum specialist should assume responsibility for ensuring the criteria identified for quality are met. Clear guidelines on who is responsible for what activity must be given at each phase of course development.

Follow-up

Decisions and action must be taken on data obtained from the quality assurance tool, and clear time frames developed and specific actions taken to address any problems or challenges identified. Online environments can allow for changes and adjustments to courses with relative ease. Advantage must be taken of this characteristic.

CONCLUSION

In this paper the authors have compared approaches to eLearning course development and quality assurance at the University of Botswana (UB) and The University of the West Indies Distance Education Centre (UWIDEC). The paper further describes a collaborative model where lessons learned in these two institutions are shared and compared with the result being guidelines for course development and delivery and quality assessment of eLearning courses at UB and UWIDEC. UB and UWIDEC have had similar learning experiences and both institutions will be sharing strategies to strengthen the quality assurance and course development processes based on lessons learned.

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APPENDIX A

UB QUALITY ASSESSMENT FOR ONLINE LEARNING RUBRIC

Evaluation Phase 1 (after production)

BENCHMARKING RUBRIC									
#	**Benchmark**	**0**	**Weak Performance**	**1**	**Acceptable Performance**	**2**	**Exemplary Performance**	**3**	**Comments**
Needs Assessment Criteria									
1	Needs assessment		There is little evidence in the course materials that student and society needs have been considered in the development of the course		The content seems to address society and learner needs but there is no indication that a formal needs assessment was conducted		Clear rationale for selection of content and its relation to society and learner needs is communicated in the course		
2	Target group		The target group for this course is not clearly communicated in the course		The target group is clearly stated in the course materials		Rationale for selection of this target group is communicated in the course materials		
		0		0		0		0	
							Needs Assessment Criteria Total:	0	
Student Learning Objectives and Performance Criteria									
3	Clear student learning objectives		Student learning objectives stated in vague terms		Student learning objectives stated clearly		The student has inputs into the objectives, i.e., student objectives		
4	Clear performance criteria		Unclear pefomance criteria		Clear performance critera		Clear, manageble performance criteria with conditions for performance, i.e., rubrics		
		0		0		0		0	
							Student Learning Objectives and Performance Criteria Total:	0	
Active Learning Criteria									
5	Active learning, i.e., case study, problem based, anchored learning		Only one example of active learning for the course		On average one example of active learning per unit or module of the course		The entire course is based on students actively interacting with the content		
6	Opportunity for student to student interaction		Limited encouragement for student to student interaction		At least weekly interaction is expected between students		Nearly continuous interaction is expected		
7	Opportunity for student to instructor interaction		Limited expectations for student to instructor interaction		At least weekly interaction is expected between student and instructor		Nearly continuous interaction is expected		

8	Further resources, e.g. links, presentations, audio, video files		Further resources used in a limited way		Opportunities for students to access further resources		Further resources engage students in the learning process		
9	Appropriate use of technology tools for the objectives		Tools not clearly related to the learning objectives		Tools relate to the learning objectives		Tools enhance learning of the content and meeting objectives		
		0		0		0		0	
							Active Learning Criteria Total:	0	
	Online Organization and Delivery Criteria								
10	Homepage (welcome, information & uidance)		The homepage is available but provides little welcome information nor guidance		The homepage provides some welcome, information and guidance		The homepage not only provides information and guidance, but it is engaging		
11	Course outline		Limited information in the course outline		Most necessary information is in the course outline		Provides all information required of the student in the course		
12	Course schedule		Limited information in the course schedule		Most information is available in the course schedule		All information is avialable on the course schedule, e.g, assignment and assessment dates		
13	Information provided to guide student through the learning process (Help)		Limited material to guide the student's learning and difficult to access		Some material is provided that guides student learning		Consistent guidance available and easy to access		
14	Ease of navigation through course components		Difficulty navigating through course components		Some difficulty navigating through course components		Easy to navigate through the course components		
15	Navigation through content		Difficulty navigating through the course		Some difficulty navigating through the content		Easy to navigate through the content		
16	Content in manageable segments		Easily become overwhelmed by the amount of content		Most segments do not overwhelm the student		All segments have manageable amounts of information		
17	Mechanisms used for active learning are cohesive with content		Little relationship between the content and the learning activities		Content and learning activities are cohesive		Learning activities are part of the course content delivery		
18	Aesthetic design of course		Course design rudimentary		Course design aesthetic		Course design very appealing visually		
19	Accessibility issues are addressed		Few alternative access possiblilities		Some alternative access possiblilities		All course materials are accessible for people facing connection problems		
20	Technology tools used are appropriate for the content and objectives		Tools sometimes inappropriate for content and objectives		Tools appropriate for content and objectives		Tools enhance learning of the content and ability to meet objectives		

21	Components of the course (objectives, instructional strategies and assessment techniques) are closely aligned		Little alignment between course components		Most course components are aligned		All course components are clearly aligned		
22	Consistency in the layout of course pages		Little consistency in the page layout		Most page layout consistent		All page layouts consistent		
23	Overall consistencies and cohesiveness in the course design		Many inconsistencies in course design		Few inconsistencies in course design		Course design is consistent throughout		
		0		0		0		0	
							Online Organization and Delivery Criteria Total	0	
	Student Support Criteria								
24	Course orientation provided		Orientation not well organized		Organized orientation provided		Well organized orientation		
25	Adequate tutors for the course*		More or better trained tutors would enhance learning		Adequate number of trained tutors		Adequate, well trained tutors		
26	Communication tools used in the course		Inadequate or inappropriate communication tools used in the course		Adequate or appropriate communication tools used		Adequate and appropriate communications tools used		
27	Consideration of different learning styles		Little consideration is given for different learning styles		Some consideration is given for different learning styles		Learning styles are considered throughout the material		
28	Opportunities for remediation		Few opportunities for student remediation		Many opportunities for remediation		Most assignments/ assessments provide opportunities for remediation		
29	Opportunities for student advisement		Few opportunities for student advisement		Some opportunties for student advisement		Many opportunties for student advisement		
		0		0		0		0	
							Student Support Criteria Total	0	
	Student and Course Assessment and Evaluation Criteria								
30	Assignments congruent with course objectives		Not all assignments are clearly related to objectives		All assignments are related to objectives		Objectives are assessed through a minimum number of assignments		
31	Assignments clearly communicated		Not clearly communicated		Clearly communicated in course materials		Clearly communicated and explained in course materials		
32	Assignments/ assessments appropriate for target group		Some assignments not appropriate for target group		Most assignments are appropriate for the target group		All assignments are appropriate for target group		
33	Assignments encourage critical thinking		Little critical thinking required		Some critical thinking required		Assignments cannot be done without critical thought		

34	Assignments encourage problem solving		Little problem solving required		Most assignments are based on a problem scenario		All assignements are based on a problem scenario		
35	Performance criteria for assignments/ assessments shared with students		Few of the criteria are shared		Many of the criteria are shared		All of the criteria are shared		
36	Opportunities for self assessment		Few opportunities for self assessment		Many opportunities for self-assessment		All assignments include an opportunity to perform self-assessment		
37	Opportunities for peer (student) assessment		Few opportunities for peer assessment		Many opportunities for peer assessment		All assignments include an opportunity to perform peer assessment		
38	Opportunities for student input into assessment criteria		Few opportunties for student input into assessment criteria		Many opportunties for student input into assessment criteria		Student input into all assessment criteria		
39	Multiple assessment strategies used		Two or less methods of assessment used		Between 3 and 4 assessment methods used		More than five methods of assessment used		
40	Course evaluation		Inadequate or inappropriate tool for couse evaluation		Adequate and appropriate course evaluation tool		Wide variety of evaluation tools used		
		0		0		0		0	
	Student and Course Assessment and Evaluation Criteria Total							0	

APPENDIX B

UWIDEC QUALITY ASSURANCE TOOL

	Activity	Person(s) Responsible	Time Frame	Assumptions	Measurable output	Remarks	Score
	Phase 1: Course Concept (planning)						
1	An eLearning course development checklist has been completed	Course developer and instructional designer	will be set when course writer's contract is being signed	a separate, comprehensive tool that identifies the elements in a course plan exists.	a course concept outlining choice & combination of media, content areas, assessment etc		
2	Clear student learning objectives have been developed	Course developer and instructional designer			Student learning objectives stated clearly in the course plan		
3	Clear performance criteria set	Course developer and instructional designer			Assignments, rubrics for students		
4	The course plan includes Active learning, i.e., case study, problem based, anchored learning	Course developer and instructional designer					
5	The plan includes opportunity for student to student interaction	Course developer and instructional designer					
6	The plan includes opportunity for student to instructor interaction	Course developer and instructional designer					
7	The plan includes the use of further resources, e.g. links, presentations, audio, video files	Course developer and instructional designer					
8	The plan includes the appropriate use of technology tools for the objectives	Course developer and instructional designer					
	Phase 2. Production Preparation						
9	Draft course content has been prepared in manageable segments based on the course concept	course developer and ID					
10	Draft content and course concept have been reviewed	Instructional designer					
11	draft content has been edited	editor					
12	relevant copyright information has been requested	editor					
13	A consistent, visually appealing course design has been developed	graphic designer					

14	Website structure has been defined, i.e. areas for course , pages in these areas	web designer					
15	HTML pages have been developed and uploaded	web designer					
16	The homepage not only provides information and guidance, but it is engaging	web designer and graphic designer					
17	The course outline Provides all information required of the student in the course	ID and CD					
18	Course schedule contains all information on assignments and assessment dates	ID and CD					
19	Consistent guidance available for student and easy to access	web designer					
20	Easy to navigate through course components	web designer					
21	Easy to navigate through the content	ID					
22	All segments have manageable amounts of information	ID and CD					
23	Learning activities are part of the course content delivery	ID and CD					
24	A consistent, visually appealing course design has been developed	Graphic Designer					
25	Accessibility issues are addressed	Web designer					
	Phase 3: Student Support Criteria						
26	Course orientation designed	team					
27	Tutors assigned for the course						
28	Communication tools developed for the course	team					
29	Response time for communicationdecided on	team					
30	Learning styles are considered throughout the material	Id and CD					
31	All chats and discussions will be moderated	CD					
	Student and Course Assessment and Evaluation Criteria						
32	Assignments developed to encourage critical thinking	CD and ID					
33	Self assessment activities have been developed	CD and ID					
34	Opportunities for student input into assessment criteria	CD and ID					
35	Course evaluation	team					

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APPENDIX C

GUIDELINES FOR DEVELOPMENT AND DELIVERY OF ELEARNING COURSES AT UB

The following guidelines should be consulted and used in the development of eLearning courses in order to ensure the highest quality of the course.

I. The course design and planning process

a. Plan course carefully, consult with EduTech, use course outline template
b. Before starting to plan your course, research existing courses on the WWW or through personal contacts
c. Experiment, you need to gather your own experiences, find your own way of using eLearning but also consult departmental/divisional/unit strategies, where existing
d. Use a step by step approach to familiarise yourself with possibilities of eLearning, start with a few elements of eLearning and progressively add new elements every semester
e. Consider using eLearning, preferably after your students have taken general computer literacy courses, e.g., GEC121 or 122.
f. Analyse your content and identify gaps that eLearning could fill in, e.g., simulations, visualisations, graphics – research on the Web, where there are large quantities of such materials available
g. eLearning can facilitate international cooperation, e.g., international colleagues can serve as experts or can link their students with your students to discuss common topics of interest using online discussion forums
h. Contact the professional world for experience exchange and professional input
i. If you plan collaboration activities, make sure students have enough time for it
j. If you want students to research on the Internet, provide “pathfinders”, web sites as starting points, to make their research easier
k. If you want students to research on the Internet, make sure you give them guidelines on how to evaluate a website (e.g., http://www.library.cornell.edu/olinuris/ref/webcrit.html)
l. Be aware of level of computer skills of your students, if they have little or none, they will need a high level of personal support from you
m. Be aware that one of your course objectives could be increased computer and/or information skills and integrate this in your assessment scheme, therefore, include eLearning in your assessment strategy from the very beginning, not just as an additional resource (e.g., allocate marks for continuous assessment or life-long learning skills developed through eLearning)
n. Just provide what is of real added value to your students, the majority won’t access anything else.
o. Think of anchors/metaphors to personalise your content, like illustrations, stories, scenarios or case studies, it enhances identification with course content and makes the content livelier. The graphic designer will support you in the development process.
p. Think about how you will allocate time for lecture hours and lab sessions/tutorials/practicals. You might want to reduce lecture hours and increase lab hours (if this is allowed) if you provide eLearning opportunities in your lab sessions/tutorials/practicals. Consider that one lecturer hour is the equivalent of a 2-3 hour lab session/tutorial/practical.
q. Be aware that using eLearning will require more time than face-to-face teaching. Just logging in will require some time at the start of sessions.
r. Be creative and playful, eLearning provides many opportunities to enhance your teaching and to make it more interactive
s. Relate content to contemporary, relevant issues

t. Be aware of intellectual property and copyright issues, especially if you are providing offline web content
u. Set specific timeframes for assignments and assessments and make sure these are reflected in the online environment

II. The course development process

a. A group development process for eLearning is most effective. Various multi-disciplinary roles are necessary within an elearning development team. Team members, however, should have the freedom to support and build each other up according to their strengths.
b. Possible roles can be:

- The role of the sponsor is necessary for the provision of necessary funding, wider support and overall project control. This will be, in most cases, your Head of Department.
- You as the subject matter expert (SME) are integral in the development process by providing content but also in developing materials electronically. The eLearning support team takes over different tasks: instructional design, graphic design, and multi-media development.
- Ideally you should organise a peer review by colleagues, otherwise try to get feedback by colleagues, students, the Academic Programme Review Unit, EduTec, etc.

c. Use the official UB Learning Management System for your online course, e.g., currently UB employs WebCT.
d. Select media to be developed based on your skills but also on the skills you would like to acquire
e. Keep ease of updates in mind: online content/html pages are easier to update than, for instance, videos
f. Use benefits of online content, e.g., pictures, colours, animations
g. If you develop online content make sure you follow online editing guidelines, e.g.,

- Divide content into small “learning nuggets”, don’t put too much content on one page
- Put the most important information on top (content bubbles to the top)
- Don’t use long sentences, use a conversational style, avoid technical terms and language
- Use colours & graphics
- Use structured content, like bullets
- Use headings and put keywords in bold font
- Embed questions, assignments, case studies, examples
- Define a common structure for your modules

h. If you have decided on a specific sequence for your online material, keep to it. Students get used to it and know what to expect (e.g., introduction, contents, links, self-tests)
i. If you provide downloadable content make sure it is printer-friendly and your students know how to download it and have the resources to print documents
j. Start developing content in advance, it might take time at the beginning to develop online content, e.g., use the long break before new academic year starts
k. Consider providing the content also offline, e.g., download websites, save content on a floppy disk or on paper in case the network fails you
l. Be aware of file sizes, the network might be very slow at certain times

III. The Course delivery and management (including online communications)

a. Use a blended learning approach so that you do not depend entirely on electronic media and so that each technology is being used for its strengths
b. Have contingency plans in case the network fails you
c. Think of how your students will access your eLearning course, e.g., in the SMART classroom (book in advance) or in their independent learning time. If you have to rely on students finding access independently consider that you might not be able to rely on them getting access
d. Be specific at the start of the course about expectations, objectives, assessment strategies and the eLearning aspects of the course
e. Book EduTech staff for one or more orientation classes for your students or teaching assistants in the lab that they will be using
f. Consider a progressive use of tools and give deliberate guidance
g. Ideally, meet with students regularly in a laboratory
h. At the beginning of the course make sure that all your students are able to log on
i. Decide carefully whether to use the WebCT e-mail tool or your UB mopipi e-mail address. Using both can lead to confusion. We suggest you use WebCT, but make sure you regularly check your inbox and reply to students' e-mails in time (feedback time should not exceed 48 hours)
j. If you use the online discussion forum you need to make it an explicit part of the course expectations, including assessment, where appropriate, giving clear guidelines on what students should do (e.g., length and frequency of postings, topic definition, how to do a summary effectively, etc.)
k. Consider using a paced rhythm of delivery, upload content week by week
l. Update content regularly, specifically check if links are still available
m. If you use online quizzes provide your students with a possibility to try it out first
n. Mix different kind of question sets, e.g., multiple choice and open-ended questions based on your content and objectives.
o. Provide a questions bank for random generation of question sets if you want to offer multiple attempts to submit quizzes.
p. You can use eLearning for managing large classes, e.g., submission of assignments and for ensuring standardised content, but you need to plan it very carefully and involve teaching assistants
q. Don't raise expectations you are not absolutely sure one can guarantee
r. Pair students, where possible, that are more computer savvy with students with less computer skills
s. Constantly refer/remind/motivate students to access online content; integrate online content in your face-to-face classes.

IV. Support required: EduTech, Library, Information Technology (IT), Head of Department (HOD) and other Faculty members

a. EduTech provides the following support:

- Training through the CAD eLearning Certificate
- Instructional design
- Media development
- Graphic design
- Induction classes for online students
- Teaching and learning equipment where possible
- Bookings in the SMART Classroom

b. Approach EduTech in time for any support that you need
c. Approach other faculty members who have already utilized eLearning strategies
d. Make your HOD aware of your work in eLearning and get support from your HOD
e. The library can help you in finding resources in the library and on the WWW through your subject librarian
f. IT: Know in advance who is responsible for the laboratories you are using and inform this person in advance of your needs. Check in advance whether technology is working in your laboratories.

V. Infrastructure and equipment

a. Use lab sessions to provide adequate computer access
b. Ideally use department/faculty labs
c. Schedule lab sessions when computer labs are likely to be free

VI. Evaluation / Quality Assurance

a. Use standardised online student questionnaire at end of the course, you can add questions if you want
b. Consider a focus group discussion with selected students
c. Consult the Academic Programme Review Unit to perform an eLearning course quality review using the Quality Assessment for Online Learning Rubric for feedback on overall quality of the course

Original article at: http://ijedict.dec.uwi.edu//viewarticle.php?id=31&layout=html