Adapting to changing expectations: Post-graduate students’ experience of an e-learning tax program

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Abstract

In response to the impact of information and communication technology on traditional business and commerce practices, and the empowerment of individuals by the growth of information available on the Internet, educators are challenged to adapt the curricula and delivery modes of educational programs for knowledge workers, such as tax accountants. Today’s tax accountants are expected to be computer and information literate, and are valued for their critical thinking skills based on subject knowledge. This article evaluates the implementation of an e-learning Masters Program in Taxation in South Africa based on the feedback from students. Three criteria are used: the use of technology, the learning design, and flexibility of the tax program. Students reacted positively to the use of technology, but expressed concern about the lack of interaction between students, and between students and teachers. The author argues that the choice of technologies, the outsourcing of teaching services, and the program facilitator’s teaching approach emulate the face-to-face tax program and therefore still support a teacher-centered teaching and learning approach. Students and teachers who are used to a traditional teacher-centered teaching and learning approach often measure the quality of a learning experience by the amount of information transmitted by a subject expert. Getting students to take responsibility for their own learning poses a bigger challenge than improving students’ computer and information skills. Several recommendations are made to improve e-learning programs that will produce self-directed, lifelong learners who can be productive in an information-based economy.

Keywords: Distance education and telelearning; Country-specific developments; Applications in subject areas; Pedagogical issues; Media in education; Lifelong learning

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1. Introduction

The impact of information and communication technology (ICT) on traditional business and commerce practices and the exponential growth of information have created a growing demand for knowledge workers who can compete successfully in an information-based global economy. Knowledge workers are expected to become lifelong learners in order to respond effectively to continual changes in their work environment.

In the competitive business world where time has emerged as a critical factor, e-learning has become a mainstream application to provide knowledge workers, such as tax accountants with learning experiences that are timely, accessible and affordable. E-learning is the use of electronic media (the Internet, DVD, CD-Rom, videotapes, television, cellphones, etc.) for teaching and learning at a distance. It also provides learners with the convenience of learning anywhere, anytime.

However, many e-learning initiatives have failed to achieve the desired learning outcomes, because not enough attention has been given to good learning design, management of the e-learning event, the selection of the right technology or to the adoption of e-learning by instructors and learners.

In the financial and business world tax accountants are amongst the professional groups whose work has been affected significantly by ICT developments and applications. The use of ICT to improve socio-economic conditions in almost every country has not only changed how and where people earn income, but has improved the process of tax collection by state income revenue services. Every legal, taxable, entity has to pay taxes – individuals, corporations, partnerships, estates and trusts. The Internet has become a powerful tool for governments, legal, financial and accountancy firms to empower taxpayers with tax information, as well as income tax, payroll and other tax related software. Increasingly, taxpayers are using the Internet to prepare and forward tax returns electronically to income revenue services. However, with the growth of e-commerce and globalization, taxation issues can be very complex. Tax accountants who are critical thinkers and possess adequate computer and information skills to perform are therefore in great demand by small public accounting firms, large accounting firms, law firms, corporate tax departments, income revenue services, state departments of revenue, investment firms, banks and private accounting and tax consultancy practices.

Against this background tax educators have acknowledged the need to change tax curricula and traditional delivery modes in order to produce computer and information literate graduates with well-developed critical thinking skills based on subject knowledge. Computer literacy for tax accountants means that they should have expertise in systems operating software and components, applications programs, the Internet and electronic communications. Information literacy can be defined briefly as the ability to search for, find, evaluate and use information from a variety of sources, such as electronic databases and the Internet (Goad, 2002, pp. 21 & 13). Student-centered teaching and learning strategies, and collaboration between tax academics and practicing tax accountants are encouraged while the use of technology-enhanced delivery modes is promoted (Meade, 2002; O'Neil & Rowe, 2000; Rubin, 1999; Schnee, 2002; Weber & Kopplin, 2000).
2. Problem statement

In South Africa, universities are embracing the idea of using ICT to support distance education (or a combination of contact and distance education) in order to provide flexible, lifelong learning opportunities. Furthermore, in keeping abreast with international developments in pedagogy, a student-centered teaching and learning approach is promoted.

In 1999, a School of Accountancy at a contact university in South Africa changed the education mode of their Masters Program in Taxation from contact education to distance education supported by an e-learning management system (WebCT) and interactive television. The shift promotes a student-centered teaching and learning approach as opposed to a teacher-centered approach. In other words, teachers should be learning facilitators as opposed to presenters of knowledge. At the same time, students are expected to work together and support each other as they use a variety of tools and information resources in their guided pursuit of learning goals and problem solving activities (Joliffe, Ritter, & Stevens, 2001, p. 19; Jonassen et al., 1995, pp. 7–26; Jonassen, 1999; Wilson, 1996, p. 5).

In South Africa, where both the first world and third world co-exist, the lack and/or costs of computers and Internet access, as well as the poor computer- and information-literacy of students and teachers are challenging issues when changing the delivery mode of any academic course. In this article, feedback from students enrolled in the e-learning Masters Program in Taxation was used to evaluate the implementation of a new delivery mode that promotes a student-centered learning model supported by ICT media. The evaluation is based on three criteria:

- The use of technology.
  - Do students have access to the chosen technologies?
  - Are students familiar with the chosen technologies?
- Learning design.
  - Is the learning student-centered?
  - How interactive is the learning environment?
- Flexibility of the program.

Based on the findings from the student feedback, recommendations are made on how to improve e-learning programs for knowledge workers.

3. Methodology

A questionnaire with 29 closed questions was sent to the private e-mail addresses of students in the first-year and second-year, and handed out in a contact class. Students were prompted to give additional written comments on the questions or on the tax program in general. As e-mail responses cannot be anonymous, students were reassured that their answers would be kept confidential.

Twenty-five questionnaires (50%) were returned by the 50 active first-year students. Twenty-one out of 35 registered second-year students (60%) returned the questionnaires. Students, contract
teachers, the program facilitator and program administrator were interviewed to validate the findings. A review of the literature placed students’ concerns in context.

4. Communication and management structure of the Masters Program in Taxation

The aim of the Masters Program in Taxation is to develop an advanced taxation knowledge base and advanced professional skills; to provide exposure to the more complex aspects of the discipline; and to develop a critical understanding of the South African taxation system.

In the contact mode of the Masters Program of Taxation from 1992 to 1998, teaching and managing the program was the responsibility of only one professor (see Fig. 1).

When that professor suddenly passed away in 1998, the Department of Taxation had to find a replacement in a market where there is a shortage of chartered accountants with tax qualifications and teaching experience. Chartered accountants are accountants who have passed the qualifying examination of the South African Institute of Chartered Accountants. In the US, they would be certified public accountants.

Implementing an e-learning model, using the learning management system, WebCT and the satellite television broadcast facilities on campus offered a solution and the means for the Department of Taxation to emulate the contact mode. Instead of appointing one professor in taxation, for the e-learning tax program various highly respected tax advisers from accounting and legal firms are contracted to present lectures on television while their notes and reading lists are posted online.

A program facilitator (an associate professor in the Department) was appointed as coordinator for subject-related matters. The learning facilitator decides on the number of teachers for a specific syllabus theme, in consultation with the contract teachers. On average 35 lectures are broadcast during the first three semesters of the tax program. Contact classes at the end of each syllabus theme supplement the lectures. The contact classes are facilitated either by the program facilitator or by a contract teacher. Contract teachers do not have access to WebCT as the program facilitator responds to all subject-related questions from students.

![Fig. 1. Masters Program in Taxation: contact mode, 1992–1998.](image-url)
The program administrator handles all administrative and technical enquiries and tasks. Before the television broadcast of the first lecture of a syllabus theme, she uploads the learning material to WebCT for the specific syllabus theme. Fig. 2 shows the various communication lines in the e-learning education mode.

The Department of Telematic Education and Learning Innovation provides technical support for e-learning courses, as well as training students and teachers in the use of WebCT. The Client Service Center offers students face-to-face and online administrative services such as applications, payments and examination results. The University’s library gives also students on- and off-campus access to the online library catalogue and electronic databases and other resources.

5. Student profile and the attrition rate

The average age of students in the study was 30. The students were either chartered accountants or students who had finished their undergraduate studies in accounting plus a B.Com Honors degree (first year of post-graduate study in accounting). The students were selected on academic qualifications and work experience in taxation.

Most students (71%) lived within a radius of 50 km from the campus and could attend contact classes if necessary. However, since all were full-time employees and many in the process of building a career and family, an e-learning model offered more convenience. Students indicated work pressure and family commitments as predictable reasons for not completing their studies. This relates to the findings of Alexander (2001) that lack of time, rather than distance, has become one of the primary reasons for student withdrawal from courses.

Exactly as in the contact mode the e-learning Masters Program in Taxation still comprises coursework divided into syllabus themes (three semesters) and a dissertation of limited scope.
Assessment is still done by means of essay questions, but are submitted electronically. Two open-book examinations are written on campus or at national and international examination centers. The degree can be completed within two years with a maximum of four years of study.

There is a typically high attrition rate in the first year of the tax program. Some students complete the coursework, but fail to submit the dissertation in time to qualify for the degree. Fifty percent in the first intake and 48% in the second intake of students in the e-learning program completed their studies. When these figures are compared with the 48% of students in the final contact program who obtained their degrees, the assumption may be made that the current use of ICTs to deliver the tax program, and the current teaching and learning approaches have basically the same effect on the student completion rate. Future research would be needed to determine whether the findings of this study, and the implementation of some or all of the recommendations, might result in a higher pass rate.

6. The use of technology

In the e-learning environment students in the tax program not only have to acquire or improve their computer and Internet skills, but also need to take responsibility for their own learning. Any innovation (change in work process) that is perceived as difficult to understand or use usually takes longer to adopt, because it may require new skills and understanding. In other words, it may involve a steep learning curve (Robinson, 2001, pp. 24–25). Rogers (1995, p. 314) shows that on the typical adoption pattern of innovation (the S-shaped curve), interactive communication technologies tend to achieve critical mass slower than other innovation, but once achieved, accelerate faster, even exponentially. This trend is also seen in students’ feedback on the tax program. Students were very positive about the use of technology, but reluctant to take responsibility for their own learning.

6.1. Internet access

The students indicated that, as accounting professionals employed in a business environment, they had Internet access at home or work and did not need to use the Internet facilities on campus. As most of the initial technical and network access problems were solved at the time of this study, the percentage of students (5%) that indicated that they had been denied access to the online program more than five times was insignificant. The students were not concerned about the extra costs (e.g. printing; computer hardware and software; Internet access), but low speed connections caused problems (especially when working from home).

“The only problem really is time. If one owns a rather slow computer and especially modem then the accessing time to WebCT and downloading can be quite frustrating.”

6.2. Satellite television

More students in the second-year group (75%) than in the first-year group (56%) have satellite television (DStv) at home. The convenience of watching lectures at home, plus the added enter-
tainment value of DStv, offset the cost of installing a dish and paying the monthly subscription fees. Students, who did not have access at home, either bought video recordings of the lectures or asked someone else to record them. The extra effort taken to obtain the lectures was seen as a minor drawback, while the benefit of watching and reviewing the lectures on video in their own time was seen as very convenient.

“Working full day and then making class at night was a huge burden for me previously: All the effort involved in going to campus, getting parking and standing in the cold waiting for lectures to start. It is a huge difference being able to sit in a safe and comfortable environment, watching the lectures.”

A disadvantage of broadcasting lectures on DStv is that reception is limited to South Africa and parts of neighboring countries. Students who are transferred overseas or on overseas business trips could only watch the lectures on video on their return or when received via mail.

6.3. Technology familiarity

Televisions, video recorders and, to a lesser extent, satellite television are familiar technologies for these students. However, the levels of students’ computer and Internet skills vary. Online communication and online information searches might have been a frustrating and time-consuming experience for those students who did not have proficient typing and Internet search skills. Assignments had to be typed using a word processing program and submitted electronically causing more distress. While most students (75%) in the e-learning program did not experience the use of technology as an obstacle, the added burden for those who had to acquire computer and information skills or even typing skills might have attributed to the high withdrawal rate of first-year students.

7. The learning design

The learning design that seems best suited to the demands of knowledge workers in the information age is a constructivist one where learning is seen as a constructive process with the learner building an internal representation of knowledge (Joliffe et al., 2001, p. 21). A good learning experience is one in which a student can master new knowledge and skills, critically examine assumptions and beliefs, and engage in collaborative learning (Jonassen et al., 1995, p. 7; Moore, 1993, p. 20). While interaction is essential in the learning process, Anderson and Garrison (1998, p. 98) explain that educational communication should be reciprocal (i.e. two-way), consensual (i.e. voluntary) and collaborative (i.e. shared control). They conclude that all too often it is a one-way transmission of information that does not facilitate the process of constructing meaningful and worthwhile knowledge.

Although the student and teacher are separated by space and time in an e-learning context, the student has the advantage of individual and personal contact with the teacher. The student can get answers to questions or feedback on assignments within a reasonable time by e-mail. The asynchronous nature of most online communication gives students the time necessary to reflect on their own understanding of concepts and theories, before sharing their thoughts with
fellow-students online. Quiet or introvert students can participate as much as extroverts (Badger, 2000, p. 125).

Against this background, the change from a teacher-centered to a student-centered approach in teaching and learning is not evident in the e-learning Masters Program in Taxation. Except for essay questions, no other learning activities promote self-study or promote the use of the communication facilities afforded by WebCT for interactivity. Learning outcomes are not stated clearly online or by the contract teachers. A student summarized his/her experience as follows:

“...”

Due to the lack of interaction, students in both groups (31%) indicated that they would prefer contact education. A student commented that the use of technology came at “the cost of quality of training”. Based on the findings of the study the following two reasons for the lack of interaction were identified:

- The outsourcing of teaching services.
- The role of the program facilitator.

7.1. Outsourcing of teaching services

Because of the use of the Internet in education, a trend at universities worldwide has developed to outsource teaching services in order to reduce the costs of education. Adjunct or part-time teachers are hired, instead of full-time teachers, because part-time teachers receive lower remuneration than full-time teachers and do not receive any benefits. Weigel (2002, p. 35) states that this has created a class of ‘gypsy scholars’ that serves educational institutions and that this trend has reinforced the belief that the teaching services of full-time faculty can be readily outsourced without a corresponding decline in quality.

Students in the first-year group in the Masters Program in Taxation received via television nineteen, one-hour long, lectures while students in the second-year group received fifteen. Students appreciated the lectures by tax practitioners from big accountancy and legal firms. However, as a result of the lack of interactivity between students and contract teachers during the live television broadcasts of lectures they were abandoned for pre-recorded lectures. The broadcasts changed into having ‘talking heads’ delivering hour-long, content based as opposed to activity-based lectures. The PowerPoint slides used for the lectures were available on the Web. Weigel (2002, p. 2) calls this a “post-a-lecture” approach that uses “... popular classroom-based instructional technologies (the ubiquitous PowerPoint presentation, for example) that treats the computer as little more than an overhead projector with bells and whistles.” One student experienced the lectures as follows:
I understand that it cannot be easy to talk to a camera. I would not be able to do it, but the lectures are, in my opinion, extremely boring because of the way it is presented.

While there are no opportunities for direct interaction between students and contract teachers, and even for interaction between the contract teachers themselves, students receive information and knowledge the contract teachers regard to be essential. According to the students, the teachers should have included and discussed more case studies.

Students also expressed concern about the quality of feedback on their assignments. Different tax practitioners (not those who present the lectures) set the assignments and examination questions, while part-time markers do the marking, according to a set mark plan. Although students submit assignments electronically, the program administrator makes printouts for the markers. The marked assignments, usually with few or no comments, are returned to the students by regular mail. The mark plan and two of the best assignments are posted online for students to see.

The program facilitator is the only subject expert to whom students have direct access and to ask questions about their marks.

7.2. Role of the program facilitator

The program facilitator of the tax program has not adapted to the role of an online learning facilitator who generates ideas and guides the students’ thinking (Collis & Moonen, 2001, p. 104; Ryan, Scott, Freeman, & Patel, 2001, pp 26–31; Ryan et al., 2000, p. 112; Selinger & Pearson, 1999, p. 39). Instead, she invites students to contact her directly via telephone, cellphone or her private e-mail with their questions. The students regarded this as an excellent service. As part-time students with limited time for studies, one can assume that they would choose the most convenient communication media available to them to resolve their problems in the quickest way possible. Lack of time was also a problem for the program facilitator who preferred to answer students’ questions verbally. However, from a learning perspective, it is still a one-way transmission of information and students are not given the opportunity to discuss and solve problems among themselves.

The program is offered in English only, because English is the most widely used language in business. English is a second language for most of the students (60%) in the study. Language may be perceived as an inhibiting factor for students. However, one of the advantages of electronic, asynchronous communication such as an online discussion forum is that it gives second language students the opportunity to correct linguistic mistakes and at the same time develop written communication skills (Badger, 2000, p. 125; Dos Santos & Wright, 2001, p. 57). Rather than language, fear of showing a lack of insight or knowledge inhibited students from asking questions. Contacting the program facilitator offered a “safer” option than the public discussion forum in WebCT.

“We do not effectively use the Discussion Section on the Net. I think we are all hesitant to admit that we do not know something in front of others, or you are scared that you are the only one that does not know something whereas every one else does.”

The only real disadvantage of online communication is that students do not get the opportunity to develop verbal communication skills. At the request of the students, contact classes for discussing case studies were introduced. The students, however, were reluctant to participate in discussions. Instead, waiting for the teacher to provide the ‘right’ answers. While the learning design
does not include any activities to promote interactivity, it is not surprising that 28% of the first-year students and 25% of the second-year students indicated that they never asked any subject-related questions. Geisman (2001) states that most students resist taking responsibility for their own learning and expect to have direct access to an expert. The following comment of a tax student confirms this statement:

“In general people, especially experts, don’t have the time and seldom the willingness to sit down and explain material. A course like this should provide that opportunity.”

8. Flexible learning

The use of technology in the Masters Program in Taxation created flexibility for students in terms of time and place of learning. However, the structure of program remained inflexible in terms of access to and exit from the program, program compilation, evaluation and assessment methods and pace at which learning takes place, because it emulates the contact mode that promotes a teacher-centered approach. Access to learning materials is restricted to the syllabus themes presented at a specific time. Students still write examinations at physical locations on nine syllabus themes at the end of the first academic year and write again on four themes in the middle of the second academic year. If they fail an examination, they have to repeat all the syllabus themes for that specific year. Also, students forfeit all credits obtained for the coursework if they fail to submit their dissertations on time.

Students were asked for their opinions on obtaining the masters degree as opposed to certificates for chunks of the program. The majority of students (90%) committed themselves to obtaining the masters degree. This could be because the perceived value of a Masters Degree in Taxation is higher than that of separate certificates. A Masters Degree in Taxation is also considered a prerequisite for acknowledgement as a professional tax accountants in the market place.

The contact classes in support of the online program add to the program’s inflexible structure. Students who could not attend felt that they were disadvantaged, despite the fact that the case studies and solutions discussed at the contact classes were available online.

9. Conclusion and recommendations

The use of technology has made the Masters Program in Taxation more accessible for more students while promoting the improvement of their computer and information literary skills. It has also created an opportunity for collaboration between academics and tax practitioners.

While the students in this study were positive about the use of technology for advanced tax education, it became apparent that managing the change from a teacher-centered to a student-centered teaching and learning approach poses a big challenge. Students and teachers who are used to a traditional teacher-centered teaching and learning approach often measure the quality of a learning experience by the amount of information transmitted by a subject expert. Changing the delivery mode of tax education is not only about students in advanced taxation becoming computer- and information-literate or about having a convenient learning environment. Rather,
it is about developing an interactive learning event that will develop self-directed, lifelong learners who can be productive and competitive in an information-based business environment.

The e-learning Masters Program in Taxation could serve as an example of a contact program that was neither redesigned to promote student-centered online learning nor restructured into modules to create flexibility. Furthermore, the teachers and facilitator who are accustomed to contact education were not trained to apply teaching strategies that are appropriate for online, distance education. The students’ concerns about the lack of interaction raise questions about the effectiveness of the e-learning experience for the development of critical thinking skills in knowledge workers.

The following recommendations are offered to improve the Masters Program in Taxation, but are also valid for similar e-learning programs for professional knowledge workers.

9.1. Technology

ICT media for education should be selected to add value to the learning event not simply because of its availability. The costs and the value of recorded lectures on television, videotapes, DVD or CD-Rom for teaching and learning should be determined. For example, instead of a lecture on television, the complete lecture notes could be made available online and the teachers could facilitate online discussions instead.

Owing to Internet bandwidth issues in South Africa, such as costs and speed, the use of the online chat rooms is not advisable. The use of asynchronous public discussion forums specifically for subject-related topics or social discussions in a virtual student café should be encouraged. Furthermore, weekly e-mails from the program administrator and facilitator(s) to remind students of events and assignments or to probe students about their progress are essential to motivate students to progress through the program. Contact classes could facilitate the change from a contact to an e-learning mode. However, the purpose of contact classes should not be to replace online learning activities, but to assist and motivate students and to create opportunities for professional networking.

9.2. Learning design

Instructional designers, educational technologists and subject matter experts in multidisciplinary teams should assure the quality of online pedagogy. Activities to encourage interactivity and online assessment strategies should be integrated and designed to achieve the desired learning outcomes. Before students register, they should be informed about what they can expect from an e-learning program and what is expected from them in return. The outcomes of the program and an online demo could be made available to potential students.

Success of an e-learning program depends on the commitment of the facilitator(s). The contract teachers and the program facilitator should have access to e-learning training programs for teachers and be supported by instructional designers. Their training should focus on distance education methodologies and online communication skills.

Interaction on the discussion forums should be kept active. The program facilitator as well as the contract teachers should access the discussion forums daily. It would depend on the nature of a question received from a student whether a facilitator or contract teacher would respond
promptly or would leave it open for discussion. In most cases, students should be given the opportunity to solve tax problems among themselves. Twenty-four hour turnaround time should be a maximum for administrative and technical questions.

9.3. Flexibility

Each syllabus theme should be designed to be an independent module, giving students more entry and exit options. Students should be given credit for each module as they complete it. The individual modules could be marketed as certificate courses for students who wish to update their knowledge or for companies that need “just-in-time” training for their employees. Students who complete all the modules and the dissertation within a fixed period could then be awarded a masters degree.

Depending on the learning design and available human resources, one or all of the modules could be offered simultaneously. This would increase flexibility for students in terms of program compilation.

9.4. Evaluation

Continuous evaluation of an e-learning program would improve its quality and marketability. Students should be requested to evaluate the program at the mid-point of the program and at the end of the program by completing an online question survey. The results of the surveys should be used to improve or adapt an e-learning program continuously thereby increasing the chances of program completion and improving the students’ overall perception of a program.

References


