Learning and Teaching Effectiveness in the Digital Age: A Case Study from a Pacific Tertiary Education Provider

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Abstract
The last few decades have seen the dramatic increase in online education in different parts of the world, at different universities. Such a change has been necessitated due to the changing scenes in tertiary learning and teaching, the need to offer students more meaningful options, and the need to embrace student learning diversity. Technology-based education, rightly designed and implemented, provides students with sound educational experiences. The aim of this study is to give a panoramic view of how an online programme is run at one of New Zealand’s Polytechnics, the Open Polytechnic. With this information, all current and prospective online facilitators would be able to improve their pedagogical practices so that their virtual classrooms are highly interactive and engaging, to the extent that the students will gain significant educational experiences. To this end, an introduction to the subject matter is given. A background to the research is also presented. The methodology used to obtain and analyse information is delineated. The strengths and weaknesses of the online programme have been identified and subsequently discussed, with a view to understanding what makes for a quality online programme. From all the data collected and analysed, conclusions are drawn in reference to what needs to be done to improve the learning and teaching quality of the online programme studied.

Keywords: e-learning, online programme, online education, technology-based education, higher education, student learning diversity.

Introduction
“In the days when university classes contained highly selected students, the lecture and tutorial seemed to work well enough. However, the increasingly drastic changes in the tertiary sector have redrawn the university scene – not entirely disadvantageously for teaching quality. With student fees now a high proportion of funding, universities have had to improve the quality of their teaching” (Biggs & Tang 2007, p. 1).

Biggs and Tang (2011) reveal that “Since 2000 there have been dramatic changes in the nature of higher education. It is not just that participation rates are higher than ever [...] but that these and other factors have altered the main mission of higher education and modes of delivery” (p. 3). This means that newer pedagogical approaches are being sought, with a view to delivering high-quality education. The Bologna Process (2010) of 1999 has had a profound impact on the delivery of high-quality higher education (HE). Since then, there has been a clamour for teaching effectiveness, which has intensified over the years. HE learning and teaching must move away from teacher-centred strategies and embrace student-centred approaches, due the increased number of students, entering tertiary institutions, who possess different learning abilities.

Online education is one significant way to cater for diverse learning styles. Online learning and teaching has to do with the technologies and technological applications used to deliver course content. It is all about getting students to move away from the full face to face (F2F) modality, in favour of a virtual environment where each and every one would be able to work at one’s own pace. Brown (2005) establishes that since the introduction of online learning and teaching, there has been a rapid improvement in student learning outcomes.

“It would not be jejune to say that online learning is quickly becoming a household name in HE, urging educators to tackle current assumptions about pedagogy. In fact, HE administration sees itself challenged to ensure that students’ mounting exigencies for high quality learning outcomes are met. Owing to existing evidence of the transformative power of information and communication technologies (ICT) across the world, the fact that it will be the major technological innovation for HE in this millennium and beyond is irrefutable” (Livingstone 2013, p. 54).

The present study deals with the analysis of an online programme to improve learning and teaching quality in higher education. One New Zealand polytechnic has been selected for this research, the Open Polytechnic of New Zealand (a tertiary provider at Polytechnic level). The online programme in question is the Open Polytechnic [OP], New Zealand (OP5440 - Certificate in Designing and Facilitating E-Learning).

The aim of this study is to give a panoramic view of how this online programme is run at the Polytechnic. With this information, all current and prospective online facilitators would be able to improve their pedagogical practices so that their virtual classrooms are highly interactive and engaging, to the extent that the students will gain significant educational experiences.
Background
With regard to the Open Polytechnic, the rationale behind conducting such a study is deposited through the following: (1) There is a need for online programmes to be developed that would embody a student-centred, autonomous approach. This analysis, from the leading online Polytechnic in New Zealand, would reveal what needs to be added and subtracted, to give rise to a successful online programme; (2) This specific Polytechnic has been chosen given the fact that the researcher was present at a workshop on ‘Online Facilitation’, at the University of the South Pacific, on July 18, 2013, conducted by the course facilitator of the specific programme in question. The discussions orchestrated during the workshop were interesting and appetising, hence the decision to assess the programme to see its worth. The Polytechnic also delivers qualifications to degree level and is known as one of the leaders in distance and online education; (3) Having discussed the elements of a successful online programme, during a course which the researcher took, ED 403, it was felt that this would be a good opportunity to determine if this programme met the requirements; (4) The end product of this study would shed light on learning and teaching practices in the virtual environment, and will act as a reference guide for online instructors as it relates to preparation and evaluating online courses. The information would then be used as a foundation on which to build, to foster learning and teaching excellence.

It is of paramount importance to note that the researcher was not exposed to the actual course Moodle shell because of not being a registered student in the programme. In this light, the judgments made about the programme are based on all the information that was made available to the researcher.

Methodology
Guba and Lincoln (1989, p. 183) consider methodology to be

“The overall strategy for resolving the complete set of choices or options available to the inquirer. Far from being merely a matter of making selections among methods, methodology involves the researcher utterly - from unconscious worldview to enactment of that worldview via the inquiry process”.

Quality research usually results from the use of a mixture of methods to do it. Hansen and Cottle (1998) highlight that researchers ought not to only account for the most suitable methods for their research or problem, but ought to also determine the specific set of research methods that would engender an improved and profound understanding of it.

It is important to establish that the Case Study Approach has been used as the paradigm of this study. Thomas (2011, p. 5) defines it this way:

“Case studies are analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more methods. The case that is the subject of the inquiry will be an instance of a class of phenomena that provides an analytical frame - an object — within which the study is conducted and which the case illuminates and explicates”.

It is also said to be an “[…] empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Yin 1984, p. 23). Soy (1997) further elaborates that it “[…] excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research” (p. 1). It emphasises a thorough background examination of a restricted number of circumstances and their interactions.

With regard to the Open Polytechnic, the approach taken, in accordance with the aim of this research paper, to analyse the online programme, the OP5440 - Certificate in Designing and Facilitating E-Learning, was qualitative descriptive (exploratory or explanatory) in nature, since it is usually used to look at individuals, a small group of participants, or a group as a whole. In this case, however, the only participant used in this study was the course facilitator of the Certificate Programme who provided all of the materials required for this study, and who offered clarifications and answers to questions asked, in relation to the course analysed. In other words, a lot of records were examined, belonging to the Open Polytechnic and to the programme, in particular, as well as information received from the Polytechnic’s webpage. The Rubric for Assessing Interaction in Distance Learning, by Roblyer and Ekhaml (2000) was employed to evaluate the degree of interaction, interactivity and engagement in this online programme.

Description of the Online Polytechnic and Programme
Open Polytechnic
“The Open Polytechnic began life as the Technical Correspondence School in 1946, providing resettlement training for returned servicemen and women following World War II. In 1963, it became the
The Open Polytechnic of New Zealand is the country’s leading online and distance Polytechnic. “Its emphasis is upon open and distance education at tertiary level. The primary method of delivery is via print-based courses, with some blended delivery courses, and a growing number of fully online courses. Moodle is the preferred learning platform, and there is a well-developed Online Campus for students” (Open Polytechnic, 2008). The Polytechnic’s website can be accessed at http://www.openpolytechnic.ac.nz/.

Fisher, Chipindiku and Maathuis-Smith (2010, p. 1-2) offer the following information about the Open Polytechnic:

“Like other institutions in New Zealand and elsewhere, the Open Polytechnic is facing commercial and competitive pressure to diversify its teaching portfolio, in order to attract and maintain students. This entails the Polytechnic building upon its current strengths in open and distance education. It includes scoping increased opportunities for e-learning.

In making these decisions, the Polytechnic is guided nationally by the Tertiary Education Strategy 2010 – 15 (Ministry of Education, 2009), and other obligations under governing statutes, notably the Education Act 1989. However, none of these includes specific guidance on the future of e-learning.

Because there is at present no national strategy that deals with e-learning, there is little guidance available to institutions seeking to build capacity in this area, in the context of a regulatory framework. In the interim, the Tertiary Education Commission and the Ministry of Education have funded a project, coordinated by Massey University, to develop guidelines that may help institutions to improve their e-learning practice. The e-learning guidelines project includes advice for students, staff and managers, to promote best practice in e-learning design and delivery.

Realising this, the Open Polytechnic undertook new programme development to cater to the needs of teaching faculty at the Polytechnic and elsewhere. These relate primarily to professional development that provides vocational education in the ‘why’, ‘what’ and ‘how’ of e-learning. The result was the creation of the 60-credit, Level 5 Certificate in Designing and Facilitating E-learning. The programme was opened for enrolment in 2008. Teaching faculty at the Open Polytechnic with an interest in e-learning was encouraged to enroll, as well as anyone else with an interest in the topic”.

“Open Polytechnic is government-owned and funded, delivering courses throughout New Zealand and internationally. All programmes/qualifications meet rigorous and transparent quality standards. The New Zealand Qualifications Authority has approved the programmes and accredited Open Polytechnic to deliver them. There is industry involvement in the development of most courses and programmes and close relationships are also maintained with appropriate professional and industry bodies. Over 100 qualifications and 1,200 courses staircase from certificate to diploma and degree level (Levels 1 – 7 on the New Zealand Qualifications Framework). They range from technical and vocational training to higher professional and continuing education” (Open Polytechnic, 2008).

The Vision of the Open Polytechnic is “A New Zealand that’s continually learning to succeed”, while its Purpose is “To inspire success through the most flexible, accessible and motivational learning experience in the world”.

The Online Programme

The E-Learning qualification was originally developed with the intention that it would only be a staff development programme for all their on-site staff. The course was piloted with eight internal staff initially. It was realised that this qualification was actually widely sought after in both New Zealand and overseas, as the role of the tutors changed from print based materials to blended delivery. It was followed quickly with full national enrolments in 2008/9.

In 2008, the Open Polytechnic presented a brand-new E-learning programme called the ‘Open Polytechnic Certificate in Designing and Facilitating E-learning’ (Level 5). Level 5, in New Zealand, signifies that the programme has been accredited for University-level studies. This Certificate is offered fully online via the Polytechnic’s Online Campus. Importantly, it was developed by two consultants who no longer work for the Open Polytech-
nic. The qualification has always been fully online. There are no print based materials at all, but is fully supported via phone or internet by an e-facilitator which has been Ms. Karen Kane. For the past three years, she has been the programme facilitator, and continues in this position to date.

Fisher et al (2010, p. 4) reveal the following:

“This programme is designed for education and training professionals such as teaching staff, trainers, community educators, instructional designers, learning support staff, librarians and knowledge managers, human resources staff, and other people in related support roles wishing to design and facilitate e-learning experiences within a variety of learning contexts. The focus is on the practical application of adult learning theories with an emphasis on e-learning methodologies, including the concepts of learner-centred, self-paced learning, supporting learners at distance, providing authentic learning opportunities and the development of meaningful learning relationships. This programme provides a professional development opportunity for those professionals who find themselves having to make decisions about incorporating e-learning into their practice or develop their skills in using e-learning”.

The qualification code of the Certificate Programme is OP5440, and consists of three courses: (1) 5901 – Applying E-Learning Opportunities, (2) 5902 – Facilitating E-Learning and, 5903 – Developing an E-Learning Course. “The courses are vocational in focus and build upon knowledge, involving an introduction to current e-learning theory, practical training in e-learning facilitation, and the creation of an individual e-learning course” (Open Polytechnic, 2008). All three of the courses are mandatory and must be completed in chronological order: 5901, followed by 5902, and then by 5903. Each course is worth 20 credits, bringing the total to 60 credits for the Certificate. Students are expected to be online for approximately 12hrs per week per course.

A synopsis of the Certificate Programme and the three courses is outlined below, as per the University’s website:

“This qualification is for education and training professionals who want to improve e-learning experiences. It focuses on the application of adult learning theories, particularly those that include the concepts of learner-centred, self-paced learning; supporting distance learners; providing authentic learning opportunities; and the development of meaningful learning relationships in e-learning environments. This qualification is for education and learning professionals who work with or design for adult students either in tertiary or community education or in the workplace. Although entry to this qualification is open, students may be asked to show that they have relevant work experience. They must also have access to a computer and the Internet and have basic computer skills, including skills in word processing, file management and email. The language of instruction is English.

Once students have completed this qualification, they will (1) Know how to apply technology as part of good teaching practice; (2) Have improved your skills and knowledge relating to designing and facilitating e-learning; (3) Have gained strategies to promote effective and engaging online learning experiences for adult learners; (4) Understand the challenges presented by e-learning online contexts.

Assessment for this qualification is portfolio-based. To pass each course students must get at least 50% for each part of the portfolio assignments, which include team and individual tasks, and a 50% mark overall. There is no exam for this course.

In addition, students can also apply for accelerated assessment, due to experience gained from their various places of work. Once they have the relevant experience that may exempt them from some parts of the qualification, then they are free to apply for this assessment type. Naturally, they will need to provide evidence that they have met the learning requirement of the course from which they would like to be exempted”.

A summary of the three courses needed to complete the Certificate Programme, which were redeveloped between 2012-2013, is given below.

5901- Applying E-Learning Opportunities. This course aims to familiarise learners with e-learning in an educational or training context, enabling them to select and apply e-learning options appropriate for their context and objectives. This is a Level 5 course, consisting of 20 credits. This first course, in the Certificate Programme, was previously denominated OP5095 (Transforming Learning Experiences), which was a study of theories of e-learning and the processes of communication. The course code was subsequently changed to 5901 and the title to the above-mentioned one.

5902 - Facilitating E-Learning. This course is for students to develop an understanding of the skills and knowledge needed by a facilitator and apply them to an
e-learning context. This is also a Level 5 course, consisting of 20 credits. This second course, in the Certificate Programme, was previously called OP5096 (Facilitating Online Learning Experiences), which was introduced students to best practices in online facilitation. The course code was subsequently changed to 5902, and the title to the above-stated one.

5903 - Developing an E-Learning Course. This course’s objective is for learners to apply online course design skills using Moodle as the LMS. Similar to the previous two courses, this one is also Level 5, consisting of 20 credits. This third course, in the Certificate Programme, was previously denominated OP5097 (Instructional Design for E-Learning), which explored the primary factors that determine effective pedagogical designs and development for online learning, in addition to the design of an online course in Moodle, using suitable technology tools. The course code was recently changed to 5903, and the title to the above-named one.

The recommended text that was used before 2012, for the Programme, was Salmon’s (2004) E-moderating: The key to teaching and learning online. However, learning materials and resources are now provided to the students by the course facilitator.


**Strengths and Weaknesses of the Online Programme/Course**

The strengths and weaknesses of the online programme are presented in a table. Table 1 highlights those from the Open Polytechnic. They are as follows:

| Table 1: Strengths and Weaknesses of the Programme OP5440 - Certificate in Designing and Facilitating E-Learning (Open Polytechnic) |
|-------------------------------------------------|-------------------------------------------------|
| **STRENGTHS OF THE PROGRAMME** | **WEAKNESSES OF THE PROGRAMME** |
| Course 5901 | Course offered fully online |
| Course 5902 | Course syllabus only contains some of the aspects of the online course. |
| Course 5903 | The presence of a course syllabus |
| | No information on netiquette rules |
| | The course aim is good |
| | Collaborative tasks are not assessed |
| Specification of course entry requirements | Assessment tasks for the first two courses in the Programme are not varied. |
| Intended Learning outcomes (ILOs) | Some course information is found in the ‘Student Handbook’, but is not on the course Moodle page |
| Learning-Teaching Activities (LTAs) | |
| Assessment tasks (ATs) | |
| ILOs, LTAs and ATs are all student-centred | |
| Extensive information about learner support and resources | |
| Feedback is ongoing | |
| Interaction and engagement | |
| Specification of learner/facilitator role | |
| Extensive information on participation guidelines | |
| Extensive information on learning community | |
| Extensive information on late assignment policy or plagiarism | |
| Extensive information on students with disability/special needs | |
| Assessment tasks for the third course in the Programme are varied. | |

2 The possibility exists that the information in this section could very well be in the actual online course in Moodle. However, it is not in any of the course syllabus for the three courses in this Certificate Programme.
Discussion of Strengths and Weaknesses of the Online Programme

The four main elements of a successful online programme, according to the Illinois Online Network [ION] (2010) are the **students**, the **facilitator**, the **technology** and the **syllabus**. These are discussed, in reference to the Certificate Programme at the Open Polytechnic.

**The Students**

While the online course meets the demands of the students, they are required to take on a dynamic role in the online classroom and understand the essentials for successful learning. The characteristics needed are access and technical skills, digital literacy skills, online communications skills, meta-cognitive skills and attitudes (Kane, 2013). The students are mature, tolerant, motivation-driven, critical thinkers, and are eager to work together in the virtual environment. They dedicate sufficient time to stay current, and the required equipment are accessible to them.

The students of the Certificate Programme are all adults who are working in learning and teaching environments. They are all professionals working in the e-learning field in their various educational institutions. The participants have

“[…] teaching experience covering a broad range of disciplines, involving potentially different student needs: independent study, a hands-off approach, regular intervention and guidance as they acquire practical skills, involving regular one-on-one interactions, including telephone conversations, some face-to-face contact, and the like. The students all share a common teaching thread, namely the use of Moodle, as an online learning system” (Fisher et al 2010, p. 4).

**The Facilitator**

“The climate in the virtual classroom must be open, honest, sincere and conducive to learning. The facilitator is the one responsible for creating the welcoming environment in the virtual class. A trained facilitator is an important component of an online programme. The facilitator, often times, is also the designer and monitor of the online course, and thus has a powerful influence on the success or failure of the programme. The facilitator’s training, personality, and attitude all impact the online environment” (Illinois Online Network, 2010).

In this online course, students can access the detailed profile of the course facilitator which is found on the front of the course page, as well as a photo with a direct link to her e-mail. Student can also communicate regularly with students and maintains the role of facilitation throughout. In fact, the course facilitator informed that her email inbox would usually be filled to capacity, on a daily basis, with student queries. Were the learning environment and the facilitator not accommodating, it is doubtful that such an act would have been occurring.

**The Technology**

“Selection of appropriate technologies becomes especially challenging due to the fast changing pace and growth of new Internet-based tools that can be used in online courses” (Garrison & Kanuka 2004, p. 36). The kind of technology that is chosen for the online programme will determine its efficacy. The technology ought to be chosen, taking into consideration the purposes and needs of the online programme, and it ought to be comprehensible, dependable, handy and reasonably priced. In other words, the technology elected must effectively deliver the course content. In addition, technology must also make the online classes interesting and must make the student feel confident and not burdened. If problems arise with the technology, then the facilitator and students need to know where to turn to help, and this help must be easily accessible and readily available. Technology is a means to deliver the education, and for successful learning to occur, the technology must be as flawless as possible (Livingstone, 2013).

Moodle is the selected learning management system (LMS) at the Open Polytechnic. In addition to this, however, learners also use Mahara e-portfolios as part of this course. It has a signal which allows them to access it from their course page.

The following image, Figure 1, is the course interface for one the three courses in the Certificate Programme, 5901 Applying E-Learning Opportunities. This is the course that is being conducted this trimester at the Open Polytechnic. For the sake of consistency, all three courses in the Programme follow the same formatting exactly.
The Syllabus
Casella (2003), of the San Francisco State University (SFSU), highlights the following:

“A carefully planned, clearly written, comprehensive syllabus is one of the most important resources you can provide your students. A well-designed syllabus performs many functions for the instructor and for the student: it outlines course expectations, organizes information, sets the tone for class interactions, and guides student learning. A carefully constructed syllabus helps prevent misunderstandings as to course goals and objectives, assessment and evaluation standards, grading policies, and student or faculty behavior”.

The course syllabus for the courses within the Certificate Programme is very simple and straightforward. The most important aspects that one would expect to find in the syllabus are there: the aims, the ILOs, the LTAs and the ATs and Grading.

In terms of the strengths of the programme, the following is noted for each of the three courses in the Programme:

1. The course aim is very well written and it gives a general panorama of what the student is expected to do and the kind of knowledge that he is expected to gain. The use of high-order thinking verbs, following Biggs and Tang’s (2011) SOLO taxonomy, is duly noted.

2. The course entry requirements are specific, in this context, as they establish who can take the course and the required qualifications for it. This course is specifically directed towards professional teachers who are working in the e-learning field, who have access to Internet and who have relevant work experience. This suggests that these professionals already have considerable knowledge about the manipulation of learning technologies.

3. The ILOs are thoughtfully and carefully selected. They follow constructive alignment (Biggs & Tang, 2011), and high-order thinking verbs are clearly visible. In fact, these verbs are determined from the students’ standpoint, hence their being student-centred. Shuell
(1986) asserts that “It is helpful to remember that what the student does is actually more important in determining what is learned, than what the teacher does” (p. 429). Bearing this in mind, the ILOs prepared clearly reflect that they are “[…] specific, measurable, achievable, realistic and time-framed” (Maki 2004, p. 86). Even though there isn’t a specification of the LTAs, there is a specification of the content to be addressed in the course. It is highly necessary to note that the ILOs are matched/paired with the content to be dealt with during the unfoldling of the course. Alignment is clearly demonstrable.

Information coming from the Open Polytechnic highlights that the learning activities in these courses have been organised in such a way that students are introduced to the team tasks in a step-by-step manner. Team tasks are conducted either with all team members or in pairs, and learners are usually given a time from of about one to two weeks to complete the tasks. This means that learners will need to log in regularly to take part in discussions and develop the expected outcomes together with their team members. They receive detailed instructions on the purpose of each task and what they need to do. Each team has its own discussion forum for every team task. Forums are used to discuss the content of the tasks and reach agreement on the team’s output. All team members need to be actively involved in team tasks.

The ATs are designed in great detail and they are also matched with the corresponding ILOs. In other words, the various assessment tasks evaluate the degree of achievement of the course ILOs. The ATs are written in very clear and simple language and it gives a chronological guide as to how the tasks ought to be done. Most of the tasks require students to discuss how they will implement e-learning in their own context.

“Student assignments in all of the Certificate courses involve the creation of independent student portfolios. The portfolios include completed assignments for individual work, and reflective essays that relate to learning outcomes associated with group work” (Open Polytechnic, 2008).

Importantly, there are opportunities for re-assessment for the various tasks within the various courses. This is to say that if a student does not do too well on one AT and he wishes to be reassessed, to get a better grade, he is given one other opportunity to do so, within a two-week time frame.

The grading criteria for the various assessment tasks follow the criterion-referenced assessment (CRA) pattern (Biggs & Tang, 2011) where holistic grading is done to ascertain the students’ overall performance in a given task. The rubric reads easily and naturally and students can refer to it, if and when desired.

It is important to note that the assessments for the final course 5903 Design Courses are not finalised yet, since they are to be delivered for the first time in Trimester 3, 2013 (November).

The assessments for that course, being used in this analysis, are the previous ones; however, the new ones will be very similar.

There is a close alignment between the ILOs, LTAs and ATs in the course. In other words, the LTAs and the ATs are designed to attain the course ILOs.

4. Even though information about learner support services are not included in the syllabus, there is a detailed brochure about the programme that contains all of the contact information, should students need assistance at any time during their learning journey. The brochure has been very well prepared, as the material is very attractive and appealing to the eye. It is available online or in PDF format. Further, additional information for learning support services is found in the ‘Student Handbook’.

5. In terms of feedback, the course facilitator works in quite an open way with her facilitation so she actually gets feedback daily from learners, for example if they are happy or not with activities, with the course, or things are broken in terms of links, and so on. In fact, her inbox is usually full every morning with student feedback. In terms of feedback on assessments/assignments, feedback is given within 10 working days (the OP Policy). To corroborate the effectiveness of giving early feedback, Cooper (2013) asserts that “It is important to offer prompt feedback as students will expect immediate responses online. Throughout the process, students should receive feedback on how well they understand the course information” (p. 24).

If feedback is being provided on group activities on which learners have worked, feedback is given within 5 days in the forums. Otherwise, the feedback would be pointless as they would have moved on to some other task. It has to be relatively quick after they have completed a piece of work.

Concerning feedback about the course, there is a student evaluation form at the end of every online course. There are sixteen questions in total in the evaluation form which covers facilitation/content/the tools used, and so on. Included in the course evaluation form, is a section where students provide feedback on the technology ease and course accessibility.
Student feedback is also used to assist in instructional and assessment planning for subsequent offerings of the course. In fact, everything is taken into consideration. In particular, activities that may have been difficult for learners to take part in will be restructured to ensure they work better next time around. An example of this, according to the course facilitator, is that this trimester she is running an activity, using synchronous tools for two weeks. This involves chat sessions over time zones with international learners. She also notes that this is very problematic when in groups of 4. In light of this, she has said that for the next trimester (Nov 2013 – Feb 2014) it will be an asynchronous activity to avoid these difficulties. This will involve re-writing the team activity but will ensure learners can participate equally.

6. In reference to interaction and engagement, Anderson (2004) establishes that “Interaction can also be delineated in terms of the actors participating in it” (p. 45). Interaction and engagement in a virtual environment is the life-blood of the online course. Absence of it could mean that the course is failing to sufficiently engage the learner in meaningful activities. Low (2007, p. 26) establishes that “[…] because of the high level of learner control and interaction, in a flexible online environment, it may encourage not only learning of new content but improved personal learning strategies or learning of new ways to learn”.

In the first two courses of the Certificate, there are both synchronous and asynchronous activities throughout. However, for the third course, there are only asynchronous activities as the focus is really on the learners developing their own courses in Moodle.

7. Ali and Elfessi (2004) submit that specifying learner and facilitator roles early in the online course encourages greater learner participation in the online setting. There is extensive specification of the learner/facilitator role in the pedagogical process. This information is provided in the course Moodle shell. This is an advantage, specifically for the learner, as he knows what is expected of him and how he is to behave in the virtual environment. Roles have been established so that there are clear lines of responsibility demarcated.

8. “Before you launch a team project, it’s important to make sure that everybody knows who’s doing what” (Engle 2013, p. 11). Extensive information exists on participation guidelines. Students access this information in the course Moodle shell. Once again, the rules of interaction and engagement for learners are determined. This are clearly stated at the outset of the programme, as learners need to know how involved they ought to be in the didactic process.

9. Humbert (2013) admits that “Instructors need to build a sense of community in online courses. Providing exercises and activities that encourage group work and participation help to maintain that sense of community” (p. 18). Detailed information exists in the course Moodle shell about community learning and the value derived from collaboration. A learning community is the heart of any online course, and it has to be considered in this course. It is absolutely necessary to portray real-world and real-life behaviours to students, as they would need to work collaboratively in the execution of their duties at their various places of work. This has also been catered for in this course.

10. In reference to late assignment policy and plagiarism, poignant information has been carefully specified to this end. In any course, be it online or F2F, students need to know what the penalties would be for not producing assignments on time. By implementing such policies, students will be compelled to practise good time management and adhere to rules. On the note of assignments, another grave issue is that of plagiarism. The present culture that exists in online courses is the ‘cut and paste’ culture, where materials are just taken from the Web wholesale. Claerhout (2004) affirms that “Students are expected to submit original work. Plagiarism, however, has become technologically much easier. Online teachers must become more diligent about explaining plagiarism and intellectual honesty to students, and must be familiar with plagiarism search tools” (p. 248). In essence, lines have to be drawn and students have to be held culpable for such dishonest practices. Clear lines need to be delineated, so that such acts are curbed. Thankfully, information on this important feature of the course has been provided in the ‘Student Handbook’.

11. With reference to students with special needs and disabilities, there is extensive information contained in the ‘Student Handbook’. They are provided with all required information as to where to turn, should they need assistance in that regards.

It is not right to assume that the students involved in the e-learning environment all have the same learning abilities and that they learn in the exact same manner. The ‘one-size-fits-all’ traditional approach is irrelevant, hence the urgency to adopt pedagogical practices that embrace student learning diversity. The National Centre on Universal Design for Learning [UDL] (2012) notes that since online learning itself is the embodiment of learning diversity, course facilitators need to conduct diagnostic tests, long before the start of the course, to be able to effectively cater for student learning needs.
All students do not learn the same way. Biggs and Tang (2011) establish that students with different learning abilities are entering tertiary institutions. It is in this light that pedagogy must address student learning diversity, of which learners with special needs is included. Failure to specify special needs and disability policy for this online course could result in a student being refused admission, being thrown out of a programme, or being left behind because his needs have not been considered or catered for. This Programme does cater for this element.

12. Shank (2013) establishes that assessment tasks should be varied to allow students to pass the course, and to cater for the use of different cognitive skills. The assessment tasks in one of the courses - 5903 Developing an E-Learning Course - are varied sufficiently. Since this course hinges on designing and developing an e-learning course, the assessment here are more varied than in the other two courses of the Programme. Examples of assessment in this course include designing of quizzes, developing a collaborative task, and creating a Moodle course.

In terms of the weaknesses of the programme, the following is noted for each of the three courses in the Programme:

1. The course syllabus only contains some of the aspects of the online course. Casella (2003) establishes that a good syllabus must contain the following elements “[…] instructor information, course information, method of instruction, course description, course objectives, course calendar or schedule, textbooks and supplies, assignments, grading, specific notes or safety rules”.

The course syllabus in question does not contain all of the various elements proposed by SFSU, for one reason or another. However, all of these elements are found on the course Moodle shell under a section called ‘Course Information’, in Book Format. The only information available on the course syllabus is the course code and title, the course entry requirements, learning outcomes, content and learning-teaching activities and the assessment tasks. There is also mention of the mode of delivery of the course.

According to Casella (2003) and the Illinois Online Network (2010), a course syllabus is a reference guide, a contract, a guide for learning. Even if the information is carefully presented in the course Moodle shell, it also needs to be in the course syllabus. This is one of the defining marks of a quality syllabus for an online course. That is an issue that could be addressed.

2. Netiquette, or Internet etiquette, is clearly absent from the course syllabus. In addition to this, it is not even present in the course Moodle shell. An inquiry was made and the course facilitator, interestingly enough, reported that while she knew it was actually essential, and a very fundamental component, there was no netiquette guide for any of the online courses in the Programme. This is a very important element in online course design that is vital to respectable, respectful, decent, mature, and professional communication on the Web. The Indiana University (2010) establishes that students must be informed of the DOs and DON Ts in the online environment. Failure to provide such guidelines could result in a catastrophe. This is also an area that needs urgent attention, as students in the various courses of the Programme need to know how to behave in the online environment. It should not be left to chance.

3. “Collaboration links closely with a learning community, in an online environment” (Shank 2013, p. 15). It is essential to indicate that collaborative tasks constitute all three of the courses within the Programme. According to the Programme facilitator, “Because there are no group submissions, the only opportunity to assess group work is by way of individual, reflective essays, which include copies of relevant contributions made by students to group tasks”.

In the newly developed courses of the Open Polytechnic, all the collaborative tasks do not link to assessment except for in the course 5902 Facilitating E-Learning, where they must cut and copy their chat session into assessment 2. No collaborative task has been linked to assessment.

In conversation with the course facilitator of the Programme, she highlighted that this was the very reason why she was now highly facilitating the courses because of the noticeably limited participation. She established that the course design definitely needs to be changed to link those collaborative activities to assessment. Shank (2013) offers that both individual and collaborative tasks need to be included in online assessment, as this is one way of ascertaining how well the learner functions alone, and with others.

Group submissions ought to form part of the assessment practices in this programme. If students are aware that they are not being assessed – and they are – they may very well not take the task seriously and do it haphazardly. The idea is to replicate what would happen in the real world. In a place of work, employees are rewarded for their collaborative skills on a project. Collaboration heights the learning experiences of all learners and thus must be appraised in the course.

4. The assessment tasks in two of the courses - 5901 Applying E-Learning Opportunities and 5902 Facilitating E-Learning - are not varied sufficiently. This is to say that for each of the courses, there are only three as-
essment tasks ranging from 20% to 50% each (30%, 50% and 20% for one course, and 40%, 40% and 20%).

Three assessment tasks are not sufficient to determine student learning outcomes achievement. Tasks need to be varied to give students an opportunity to pass the course and not fail it. Giving students more options lends itself to diversity and creativity of thought. In other words, students would be engaged in different kinds of tasks to test different kinds of cognitive skills. In support of the above paragraph, Shank (2006, p. 3) apostrophises the following:

“...Inadequate learning assessments are at best frustrating. At worst, they can damage students and institutions. Adequate learning assessments are one of the hallmarks of competence in building good instruction and markedly improve the quality of instruction. In an online course, where students often require extra feedback and motivation, unintended frustrations and unfairness can cause many problems including complaints, reduced enrollments, and lack of persistence”.

This is an area in the two courses that needs to be revisited.

5. Some of the course information is found in the ‘Student Handbook’, but is not on the course Moodle page. This is considered to be a weakness. While it is good that it has been considered, there is no guarantee that students will read the ‘Handbook’. The course Moodle shell is arguably the most important learning tool for the student, since this is the tool through which his learning experiences will be derived. In other words, he has to interact frequently with this tool to complete all tasks and activities. What better place than this to include all relevant information that will be instrumental in his learning process?

In conversation with the course facilitator, it was revealed that the information from her institution is not necessarily fully organised. She reiterated that some of the information is in the ‘Student Handbook’; however, she felt that such information should be in the course shell. She has since decided to address this issue. One recommendation offered by her, upon which she intends to act, is to link the ‘Student Handbook’ into the course page so that learners take note of the information contained therein.

**Determining the Quality of the Programme**

On hearing the word quality, what comes to mind is originality, innovativeness, credibility, validity and authenticity. Anything of quality must have value. In other words, it has to do with the standard of something as measured against other things of a similar kind or the degree of excellence of the standard or level. In pedagogical terms, quality has to do with the degree of effectiveness of an instructional method. In this case, however, the emphasis is Internet-based pedagogy.

In determining the quality of an online programme, a number of parameters need to be established that would give an indication of the degree of effectiveness of the programme. To address this issue, a number of rubrics have been produced to design and develop an online course, or to assess it. The rubrics have been developed to address the question, “What does high-quality online instruction look like?”

For the purposes of this discussion, The Rubric for Online Instruction (ROI), developed by the California State University (2009), is used to assess the quality of the Certificate Programme. The ROI document has been well prepared, showing the six categories that must be considered and reflected in an online course, if it is expected to be of good quality. Within these categories, the quality-kind ranged from baseline to effective to exemplary. All these categories are of paramount importance for effectively designing and delivering an online course. In other words, the ROI is indeed a reference guide for ensuring quality learning and teaching in a virtual environment.

Sheridan (2009) reveals that “Online learning must create challenging activities that enable learners to link new information to old, acquire meaningful knowledge, and use their meta-cognitive abilities; hence, it is the instructional strategy and not the technology that influences the quality of learning” (p. 18). In other words, it is not the computer that promotes student learning, but the design of the true-to-life replicas, and the students’ interactive engagement with them. The computer is seen simply as the means that provides the processing capacity and conveys the teaching to learners.

Closely following the guidelines of the ROI document, and based on all of the information gathered about the online programme, the following has been revealed:

**Learner Support and Services**

Course contains extensive information about being an online learner and links to campus resources (exemplary)
Course provides a variety of course-specific resources, contact information for instructor, department, and programme (exemplary)
Course offers access to a wide range of resources supporting course content and different learning abilities (exemplary)

From the above information, learner support and services is exemplary.
Online Organisation and Design
Course is well-organized and easy to navigate. Students can clearly understand all components and structure of the course (exemplary)
Course syllabus is unclear about what is expected of students (baseline)
Aesthetic design presents and communicates course information clearly throughout the course (exemplary)
All web pages are visually and functionally consistent throughout the course (exemplary)
Accessibility issues are addressed throughout the course (Including: sight, mobility, hearing, cognition, ESL, and technical) (exemplary)

From the above information, online organisation and design is, for the most part, exemplary. However, one sub-category is baseline.

Instructional Design and Delivery
Offers ample opportunities for interaction and communication student to student, student to instructor and student to content (exemplary)
Course goals are clearly defined and aligned to learning objectives (exemplary)
Learning objectives are identified and learning activities are clearly integrated (exemplary)
Course provides multiple visual, textual, kinesthetic and/or auditory activities to enhance student learning and accessibility (exemplary)
Course provides multiple activities that help students develop critical thinking and problem-solving skills (exemplary)

From the above information, instructional design and delivery is exemplary.

Assessment and Evaluation of Student Learning
Course has limited activities to assess student readiness for course content and mode of delivery (baseline)
Learning objectives, instructional and assessment activities are closely aligned (exemplary)
Assessment strategies are limited in use to measure content knowledge, attitudes, and skills (baseline)
Regular feedback about student performance is provided in a timely manner throughout the course (exemplary)
Student’s self-assessments and peer feedback opportunities exist throughout the course (exemplary)
From the above information, assessment and evaluation of student learning is, for the most part, exemplary. However, two sub-categories are noted to be baseline.

Innovative Teaching with Technology
Course uses a variety of technology tools to appropriately facilitate communication and learning (exemplary)
New teaching methods are applied and innovatively enhance student learning, and interactively engage students (exemplary)
Variety of multimedia elements and learning objects are used and are relevant to student learning throughout the course (exemplary)
Course optimizes Internet access and effectively engages students in the learning process in a variety of ways throughout the course (exemplary)

From the above information, innovative teaching with technology is exemplary.

Faculty Use of Student Feedback
Instructor offers multiple opportunities for students to give feedback to faculty on course content (exemplary)
Instructor offers multiple opportunities for students to give feedback on ease of online technology and accessibility of course (exemplary)
Instructor uses formal and informal student feedback in an ongoing basis to help plan instruction and assessment of student learning for the next semester in a limited way (exemplary)

From the above information, Faculty Use of Student Feedback is exemplary.

Assessing the Level of Interaction and Engagement
In order to assess the level of interaction and engagement in this Certificate Programme, the Rubric for Assessing Interaction in Distance Learning by Roblyer and Ekhaml (2000) was employed. The four elements to be assessed are:

a) Social rapport-building activities created by the instructor
b) Instructional design for learning created by the instructor
c) Levels of interactivity of technology resources
d) Impact of interactive qualities as expressed in learner response

The rubric ranges from few interactive qualities to a high level of interactive qualities, ranging from one (1) to five (5) points; one being the lowest and five, the highest. This rubric is a guide for assessing the quality of interaction in the courses. Low interactive qualities fall between 1 - 7 points. Moderate interactive qualities fall between 8 - 14 points. High interactive qualities fall between 15 - 20 points.

The following result has been determined, using the afore-mentioned rubric:
Element # 1 (Social rapport-building activities created by the instructor)
- In addition to providing for exchanges of personal information among students, the instructor provides several other in-class activities designed to increase social rapport among students. (This suggests above average interactive qualities, equivalent to 4 points).

Element # 2 (Instructional design for learning created by the instructor)
- In addition to requiring students to communicate with the instructor, instructional activities require students to work with one another (e.g., in pairs or small groups) and share results with one another and the rest of the class. (This suggests above average interactive qualities, equivalent to 4 points).

Element # 3 (Levels of interactivity of technology resources)
- In addition to technologies to allow two-way exchanges of text information, visual technologies such as two-way video or videoconferencing technologies allow synchronous voice & visual communications between instructor and students and among students. (This suggests high interactive qualities, equivalent to 5 points).

Element # 4 (Impact of interactive qualities as expressed in learner response)
- By the end of the course, over 75% of students in the class are initiating interaction with the instructor and other students on a voluntary basis (i.e., other than when required). (This suggests high interactive qualities, equivalent to 5 points).

The above assessment highlights that for elements # 1 and 2, 4 points each have been awarded and for elements # 3 and 4, 5 points each have been awarded. The total is therefore 18 points, establishing that the Programme has high interactive qualities.

The analysis and discussion above highlight that the Certificate Programme is very well run and is a quality online programme. Still, no course/programme is unimprovable. There is always room for improvement through action research and transformative reflection (Biggs & Tang, 2011). In this way, the course facilitator will always be finding ways to assure and enhance programme quality for sustainable educative practices.

The above discussion on the strengths and weaknesses of the online programme studied highlights that there are a number of good aspects of the programme that must be embraced and that the weaknesses are to be addressed, with the objective of fostering high-quality learning and teaching.

Conclusion
The spread of the Internet and web-based technologies has paved the way for a boost in the number of online courses available at tertiary institutions (Sheridan, 2009; European Commission, 2013). Online learning allows flexibility to student, enabling them to study anywhere and at any time, provided that they have access to an Internet-ready computer. Based on research conducted (Garrison & Kanuka, 2004; Dunlap, Sobel & Sands, 2007; Cooper, 2013), online learning has the potential to stimulate meaningful educational experiences.

The quality of online courses is of prime importance to all HE stakeholders (Bershin, 2004). And this important element will determine what, how and how well students learn what they are supposed to learn.

This research has centred its attention on the analysis of the online programme from one of New Zealand’s Polytechnics. The subsequent discussion has shed light on valuable information pertaining to the course quality and steps that could be taken to enhance and maintain it. The information revealed does validate the Certificate Programme, as it has demonstrated its ability to meet the needs of the students. In other words, the course is a student-centred high-quality online course that promotes deep learning and meaningful educational experiences.

With regard to the Open Polytechnic, the information obtained - from the programme coordinator, from the online website and from the Polytechnic’s working papers - does validate the programme, OP5440 - Certificate in Designing and Facilitating E-Learning, as it has demonstrated its capability to satisfy student needs. In other words, the course is a student-centred high-quality online course that promotes deep learning and significant learning experiences. Having said that, there is definitely room for improvement, as revealed by the study, and the areas for consideration ought to be addressed in subsequent course offerings. The weaknesses found in the programme need to be addressed, with special emphasis on the course syllabus. Casella (2003) affirms that one of the hallmarks of a successful online programme is its syllabus. This needs to be as detailed as possible, as it is a reference guide for student learning. In other words, all the information, or most of it, related to the students’ learning experiences, needs to be included. This encourages transparency and gives the course credibility, validity and authenticity. The strengths of the programme clearly establish that much thought was placed in its design. The results of the courses’ assessment of programme quality and interaction and engagement clearly validate this assertion.
Taking into consideration the above stated facts, it is absolutely necessary to establish that online learning and teaching has the potential to transform students’ learning experiences, with the benefits of self-paced and revolutionary instructional tools. It encourages flexibility of learning, eliminates distance barriers, and adapts learning materials to the different styles of learning. In fact, it is a promising development for assisting students in determining what is accessible and combining the most germane alternatives for their needs (Bershin, 2004; Sheridan, 2009).

Even though the researcher was not given access to the Moodle course shell, for not being a registered student at the institution, it would not be unfair, based on the analysis done, to say that this is a programme that could be offered to anyone desirous of being certified in E-learning Design and Facilitation. The only suggestion would be to revise the entire programme reflectively, based on the results highlighted, so that online learning and teaching quality is assured, ensured, enhanced and sustained.

References


