

CREATING A VIRTUAL CLASSROOM:

**EVALUATING THE USE OF ONLINE DISCUSSION FORUMS TO INCREASE TEACHING AND
LEARNING ACTIVITIES IN AN INTRODUCTORY ACCOUNTING CLASS**

by

Peta Bezuidenhout

L P Bezuidenhout

L.Bezuidenhout@ru.ac.za

046 603 8201 / 082 787 5391

Department of Accounting

Rhodes University

Grahamstown

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Abstract

In teaching large classes, the educationally beneficial informal interaction between students and between lecturer and students is generally reduced, while effective use of both students' and lecturer's time is often a challenge.

During student consultations, especially over the already stressful test and examination periods, many of the questions asked by the students are the same or similar. The lecturer needs to respond to each query by providing the same detailed explanation for the problem, resulting in ineffective use of time for the lecturer, while students waste time waiting for an appointment, or more often, simply don't bother to follow up on any queries they may have.

Having a social presence is important for students' cognitive development, but in a large class posing questions or interrogating issues during a lecture appears to be challenging for many students. It is often not easy for students to initiate discussions or establish relationships with peers or the lecturer due to feelings of vulnerability and due to the size and impersonal atmosphere of the lecture theatre.

This paper deals with the introduction of online discussion forums in an introductory accounting course and the benefits and problems experienced by the students, tutors and lecturer as a result thereof. Feedback received from these participants is discussed.

The introduction and use of these forums resulted in a virtual classroom being created, where significantly more teaching and learning activities took place, to the benefit of all participants. Participation could have been peripheral - in the form of simply reading discussions; or active – through posting questions, or responding to questions.

Key words: Accounting, discussion forums, online teaching, active learning, formative feedback, virtual classroom.

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Introduction

Five hundred students were enrolled in the first semester of the 2008 introductory accounting class at this contact, residential university. In this course lectures are held three times a week, in a 411 seat lecture theatre. All lectures are repeated due to constraints imposed by both lecture theatre size and time-table clashes.

Large class teaching (in this case attendance may vary from one hundred to three hundred students) has become the norm in most first year courses in the Commerce Faculty at this university. With the growth in numbers has come an increase in diversity as students from substantially different socio-economic backgrounds, with different home languages and from different countries are thrown into one big melting pot. This leads to many first year students having very specific learning needs and experiencing difficulty in managing the responsibilities placed on them (Oliver: 2007).

Past learning experiences can inhibit a student's cognitive understanding within a discipline. Imagine the scenario of a lecture in a four hundred and eleven seat lecture theatre. The lecturer explains a problem from the front of the class, and a student does not understand the explanation. Plucking up courage, clarification is sought from the distant lecturer (this could involve having to speak loudly and then to possibly have to repeat the question), but the response from the lecturer may not explain the solution adequately for the student's needs. The student may find it difficult to move on to the next exercise, and could remain focussed on the problematic exercise. Many accounting lecturers will have experienced the situation where they are referred back to an exercise covered ten or fifteen minutes earlier, where the student is clearly still struggling to understand a concept. Once students have revealed to the other three hundred in the lecture theatre that they do not understand an aspect of a question, they are not likely to persist in questioning the lecturer, even if they still do not understand the suggested solution, after a second or third explanation.

The diversity in our class highlights the “vulnerable self” suggested by Pratt (2002:7) where he explains that students come to a higher education institution bearing the wounds of their previous experiences and schooling. When a student’s self-concept is under threat, learning will either be inhibited or totally blocked. The student may leave the lecture theatre without clarity on the problem, but now also feeling emotionally vulnerable. Should the student ask the same question online, the context will have changed significantly. The question will not be asked in front of a couple of hundred peers, but from the calmness, security and relative anonymity of a computer keyboard and screen, with time to contemplate and compose the question. There is no pressure to understand the explanation immediately and there is time to think the solution through carefully.

This diversity may also result in some students feeling that they do not have the confidence (or that they have not mastered the discipline’s discourse sufficiently) to allow them to participate in discussions or pose questions during lectures. Without another avenue for interaction, these students’ queries, concerns and opinions will go unheard. In creating a ‘virtual social presence’ for themselves, students can make themselves heard in virtual world. A ‘social presence’ is defined by Picciano (2002:22) as “a student's sense of being... and belonging in a course”.

This social presence provides students with a safe space from which they can ask questions and become part of the learning community. According to Vygotsky’s sociocultural theory, “full cognitive development requires social interaction” (Tu, 2000:33). Vygotsky suggests that teaching and learning are “social activities that take place between social actors in socially constructed situations” (Moore, 2000:15). In this large class environment, where it is difficult to establish a physical social presence, a virtual social presence may be essential for students to achieve full cognitive development.

The issue of teaching the first of the Y or Net Generation students, also known as the Echo Boomers (the off-spring of the Baby Boomers), who are technologically

advanced, like less structured lives, are independent and have shorter attention spans¹ (Arhin & Johnson-Mallard: 2003; Alch: 2000) is also relevant. These 'latch-key kids', whose formative years were marked by absentee parents,² are most strongly influenced by their core peer group and have little loyalty outside this peer group.

In this residential university, most students in the introductory accounting class have easy access to the computer facilities and the internet, either through a connection in their on-campus accommodation (if they have access to a personal computer), or through one of the many and easily accessible computer laboratories on campus. While access to the computers is relatively easy, the level of skill of the students and the ease with which they are able to access and utilise the Learning Management System (LMS) will differ significantly. Feedback received from students indicates that very few students were not able to make use of or gain access to the forums, so it appears that they were able to bridge any gap in skills.

In the days and weeks leading up to an examination students generally start revising more diligently. Due to the nature of the discipline, and the spiralling approach taken when setting tutorial questions, an accounting question which looks fairly simple at a glance can quickly become quite complex and students may not be able to determine how figures in the solution are calculated. If unable to trace the source of the figures used in the calculations, students may be unable to fully understand the principles behind the calculations, resulting in them being unable to progress with their learning in that particular area. As students often work during the evenings or over weekends, this means that progress in their studies could be halted until 'expert' advice can be obtained.

¹ Generation Y applies to children born between approximately 1982 and 2000 (although dates may vary slightly between researchers and across countries and continents) who have had the advantage of a technologically advanced learning and growing environment. This generation is also known as the Echo Boomers, Millenials, Nexters or the Net or Nintendo Generation.

² The Baby Boomer parents were absent as they were working to provide for their children's physical, intellectual and material needs. This drive for material wealth was to compensate for their own perceived unmet 'needs' being the off-spring of those who had lived through the war years with the related rationing and other hardships and the resultant 'waste not, want not' mentality. This means that Generation Y students have few material needs which has resulted in them not being as motivated by financial reward as their Baby Boomer parents. For the typical General Y student it is more important not to be bored and flexibility in the work environment is valued (McCrindle: 2007).

Previously students would have had to queue for a face-to-face consultation with a lecturer to discuss these problems. Many of the queries dealt with by a lecturer would have been repeated and the explanations would have been repeated. This resulted in wasted time for both lecturer and students alike. More worrying was that some students would either not have been aware of their lack of understanding, or would not have bothered to query the problem and would have continued with their studies unaware of these gaps in their knowledge.

In the 2008 introductory accounting class, we had students who were technologically advanced and influenced by their core peer group, but who had fewer opportunities for active learning due to class size, and little opportunity for creating a social presence.

RUconnected is the LMS used at this university. An LMS is defined by Paulsen (2002) as a system which “organise[s] and provide[s] access to online learning services for students, teachers and administrators”. The introduction of online discussion forums (ODFs) meant that students were able to post questions which they were not able to ask during lectures, whether due to a lack of confidence (Davies, Ramsay, Lindfield and Couperthwaite: 2005), lack of time, lack of academic discourse, or simply due to the student not being aware of any lack of understanding in that particular area. Using the ODFs was a voluntary activity and no form of assessment was attached to any activity on the forums. The forums were established purely to facilitate student learning, with the focus being improving students’ understanding of accounting concepts and principles leading to improved performance in tests and examinations.

Through the academic discussions on the ODF, students engage in active learning and receive formative feedback from their peers, tutors or lecturer, which guides them in their learning. According to Bezuidenhout (2008:2) “[f]ormative feedback allows the student the opportunity for complex learning through reflection”. Complex learning is the transformative or deep approach to learning suggested by Lucas and Meyer (2004) and Biggs (1999) respectively.

Having the time to reflect on the formative feedback received from peers, tutors or the lecturer in an ODF, will allow these students the opportunity for complex learning. Additionally, participation in the forums will offer the students the opportunity to spend more “time on task” (Chickering and Gamson, 1987:3) while they engage in active learning. Active learning is defined by Machemer and Crawford (2007) as anything more than passive listening.

The use of RUconnected in Introductory Accounting

Using RUconnected the study plan and assignments for the semester were loaded for students to view. Solutions to assignments were available as soon as the submission deadline had passed and students had access to these. Past years’ examination papers and solutions, the departmental Student Handbook, the tutorial list, lecture summaries and PowerPoint slides used during class and other learning resources were also available on RUconnected for students registered for the course. Students were also able to use RUconnected to send each other, their tutors and lecturers instant online messages.

RUconnected also has the facility for running ODFs. If subscribed to a forum a student will receive an email message every time a posting is made on that forum. If not subscribed to a forum a student may access the forum and is able to access all discussions on that forum, but will not receive any email messages. Previously only used for the one-way flow of information from lecturer to student through a news forum, in 2008 I decided to make better use of the ODFs. The format for the forums is extremely flexible and varies from

- any student being able to initiate a discussion or respond to any other discussion or posting (in the general discussion forums), to
- the one-way sending of information from the lecturer (the news forum), as well as
- separate discussion forums both for our tutors (as a group) and for each tutorial group.

Subscription to a forum can be compulsory (the news forum), or subscribed initially, after which the student can elect whether to remain subscribed (the general discussion and tutorial forums). The increasing use of forums would result in more effective use of my time and my students' time in the busy test and examination revision periods.

From the beginning of the second term, I also set up a social forum, with a voluntary subscription, as it was felt that there was some social interaction which would be more appropriate in a social forum. I advised students that I would not participate in discussions on the social forum - unless asked to intervene if there was undesirable behaviour or language - as this would be their space for informal interaction. It was decided in consultation with the class that they would have to subscribe to this forum. This unfortunately meant that there were very few subscribers, so few students were aware of discussions on the forum, resulting in limited interaction on the forum and ultimately a lack of success in establishing the forum.

While students were initially subscribed to but had the option of unsubscribing from the general discussion forums, they needed to subscribe to the social forum. All students were forced to remain subscribed to the news forum. Students, tutors or the lecturer could post a comment or a query to the general discussion or tutorial forums on RUconnected. This query was posted to the forum and an email was sent to everyone who was subscribed to that forum. Where relevant, peers, tutors or the lecturer could formulate a response and post this to the forum, with the emailed response again being received by all subscribers. The benefits of this are:-

1. Students are able to pose a question and receive a response at a time that suits them.
2. Participants are able to check for postings and respond, again at a time which is convenient.
3. An online record is available of all discussions, allowing students to refer back to these at their leisure.
4. Tutors are aware of what is being said to and amongst their tutlings³.
5. Students are able to ask questions while they remain relatively anonymous.

³ A 'tutling' is a member of a tutorial group.

6. Perhaps the biggest benefit and possibly the most difficult to measure, will be to those students who will have had their questions answered before they were aware of a lack of understanding.

After having with a colleague who had used an ODF in her course, discussion forums were first utilised for this course during the first term 2008 prior to the first test. My commitment to my students was that in the week or two prior to a test or examination, I would respond to queries on RUconnected at least within 24 hours. During the week, while I was in my office and on the university's network, my response time would be much quicker, but I was undertaking to access RUconnected at least once a day over the weekend, to assist with queries which may have arisen during this time. As it was I was interested to see what discussions were taking place, and I accessed the forums far more often than that!

When setting up their profiles, students were able to choose to remain relatively anonymous (to all except those who know them) by keeping the default 'smiley face', or using a picture or cartoon, or they could choose to identify themselves and use a photograph. I use the term 'anonymous' cautiously, as with a large class, although students may recognise a name, this will not mean that they know who the person is, so there is relative anonymity.

During 2007, prior to ODFs being utilised, most students seemed to favour using photographs when setting up their profiles. In 2008, when ODFs were introduced, there seemed to be a shift to students favouring a cartoon, some other image or the default 'smiley face' to depict themselves. I have no theoretical basis on which to suggest that the introduction of the ODFs was responsible for this change, however, it was a notable change from 2007. The possibility that the desire to remain anonymous was the reason for this shift, finds support in a small way in a discussion which took place with a colleague. This colleague revealed that when using a forum for a small group of approximately eight students, some students claimed that they were reluctant to use the forum as they were too shy. In this instance it would not have been possible to maintain anonymity as all members of the group would have known each other. It appears then that it is possible that students may prefer to participate in a forum discussion, when they are able to retain some degree of anonymity. This could

also partially explain the lack of success in the social forum. Instead of five hundred students subscribed to the forum, there were only about five subscribers. Perhaps in the reduced numbers, students felt they had lost their anonymity.

These assumptions support the theory of teaching and learning being a social activity with students gaining confidence through creating a 'virtual' social presence. This social presence only exists within the forums, a virtual environment, and they can choose not to allow it to exist beyond these forums.

The difficulty that this shift from photographs to cartoons or other images caused for me, was that I could have engaged in an on-line discussion with a student, but unless the student made an effort to formally introduce themselves to me, I would not know when I was addressing that student in a lecture. So while the student felt that he or she 'knew' me and had established an on-line relationship with me, to me the student was just another anonymous student.

Effective Teaching

"Effective teaching means setting up the teaching/learning context so that students have every encouragement to react with the level of cognitive engagement that our objectives require." (Biggs, 1999b:54.)

An effective teaching environment requires that students develop an active approach to learning, while the teaching should engage in Level 3 teaching (Biggs: 1999a), with the focus being on what the student does. Set teaching and learning activities (TLAs) should promote student activity and involvement at the required cognitive level.

Aim of the research

This research aims to determine whether students accessed the discussions on the forums and if so whether they benefitted academically from using these forums.

In particular, I want to answer the following question:

“Did the use of online discussion forums result in an increase in teaching and learning activities and provide evidence of active learning and appropriate cognitive engagement by our students in a classroom environment that extended beyond the confines of a physical lecture theatre?”

This question will be answered though

1. Analysing students', tutors' and the lecturer's comments.
2. Determining the educational benefits obtained from the use of the forums while identifying areas of improvement.
3. Linking findings to theory.

Method

Evaluation of the impact of this innovation was conducted using a paper-based questionnaire for completion by our students. Triangulation came from several sources in the form of feedback from all of our tutors also in the form of questionnaires and informal feedback from peers within the discipline who have also made use of forums on RUconnected. Member checking was used to verify the information captured from sources other than students. Copies of instant messages received from students were provided as evidence of unsolicited feedback during the first semester of the year.

At the beginning of the fourth term (September) 2008, students and tutors were asked to complete a questionnaire thereby providing both quantitative and qualitative feedback (see Appendix A). These forms were completed by the students during the compulsory weekly tutorials and by the tutors during the compulsory weekly tutors' meeting. As the questionnaires were completed during the compulsory weekly tutorial, a high rate of return was expected on these forms, from both students and tutors, increasing the reliability of the feedback received.

Thematic analysis was used to analyse the qualitative data.

Ethics

In the questionnaires, students, tutors and peers were assured that all comments would be made anonymously and all students were asked to agree that any quotes they made could be used (anonymously) in any future research. The forms were completed within tutorial groups, and no identifying marks, codes or numbers were placed on the papers. This meant that no form could be traced back to any individual student, and anonymity was thereby guaranteed. Additionally, data would be captured into a database and no names or numbers would be attached to this data. Forms were numbered as they were captured, to allow verification and auditing of the data should this be required.

RESULTS OF SURVEY

Of a possible 415 students⁴, 385 returned the questionnaire, a 92.77% rate of return. This gives the feedback we received a high degree of reliability.

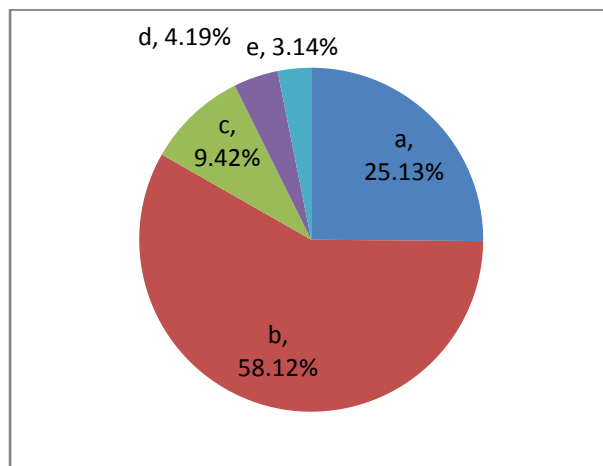


Figure 1 - Usage of ODFs amongst students

Key :

- a. I did not make any use of the discussion forums.
- b. I have read the postings in the forums.
- c. I have read the postings in the forums and contributed one or more questions.
- d. I have read the postings in the forums and responded to one or more questions.

⁴ These were the students enrolled for the second semester of the 2008 Accounting 1 year.

- e. I have read the postings, contributed questions and responded to others' questions.

Of the students who responded to the survey, 75 percent made use of the ODFs, through accessing the forums. Of the 25 percent (n=96) who did not access the forums, 44 percent (n=42) still said they had benefitted from the ODFs through the emails which they received automatically, while 68 percent (n=65) said that they felt that the forums should be used again in 2009. Students did not always answer every question which will explain differences in the percentages provided.

Some readers may conclude that the forums may not have been that useful due to the low percentage of students who were active in posting or responding to questions on the forums. This argument is countered by the fact that 82 percent of all respondents felt that they had benefitted from having the ODFs, either through following the discussions or reading the emails they received, or through becoming aware of a 'cognitive dissonance' when reading comments posted by their peers. Festinger (1962) suggests that students learn through "cognitive dissonance". Through becoming aware of a difference between their understanding of a concept as opposed to another student's understanding of the concept a dissonance exists which is psychologically uncomfortable. This dissonance should result in learning taking place which will achieve consonance or psychological equilibrium for the student. The student could also avoid the area of discord to reduce the dissonance.

Simply accessing the forums and reading the discussions, or reading through the emails received on these discussions would have resulted in active learning. These students would have been engaged in more than just listening, they were involved in legitimate peripheral engagement.

Factors inhibiting access to the forums do not seem to be a problem, with 94 percent of the respondents saying they were able to do so. Analysing the responses from the 24 students who said that they had experienced access problems, it appears that these problems related more to the fear of censure if they did contribute to the discussions rather than an inability to access the forums. The anonymity provided by the forums was clearly not always enough to assuage the fears and vulnerabilities of all students.

The most critical response, I believe, is that 90 percent of the students who completed this question said that they recommended that the forums be used again for introductory accounting in 2009. Students must have benefitted from this experience if they recommend that the activity be made available to future introductory accounting students.

Feedback from Students

Students were on the whole very positive about their experience of the ODFs, (S9⁵) “information... was just a click away”(S26), the, “forums are very easy to access”(S79), “it was very helpful indeed” (S32), “it was easy to use and you could post any question”(S32), “questions I didn’t understand were posted on RU[connected] and the lecturer swiftly responded”(S44), “Lecturers responded very quickly to the questions posted. Very good academic tool.”(S79). (S16)“my questions were answered in a way that I understood.” “Very well organised. Well done to the Accounting Department.”(S57). “I really appreciate the time and effort made for the clear and useful postings on RUconnected. Thanks.”(S89), “!!!VERY HELPFUL!!!”(S142), “It’s like an agony [aunt] column – IT REALLY HELPS”(S168).

Some students stated that many questions posed on the forums were often the same queries they had (S11), “the questions some people have are just the same questions I have”; or (S17), “reading others problems often answers your own” finally, “the questions I wanted to ask were already posted and so I got my answers”(S32), “gave me clarity to things that I was uncertain of”(S79).

There was a benefit from, “finding out what my peers’ opinions are thus finding another angle to tackle problems” (S27), this was supported by being able to, “pick up on other peoples’ arguments and learn from them”(S43), “You get help from peers who understand your problem...”(S92).

⁵ To enable easy cross-checking of forms and quotes, all completed responses were numbered, with students responses being preceded by an ‘S’ in this paper, tutors responses being preceded by a ‘T’ and other lecturers’ responses being preceded by an ‘L’.

However, the concern was expressed that, “conflicting answers from different students...”(S89) may have created some confusion.

The problem of feeling vulnerable and unable to raise an issue during lectures was also articulated, “people who are too shy to ask questions in lectures can ask on ru[connected]”S45, “some of the questions asked w[h]ere questions I had but did not have the courage to ask” (S27); “introduce[d] question[s] I would have never ask[ed] but did not know the answers to” (S30), “able to ask... questions that may seem silly...”(S127), “At times I was scared to ask, thinking my question would be silly... I learned more and did not have to embarrass myself in the lecture”(S168), essentially, “If one person has a question then many people will [have the same question]”(S160), “Sometimes we are shy to ask [questions] in lectures and this is when we really get the opportunity to explore our hearts”(S246).

One student found that it was only used for, “last minute panic questions... last minute revision after being lazy”(S99), which was supported by, “it just made individuals lazy and reluctant to research.”(S181). Interestingly this was supported by a colleague, who had limited success with the introduction of discussion forums, (L1), “What students tend to do is only use the RUC discussion forum when they decide at the last moment to start studying... which is often too little too late.” I think my colleague would agree that in this instance, the forum was only set up a couple of weeks before the examination and students had not become accustomed to using the forum as a learning activity.

Addressing the constraint of having to pay a visit to the lecturer was also mentioned, “My questions were responded to... without me having to personally go to the lecturer”(S74), “Able to ask questions without booking an appointment...”(S127).

Some students, however, felt that they did not have a need to access the forums as, “... my colleagues were of enough help to me” who elaborated that, “I didn’t use them as... the explanations in lectures were beneficial” (S15) or, “I found it easier to discuss with my peers.”(S80).

Administrative issues appeared to be the focus for a few students who said they benefitted from being able to, “access the week’s tutorials and lectures” (S24), or, “... to be reminded of tut work, test times, test content etc.”(S89), “Got updated on... when tests are.”(S125)

A large number of students expressed concern that the forums were not only being used for academic discussions, “people should be discouraged from writing little one line[r] random responses”(S34), or, “could people just ask serious questions”(S42), “... my email gets full of silly questions.”(S85)

The large number of emails was a problem for some students, “The amount of emails is quite annoying.”(S74), “I don’t want all [of] those message[s] in my inbox.”(S58), “... it’s irritating when my mailbox is clogged up...”(S80), “The emails were just very annoying.”(S154), while some students liked receiving all the emails, “The forum was well handled as we receive emails when new posts appear”(S159).

The question of students reading questions without needing to access the forums was also expressed, “... because all the questions... were emailed, I didn’t make much use of the forums.”(S88) and, “Emails are sent with the information so it is not necessary to go to RU[connected]”(S118), “Find email discussions very useful.”(S134), “Even if I don’t go on RUconnected, I still get emails whenever there is something new.”(S148).

Access to the forums was problematic for a few students, “had no idea how to access the forums” (S18).

Some students saw the academic benefit of the forums with many of the comments revolving around the issue of cognitive dissonance. “It is a form of revision...”(S51) and, “I picked up on things I thought I understood, but did not.”(S111), “Help[s] you see... things that you would have left out in your studying and are still not good at.”(S112), “It brought to my attention issues that might need further input from me.”(S113), “It’s good to see what people are battling with, to see if I’m on the right track.”(S117), “Lecturers could ascertain which section the class was struggling [with] and discuss it further”(S165), “... made me aware of what part of the course I

was neglecting... reading the forums reminds you about what to focus on.”(S186), “[I] would do extra revision. I would get worried when I did not understand something so would try [to] figure it out”(S229), “... helped me solve a problem I didn’t know existed”(S203).

The ease of access and availability of the forums was mentioned, “I could ask questions any time of the day.”(S195), “availability”(S199), “... if there is no-one to ask then you can try the forum”(S97).

For me the response from one student summed up the impact of the ODFs quite comprehensively, “It provides an easily accessible platform for students and lecturers to interact with regard to the various concerns and questions they have.” (S14).

Feedback from Tutors

The feedback received indicated that most tutors were able to access RUconnected, although some commented that more training would have been useful. As all of our tutors were third or fourth year students, some had moved out of the university residences, which meant that internet access from their private accommodation was sometimes difficult. (T5), “Digs⁶ doesn’t allow easy internet access, but mostly the demonstration of using RUconnected was inadequate.” Most tutors (85%) read the emails which were posted, although some found receiving so many emails irritating T13, “Got really irritated with every question been [sic] returned to our email addresses, makes you just delete emails.” Most tutors (again 85%) felt that their tutlings had benefitted from using the forums, with some tutors even going so far as to encourage their students to use the ODFs. One tutor defended not using the ODFs as he/she didn’t see any unanswered queries from his/her tutlings on the ODFs (T9), “I did not see any of my tutlings’ names or questions which have not been answered and thus felt no need to contribute further”. Tutors found that the use of the ODFs made tutorials easier as, “... common questions and comments enabled tutlings to benefit”;

⁶ ‘Digs’ is private off-campus accommodation, generally shared with a group of students. Internet access would vary significantly from one digs to another, according to what is organised by the students.

and prompted further discussion in tutorials (T4), “[students] always have questions to ask which the discussion may have not dealt with comprehensively”.

While one tutor expressed the concern that, “some [students] are not taking it seriously” (T1), generally tutors felt that using the forums was beneficial as students could, “ask questions if they are to[o] shy to speak in front of an entire lecture theatre” (T4) who added, “amongst them[selves] they could help each other”. (T12) said that, “They are available even on weekends when the lecturers aren’t” and finally (T13) said, “Excellent tool, I wish my tutor had it in 1st year.”

When reading these tutors comments, and as articulated by the final comment from T13, it must be remembered that when these tutors were in the introductory accounting class, no LMS would have been in use. For many of them, using RUconnected would have required learning new skills. As our students progress through the system, (from 2009) we will have tutors who have had exposure to using RUconnected, so there will be less anxiety about using this as a LMS.

Suggestions for improvements were firstly that emails should not be sent out for every comment and secondly two tutors asked for additional training in the use of RUconnected. This will be implemented in 2009, as tutors and students will be given far more comprehensive training in the use of RUconnected.

Every tutor recommended the use of ODFs for introductory accounting in 2009.

Feedback from the Lecturer

The initial motivation behind the introduction of the forums was the more effective use of student and lecturer time in the stressful period leading up to tests and examinations. In this regard the forums were without doubt a success.

Questions were posted to the forum in the students’ time and responses were received and available to all students whenever a response was formulated by a peer, a tutor or the lecturer.

There was no need to repeat explanations as these were always available to students, while the number of student consultations declined significantly as queries had already been posted on the forums.

The introduction of ODFs provided a space for informal interaction between students and between lecturer and student which had been absent in the classroom. This resulted in students seeing the lecturer as being ‘available’ and ‘caring’.

As a new lecturer, I benefited from having time to compose my responses before posting a message on the forum.

SUMMING UP

Benefits

Students in this introductory accounting class benefitted from the ODFs and resources being available on RUconnected as:

- resources were readily available and not ‘lost’ somewhere in a file or on a desk;
- questions were answered often before students had the opportunity to ask them;
- discussions could be followed through email without even needing to access the ODF;
- questions were posted from the safety and relative anonymity of a computer keyboard and screen and without the pressure of peers watching and the thought that they could be censured;
- forums raised an awareness of areas which needed additional work, as a result of issues raised by other students;
- students were forced to put their queries into words, time was not wasted while students looked up references or thought their queries through;

- the process of articulating queries would have resulted in students engaging with the accounting principles and concepts at a deeper level (Boughey: 1997); and
- the lecturer, tutors and peers were always available to assist with problem areas. A 'virtual presence' was available even after hours and over weekends, or when either student or the lecturer were off-campus.

All tutors recommended the continued use of the ODFs, despite this being their first exposure to this type of activity. While they too commented on the frustration of receiving too many emails, on the whole they felt that the forums were beneficial. In particular they felt students benefitted from discussions

- amongst their peers in problem areas
- being raised in tutorials on areas which had not been clarified on the ODFs
- amongst students who were too reserved to speak during a lecture; and
- being accessible for reviewing at any time.

Although tutors spoke about experiencing access problems, this is more of a convenience issue than an access issue as all tutors would have access to networked computer facilities while on campus and they would all have been on campus for lectures from Monday to Friday every week.

The lecturer benefitted equally from the using ODFs in that:

- where there was a difficult exercise, an explanation needed to be given once only and all students would benefit from it;
- there were no queues outside the lecturer's door in the days leading up to tests or examinations;
- students often answered each other's queries, without requiring intervention from the lecturer; this is a form of obtaining formative feedback through peer assessment where the assessor learns through being the teacher (Snowball and Sayigh, 2007);
- students often became aware of gaps in their knowledge as a result of reading the forum postings and were able to address these problem areas; and

- even when out of the office, the lecturer had made the commitment to check forum postings at least once every 24 hours, so there was always a ‘virtual’ academic presence.

Additional benefits which resulted from accessing the ODFs were that students were working towards achieving the critical cross-field outcomes in our curriculum of:

- using technology to access information;
- being able to communicate effectively;
- promoting informal group work activities;
- enhancing leadership skills.

The lecturer on this course found the introduction of these forums to be highly beneficial in being able to reach all students when answering queries, regardless of the normal constraints of lecture times and physical presence on campus, while for the student who would not normally pose a question in a large class, this provided a safe space in which to do so.

Tutors found that the forums were beneficial for students who felt that they did not have a voice in lectures, and that utilisation of the forums assisted tutors in answering questions and in stimulating discussions in tutorials.

Concerns

Concern was expressed about the lack of training which both students and tutors received in the use of ODFs. This resulted in these users being uncertain of how to, or unaware that they could, change their settings so that they did not receive emails. Another concern was regarding the use of the forums for casual conversation rather than academic discussions. In 2009 every student will initially be subscribed to the social forum, with the option of unsubscribing, so that those who wish to participate in informal conversations can do so. Students will also be educated on what would be appropriate responses in the general discussion forums establishing a ‘Manual of Forum Manners’ or some other appropriate document.

Threats to validity

As the questionnaire was only handed to students for completion at the beginning of the fourth term, it is possible that they could have forgotten the benefits of accessing RUconnected which they had enjoyed during the first semester. As the access and the use of the forums had continued into the second semester, students should have remained aware of the benefits of using the forums.

A possible threat to validity could be that some of the students who completed the questionnaires may not have been registered for Accounting 101 during the first semester 2008, having completed it the previous year. Again the same argument as above holds, they would have been experiencing the use and benefits of ODFs and would have been competent to comment on these.

A real threat to the validity of these findings, is that those students who obtained less than 35% in the June 2008 examination and who were not permitted to continue into Accounting 102, would not have been asked to complete this questionnaire. It could be argued that this group may not have experienced the use of the online discussion forums in as positive a light.

There is also a possible threat to the validity of the feedback received from tutors. While all sixteen second semester tutors completed the questionnaires, twenty three tutors had been involved in tutoring during the first semester. The sixteen second semester tutors who completed the evaluation had, however, all tutored during the first semester and this threat should not significantly undermine the validity of the data.

Although the issue of completing the questionnaire during the second semester is a cause for concern, I submit that that the results would have been significantly different had the questionnaire been completed at the end of the first semester.

Suggestions for future research

It would be interesting to determine whether the number of participants in a forum impacts on the interaction between the participants of the forum.

It would also be interesting to try to determine whether using a photograph of themselves as opposed to a picture or a cartoon impacted on students' participation in the forums.

Conclusion

The main purpose of setting up these forums was for the benefit of our students. The students found the forums to be exceptionally beneficial, even when they were not active in initiating or responding to discussions. While firmly supporting the continued usage of the forums for future students, they have provided suggestions which will result in a more satisfactory experience for these students.

Most importantly, however, teaching and learning in introductory accounting was extended beyond the confines of the physical lecture theatre and the set lecture times. Instead these activities became always available and easily and conveniently accessible resources in a non-threatening, interactive, socially-focussed, virtual classroom.

The introduction of the ODFs provided a more effective teaching environment through providing students with 'every encouragement' and additional opportunities for appropriate cognitive engagement and understanding at the required level.

The question I sought to answer was, "Did the use of online discussion forums result in an increase in teaching and learning activities as well as showing evidence of active learning and appropriate cognitive engagement by our students in an introductory accounting classroom that extended beyond the confines of a physical lecture theatre?"

The response to this, based on feedback from students and tutors must be a resounding 'YES'.

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Evaluation of Online discussion forums in Accounting 1 (2008) on RUconnected

Although some disciplines (subjects) make use of online forums for academic discussions, this is not often found in Accounting. The following questionnaire is to conduct research into your experience of the RUconnected forums in Accounting 1 in 2008.

Your honest reflection on how this benefited you would be appreciated. The research report from this evaluation will be made available to you on RUconnected. By completing this questionnaire you agree that your anonymous comments may be used or quoted in discussions on this research.

Thank you for your participation and co-operation.

Peta Bezuidenhout.

Please circle the correct answer where relevant.

1. Choose the statement below that best describes your use of the online discussion forums in the Accounting 1 course on RUconnected.
 - a. I did not make any use of the discussion forums.
 - b. I have read the postings in the forums.
 - c. I have read the postings in the forums and contributed one or more questions.
 - d. I have read the postings in the forums and responded to one or more questions.
 - e. I have read the postings, contributed questions and responded to others' questions.

2. Did anything inhibit/prevent you from using the RUconnected Accounting 1 forums
Yes / No

Please explain

3. If you did not contribute to or respond to the discussion forums, do you believe that you still benefited from these discussions ? Yes / No

Please explain

4. If you believe that having the discussion forums on RUconnected was beneficial, in what way did you benefit from using the forums?

5. If you believe that having the discussion forums on RUconnected was not beneficial, explain why and what could be changed to make it more beneficial

6. Any other comments/suggestions you may like to make on the use of the discussion forums for Accounting 1.

7. Would you recommend the discussion forums being used again in 2009 Yes / No

Continue on the reverse side of the page if necessary.