

Introduction

This chapter deals with the themes and topics that were identified after a careful analysis of the various data sources, and is guided by the following question:

How did the CyberSurviver game elements affect the group dynamics, and the various types of interactions involved in this online module?

In order to answer this question, this section will focus on the dynamics and interactions in the module as they were embodied in the following themes:

- Learning outcomes and expectations
- Peer support
- Feedback from peers and the facilitator
- Peer assessment
- Interpersonal conflict
- Language issues
- Stress factors
- Time concerns
- Competition
- Humour
- Personal lives
- Synchronous and asynchronous communication
- Costs implications
- Online culture
- Retention rate

This section describes both the frustrations that inhibited learners in the online game and those features and elements that encouraged them and motivated them to continue. I will examine and analyse in some detail the various satisfactions and frustrations that learners experienced during their six weeks on CyberIsland.

Many studies have identified the deficiencies of traditional classrooms. These focus on elements such as levels of personal attention, boredom, and outdated knowledge (Diamond 1997; Gardiner 1997; Handy 1998). Far fewer studies have identified the deficits that are associated with computer-assisted learning.

Most of what we read or hear about computers in education emphasizes only one aspect, usually the good points, but occasionally the bad, to the exclusion of other points of view (Ragsdale 1988).

Burge (1994) suggests that so few qualitative research studies into computer-assisted learning have been carried out because the intricacies of virtual classroom dynamics are (as yet) little understood.

My purpose in examining the satisfactions and frustrations that learners derived from this game was to observe whether such satisfactions and frustrations significantly

inhibit or enhance their learning opportunities.

learning about online learning through online learning.

Learning outcomes and expectations

As the facilitator of this module, I learned a number of important lessons. One was that one cannot take for granted that all learners hear, read, and internalise everything that one communicates to them as one shares important information. This is as true in an online learning environment as it is in the tradition face-to-face teaching situation.

Because this priority was guiding my research, I was less concerned about the products that they were creating than I were about their reflections on the processes through which they were passing. That a few learners actually understood the focus of this module is shown by this anonymous response to the survey:

It was about process, and not the actual content and hard skills, like learning to program in HTML.

As I was mentioned above, the module began with a short contact session (Thursday, 18 July 2002), during which the nature of the *Survivor*® metaphor was explained, learners were divided into heterogeneous tribes, and detailed instructions were given to learners about where they might find the *CyberSurviver: Introduction* document and information about the first week's assignments. I also told them that they would experience at first hand what it is like to be an online learner, and that we would be doing a lot of reflective exercises to ensure that they would be able to relate *their* experiences to what is important to an online facilitator. Some learners struggled with this concept of learning by means of hands-on experience:

Another learner realised that they were learning not only from those events in the module that went smoothly, but also from those that did not:

I think what we were learning about was also, as I said, perhaps what the pitfalls were of online learning.

The first thing that strikes me about this study [...] is that we were actually

All the information they needed to understand how the game worked and what the assignments were about was provided on the Elearn 2002 *Yahoo Groups* service on the very first day that the module became operative. What actually happened though is that most learners had somehow not understood my announcement that these documents were available in *Yahoo Groups*. Others managed only much later to get access to the web-based version of *Yahoo*

Groups. This probably means that they never read through the sections that explained the rationale behind the game and the outcomes that they were expected to reach.

The introductory document strongly emphasises the point that because all the learners were postgraduates, they were expected to carry out a lot of independent and self-motivated study and exploration in this module. The document also explained that both tribal and individual assignments would have to be completed, and that some of the work would be peer-assessed.

It seemed to me, from what I had been able to gauge, that the learners felt that they had understood the approach outlined above. Gabrielle (Response to Question 3, Test 3) emphasised that the learning objectives were made clear at the first face-to-face meeting, and that they were also clearly *implied* by the nature of the subsequent assignments.

It was clear that not only the content mattered, and gains in knowledge and computer skills, but also social skills were being tested and developed through the metaphor of a game in which survival of the fittest would be proven.

Geronimo's response to Question 3, Test 3 indicated that the outcomes for the module were

clearly stated and that students knew what was expected of them.

Others indicated that they had reached at least some of the outcomes that had to be reached:

I learnt a great deal about the Internet – what is available (free), how to FTP, etc.

[Anonymous survey response]

But Dan (Response to Question 3, Test 3) confirmed that the outcomes of the module were not clear to everyone from the start. He mentioned that

the objectives of the course were fairly clear. This was not so from the beginning though, as we were all getting used to the technology and a second face-to-face meeting was needed to clarify things.

The problems at the start of the module could be ascribed to a number of factors, including the fact that the learners did not hear (in their excitement on that first evening) where and when these two explanatory documents had been uploaded.

Others, like Samantha (Response to Question 4, Test 2), admitted that they battled to understand what was expected. She said that

some of us took long to finally get a grasp of expectations or performance.

I discerned two distinct paradigms of thinking that learners held. There were those who simply wanted to get good results (marks) for the module so that they could to complete the master's degree (particularly if they wanted to complete it with distinction). Some learners went out of their way to let me know how important it was for them to succeed in getting high and measurable results for this module. In response to a Survey question (Week 6), one learner responded as follows:

Not happy with the assessment. This mark on this module means a lot to me (working on an average of 80% for all my modules).

Then there were those who were interested in the topic of elearning and who wanted to know more, and therefore got excited with the prospect of experiencing all the different elements that related to elearning and that were parts of this module. I found it extremely difficult to accept with equanimity many learners' obsessions with marks. I also found it difficult to persuade learners that

what they actually *learned* about elearning would be far more valuable to them than a symbol on a piece of paper.

The design of the module (and in fact of everything that I teach) was based on the premise that the learners should exit the learning experience with a high degree of satisfaction that is always a consequence of personal growth in learning. I wanted learners to be able to say

This is something that I can now do – something that I could not before this course

or

I now understand this so much better than before.

In spite of these, my personal hopes and ideal, learners confronted me throughout the course with the fact that they were far less interested in going through the process in order to experience a rich learning opportunity than they were in obtaining good marks for their products and outputs.

In a *Yahoo Messenger* conversation (Monday 12 August 2002), Dan and I discussed the reasons why no one had posted their responses to a particular individual assignment. He argued his viewpoint as follows:

Just making a point about why no one has posted anything to webct yet ... Everyone is waiting for someone else ... just to be sure their post is better ... Many are too concerned (says he) with marks than with how much they are learning!

It seems that not only were the learners obsessed with the marks they were going to get for the module, but that there was a strong underlying sense of competition among the learners themselves.

In the focus group conversations, one of the learners commented:

We're doing it to get a good mark to be able to get a good job one-day once we've got this.

Even though I constantly provided feedback and encouragement, some learners were only interested in feedback if it was in the format of a concrete percentage mark.

Most of the learners though, whether they were obsessed with high marks or not, recognised that, even though the controversial methodology of the module may have been open to discussion, they had experienced an intense experience of learning because of this module. In an anonymous focus group response, one of the learners commented:

I thought it was the best course that I've done, certainly in a long time, because of what we learnt.

When I asked them why they had remained active learners until the end, another Focus Group member commented:

Because we learnt so much. We learnt a tremendous amount of work. New things.

Peer support

Many researchers such as Burge (1994) and McIsaac and Gunawardena (1996) assert how important a virtual community is to support students. The lack of learner support in elearning courses is also repeatedly addressed in the literature (Rahm & Reed 1998; Hanna 1998; Koble & Bunler 1997).

Tobin (2001) notes that learners in an elearning course, who fail to engage and build relationships with other learners and the facilitator, are more likely to fail than those who do engage and build such relationships. Larissa (Response to Question 2, Test 3) supported this view by saying:

If people feel they will be treated sympathetically by fellow students, they will contribute more freely. If they are not on their own, they will not feel anxious, defensive and

unwilling to take the risks involved in e-learning.

For this reason, the design of the *CyberSurviver* module encouraged a strong reliance on other tribal members through elements such as the tribal assignments. But learners not only built strong relationships because of the collaborative tribal assignments. Because the individual assignments were often technically challenging, learners built support networks across tribal boundaries because they needed help from one another.

According to the survey results (Week 6), the peer support that learners got from each other was one of the positive influences of the game that was identified by the learners. Many learners commented that they were positively encouraged and supported by others, often even by those who were in tribes different from their own. Others stated that the forced collaboration affected their learning process positively. Lisandra responded to the question about the strengths and weaknesses of Internet-based learning by stating that the support received during the *CyberSurviver* learning intervention could be regarded as a strength of the module.

There was always somebody (either the peers, or the facilitator) there to assist whenever someone needed assistance. Learners supported

each other and this has greatly aided the learning process.

Evidence of this type of peer support was abundant in this module. Not only did learners provide emotional support by means of positive and supportive feedback on other learners' efforts and attempts, but some also declared themselves willing to support others with technical difficulties. What made this so remarkable is the fact that everyone was working against time and, with the workload being what it was, everyone had a limited time in which to complete his or her own assignments. Dan (*Yahoo Groups*, Monday, 29 July 2002, 23:44) encouraged others to contact him with their technical problems:

I am more than happy to help out where I can if anyone is in need of technical assistance with any project. Just send me a mail and I'll help if I can ... any tribe!

The learners with less previous Internet experience appreciated this offer immensely and, on quite a number of occasions, individual learners would approach him with their technical difficulties. Brenda (*Yahoo Groups*, Wednesday 31 July 2004, 07:38), for example, took Dan up on his offer:

My common sense tells me (not sure if I can always trust that) that one should be able to open the Hagar

page and then link to the present site. Dan, is this possible or am I dreaming of something impossible?

Mabel (Yahoo Groups, Tuesday 30 July 2002, 14:58) also followed up on Dan's offer for technical assistance:

I need help with my website.... I don't know how to connect the pages to the index.html which is the first "home" page. Can you help?

Neither Mabel nor Brenda was in Dan's tribe and thus his sincere invitation for support loosened the rigidity of tribal boundaries. In a focus group discussion, the following explanation was given:

Something that was really frus... not frustrating, but was just part of the game, is I didn't think we stayed in the tribes as much as we were supposed to.

Yes. In other words, we got support from people from the other tribes, and we supported people from other tribes, because they were online at that time when we were online.

Because it was frustrating sometimes that you'd ask something of a tribe member, and that tribe member is not online at that time, and then you are just thanking God that the other tribe's members are replying.

As this particular learner indicated, the tribal members did not remain 'loyal' to their tribal mates alone. They got involved with learners from other tribes as well. The one thing that these learners had in common was the fact that they were available for contact and support at the same time.

I must say that was a very positive aspect for me from the way the whole thing worked. That there was sharing, you know, outside ... It [wasn't about] the tribes. [Focus group comment]

Brenda (Response to Question 3, Test 3) also commented on the culture of sharing by saying:

There was a culture of sharing knowledge – although at first just between the members of a specific sub-group or tribe. Later on, knowledge was shared with anybody.

Some learners explicitly requested help while others felt exposed when they had to admit that they were struggling. Lisandra was one of those learners who had a sense of humour and used it when she needed support. On 30 July 2002 at 04:29, she cried out for help by addressing Dan personally and requesting help for two particular problems that she was experiencing. She wrote:

This blond definitely needs some assistance with this week's assignment.

Other learners were on the whole worried about exposing their lack of knowledge publicly. One learner made the following comments in the focus group discussion:

I think one feel exposed when you are writing the e-mails and even the letters, because you have to put more thought into what you're doing, because you feel maybe I'm asking a stupid question or I'm just not understanding the problem, so now I'm asking somebody else for the answer. I had a feeling, you're kind of feeling exposed as well.

Those who had already acquired some degree of success, spontaneously offered their help when they saw others battling with challenges that they had also struggled to overcome. Geronimo (Response to Question 2, Test 3) replied that he highly rated the

peer-help and support – learners have the same problems, many times the problems are sorted out by another learner who saw the cry for help and had the same problem previously.

Catherine (*Yahoo Groups*, Wednesday 24 July 2002, 22:15) and Ted illustrate an interesting phenomenon where even those who indicated that they had limited Internet skills, tried to help when another asked urgently for help:

Try again to get to the page by double clicking on the URL below! Maybe you are lucky this time round.

In reality, Ted needed first to change his *Yahoo Groups* settings in order to obtain access to the web-based course as well as the e-mail version. It was therefore not quite as simple as just double clicking on an URL. But it was the willingness of someone with limited knowledge to support another learner in need that was gratifying. Ted eventually managed to gain access to *Yahoo Groups* on Thursday 25 July 2002.

In another example, Beatrice shared the error messages that she was getting in a message to the group. Jasmine (*Yahoo Groups*, Saturday 27 July 2002, 09:26) replied even though she did not regard herself as a particularly skilful Internet user. Instead she suggested Geronimo as a potential technical source of support:

Hi Beatrice, You must yell if you need help. Geronimo is a fundi [expert] – he'll sort your problems out in a whizz!

Geronimo (*Yahoo Groups*, Wednesday 31 July 2002, 02:18) himself later followed up on Beatrice problem by asking:

Did you manage to get it right? Let me know, I will help! [Translated]

It was not only those who needed help that benefited from the peer support activities. According to Geronimo (Response to Question 4, Test 2), the peer-supported learning helped him in his own understanding of the topics under discussion:

We had to help each other, and in helping the problems became clearer.

Tu and Corry (2002) define a learning community as:

a common place where people learn through group activity to define problems affecting them, to decide upon a solution and to act to achieve the solution.

Without being consciously aware of it at the time, the *CyberSurviver* learners started to build a strong elearning community. In her response to Question 3, Test 3, Catherine wrote:

Although a number of students were quite removed from their comfort zones, the challenges were met

and an e-learning community resulted that will exist long after the information gained from the course has been integrated.

Dan (Response to Question 2, Test 3) also emphasised the importance of

collaboration and peer support through debate and online interaction. Members of the community who need support have a forum, they have access to the collective support of the entire community, something which might also not be possible within a conventional community.

Everyone contributed to this community wherever they were able to. Brian (in response to Question 4, Test 2) responded by saying:

Resources and ideas were shared across the spectrum. Some people knew about LMS, some about synchronous tools, others about e-testing. Everyone in this course helped each other with what they knew best.

The support was not always simply technical or academic. When time became limited and Geronimo desperately cried out for the contact details of his tribal members, Jasmine responded by sending him her own

list of e-mail addresses that she had compiled. The intention was clear: everyone suffered and thus everyone understood what the others were going through. This mutual willingness to help and support others in similar situations was conspicuous on many occasions.

Some learners felt that this type of communal support was extremely helpful, and indicated that they felt that those who excluded themselves from the community by not participating actively, were missing a very worthwhile learning experience. An anonymous survey response said:

The fact that Dan and I worked very well together contributed to my learning – especially on the technical side of things! This made up for the fact that the other members of our tribe did not contribute to our learning – they are the ones that missed out!

One learner was also less sympathetic with those who did not stay with the game. He/she felt that, in general, too many learners were

spending time to give others a hand, instead of just voting them off – [that] would have been more ethical.

[Anonymous survey response]

The effectiveness of the learning community as a support system was commented on in a response from one of the learners. In it, he/she indicated that it was because of peer support that he/she had been able to remain active in the module. The following comment was made in the anonymous survey when the workload and lack of participation from tribal members nearly overwhelmed one of the learners:

Members from other teams were very supportive and that kept me going.

In the anonymous survey, one learner commented on the influence of the *Survivor*© metaphor by stating:

The positive part was the help and collaboration of other group members.

There were those who did not experience the elearning community quite as positively. Mabel for example wrote out in her response to Question 4, Test 2:

I am not quite sure that it fulfilled all the social needs, and as humans the need of a social environment is important. At our course we did try to build a community, yet it isn't a natural [community] and it acted as some thing that is not natural.

This need for social contact also became even more evident as learners started to 'break the rules' and began to use other means of communication such as personal visits and telephone calls. Some learners insisted that the main medium for communication was the web-based applications. Geronimo (Response to Question 3, Test 3) noted:

Guidance and feedback were constantly given by using e-mail messages and Yahoo Messenger.

Others indicated that they had made rather extensive use of the 'forbidden' means of communication. Dan responded (Yahoo Groups, Wednesday 31 July 2002, 07:32) by first apologising for not replying earlier and then by explaining the procedures that Lisandra was uncertain of in a systematic manner. He ended his message by writing:

Please phone me if needs be on 082 xxxxxxx if you get desperate.

This is a good example of the lengths that learners went to in order to support one another and to help others also to be successful. Even though learners were requested not to make use of communication mediums other than the Internet, the majority felt it was more important to support one another and to help each other to succeed than to follow to the letter the rules of the game as they had

been agreed upon at the beginning of the module. In this example, Dan explicitly stated his willingness to support Lisandra – even over the telephone – should the need arise.

One learner, though, asserted that most contacts did indeed take place by means of the online medium, and that the other types of contact were limited:

Well, I don't know what everybody did in the dark, but what I know with my knowledge is that the breaking of the rules is maybe twenty percent of the time. Not that we break the rules all the time, we chat all the time on the telephone or whatever. It's just sometimes if you had a problem.

In an attempt to justify this type of illicit contact, one learner wrote:

I just want to say [that] a lot of the talking if we did talk, was more in a supportive way than in a technical, academic...

It is thus clear that learners experienced a need for *both* emotional and technical support and that while they used the web-based applications for the latter, they often satisfied their need for emotional support by contacting other learners in person.

Struggling with the same problems certainly compelled the learners to become more involved with each other than they would have been had they not needed support from one another. On a more personal note, Brenda (31 July 2002, 07:38) remembered that one of the other learners, Dan, had just recently been offered a new job and was due to start at his new workplace the next day:

Is it not your fist day in the new job tomorrow? If it is, good luck!

What makes this kind of gesture exceptional is the fact that all these learners were under immense pressure and were, in addition, battling to meet deadlines. Nonetheless Brenda remembered that this would be an important day for Dan. It is even more remarkable because Brenda and Dan were not even in the same tribe. This is just one example of how the learners became more than just simply fellow learners. *CyberSurviver* managed to bring people closer to each other and to create an atmosphere of mutual care and sympathy in an environment (the online environment) that is can be fairly harsh and even clinical.

Other learner emotional needs that became obvious in this module was the need for recognition, acknowledgement, and positive feedback. Learners often completed an assignment and then posted a message in which they asked members of

the group to have a look at it and then give them some feedback. Usually the other learners replied almost immediately with supportive comments. Beatrice (*Yahoo Groups*, Thursday 25 July 2002, 01:16) responded to Geronimo's attempt at a tribal website and his request for feedback by stating

I've accessed the website and am very impressed. Thanks.

Mabel (*Yahoo Groups*, Thursday 25 July 2002, 11:18) responded as well with:

...it looks o.k. well done!

Brenda (*Yahoo Groups*, Wednesday 24 July 2002, 10:27) responded (presumably with ironic humour) to Dan's request for comments on their very special PHP site:

It looks great Dan!! Do you have the time to do a couple more sites?

Apart from the support that learners got from their peers, they also relied on other people (outsiders) for support and understanding. It became evident that most learners also had other sources of support to sustain them. Some learners indicated that they relied heavily on their families and spouses – as the following quotation demonstrates:

I would go so far to say if you didn't have the support of your family, you

wouldn't be able to complete this. My wife never – I must say this – my wife never complained. Only at the end did she complain about the telephone account, but she understood that... She didn't complain that I worked at night, until ... one o'clock, two o'clock in the morning [Anonymous survey response].

Others were not lucky enough to have support at home and so they had to encourage themselves.

I want to say I did not have so much support. My only support was my internal motivation. That was my only support. [Anonymous survey response]

Another learner indicated that he/she also had no support at home, and relied on colleagues for this kind of support:

My sole support came just purely from my colleagues. From the people I studied with. Nothing and nobody at home knows anything. [Anonymous survey response]

Moore (2001) notes that facilitators in an online learning environment should allow learner-to-learner interaction to take place with minimal intervention from the facilitator. In *CyberSurviver*, I strongly encouraged this type of interaction and refrained from taking

part in discussions while learners were discussing issues among themselves. But I often publicly interacted with both individuals and tribes, although much of my public communication had to do with administrative arrangements or conferred general praise and gave feedback, as my contribution below demonstrates. On Friday, 16 August 2002, 22:13 I commented:

Must say I am soo impressed with you guys. Your willingness to help each other and to share your knowledge is great and shows that we have indeed created a lively, caring online learning community! Well done!

To ensure that the learners made use of their collective knowledge rather than my expertise, I encouraged them first always to try to solve their problems by asking for help from their fellow learners. Even though I remained available as a final resort, I did not volunteer help unless it was specifically requested. I only intervened if I saw that learners had totally missing the mark and were wasting their time in futile exchanges. Larissa confirms this in her response to Question 4, Test 2:

In [the CyberSurviver module] we helped each other a lot in learning to do things. Sometimes you had to wait a bit, but help was always on

hand, and Linda eventually sorted things out.

Mabel (Response to Question 3, Test 3) replied that apart from the support from her peers, she recognised my role as the facilitator in keeping discussions moving:

The students work in collaborative groups and it must [have been] an incredible workload to monitor, encourage, challenge, provoke the students in all the groups and to keep them discussing and focusing on the issues.

Gabrielle also shared her feelings about my supportive role in a *Yahoo Messenger* conversation on Saturday 31 August 2002:

Thanks for your patience, you certainly supported us throughout and we got to know you as someone who is not interested in marks, but in what students learn. I learnt LOTS – also rediscovered some interesting facets of myself.

[Translated]

Some learners were so overwhelmed by the frustrations they experienced in connection with their own technology deficits and/or lack of computer and Internet skills that they gave up and never became active again. Hara and Kling (1999) state that if students can manage to cope with their frustrations, the learning experience might not be

perceived as unconstructive. The very fact that learners supported each other by openly sharing with their frustrations with their classmates eventually added (for those who did not give up) to the richness of the learning experience. It is my opinion that without this kind of mutual support, *none* of the *CyberSurviver* learners would have completed the module.

In the focus group, some learners were critical of the fact that learners in Tribe 5 had not being given alternative modes of support. But one learner emphasised the importance of being a self-directed learner. He/she felt that those learners who were struggling only had to ask for help because he/she, and others, had openly declared that they would make themselves available for supporting others.

If one of them asked me about the HTML, I would have given them [information], because I didn't know HTML. I didn't go to the course. I found that Netscape has a composer that works like Microsoft word. And you work in Netscape composer, and you save it on your HTML file, and you put it on your composer, and it looks wonderful.

It was clear that those learners in the *CyberSurviver* module who engaged with others and built up relationships with other learners and the facilitator had access to a

critical network of support while those who failed to connect with others suffered and failed to experience the richness that an elearning community can offer.

Feedback

In a web-based distance education situation, where learners do not see each other or their facilitators, the absence of physical cues can lead to various degrees of frustration among learners (Hara & Kling 1999). Kuehn (1994), Harasim (1987), and Mclsaac and Gunawardena (1996) caution that a lack of communication cues is a great disadvantage in computer-mediated communication because nonverbal clues, such as gestures and facial expressions, are absent from the medium. It is therefore crucial to provide feedback and encouragement to students who are struggling in this environment (Bonk & Cummings 1998). Mclsaac and Gunawardena (1996) emphasise the importance of feedback when they say that

the concept of interaction is fundamental to the effectiveness of distance education programs as well as traditional ones.

The literature is full of research that indicates the importance of *immediate* feedback (Thurston & Reynolds n.d.; Mclsaac & Gunawardena 1996; Bonk & Cummings

1998). The behaviour of the learners who took part in this module also affirmed the validity of this recommendation. Both peer feedback and facilitator feedback were regarded as vital for survival.

When referring to getting feedback from her peers, Larissa (Response to Question 3, Test 3) noted:

Feedback came from not being voted off, and from being re-invited to join other tribes, motivational and congratulatory e-mails from other students and the facilitator...

She also commented on the fact that she enjoyed the sense of accomplishment that she derived from completing an assignment.

Feedback was also achieved by visible results of finishing assignment and successfully linking it to shelters: proof of pudding ;-)

CyberSurviver learners often specifically requested feedback from their fellow learners. They would typically invite their tribe members (or all others in the game) to 'check out' their accomplishments. Larissa (Response to Question 2, Test 3) explained why feedback from peers was different from that which the facilitator might provide.

Feedback from peers takes into account other factors than teacher evaluation, as they all did it under the same circumstances: learning opportunity for teacher!

Apart from the qualitative feedback that fellow learners often spontaneously offered to one another, the other main sources of feedback from their peers were located in what happened in the assessment and voting stations. I consider the fact that learners were only able to record *quantitative* assessments as the one weakness in the design of the voting and the assessment stations. The stations did not allow users to provide qualitative feedback. If they had, learners would have been able to explain their reasons for allocating a poor mark to individual assignments. Brenda made a comment about this in her response to Question 3, Test 2:

Feedback is always very important in any assessment and peers should not be allowed to assess each other without being given the opportunity to give feedback to the person that has been assessed.

She suggested that the rubrics used for some of the activities be made available online so that learners could simply indicate (by ticking) their score for a particular piece of work.

The quantitative feedback that learners received for their performance from the peer assessment activities and from the voting at the end of each week did nevertheless provide learners with some indication of their progress. In my opinion, the design of this feature of the game still needs a lot of revision because many learners did not use this privilege responsibly. Dan (Response to Question 2, Test 3) commented:

At times I was unsure of how I was progressing, although I do believe that we received more than enough feedback. It was not always easy to interpret the feedback that was in the form of voting and peer evaluation though.

Learners often however offered constructive qualitative feedback on the work of others. Warren, for example, commented on another tribe's site by saying:

*Been to your website = GREAT!!
However it seems that the URL link to you last game "Scavenger Hunt" (developed by Jasmine) is not active.*

This type of feedback was regularly given, and most learners appreciated, and even actively requested, this type of input from their fellow learners. Brenda (*Yahoo Groups*, Wednesday 24 July 2002, 11:35), for

example, requested her tribe to access the tribal web page that she had collated for them, while Dan (*Yahoo Groups*, Wednesday 24 July 2002, 06:33) also invited comment:

I have posted the first review on our site. Take a look and write some comments!

Most learners also posted their articles (final Individual Assignment) to the *WebCT* Bulletin Board so that it would be available for the rest of the group. Brian (*WebCT* posting, 30 August 2002, 21:37) specifically requested feedback on his article:

I really want to know what you think of my article.

Apart from relying heavily on the qualitative and quantitative feedback from their peers, learners also found the feedback that came from me as the facilitator indispensable. I undertook to assess all their Individual Assignments at a point half way through the course (end of Week 3, beginning of Week 4), and again at the end of the module (End of Week 6, beginning of Week 7). Apart from this official feedback, I made a concerted effort to provide the learners with constant quantitative feedback online, both individually as well as for groups as a whole. But I realised once again that marks were the only 'acceptable' means of assessment and feedback in the eyes of many of the learners in this master's degree course.

Brenda (Response to Question 2, Test 2) expressed a need for individualised feedback as soon as possible after each session. She stated that a general comment such as "You were all great" was insufficiently helpful.

Other learners (in a Focus Group discussion) appreciated the personal touch that the web allows:

And she always made it sound as if she was only speaking to you. She never gave you the idea that she was actually talking to ten other people also. She made it personal.

Even though I tried to provide personal feedback as frequently as possible, I often found that a number of different learners had similar questions and enquiries. Rather than repeat myself over and over again to individuals, I took these issues to the Bulletin Board and discussed them there publicly, as this Focus Group comment shows:

[When a lot of similar questions were asked] on Yahoo Messenger, she replied to the whole group [by] using the bulletin board when she picked up there were a number of questions that came up, like frequently asked questions that came from the students. Then she answered it using the bulletin board. So, it was, I felt, also quite positive.

Lisandra (Response to Question 3, Test 3) learned from this module that feedback in an online learning environment should always be frequent and that messages requesting feedback should be promptly responded to.

Although no time limits were set for responses, I believe feedback was prompt.

Most learners seemed to agree that enough feedback and support was provided, as these Focus Group comments indicate:

Maybe it's just because I argued so much – but I had enough feedback.

I would say that I really got tremendous support from the mentor. We used to talk on the chatterbox thingy... with Linda, late at night, you know, it was amazing.

Other Focus Group comments included:

And she was always available.

Sometimes I wondered, you know, if she ever sleeps.

The availability of the facilitator and immediacy of feedback is always appreciated in an online course where

communication is asynchronous (as more often than not it is).

If you got her on Yahoo Messenger, which was always, she would reply straight away, and either say to you: yes, she can help you now, or say to you: listen, I'm busy. Send me an e-mail. If you sent her an e-mail, within a day, you got a reply. So that to me, I think, that to me was very positive, because I think it can be extremely frustrating if you can't get hold – if you're in the middle of a course, having to do stuff, and you can't get hold of your facilitator.

Having free (university-sponsored) access to an unbroken Internet connection during the day, and a R7-deal from Telkom at home after hours, made it easier for me than for most of the others to be online frequently and for long periods on end. Telkom's R7-deal meant that I could dial up during off-peak hours (19:00 – 07:00 daily) and remain online for the entire period. The total cost of the 12-hour call would then only be R7,00.

This was helpful because it allowed me to respond promptly when learners e-mailed me. One of the learners in the focus group discussions also commented about this feature.

I want to add to that she was really available, and she accommodated

us. I was doing it in the day from my office, and was not available after hours, and most of them worked after hours, and I mean, she accommodated all of us all the time. I mean, I recall, when I sent her an e-mail during the day, it wasn't a minute, and I got a reply back.

Most learners seemed to share this view. Brenda (Response to Question 4, Test 2) noted:

The facilitator was great. A bit of a bully overloading the students with tasks but great with support and feedback.

I tried to make it a rule to respond to every message within 24 hours, but even much sooner if possible. By doing this, I wanted to send an implicit message to the learners that I was there if they needed me, that their questions and their comments were important to me, and that I was as involved as they were.

From my perspective as the facilitator, I was nearly always able to provide instant feedback if learners approached me whenever I was connected in the day and in the evenings. I also tried to be very conscientious about replying to asynchronous messages (e-mail or bulletin board) every time I logged on.

In addition I exercised a strict self-imposed discipline with regard to style of writing that I used in communications between the learners and myself. I wanted them to experience as far as possible the warmth and closeness of a traditional classroom, and was therefore particularly careful to include lot of encouragement and support. And because I understood the learners' frustrations with the workload, and the challenges they faced in terms of the technology and their fellow tribal members, I made a conscious effort to combat their feelings of isolation by being helpful and supportive in a friendly and somewhat informal manner.

As I mentioned earlier, I had committed to officially marking their assignments at the half-way point of the module, and again at the end. The reason for my decision not to provide weekly feedback in the form of marks was two-fold. Firstly, I tried to be lenient in terms of the deadlines for the individual assignments because I realised that the learners were adults who all had many other responsibilities that were competing for their time and commitment. Learners often asked for extensions to their deadlines for their Individual Assignments. As a result, I could not assess all the assignments when quite a number of learners had not yet completed them. It simply would not have been fair on those who had handed their assignments in on time. But those learners who did stick to the

deadlines gained by being able to devote their full attention to the following week's assignments without the additional burden of having to carry work over from the previous week. I allowed all learners to update, complete, and improve upon their Individual Assignments up to the final assessment that only took place a week or two after the last debriefing session.

Secondly, because all assignments were posted to web sites (both individual and tribal), it meant that I had to be online at the time of the assessment. Not even I was able to bear the high costs of being online all the time. I too had to work in a manner that was cost-effective and indeed had many other obligations to which I had to attend. Had I completed the assessments on a weekly basis, I would have had to revisit sites repeatedly to make sure that I had not missed any updates. This was simply not feasible for me in terms of productivity or cost-effectiveness.

When I got round to marking the essays and the academic articles that the learners had to write as their final individual assignments, I went to great lengths to provide thorough comments that I hoped would give them useful feedback even at that stage. Because I did not possess a portable computer at that time, I decided to print all the articles out and to take some with me when I knew that I would have spare time on my hands.

As most of the learners were using Microsoft Word for the composition of their articles, and I was still using WordPerfect, I was not, at that time, familiar enough with the word processor to provide learners with electronic feedback. With hindsight, this may have been a much more satisfactory solution because I would then have been able to return their articles to them with my comments electronically inserted. After the module, I never had an opportunity to return to learners copies of their articles on which I had made extensive notes.

This is the one area in which I feel that I failed those learners who spent long hours in working on and perfecting their articles. I also feel very strongly about the value of constructive feedback, and I feel that any first draft of a text needs a lot of revision if one wishes the final product to exhibit a requisite degree of polish. Unfortunately, we did not have enough time during the module for work in this (ideal) way. Future designs of this module should make provision for at least three revisions before the final article is submitted.

Studies show that when workers get feedback that is relevant to specific goals, performance improves (Steers & Porter 1990). We may thus infer that feedback is important because it provides individuals with a means of assessing their performance. And as Bandura (1982) and Kanfer (1990) suggested for the traditional

classroom, it is fair to say that learners in a web-based environment who receive sufficient and timely feedback are much more likely to reach the stated outcomes and to successfully complete their studies.

Peer assessment

Peer assessment, both formative and summative, has many potential learning benefits for both the assessor and the assessed because it encourages learner autonomy and higher order thinking skills (Bostock 2000). The decision to introduce peer assessment as part of the evaluation strategy for the *CyberSurviver* module was made for a variety of reasons that included my own strong belief in the efficacy of peer evaluation by students and my conviction that it is necessary for each learner consciously to reflect on the learning material and its specified outcomes in both his/her own work and in that of others.

As they carried out peer assessment, learners needed to be able to engage in critical higher order thinking skills if they wanted to be in a position make informed judgements about the value of other learners' products. This ability to evaluate and judge is the highest level of Benjamin Bloom's cognitive taxonomy (Bloom, Mesia & Krathwohl 1964), and is thus of great value. While peer assessment encourages deep rather than surface learning, it also bestows

on learners a sense of ownership with regard to the assessment process. It also of course levels of improves motivation (Bostok 2000).

As they judged the work of others, learners were also able to obtain insight into their own performance. Brown, Rust, and Gibbs (1994) state:

Peer and self-assessment help students develop the ability to make judgements, a necessary skill for study and professional life.

I introduced the concept of online peer assessment was into *CyberSurviver* as part of the design experiment. With funding from the National Research Foundation (NRF), a BTech learner was commissioned to build two stations, one a voting station for the assessment of tribal behaviour (or teamwork), and one an assessment station for assessing the tribal assignments of the other tribes. These stations allowed learners to log by using their unique usernames and passwords. The design of the module then required learners to access these stations on a weekly basis so that they could cast their votes and allocate a mark for the tribal assignments of other tribes.

Because the peer assessment strategy was introduced for the purpose (among other things) of providing learners with the opportunity to see what impact it made in

the elearning environment, I was happy to read Dan's response to Question 3, Test 2:

I believe that some degree of peer assessment can always be used. ... Peer assessment is useful because it allows the learner to reflect on his own work as well as that of others. It may also teach learners to accept (constructive) criticism. I would suggest that where peer assessment is used, ... a rubric be used for evaluation. This ensures that the evaluation is fair, but also, the person doing the evaluation will learn from the experience.

It was clear that he had analysed his own experiences of the peer assessment activities, and had synthesised what he had learned for himself in this response. Geronimo (Response to Question 3, Test 2) also reported that he had learned a lot from doing peer assessment:

By assessing the work of my peers, I compared their work with that of my peers, and learned in the process.

Peer assessment activities not only enriched their own learning experiences; they also motivated learners. Larissa identified this influence in her response to Question 3, Test 2. She stated that a facilitator should make use of peer assessment if

the students can learn from objectively scrutinising the others' work. Some may be more skilful than they, and it can be a great motivational tool to see what others can accomplish.

Roleen was one of the learners who admitted to giving tribes marks without actually having evaluated their sites because of time constraints and the accompanying cost implications. She was quite outspoken in her judgement of the peer assessment system, as may be seen in her response to Question 3, Test 3.

I think that the peer assessment worked, but not well, as not all [learners] assessed.

She also tried to explain why all the learners did not take part in the assessment activities:

The main problem was that it had to be done online. I do not think that the idea of assessing the other tribe's sites worked well as it was time consuming to go to all the sites.

Roleen followed this up by articulating a almost universally true statement about most students – and it was one that played a major role in the module:

Students tend to do things for which they will be evaluated, and giving marks and spending more time on the net was not part of this.

In future designs of this module, a system needs to be introduced that will allow learners to be evaluated in terms of the *manner* in which they judged the work of their fellow learners. In other words, since marks will be allocated for peer assessment, one may anticipate that learners will take more care with these evaluations. The system should not only credit learners for *doing* the assessment. They should also be evaluated on the basis of the *quality* of their assessment, and thus on the depth of their understanding of the topic under discussion. It was already obvious in the current version of *CyberSurviver* that the quality of the feedback provided by learners gave very powerful indicators of the level of understanding of any particular learner.

There was some unavoidable resistance to peer assessment from learners who feared that personal grudges might influence some of the marks. Lisandra (Response to Question 3, Test 4) commented that she personally felt uncomfortable about using the peer assessment system.

I believe it is biased – it could be that peers rate each other purely on an “I like you” or “I don’t like you” basis which defies the object!

It soon became clear however that students worked more closely together in those assignments which their peers would assess than they did in performances that would be assessed solely by myself. Warren (Response to Question 3, Test 2) indicated that the peer assessments in which tribe members indicated the level of participation, and size and value of the learner’s contributions, were effective. Dan (Response to Question 1, Test 2) expressed a similarly interesting observation about self-discipline that was needed by the learners in this module:

Many learners are more likely to keep up to date if they know that their work is to be evaluated by their peers.

Roleen also commented on the role of peer pressure in this type of assessment in her response to Question 2, Test 2:

If students know going into the project that they will evaluate their peers and be evaluated by them, it causes them to work harder on the project than they might if their grade only were at stake. On the rare occasion when a student does not do a fair share, the other members of the group have an opportunity to reveal that problem.

Quite a number of learners commented on the fact that they agreed with the peer assessment concept when it is used to assess the

effort and input from other group members.

[Geronimo Response to Question 3, Test 2]

Samantha (Response to Question 3, Test 2) stated that she experienced the peer assessment as appropriate in the cases where we used it to

evaluate each others' contributions towards given projects.

Roleen (Response to Question 3, Test 3) supported the idea that tribal members had to give each other marks for participation

as not all are doing an equal amount of work.

Tu and Corry (2001) state:

Participating in an online community creates uncertainty among its participants regarding which roles they should play, what scripts they should follow, how they should behave, and what are the appropriate interactions with fellow members.

In terms of the development of a personal online identity, Dan (Response to Question 3, Test 3) contributed the following:

I found this another interesting aspect, perhaps highlighted by the peer evaluation, but even though I rarely met with the people in my community, I was very aware that each person was creating their own online identity though their interactions with others. I also became aware of my own identity within my community.

Dan went through a rather traumatic experience when his tribal website (built in PHP and obviously high quality in comparison to the sites of the other tribes) was rated lower than some of the other rather elementary and incomplete sites, by his peers. It happened quite by mistake that he saw who assessed him with such low marks. Because of a technical fault with the server that was hosting the voting station, and the fact that it could only be corrected after the weekend, learners were requested to send me their tribal assessments in a private mail to my private address.

Some learners did not heed the warning about sending their assessments to me personally in order to protect their anonymity. Either they did not read the message in its totality, or they simply did not care that their identity would be exposed.

Roleen, as well as a number of other learners, replied to the message, and thus to all the members our *Yahoo Groups*, by listing the tribes and by adding the marks she had allocated to their websites behind the name of each tribe. By doing this, their assessments were no longer anonymous. With hindsight, this turned out to be a helpful development because it opened up a lively discussion on the fairness of peer assessment in an online environment where costs implications and standards need to be taken into consideration. Afterwards, Dan (Response to Question 3, Test 3) replied that he

did not enjoy peer evaluation, but was happy with the evaluation.

Brenda commented in her response to Question 3, Test 2 that peer assessment could be very successful if it were properly planned and correctly executed. She emphasised the fact that assessment criteria should be discussed with participants *before* they start working on an assignment, and that peer assessment could

actually enhance the learning process.

After the discussions about the fairness of the peer assessment strategy, we started collectively to decide on the criteria for the marking of the assignments. Madeline (Response to Question 3, Test 2) approved of

this practice and mentioned that she would only be happy with the peer assessment

when there is a set of criteria that is designed beforehand and is given to the learners and that set of criteria will strictly be followed and adhered to by the learners.

The literature suggests that, as far as peer assessment goes, learner involvement should not only be limited to the final judgements made about other learners' work, but should include learner involvement in the prior setting of criteria and the selection of evidence of achievement (Biggs 1999; Brown, Rust & Gibbs 1994). I thus encouraged the learners in *CyberSurviver* to come up with criteria to use for evaluating tribal members and assignments after they had become aware that everyone was using his or her own judgement and bias as the basis for assessment. This worked rather well, and many messages indicating criteria that they felt were important for assessment if the tribes were to function properly were posted. Catherine (*WebCT* posting, Wednesday, 14 August 2002, 03:05 [am]) expressed a strong need for clear and regular communication in her suggestions for the assessment criteria for teamwork:

- 1. Reacting on assignments by contacting and responding to tribe members' communications*

2. *Willingness to indicate when "online" and to assist or respond when one of class members tries to contact you*
3. *Delivering what you undertook to do within the time frame to the correct place*
4. *Indicating that you are trying your best and keeping members in the group informed if you run into difficulties so that they can assist you.*

to offer and the visibility of a member's eagerness, willingness etc. can be evaluated.

Mabel agreed with Warren in a posting later the same day (17:10) when she stated:

I do agree with all you said. As a teacher (and sometime group member) I always looked to see the attitude and the motivation in each one of the group members. The spirit one shows is important.

The notion of open lines of communication was mentioned repeatedly in the criteria that learners offered when they assessed tribal behaviour. It became obvious that the lack of response from some learners was distressing to those who were actively participated. In his *WebCT* posting, Wednesday 14 August 2002, 12:04, Warren also mentioned the need for fellow learners to react and respond to e-mails and to produce the work for which they were responsible in time.

Warren, who remained in an antagonistic relationship with his tribal partner Brenda throughout the module, also felt strongly about the attitude of his fellow learners:

The main criteria for collaborate behaviour is attitude. Not everybody has the same knowledge, skills, access to technology, etc. However, everybody has something

I tend to agree with Warren. There were learners who, in spite of suffering intensely because of their deficits in hardware or their inadequate Internet literacy, remained active participants in the module. These learners sometimes stretched themselves beyond what could be expected in the module. But they made it clear that learners who were motivated to succeed and who demonstrated an attitude of eagerness and willingness to participate, were able to overcome many obstacles in order to reach the goals that were set.

It was clear that the criteria that learners identified were based on two deciding principles that devolved on:

- where they felt that certain of their tribe members were failing them
- where they considered themselves to be contributing most strongly

There are a number of potential challenges that have to be faced when peer assessment is introduced as part of the evaluation strategy for a module such as *CyberSurviver*. At first sight, the validity and reliability of learner assessment may be open to question. One may also question whether the feedback obtained from fellow learners is accurate and valuable. Even though such challenges may be met by means of accepting clear criteria that are based on specified outcomes, by the practice of offering anonymity, and by requiring multiple assessors for each piece of work, peer assessment was not introduced into this module to obtain valid and reliable marks. There are too many research studies that contradict one another in terms of over-marking and under-marking. One may contrast these with studies that indicate that learners graded their peers accurately and consistently (Stefani 1994; Marcoulides & Simkin 1995; Boud & Holmes 1995).

The purpose of the assessment strategy in *CyberSurviver* was to enrich the quality of the learning in this particular module by introducing peer assessment as a higher order cognitive activity. Taking responsibility for assessment was seen as an integral part of the learning process. Learners were constantly evaluating their own progress against that of others, and many informal comments on the performance of peers were passed. If one asks learners to assess other learners, one may benefit from their

personal experience in this traditional and often formal process.

Learners were also told in the introductory document that the peer assessments were going to be moderated by the facilitator. I wanted to ensure that they realised that I retain the right to adjust marks if I should deem it necessary. As it happened, the marks were not reliable for a variety of reasons, and even though the main goal of enhancing their learning was achieved, I only used the marks that the learners gave each other as a guideline in my final assessment of the modules' outcomes.

Young (1993) suggest that

assessment can no longer be viewed as an add-on to an instructional design or simply as separate stages in a linear process of pre-test, instruction, post test; rather assessment must become an integrated, ongoing, and seamless part of the learning environment.

My purpose in designing the module so that peer assessment was integrated into the learning environment was to give form to my intention that it would promote lifelong learning by helping students to evaluate their own and their peers' achievements realistically, and, most importantly, to encourage them not *always* to rely on evaluation from the teaching authority (Brown 1996).

Interpersonal conflict

Tobin (2001) states that good relationship skills are essential for both facilitators and learners in a distance-learning environment. Without these, courses can easily founder in a welter of conflict, problems, frustration, and failure on the part of both the learners and the facilitator. When learners fail to engage, and are unsuccessful in building up meaningful relationships with both other learners and the facilitator, they are more likely to fail than those learners who succeed in doing so.

Groups usually have a mutually interdependent purpose because the entire group is dependent on the success of the other members. This shared commitment to a common purpose is the factor that distinguishes a *group* from a *gathering* of individuals – and small group discussion from a casual, unstructured exchange. The individual group members rely on each other to accomplish their common objective (Samovar, Henman & King: 1996).

When group members therefore do not communicate and do not take part in making shared decisions about who contributes what, insurmountable problems may arise, as was the case with Brenda and Warren. Because of tensions between them, they did not discuss their various roles and contributions with each other. They then both created separate web sites (a task

requested in one of the collaborative tribal assignments). Because they did not work on a single website collaboratively, their websites were the product of their own unaided work (with all the implied and actual limitations of such a procedure), and the workload was effectively doubled.

Warren and Brenda also clashed because they were not able to synchronise their online times for discussions. This made all their collaboration asynchronous, difficult, and time-consuming. After the shuffling of the tribes, Warren once again experienced conflict in his new tribe who wanted to collaborate after hours and over weekends while he preferred not to work on *CyberSurviver*-related work at those times. He also refused to meet with them face-to-face because, as he correctly explained, this was against the *CyberSurviver* rules. As most learners ignored this rule simply in order to survive and succeed in almost impossible conditions, they urged him to join them in these contact sessions. But Warren adhered to his convictions and thus became isolated from the group.

All parts of a group interact dynamically and constantly. This means that all parts of a group are intricately interconnected and that each part affects all others. A change in any single part of a group creates a change in all the other parts. Learners often had a way of subtly getting others to 'hear' what they wanted to say in a comment that

was thinly disguised as a joke. As a result, I think a great number of people were discouraged from further participation. Wood, Phillips and Pedersen (1996) state:

When participation is stifled, member satisfaction declines. There is a direct relationship between participation and satisfaction

This becomes a vicious circle because whenever satisfaction is reduced, the probability that the group will achieve a high level of quality in their outcomes decreases. Stifling participation may thus seriously influence the quality of the outcomes.

Brenda was one of the more active members of the *CyberSurviver* community. She participated fully in discussions and made optimal use of the mediums available for communication. Warren (*Yahoo Groups*, Wednesday 31 July 2002, 15:51) once responded to her prolific output of e-mail messages with the following:

Anybody out there?? Brenda, don't answer – your e-mails are flooding my computer!! (Joke).

Brenda (*Yahoo Groups*, Wednesday 31 July 2002, 18:32) responded a couple of hours later:

I am only trying to make up for the rest of my dead team mates and I

thought that that was the fun part of the whole game. It is nice to know that you are not the only one working in the early hours of the day.

At this stage, the relationship between Warren and Brenda was already strained for a variety of reasons, some of which have been mentioned above. It was therefore clear that Warren, even though he had disguised his comment as a 'joke', was irritated with the number of e-mails he was getting from Brenda. Fortunately Brenda was not deterred by his comments and continued to contribute to the discussions in a spontaneous manner. But Warren and Brenda never managed to resolve their individual differences and the negative effect that these had was that their tribe never cooperated fully or collaborated as they should have done. Clifton (1999) points out that a level of trust is needed in the educational process:

When people do not trust each other, and when they do not share norms, obligations, and expectations, as is presently the case in many universities, the community is not likely to develop, and the self-interest of people in their status is likely to predominate.

Beatrice (Response to Question 1, Test 3) suggested that the facilitator take control in cases of conflict that occasioned a

breakdown of communication. But such a procedure would conflict with my personal conviction that learners studying for a master's degree should be able to sort out their individual differences and should be able to negotiate workable solutions in areas of conflict.

Clashing individual personalities also affected the dynamics in the various tribes. Conflicts arose because of various factors that included availability, lack of commitment and active participation, divergent personalities, and stubborn individual wills.

The survey (Week 6) asked whether learners had experienced conflict at any stage of their learning process in this module. They were also asked if it had influenced their learning in any way. Most learners indicated that they had experienced conflict or irritations of various kinds. Only one learner wrote:

I didn't experience any conflict!

[Anonymous survey response]

Others were more cautious and described their experiences as irritations:

No real conflict, just being irritated with tribe members [who were] not available during off-peak hours and over weak-ends and tribe members not taking part.

[Anonymous survey response]

Other learners were more outspoken:

Yes. (1). At first all my tribal members were dead (2). I refused to meet in person – it got me voted off. I believe that it did not influence my learning.

[Anonymous survey response]

There was silent conflict and implied conflict. It did not affect me much – I am a denier of conflict and would not react to it.

[Anonymous survey response]

Whenever I tried to participate according to my level of understanding the task, I would be ignored [because I may have seemed to have offered a] stupid contribution, instead of receiving constructive and positive guidance. Eventually to an extent I was labelled an "online Entertainer". Discouraging and DEMOTIVATING.

[Anonymous survey response]

I personally also experienced an incident of conflict with Brian. Brian was extremely focused on achieving good marks for this degree. He was constantly reminding me of the fact that he aimed to attain at least 80% for all his subjects. As I have mentioned quite a number of times already in this thesis,

my focus was more on *what* they learned and how the module was influencing their ability to utilise the Internet to its full capacity as trainers or teachers. I also felt that I was extremely lenient when it came to the deadlines for individual assignments, and made sure that learners knew that they had time until the end of the six-week duration of the module to correct, complete or improve their individual outputs.

Even after I had officially assessed their work, I still gave them the opportunity to improve on points that I had brought to their attention. In some cases, for instance, links from their home pages were broken, and, in other cases, an assignment may not have been found where it was meant to be posted or linked. I repeated my statement of lenience in this regard quite a number of times. Gabrielle, for instance, had the following to say in one of our *Yahoo Messenger* conversations:

I just read that missing links can still be fixed and that you will reassess them. I am in the process of correcting mine. Will be ready by tomorrow evening.

She also noted (Tuesday 24 September 2002):

I was extremely relieved when I read in your old e-mails where you specifically mentioned that you

were not going to be too strict with the deadlines for the various individual assignments.

When Brian then, in a *Yahoo Messenger* conversation, erupted because of missing marks for two of his assignments, I also became upset.

I had just uploaded a spreadsheet with the student numbers of the learners, and a mark for each of their Individual Assignments to *Yahoo Groups* on Sunday 18 August 2002. Brian did not follow the link in a *Yahoo Groups* message that the tool sends to all the members of the Group when a new file is uploaded, and he was thus upset about the fact that he could not find the marks.

I can't find my marks?

When I asked him whether he did not see his marks on the file that was uploaded, he responded with the following:

Listed where?

I then told him where to go and look, and provided him with the name of the spreadsheet file. He got back to me almost immediately, having now found the file.

I got it. My first assignment is on the tribal site if you click on the B on the left hand side.

Noting that he was upset, and hoping to calm him down, I responded:

I clicked every single link on your page, but let me go and have another look.

But Brian was steaming ahead:

My puzzle is on my site at Hagar. Everyone saw it there and I get 0!

I was becoming more and more agitated with him:

Don't moan so much, Brian. I did mention in my mail that I was prepared to reassess your work if you sent me the correct URLs.

Brian then got personal, and referred to the fact that I was utilising the module that I was teaching them for my PhD:

I work as hard on my degree as you do on yours. Remember to mention these problems with online learning in your doctorate degree.

I wanted to be sure that I understood exactly what he referred to:

Which problems are you referring to, Brian?

Brian replied as follows:

The fact that you give me nil when the assignment are on the pages. What more must I do to convince you that all my assignments have always been in on time?

In another attempt to get him to calm down, I wrote:

Relax, Brian. You are going to get marks for every single assignment that you did. Give me the direct URLs, and I will go and look.

While this discussion was taking place, I went and took another look at his pages. I clicked on every available link and checked every possible place where these assignments could probably have been, but without success. I wrote:

I still don't find the assignments?

Brian then became quiet for a while. When he returned a couple of minutes later, he told me that he would soon be back to talk to me. After another ten minutes or so, he was back:

Sorry, it was my mistake. I ask forgiveness. It lies under my own personal stuff, but the links do not work. I now just want to go and see what is going on. Sorry again.

I promptly replied:

Apologies accepted! :)

Brian concluded our debate with the following:

Do write in your Doctorate that you get 'stupid' people like myself. I was 100 % sure that it was there (long long ago). The file is for some unknown reason not there in geocities – don't understand it at all – sorry again.

This concluded the discussion, but it sapped some of my energy. I had never before been confronted in that way by a student, neither in person nor online. I felt undermined by the implications of his accusations, and it took me some time to come to terms with this experience. The lesson that I learned from this episode was that an online facilitator must make allowance for misunderstandings and mix-ups in an online learning environment and that in the design of a module such as this one, should make particular allowance for it.

I have also learned to accept that there will always be learners who do not read their instructions carefully, and since one has only one's written messages to fall back on in the elearning environment, they have to be as clear as possible. The one aspect that I did change in my own online teaching efforts

after this module was to restrict the length of my written messages to learners, and to stick to one topic per message – with each message containing a unique and clearly identified topic in the subject heading.

In the *Survivor*© reality show, the participants often experience interpersonal conflict. This is completely understandable if one considers the variety of personalities and the harshness of their environment. *CyberSurviver* also included a number of conflicting personalities who were forced to work together under arduous circumstances. It is clear that it is important to allow time and space for building meaningful relationships in the online environment because conflict, problems, frustrations, and failure on the part of both the learners and the facilitator can seriously hamper the quality of the online learning experience.

Language

The effects of the language medium of instruction on learners' approaches to learning have not been widely researched despite its obvious importance in cultures that use second-language instruction. In South Africa, with its 11 official languages and linguistic groups, an official second language, English, is used for communication between different groups. In the *CyberSurviver* group, only one learner was a native speaker of English. All the other

learners were Afrikaans, Sesotho, Tswana or Zulu and so English was their second language.

While proficiency in the English language alone does not determine the educational outcomes of a module, a certain level of English is a prerequisite for effective learning (Graham 1987). The literature is not in agreement in its conclusions about the effects of language proficiency with regard to a surface and deep approach to learning (Biggs 1979; Farmer & Sweeney 1997; Watkins, Biggs & Regmi 1991). Some have argued that a low proficiency in English is often associated with a surface approach to learning while high proficiency may promote a deep approach to learning. Other studies have shown the opposite (Flowerdew & Miller 1992; Biggs 1987a).

The first position argues that since learners with a poor command of English are trying to cope with overwhelming demands on their processing capacity, they revert to a surface approach in order to deal with this. Students who are proficient can adopt a deep approach and are able to engage in complex reasoning about the main ideas. Watkins, Biggs and Regmi (1991) agree with this conclusion and assert that they have found that language-confident learners obtain low measurements for surface learning and high measurements for deep learning approaches.

In contrast to this, Biggs (1987a) reports on a study in which it was found that learners for whom English was a second language scored significantly higher on deep learning than did native English speakers, no matter what their first languages were. He argues that second language learners who try to understand a specific concept may need to translate a term from one language to another, deal with it in their home language, and then translate it back into their second language. This would encourage a deep rather than a surface approach.

In *CyberSurviver*, language barriers often surfaced throughout the module. Brenda (*Yahoo Groups*, Tuesday 23 July 2002, 6:43) identified this problem early on in the module:

I think that language is probably one of the barriers of communication on the Internet. The more informal the setting, the less people tend to worry about tenses and spelling. The problem is that as soon as you enter a situation where the content is of a more academic nature and the participants are competing on an intellectual level, people tend to be uncomfortable communicating in a second language.

Her comments sparked a lively debate on the topic of learning by means of a second

language. Jasmine (*Yahoo Groups*, Tuesday 23 July 2002, 7:54), for example, commented as follows:

Thanks for your comments. This is/was a real problem for me – communicating in a second language! But I am trying and learning fast!

Apart from being personally interested in the topic, I was also pleased that learners reflected on the role of language in the elearning environment and were learning from experience how this challenge could affect learners in a web-based course.

Language proficiency turned out to be a crucial factor in both the synchronous and asynchronous interactions between the learners. It was much easier for them to interact in their own language than it was to do so in a second language. Some non-native language speakers initially took on a much more passive role, with the result that discussions were dominated by English home-language users.

Learners often used hybrid forms of different languages in the group. Samantha (*Yahoo Groups*, Tuesday 23 July 2002, 18:42), who spoke one of the African languages at home, reached out to a fellow tribal member who is Afrikaans speaking by writing the initial sentence of a message in Afrikaans:

Goed vir ons groep! E-GO, WE-GO, ALL-GO!!!

She also requested help from Dan (who is actually a mother-tongue English speaker) for her Afrikaans. This indicated her willingness to respect the cultural differences of tribal members.

Help asseblief! ... Groetnis.

Samantha (*Yahoo Groups*, Tuesday 23 July 2002, 07:07), after heading her e-mail as *Ey! Kuyafiwa!* (Loosely translated: Hey, all you dead people!), continued to mix Afrikaans with her own mother-tongue and another African language:

Ma-Gang, Ho reng? Nina natuhulanje, eintlik waar is julle?

When learners wanted to indicate emotions or feelings in their messages, they often drew on their mother-tongue resources to express themselves. Learners would switch between the various languages by using English for formal communication purposes and throwing in a bit of Afrikaans or Tswana when they made interjectory comments. Lisandra (*Yahoo Groups*, Wednesday 24 July 2002, 09:10) stated:

I am also in the process of creating my own web page (ek sukkel natuurlik my alie af – but I am

getting there!! [Translated: I am struggling my butt off.]

After explaining her technical difficulties in detail, she wondered whether everyone understood her problem:

– *ek hoop nie ek praat Grieks nie!*
[Translated: I hope this doesn't sound like Greek.]

It was clear that barriers were created not only by the different languages that the learners spoke, but also by subject-specific terminology with which some of the learners were unfamiliar. Lisandra (*Yahoo Groups*, Wednesday 24 July 2002, 09:10) expressed her lack of understanding of the technical terminologies that were used in one of her messages:

Jasmine, that explanation of yours re IP – will you please explain it to me in English, as I have no idea what you guys are talking about!

On Wednesday 24 July 2002 (07:55), Lisandra explicitly stated her need for some kind of glossary in order to understand the new concepts with which she had to deal:

I still need to figure out what all the 'terminologies' mean before I can even start with the assignments – my 'to-do list' is endless at the moment.

She also commented in a *WebCT* posting, Wednesday 14 August 2002, 16:08 that

if learners are expected to converse in a second language they should at least understand the basic concepts and know the vocabulary. This can easily be done through pre-reading assignments or by giving learners a list with the basic concepts translated into their mother tongue.

After their first request for a list of terms with their explanations had surfaced, Professor Cronjé responded by directing them to a website that had been set up by a learner in a previous group, that dealt with the terms and acronyms such as FTP, LMS and asynchronous communication. Although I am not convinced though that the learners with this specific request ever followed up on Professor Cronjé's lead, I shall certainly include such a list as a part of the resources available to learners in future designs of the module.

Mabel also had difficulty in understanding subject-specific language. In one individual assignment, the learners were each given a topic on which they had to write an academic article. Mabel's topic had to do with the 'affective' behaviour of learners in an online environment. Unsure of the meaning of 'affective', Mabel used *Yahoo Messenger's* Instant Message tool (Sunday

25 August 2002) to ask me for clarification. The next day she messaged me again and said:

Your replay to my questions was most important and it took me on a very interesting voyage in which I have made an example of survey which I would like the whole group to do.

Mabel, who displayed a deep learning approach despite her obvious lack of language proficiency, came across a site that allowed her to create free surveys. As we discussed this service, I referred to the application as follows:

Formsite looks like a very nice freebie!

'Freebie' was another word which she found difficult to understand, and I needed to explain. This raised my awareness of the fact that one often uses colloquial speech that may be difficult for non-native speakers to interpret, despite of what Gabrielle had said in a message (Response to Question 2, Test 3):

As far as communication was concerned, everyone who understood English, could understand most of what was said.

Geronimo (Response to Question 1, Test 2) highlighted the fact that some learners may have felt isolated as a result of not being native speakers of English when he mentioned that

a significant cause for feeling alienated from the course is the feeling of some that the course is dominated by a group that speaks a different language from them.

Larissa (Response to Question 1, Test 3) touched on the fact that learners often feel inhibited by their lack of language and writing skills. She mentioned that it was the task of the facilitator to

encourage them [the learners] to contribute their opinions, even if they do not have much confidence in their own writing ability. The old-timers, including the tutors, must set the tone of being informal and the style of language, which is more related to spoken language. They can then draw in the hesitant newcomers to the discussion.

Roleen (Response to Question 1, Test 2) took another point of view and commented that language issues are

a problem in an online course, because any one can participate. I do think that the responsibility lies on

the learner – I shall not take a course if the language is French.

(Yahoo Groups, Wednesday, 31 July 2002, 18:20) apologised:

She also stated that:

In our country we do get persons from different cultures with different languages. I think that you [the facilitator] should make sure that you use a language without complicated words. If terminology must be used, a list should be provided.

Sorry Mabel. I sometimes forget! We were having a problem finding out which version of Explorer [I was using] and Geronimo and Johannes tried to explain it as simple as possible for the two dof [an Afrikaans word that means 'faded' but in this context it means 'stupid'] ones.

Interestingly, Beatrice (Response to Question 4, Test 2) stated that the module helped to improve her grammar, especially in English. She also felt quite strongly that

English speaking is to be encouraged at all times!

The fact that some of these message (unlike the conversation mentioned above) were of no relevance to the rest of the group, was not known to Mabel because she had no way of knowing what was being said in them. She constantly worried however about the fact that she might be missing important information. Mabel also made a point of thanking those who made an effort to translate their messages on her behalf.

From time to time, learners forgot that everyone in the class could not understand their comments, and then they would then reply to a message from another in Afrikaans. Apart from the number of black students, for whom Afrikaans is a third or perhaps even fourth language, the group also had to accommodate Mabel who was originally from Israel, and who therefore did not understand Afrikaans at all.

Contributing to the debate on second language learning, Brenda (Response to Question 2, Test 2) expressed her opinion about the use of a learner's first language by stating:

At one stage, Mabel requested learners who were communicating in Afrikaans to translate the messages for her. Brenda

You [should be able to] contribute short sections in mother tongue if you have a peer that will be able to translate or in case the others will be able to understand.

In his feedback on the synchronous InterWise session, Dan (WebCT posting, Tuesday 13 August 2002, 09:22) commented that he

found some literature to support points made during the session about native language. Literature suggests that interactive sessions are best conducted in the native language of the participants, otherwise the activity tends to be dominated by native language users (which was to some extent true in our case).

Dan also made an interesting observation about the impact that the novelty of the synchronous medium had on the language usage of the learners.

It was also as if, because of the medium, people tried to express their ideas more concisely and even their enunciation of words seemed more measured than in usual conversation.

Writing the test on the computer had a definite advantage for the second language speakers, as Mabel indicated in a discussion using Yahoo Messenger (Wednesday 28 August 2002):

I feel it was better than the last time I gave a written test (the first course) to have the Word program with me

made it easier to write. I am sure I still have many mistakes yet much less than in hand writing.

Being able to use the spell and grammar check functions in Word made her more confident about her own writing. Amazingly enough, she apparently also used this strategy when communicating synchronously. In a focus group discussion, one learner explained how he/she approached the spelling and grammar issues of online communication.

The online Telkom [probably meant Yahoo] Messenger, for me, it was a checking thing with my spelling mistakes. So I was using Word, and while I'm on Word, checking my spelling mistakes and then cut and paste, where the others were writing to the Messenger right away.

Even in spite of all these extra precautions that Mabel took (and they must have absorbed much of her time), she nonetheless actively participated in both synchronous and asynchronous interactions with myself and the other learners.

I would be hesitant to agree that language proficiency, or the lack thereof, is the only, or even a major indicator of surface and deep learning approaches because Mabel proved that the language barriers could be overcome. But other African learners did not

display Mabel's same deep-learning approach, and this may, or may not, be connected to their second language abilities. These more penetrating questions however do not fall within the scope of this particular study and indicate the possibility of new themes for research. What we can state irrefutably is that second language speakers certainly have to bear an additional cognitive load that is not intrinsically related to the learning outcomes.

Stress factors

Stress is an inevitable part of living and thus of any learning process. In any learning situation there are *optimal* levels of stress that should be maintained. This means that stress levels should be kept within a moderate range that is not too high and not too low. Optimal stress means that learners are not depressed hopeless, but are also not too relaxed or unrealistically optimistic. Learners should not be stuck, anxious, frustrated or angry. Instead they should feel energized and focused as they progress through their learning experiences.

Whereas optimal levels of stress challenge learners to strive and grow, extreme levels of continued stress accomplish the opposite. A classroom (online or otherwise) has to be a moderately stressful environment, one that helps learners to focus on what really matters, one on which they can accomplish

the tasks and outcomes, stay calm under pressure, and enjoy the learning journey.

Research tells us that too much stress inhibits learning and higher-order thinking (Lourens 2004; Coates 2003). Too much stress can also inhibit the ability to learn, it can impair memory and the ability to solve problems (Sapolsky & McEwen 1995). Stress and negative emotions inhibit and make learners feel hopeless while a contented, positive environment enhances learning and higher-order thinking.

Initially many of the incidents of confusion and therefore too much stress derived from the fact that the learners did not really understand that two different facilitators were presenting two separate units as part of a single module. Brenda (*Yahoo Groups*, Wednesday 24 July 2002, 4:43) remarked:

We think that the problem lies in the fact that the assignment given in class and the one posted on the net differ to the extent that nobody really knows where to start.

Dan (24 July 2002, 07:29) was also uncertain. He wrote:

Thanks Todd – send some stuff for the site, if you have some / are one of the lucky ones who can figure out what they want!

During this time, learners did not understand that the two units were totally separate entities and that what was discussed in class with the one lecturer had nothing to do with the *CyberSurviver* unit. It was only after the emergency Tribal Council that this misperception was cleared up. In the meantime, the confusion generated by this uncertainty contributed to the high levels of stress that learners experienced during the first week on CyberIsland.

Catherine (*Yahoo Groups*, Wednesday 24 July 2002, 22:15) attempted to introduce a bit of humour as a palliative for the high levels of stress:

Mabel, we won't be offended if you write in Hebrew, as the 'language of angst' seems to be the mother tongue!!!

Beatrice commented in her response to Question 3, Test 3 that it is a good thing to

throw learners into the deep end sometimes. [This module] did so successfully!

Gabrielle summed up her response to Question 3 in Test 3 by writing:

Participants were frustrated, praised, and taken apart... some even fell apart all by themselves and had to learn to cope with all of this.

Later in the module, stress levels once again increased as tribes were required to work together collaboratively online. As personalities clashed and group collaboration was not working as well as it should have done, Brenda (*WebCT posting*, Wednesday, 14 August 2002, 16:00) commented:

I hate situations where I feel that I do not have complete control (call me a control freak if you like).

Some learners experienced physical symptoms of stress. Lisandra (24 July 2004, 07:55) mentioned:

Ek het al sulke moerse knoppe in my nek en skouers van stress!!
[Translated: I have huge knots all over my neck and shoulders from stress!!]

In the focus group discussion shown below, some learners compared the *CyberSurviver* learning experience to white-water rafting (shooting rapids on a river) and once again emphasised the physical effects of stress:

It was very hard right through the whole thing, and if I had to compare it to anything, I would say it's white river rafting...

That you're on the river, and there's no way that you can get off.

It's very exiting.

It's painful. I mean I, my muscles, my feet were swollen, my back was sore.

Messages often also displayed feeling of insecurity, and the expression 'feeling dof' was used regularly. ('Dof' is a colloquial expression used in Afrikaans when a person wants to say about someone that they are disorientated, stupid or confused.) Brenda (*Yahoo Groups*, Monday 22 July 2002, 23:16) was one of the first learners to express her feelings of insecurity in this manner:

Am I the only dof one?

Jasmine (*Yahoo Groups*, Wednesday 24 July 2002, 05:52) also used the expression:

Please, isn't it possible to postpone all these assignments to next week – to give all "dof" people like me a chance to find my feet. Really, I'm feeling as if I'm fooling around where "angels" fear to tread!

Larissa (*WebCT* posting, Wednesday 14 August 2002) also stated that she felt very 'dof' when she did not manage to unravel the threads in the *WebCT* Bulletin Board, even after an elaborate explanation from Geronimo in a previous posting. Lisandra (*Yahoo Groups*, Thursday 25 July 2002,

09:10) indicated her self-doubt by signing her message with the following greeting:

Groetnis DIE BLOND (alias Lisandra)

Lisandra is a natural blond, and was making a self-deprecatory reference to a genre of now largely passé 'blonde woman' jokes – the (offensive) point being that blonde women are not very intelligent. She experienced high levels of stress because she was uncertain about how the Individual Assignment was meant to be done.

I would just like to know how do I get this polling thing onto the site – if I create a poll in Yahoo, how do I link it directly to my web page? Or is there a freeware programme that I am not aware of that I can use to load the poll directly onto the site? (I did a search by the way, but couldn't find anything!!) – Ek hoop nie ek praat Grieks nie! All of this is really very new to me. HELP!!."

Brenda (*Yahoo Groups*, Wednesday 24 July 2002, 4:43) explained why she felt stressed:

It might be that the you planned that one should feel totally lost but not only do we have to struggle through the jungle of new concepts and terminology but the mass of information is just overwhelming. Basic things such as how to FTP and

how to upload files onto a website are things that most of us have never done before.

Learners also dealt with these levels of stress in a variety of ways. Brenda (Yahoo Groups, Wednesday 31 July 2002, 18:09) mentioned:

Thanks. Now that I've let off some steam I will try again. I think that I must follow Lisandra's red-wine method. Then at least it is fun, and the later it gets, the less it bothers you when you're not getting it right
[Translated].

As this section has demonstrated, stress exerts both physical and emotional effects on learners. As a negative influence, too much stress can cause feelings of distrust, anger, and depression. As a positive influence, optimal levels of stress can add anticipation and can induce learners to act. In the right quantities, moderately stressful deadlines, competitions, confrontations, and even frustrations all add depth and enrichment to the learning process.

The goal in online teaching should not be to eliminate stress, but to learn how to set it at the right levels, manage it, and channel it in positive ways. We need to identify those optimal level of stress that will individually motivate but not overwhelm learners.

There were quite a number of circumstances that raised the stress levels of the *CyberSurviver* participants. Some of these included the lack of control over their circumstances, time pressures, lack of participation from fellow learners, conflict between tribal members, technical difficulties, and the frustration of personal achievement goals. It was evident that even the success of others sometimes caused the failure of self-confidence in less literate and capable learners. Some of these pressures were needed to generate momentum in the module. But some of the other stressors were just too overwhelming and too extensive, and future designs of this module will have to take this into account.

Time issues

A group should not be considered separately from its context because learners are always rooted in a variety of other systems such as their families, their work environment, and their financial and infrastructural status (Wood, Phillips, & Pedersen 1996). Groups influence the environments in which they are embedded and are similarly influenced by them. If learners are therefore forced to spend large amounts of time and money (as some were doing for time online [bandwidth]), it certainly affects those who are closest to them.

Atack and Rankin (2002) report that one of the greatest obstacles to learning in the online environment is the lack of time that one can devote to course content alone. Learners often report that they do not have time to access the content at work; this serves to indicate that work environments are often not ideal environments for learner-content interactions. This issue of lack of time also extended into the home environment because subjects sometimes had to compete with others for access to the computer in their homes.

Learners in the *CyberSurviver* module often complained about the high costs of online time and the amount of time that assignments took to complete. Roleen (Response to Question 4, Test 2), for example, mentioned that she experienced the module as extremely time-consuming:

I don't think you always knew how much time we put in.

CyberSurviver groups often did not have sufficient time adequately to consider their tasks because real or perceived time constraints exist for virtually all groups (Samovar, Henman & King 1996).

Geronimo (Response to Question 1, Test 2) appreciated the fact that I had a sympathetic ear for what he called 'excuses'. He stressed the fact that

people on an online course are usually doing it at the same time as holding a permanent job.

Even though I stated in the ground rules of the module that learners were expected to log onto the course at least once every two days, it was by far more productive to log on daily as the message below indicates. In her response to Question 4, Test 2, Lisandra commented on the time factor stating:

One of the negatives [of this module] is TIME. This was a very time consuming exercise. It is also hard to catch up with the discussion and respond to it, if you take too long to go into the bulletin board. It is therefore necessary to log on on a daily basis.

Larissa (Response to Question 4, Test 2) also identified time constraints as one of the weaknesses of Internet-based learning by stating that

time for assignments is limited due to full schedules

This is however nearly always a problem with most learners who study part time and working full time and could probably not be attributed entirely to the nature of the game or to web-based learning in particular.

Catherine, whose postings often indicated that her messages were sent between 2:00 and 4:00 in the early morning hours, identified asynchronous communication as a possible solution to the problem of gruelling work commitments and family responsibilities. In her response to Question 4, Test 2, she commented:

Time in busy schedules could also be leveraged to take place late at night rather at set times for classes. (Although this could be seen by some students as a disadvantage!)

Dan made an interesting observation in his response to Question 4, Test 2:

Perhaps because learning on the Internet is higher order learning and one does a lot of exploring and searching, the learning was very time consuming. Also of course cost became a factor.

Although I do not entirely agree with his view that Internet learning *per se* constitutes higher order learning, Dan is right in his perception that when learners are expected to construct their own knowledge and are therefore expected to do some independent and unaided research. This, although it may be satisfying, can also be very time consuming.

It is true that the *CyberSurviver* module was overloaded with activities, all of which required a lot of time to complete. But the aim of the module was to expose learners to as many of the features as possible of the Internet. That is why the programme was so heavily loaded. This might have been a good idea – as the focus group comment below indicates:

I just want to add something about staying [active until the end of the module], and that is the fact that we didn't have time, I didn't have time to think I could quit. I just didn't have time. You know, I was in this thing, and I never stopped to think ... I didn't even consider it, because there was no time to consider that that was – could possibly be – an option.

In a Yahoo Messenger discussion (Tuesday 20 August 2002), Roleen discussed the fullness of her programme:

I think its the lack of time that catch us all – everyone is busy and time to have a conference – even online - isn't always manageable.

She then requested an extension on the deadline for the concept maps.

Warren (Response to Question 3, Test 3) appreciated the fact that

there was some flexibility toward assignment dates (late assignments, etc.)

An anonymous response to the Survey confirmed the fact that learners knew that the deadlines for the individual assignments were flexible.

There is always a second chance.

This was indeed so because I understood the realities of adult learning and the stressful external factors that inevitably affect the learning process. Dan (Response to Question 3, Test 3) also wrote:

I think that there was a fair degree of understanding of the audience [from the perspective of the facilitator]. Concessions were made where learners were unable to meet deadlines.

I tried to accommodate learners as far as possible with respect to the deadlines for individual assignments because I understood that family, work, health and other matters may have influenced the time available for the exercises. On the other hand, though, the tribal assignments were of such a nature that one had to keep up with the pace of the tribe or else miss a specific learning experience.

Soon after I posted the assignments for Week 2, I realised that the learners needed more time to explore the applications (*Yahoo Messenger* and *NetMeeting*) to the fullest. I then extended the deadline by another week. This meant that they now had two weeks in which to experiment with the new tools. But I was surprised to note that none of the tribes organised any synchronous time online with the purpose of completing this assignment until very late in the second week. Most of the tribes procrastinated and only really got into the assignment as the new due date drew closer. This made me realise that more time given for an assignment did not necessarily equate to more time spent on a task. All that this postponement really accomplished is that it took some pressure off the learners in one of the two weeks under consideration.

When I commented in a *Yahoo Messenger* conversation with Dan (Tuesday 20 August 2002) that one of the later Tribal Assignments should also have been run over a two weeks, he made an interesting observation:

The YM and NM project had its own set of problems related to technical competence and members of groups who were really not on board but yes, 2 weeks did help though had we been given only a week we would have been forced to do it!

I tend to agree with this statement. Although one would not want to overload learner programmes unnecessarily, extending deadlines does not necessarily improve the quality of the final product. If more time is given, learners relax more and get less done in the process than they might have achieved had the pressure been on them because of a looming deadline. I thus responded:

I must say, I noticed that the moment the urgency to complete the assignment was dropped, the pace also slowed down. In some tribes it was harder to get the momentum going again than in others.

During Week 5, a number of learners requested more time to complete their tribal assignment (a concept map on the topic of elearning). Even though I wanted to be sensitive to their need for more time, I also had to ensure that we had left enough time to complete the next week's assignments. As the tribal assignments were usually peer-assessed and therefore had to be done before a certain date, I undertook to mark the assignment myself in the following week and so give them a few more extra days to work on the map.

This is, however, not an official extension. I would still like the majority of you to finalize your work

on the map by tomorrow evening as I need you to focus on the assignments for Week 6.

I was less accommodating with learners who were conspicuous by their absence throughout the module but who then started to emerge two days before the module was scheduled to end. For example, Madeline (WebCT posting, Tuesday 27 August 2002, 23:31) looked for assistance in linking her report (Individual Assignment Week 1):

Need to send my report to the webmaster to be linked. How should I go about?

I reminded the learners on a weekly basis of the progress that they were supposed to have made in terms of Individual Assignments. The following comments came from the Focus group discussions:

What I liked, I can't remember how regularly she did it, but I can recall that at times she said: By now, you should have done this and this. And then she'd make a list, and that would remind me of what I haven't done yet.

I needed it. It helped me.

I gathered from focus group discussions that the learners expected me still to be available after the official end of the course.

Apart from the academic articles that most learners were still working on, the understanding was that we should *complete* the module with a final debriefing session once the sole *CyberSurviver* had been appointed. Unfortunately, I had to leave town to deliver a paper at a conference the week immediately following the end of the module, and only shared this in a number of learners in individual *Yahoo Messenger* conversations. At the focus group, the following comments emerged:

At the end of this thing, she wasn't available. Did you pick that up?

The moment the course ended, it was like Linda ended. She was not there anymore. Because I wanted to do things afterwards. I just – I can remember that I was looking for Linda. Eventually I picked up the phone and called the Technikon to find out where's Linda, and they said that she was at a conference. [...] And that I experienced in a negative sense

I expected her to still be available. I was like: joe-hoe, where are you? Then, cyber space-like, she didn't come back to me.

Without realising that some learners experienced my absence as neglect, I sent

an instant message (Sunday 8 September 2002) to the group as soon as I was back:

Just a short message to let you know that I am back in town after a wonderful couple of days in Cape Town at the Stellenbosch, 4th WWW conference. I know that some of you would be keen to get some response with regards to your articles. Please be patient though if you can? I will try to get round to them asap!

I was thus surprised to learn from the focus group discussions that some learners had the expectation that I would still be constantly available to them online, even after the module had ended. In future designs of the module, I will institute specific 'virtual' office hours. This kind of arrangement will protect facilitators from the expectation of being available 24 hours per day.

The *CyberSurviver* learners who remained active until the end of the module all made considerable sacrifices in terms of their families and their personal lives.

Competition factor

There are a number of research studies that deal with the effects of competition on learning and performance. Much of it

focuses on interpersonal competition in the classroom, i.e. inter-group, intra-group, and individual competition (Clifford 1971; Hamm 1993; Graham 1976). In *CyberSurviver*, learners had to combine their collaborative activities with those that were based on competition. One of this module's aims was not to prove that competition is better than cooperation – or vice versa. One of the aims was to look at ways of combining the two approaches to find the best balance between the two.

One of the most widely used classroom teaching techniques is competition such as one sees in games, contests, and quizzes. These activities serve to create a classroom environment that can be both motivating, highly charged, threatening, and damaging at the same time. The following section will explore the dynamics of competition on the *CyberIsland*.

In an anonymous survey reply, one learner responded to a question about the influence of the *Survivor*® metaphor by stating

I think it did [influence his/her learning] in the sense that it contributed to the competitive element as viewed in the Survivor Game on TV. I see the competition as positive, but the stress it caused in my life is definitely a BIG negative.

One learner (Anonymous response to Survey) did not like the *Survivor*® metaphor because it had the component of competition built into the design of the module:

As an avoider of conflict and a denier of competition, I think it slowed down my learning. It made me tense.

Whilst the Reward and Immunity Challenges created a competitive atmosphere between individual learners, they were not formally assessed for marks. These challenges were meant to be a playful exercise in which learners could compete on a friendly basis. I was therefore surprised to see the level of competition that had already been established between these learners – as demonstrated by their comments about the Tribal and Individual Assignments (that were formally assessed). It was not so much that the Grand Prize or the fear of being voted off that generated the competition between learners. Rather, the competition to be strongly related to the *achievement approach* (see Biggs 1987a) to learning that so many of the learners had adopted. The achievement motive (as opposed to a surface extrinsic and deep intrinsic motive approach) is based on competition and the ego-enhancement that goes with obtaining high grades or marks. In a *Yahoo Messenger* conversation (Monday 12 August 2002), Dan and I discussed the reasons why no one had yet posted their responses to a particular

individual assignment. He argued his viewpoint as follows:

Just making a point about why no one has posted anything to webct yet ... everyone is waiting for someone else ... just to be sure their post is better ... many are too concerned (says he) with marks than with how much they are learning!

The level of underlying competitiveness also became overt as learners compared their own work with that of their fellow learners. Although Brenda (*Yahoo Groups*, Wednesday 24 July 2002, 10:26) felt excited by her progress because she had managed to complete one of the assignments, she judged her own accomplishment against that which another learner achieved:

But I still feel that I am way behind if I look at Dan's site!

But in some cases, the competition factor inspired and motivated learners. In the anonymous survey, one learner specifically mentioned that the competition element was one of the positive aspects of the game.

The biggest positive aspect that came out of the 'immunity' games was the personal competition that it awakened. As the rest of the module heavily relied on group

work, this competition factor between individual learners was the source of much excitement.

[Translated in part]

Arbaugh (2000) found that women participated more than men in class discussions and that women were more collaborative than men who were more competitive. On the *CyberIsland*, Geronimo and Dan engaged in the occasional display of good-natured competition as they both tried to be the first to answer the questions posed in Reward Challenges. One example was when Dan responded after Geronimo beat him in providing an answer first:

Drat Geronimo got to it before me!

Although inter-tribal rivalry was rare, it did occasionally occur. On a question from Ted that asking why everyone was so quiet and whether the other tribes still existed, Roleen (*WebCT* message, Tuesday 13 August 2002, 09:35) commented:

No, Virtual Eves, Uno is here as well! You may not be able to see us, but we are here! Don't think that because you think something, it is true!

In the focus groups the learners had opposing views about the competition element:

I carried on in spite of the fact that it was a competition.

Yes, I hate a competition.

I like competitions.

No, I'm not a competitor.

It seems as if the levels of covert competition were rather stronger than I realised during the course of the module. Warren (Personal e-mail, 21 August 2002, 09:21) expressed his relief at being voted off his second tribe by stating:

The fact that it isn't competitive any longer (read "back stabbing" & politics) will make my learning experience much smoother (and with less complaints!!) & sane.

Competition between learners can manifest both positive and negative consequences. It can be used as a motivating educational tool – or it can be abused. Failure to understand the possible negative impact of competition can maintain the credibility of learning programmes premised on a theory of competition that alienates rather than attracts learners. Future designs of *CyberSurviver* will have to consider the effect that the overt and covert competition elements had on the learning process.

Research has consistently found that competition induces performance goals and affects learning motivation (Lam, Yim, Law & Cheung 2004). However, as this module shows, not all adult learners enjoy the competitive nature of games. While many of the learners enjoyed the friendly competition that the Reward and Immunity Challenges sparked, most disliked the underlying competition that was rather too evident throughout the module.

Humour

Gividen and Mantyla (1997) suggest that one of the possible reasons why some elearning courses are unsuccessful is because no humour or fun is integrated into the learning process. I strongly believe in the ameliorative power of humour, especially in a tension-laden module such as *CyberSurviver*.

It is always difficult to report on humorous situations without providing the full context of situations. As it would be impossible to recreate the climate of the course in any given point in time during the module, I would simply report on some incidences of wit and humour as they happened. Although some of these may not seem particularly humorous out of their original context, I have included them here in order to give the reader some sense of how this dynamic operated.

In stressful situations, it often helps to defuse a situation with a witty comment or with a spark of humour. I wanted the learners to know that not everything in this module was a matter of life and death. In one particular incident at the end of Week 1 everyone had just realised the extent of the assignments that had been posted a week earlier, stress levels were high, and there was a need for everyone to see the lighter side of things.

I wanted to be as fair and reasonable as possible as far as assignment deadlines were concerned – but not rigid and inflexible. This was difficult to manage because while I had to be fair to those who had complied with the original timeframe, I also needed to accommodate those with reasonable excuses for not having been able to complete their assignments in time. It seemed unfair though to allow some people latitude in terms of deadlines when others had worked long and dreary hours to complete their work in time. I therefore decided to post the following poll (*Yahoo Groups*, Wednesday 24 July 2002, 10:42) and to allow myself to be guided in my decision making by the outcome:

Will you be ecstatic (and forever grateful) if I extend the deadlines for the first week's assignments until noon this coming Saturday?

The replies that were offered read:

- *Aaah, yes please!*
- *No way, I worked really hard to be ready on time. It won't be fair at all!*
- *Any which way is OK with me...*

Seventeen participants took the poll and 100% of those indicated that they were grateful for the extension.

The literature warns that while humour promotes novelty, divergent thinking, creative problem-solving and risk taking, a facilitator should refrain from any humour that makes reference to anything that might invoke any degree of feeling about racial, ethnic, gender, political, religious, sexual orientation or alternative lifestyle issues (Hill 1988; Watson & Emerson 1988). But some such humorous remarks arose from the learners' side. Some were slightly more risqué than I could have anticipated. One learner (Response to anonymous survey) 'joked' about her own hard-driving nature:

I am self-employed, and the bitch that I am working for does not allow study leave or any such luxuries.

Geronimo (*Yahoo Messenger*, Monday 12 August 2002) responded to the Reward Challenge in which learners were asked if they knew what a LMS (Learning Management System) was:

Now where am I supposed to find out what a LMS is? Sounds dangerously close to PMS!! :-)

I responded with:

LOL! And almost as much of a pain at times ;-)

In a *Yahoo Messenger* conversation (27 August 2002), Geronimo and I discussed the topic of his academic article, namely, the role of fun and games in adult learning. He commented on his progress and then said:

But the web searches are a little difficult. Don't think that you can type in adult and fun & games without stumbling onto some really strange stuff!

I responded with:

LOL, it can add a new dimension to your learning!

To this he responded:

VERY STEEP LEARNING CURVE!!!

Ted often used humour effectively to convey his feelings. He thanked Samantha (*Yahoo Groups*, Wednesday 24 July 2002, 15:20) for sending him the tribe's motto:

Thanks for the motto, it is the only thing that is keeping me sane and going. Lets give real meaning to it. E-Go, We-Go, All-Go, even if it is Slo-go!

Even in times of extreme stress, some learners managed to manifest a sense of humour. In response to a question about whether the *Survivor*® metaphor had influenced their learning process, one learner replied:

I could really identify with the metaphor, as I felt like a castaway on a remote island most of the time. I was, however determined to make the most of the learning opportunity, (some people pay a lot of money to spend time on a remote tropical island in the middle of nowhere!).

Brenda (*Yahoo Groups*, Wednesday 24 July 2002, 12:00) related her experience on *CyberIsland* to a local advertisement for a small car (a Tazz) on national television:

I now feel like the Tazz ad: 'Life is fun in a tazz!' I now want to say: 'Life is fun on the E-Learn Island!'

Brenda also made me smile when, in a *Yahoo Messenger* conversation on 7 August 2002, she told me that she had already logged into the *InterWise* classroom – almost an hour early. She commented:

I was scared that I wouldn't get a good seat! [Translated]

In a a *Yahoo Messenger* conversation with Dan (Tuesday 20 August 2002), after I had discussed the difficulties of collaborating online and constructing meaningful learning over the Web with him, he stated:

I must be coming down with a bout of constructivism!

He noted in the same discussion that he was not too keen for me to grant an extension for one of the Tribal Assignment deadlines when I asked about his feelings in this matter. When I mentioned that another tribe had misunderstood the assignment and had thus to start all over again, he commented:

Nice! I'll give them 3/25 without looking now B-)

His comment has to be seen in the light of a previous incident in which one learner had given his tribe a mark without even having been to their site.

Dan also quoted Catherine in one of our *Yahoo Messenger* conversations (Monday 19 August 2002):

The problem is not the online. It is the cats in the group. Getting everyooooone doing their jobs is like herding cats!

The evening before the online test in Week 6 (Tuesday 27 August 2002), I sent a *Yahoo Messenger* Instant Message to all the learners and wished them good luck for the following day. Dan immediately responded with:

Is luck a factor?

To which I responded:

As Gary Player used to say: The more I practice the luckier I get!

Sometimes a comment was intended to be ironic. One was my *WebCT* posting (Monday 12 August 2002) in which I announced that Brian had won a reward challenge:

Thanks Brian for getting us up and running! Your reward is attached for consumption.

The reward was in the form of a *photograph* of a bottle of beer attached to a message. As I stated previously, although this was really an insignificant reward, the learners seemed to enjoy the silly pictures and competed fiercely to be in the running for this prize.

Earlier on the same Monday, I prompted learners with a message that reminded them of their assignment and what was expected. I then offered a reward to the first

person who posted a message on the topic in an attempt to get the discussion going.

There will be a reward for the first posting related to Assignment 8! (And no, Dan, Warren and Brian, it will not be in the form of extra marks, sorry ;-)

As these three learners had all, at one time or another, indicated their preoccupation with marks, I deemed it appropriate to joke lightly with them in this regard. It was however important for me to include the smiley emoticon because this kind of humour can easily cause a negative reaction.

While there were no doubt times when some of my comments could probably have been classified as ironic or even sarcastic, my intent was always to ease the pressure under which the learners were working. For example, on Monday, 12 August 2002, 21:14, I posted the following message to *WebCT*:

Please also note that you are not limited to one or two posting only! Post your comments, then rethink them and change your mind (if you need to), criticize what someone else said, differ or agree with one another, whatever ... Just DO IT!

It seemed though that some learners appreciated 'the lighter side' of the module – as this focus group comment indicated:

First of all, she has a sense of humour, which I find very important. She brought that in.

Sharing personal information

The immediate families of the learners were well aware of the *CyberSurviver* module, some because of the positive and interesting world that unfolded on the computer screens of their family member during the six weeks, and others because of the absence of the learner from their family or the financial burden that the module placed on them. Madeline (*WebCT* posting, Monday, 26 August 2002, 23:17), for example, gathered her entire family around the computer so that they could all experience the synchronous *InterWise* session with her.

This was a lovely experience even with my family.

Catherine also mentioned in a face-to-face conversation how excited her daughter had become when she heard the *Yahoo Messenger* 'knock' – the sound clip that plays when one of the friends in your list enters the system. She also relayed her daughter's confusion when she 'talked' to her

computer during a synchronous session with a fellow learner. Because Catherine's daughter is autistic and demanded a lot of attention, Catherine had to change her entire routine. This meant that she did most of her work in the early hours of the morning – from 01:00 onwards.

As the module progressed and the online community started to form, learners often shared their personal circumstances with others in the group. Mabel (*Yahoo Groups*, Wednesday July 2002, 22:01) shared the following with Roleen:

Sorry I didn't write to you all this time, my parents are visiting us this days and I was running from here to there.

In her posting to *WebCT* on Wednesday, 14 August 2002, 17:53, Gabrielle shared with the group that she

was in the process of moving house, could therefore not establish [the InterWise] connection in time.

Geronimo, too, shared his personal circumstances with the group in his posting to *WebCT*, Thursday 15 August 2002, 11:07:

I will be away for the whole of next week (Grade 6 our to Mpumalanga!!) [...] Please keep

me in your thoughts, 55 11-year olds are no joke!!!

Some of the learners had serious challenges to face. Gabrielle told me about one of her personal dilemmas in a *Yahoo Messenger* conversation on Tuesday 20 August 2002.

I am being tested from more than one side! On Saturday morning, my computer has been stolen from my office.

In a *Yahoo Messenger* conversation (Wednesday 14 August 2002), Brenda shared her personal circumstances. When I asked how she was, she replied:

A little rough, I just came home from hospital – both my husband and my dad are in different hospitals and we had to visit hospitals that are not close to each other. [...] I will not be able to attend class tomorrow evening, as I am also going in to theatre tomorrow morning for work on my teeth. I doubt that I will be presentable by tomorrow afternoon. The previous time it looked as if I was attacked for more than 3 weeks!

The lack of physical and visual contact between the learners in virtual conditions online created a situation in which learners participated 'normally' – even when they were ill and nobody else in the group knew

it. Jasmine (*WebCT* posting, Friday 16 August 2002 20:01) revealed that she had been extremely ill with threatened pneumonia during the previous couple of weeks:

For the last 2-3 weeks I was in bed (believe it or not!) and participated on my own telephone account!

In a *Yahoo Messenger* discussion (Tuesday 20 August 2002), Roleen discussed her full programme:

At school, we are currently busy with the record exam, and it is a very high priority (one has to prioritise at some stage).

Mabel shared the problems caused by her modem being struck by lightning in a *Yahoo Messenger* conversation with me on Sunday 27 August 2002. She then also told me about a crisis with her dog:

And if that isn't enough, my dog went into a coma (I hope I am writing it correctly) this afternoon!

As Mabel was originally from Israel, one evening we informally discussed my own experience of once working there on a Kibbutz. This type of conversation, in essence non-work related, helped to build a sense of trust and some degree of sociability between myself and some of the learners.

In a *Yahoo Messenger* conversation with Catherine (Tuesday 6 August 2002), she shared some personal concerns with me. She had notified me earlier about a power failure:

The entire hostel is in chaos. [...] I am the mother of a child with autism and I live in a hostel with another 45 of them and they like their routines! The LOL [Laughing Out Loud] is coupled with a gnawing of teeth in the background. [Translated]

She also mentioned that her personal life was in a shambles because of the lack of attention that she was paying to her autistic daughter who always needed special attention:

Luckily my child is going to her dad's this weekend, so it will give me a chance to feel less guilty.

Geronimo (Response to Question2, Test 3) commented on the value of the camaraderie that existed between the members:

It is good to see you are not alone in this. Others have the same problems as you have.

He also commented on the topic of friendship and stated that it is important to

get to know fellow classmates, it's easier to work with someone you know.

Lisandra also noted (Response to Question 3, Test 3):

Space was created for establishing a personal identity – especially where the learners had to create their own websites. Members also created a personal identity in the way they responded to discussions on the bulletin board.

Despite, or perhaps rather because of the pressures these learners had to cope with during the module, some demonstrated an openness and a willingness to engage with their fellow learners. Some of them acted as each other's support network across tribal and physical boundaries.

Synchronous and asynchronous communication

Synchronous interaction means that the learners and/or the facilitator are online at the same time and are communicating in real-time. In *CyberSurviver*, a number of synchronous applications, some commercial and others free of cost, were introduced to support the interaction between learners with chat rooms, instant messages, conferencing and file sharing.

The benefits of synchronous interaction were that communication between learners was immediate and that feedback could therefore occur in a shorter time period. Synchronicity is ideal for activities such as brainstorming and group decision-making because these activities need rapid interaction and feedback, and tend to be of a lower quality if they extend over longer periods of time (Anon. 2001). Roleen (Response to Question 4, Test 2), for example, experienced the asynchronous nature of the module as problematic for her.

Because it [the communication] was not always synchronised, you get messages late, resulting in misunderstandings. E-mail garbage is a result of this. If some one has a problem, it has to wait till some else is online and prepared to help.

The immediacy of response and feedback seemed to have played an important role in learners' preferences for synchronous communication, as the Focus Group comment below indicates:

Because in synchronous [communication] you could ask a specific question to a specific person, and get a reply now, and carry on with your work.

Another learner indicated his/her preference for synchronous communication because of

the immediacy that it created in Focus group discussions:

Because with Messenger I could type hello Jasmine, how are you? And she'd say: Fine thanks, but I am struggling with this... So that circle of communication to me is very important. I can't send an e-mail to her and tomorrow get a reply and I can't remember what it's about. So as soon as we started using the Yahoo Messenger... it was better.

Logistics and time limitations were two of the drawbacks of synchronous learning. The fact that all communicating parties had to be online *at the same time*, regardless of their location and obligations, was disruptive to those adult learners who had diverse family and work responsibilities. Learner population size and their availability in terms of synchronicity, also make it difficult to schedule a suitable time for such sessions. Larissa (Response to Question 4, Test 2), for example, mentioned how difficult it was to attend the synchronous *InterWise* session. She mentioned that because the nature of the rest of the course was asynchronous, it was difficult for her to reschedule prior engagements (in her case a school function) to attend the synchronous session.

Synchronous communication worked well for short sessions of about one hour. But in *CyberSurviver* the *InterWise* session took place over two hours, with a decrease in

attention and participation after the first hour.

In *CyberSurviver*, the synchronous component brought in by Yahoo Messenger's instant messages became a lifeline for most learners. For example, in a Yahoo Messenger conversation (Saturday 17 August 2004), Dan and I discussed how his new tribe has settled in. He commented:

Good question ... no one is online... I think we're a little out of sync ... between the async and sync comms. This is a difficult project to do collaboratively!

Asynchronous interaction means that learners have to communicate over elapsed time and not in real time, and usually have to do so in a typewritten format. This type of interaction includes straightforward discussions, group project activities, assessments, surveys, and votes – to name but a few of the elements. While some of these asynchronous activities were completely open-ended and informal in *CyberSurviver*, for the Tribal Assignments they were constrained by defined starting or ending times.

The main benefit of asynchronous interaction is that it allowed for flexibility gave learners an opportunity to accommodate their real-life realities and obligations. Larissa (Response to Question 4, Test 2) identified

the fact that the learners were not bound by synchronicity as an advantage:

Available anytime, anyplace. As all in [the Survivor© module] are working full time, we could structure our time to suit work and family timetables. Some worked during the day, others at night and over weekends.

Dan (Response to Question 4, Test 2) identified the asynchronous nature of the module as a strength:

I could get on with [my] work at any time and from any place. We all worked late into the night or got up early. Many of us worked from home and from work.

Learners connected to the Internet when it suited them, and a variety of documents and file attachments were shared, unlike in synchronous communication which is mostly text-based.

Larissa (Response to Question 4, Test2) identified the availability of asynchronous communication tools as invaluable because they allowed learners to communicate with each other and with the facilitator, and to therefore build up a learning community.

Sometimes you had to wait a bit, but help was always on hand, and Linda eventually sorted things out.

For groups that are geographically dispersed, or for learners who have different working patterns such as Warren (he worked on the module during office hours) and Brenda (she worked on the module after hours), it was an ideal mode of communication. Asynchronous interaction made it possible for both these learners to access the classroom at times that suited them both as individuals. Brenda, in her response to Question 4, Test 2, enjoyed the fact that the

Virtual Island Classroom was open 24 hours a day, seven days a week.

Gabrielle commented in her response to Question 3, Test 3 that she felt that

the social dimension of asynchronous learning networks proved quite successful. Communication between people took place that otherwise would not have been the case.

Asynchronous environments also provided a fairer method of communication than either face-to-face or synchronous communication because all learners then had equal opportunities to contribute. They were not inhibited by their own lack of language skills or by the overbearing personalities of other learners. Those learners who found it difficult to speak up because of language differences or shyness could interact by means of the bulletin board or e-

mail and take their time to construct a written reply because they could consult dictionaries, and use spell and grammar checkers. The asynchronous mode of communication allows time for everyone to *think* about the learning content.

Another advantage of the asynchronous environment is that the learning does not have to be geared to the average student only (Anon. 2001). Those learners who wanted to research the topic under discussion in more depth were able to do so in their own time. Slower learners could also review their material a number of times.

Technically, access to asynchronous environments can often be made with lower hardware and network specifications than are required for synchronous ones. As limited bandwidth is still a major problem in South Africa, asynchronous environments have an important role to play. The lower hardware and network specifications made access easier because most computers were able to handle the entry-level requirements.

The downside of the asynchronous part of the learning is that it occurred over longer periods of time. In *CyberSurviver* this often meant that it was difficult to come to group decisions or to share ideas quickly – a necessity in view of the extremely tight deadlines.

Motivation was also a critical factor. As we saw with the extension of the deadlines for the *Yahoo Messenger* and *NetMeeting* assignments, it seems to be a widely evident human trait to procrastinate until it becomes obvious that the work is about to be assessed or judged. With synchronous environments, because the threat of exposure is greater, there is pressure on learners to arrive prepared.

Learners who did not have a self-directed approach to learning failed to contribute in the asynchronous environment because there were no strict deadlines and no facilitator watching over them. These learners needed additional coaching in self-managed learning and collaboration – which was the cause of serious problems in the *CyberSurviver* module because of the time constraints and the fact that the initial design did not accommodate such deficits in learners.

In synchronous learning teaching and learning took place in real time while the facilitator and learners were physically separated from each other. In asynchronous learning the process took place – but with additional time intervals – during which the learners and myself were physically separated from each other. Both of these types of interaction has its proper use in our online community and were thus designed to complement each other. As Gabrielle concluded (Response to Question 3, Test 3):

There was a good balance between synchronous and asynchronous instructional strategies. The effectiveness thereof however still was in the hands (hearts and heads) of the participants who either by choice or by money constraints and lack of skills strongly influenced the level of participation.

Aitken and Shedletsky (2002) stated that they found

chat and instant messaging to be less useful for group interaction than e-mail or message board communication... that message board and e-mail discussion lend themselves to more serious, on-task discussion than does online chat.

In contrast, McInerney and Roberts (2004) argue that asynchronous communication may not give the immediacy that is required for successful social interaction. They note that the lapsed time that can occur between a question and the answer may not help to counteract the sense of isolation from which some learners suffer.

Both synchronous and asynchronous types of interaction are required for the successful operation of an online course. Wang and Newlin (2002) note that they

believe that the type of interaction fostered by online chat rooms will

enhance and clarify the information that is gathered via asynchronous interactions. Both types of information delivery systems are needed.

They also stated that they

think of asynchronous communication as the "backbone and muscle" for course content, online chats are the "heart and hustle" of our Web-based classes.

Cost implications

Throughout the world the convenience and cost savings that accrue to online learners are regarded as benefiting online learners (Phillips 2004). But because of differing needs and interests, an adult learning module requires a different focus from that found in traditional programmes. Adults most of all need *convenience* because they have family and work responsibilities, and often cannot take time off to attend classes at any time.

The importance of this fact was not emphasised strongly enough in the initial design of the module. When the decision was made to present the entire elearning module online, we realised that some learners might not be able to afford to complete the module from their home

computers. We immediately ensured that all potential learners would have access to computers with Internet connections at the university. The fact that learners could make use of the computer laboratories that were open 24 hours per day on the campus for the purpose of study was then communicated to all learners during the first contact session.

However, as the learners were all adult learners with family and work responsibilities, convenience of access turned out to be more important than costs. Most learners preferred to work from home rather than to travel to the university. But this did not mean that they were happy with the situation. Most learners made some or other comment about the high costs involved in doing an online module in South Africa. Warren, a lecturer at the University of Pretoria, refused to work from home and blamed the high costs involved in having to access the Internet from his home for his decision. In his response to Question 4, Test 2, he stated:

During this module each member worked when and where it suited him/her. I worked from work (during the day to save on my telephone bill), while others preferred (are forced due to their working environment) to work from home, after hours.

Much of the conflict between him and fellow tribe members rose from this arrangement because only he accessed the course from work and in office hours alone. One anonymous learner responded in the survey by stating that doing this module cost him/her about R2000. Lisandra identified the high costs that the module entailed as a weakness in the system in her response to Question 4, Test 2. She stated:

I think a number of people lost out on a lot of information due to the high costs. This is especially true for "middle income" South Africans with the low bandwidth problems this country is currently experiencing.

Gabrielle (Response to Question 4, Test 2) agreed with the fact that the financial implications had a negative effect on the learning process.

Another serious disadvantage is the cost aspect of the module. There are many hidden costs involved and [these] can be a real [contributing factor] to the level of activity and interactivity of some students.

Madeline, in her response to Question 4, Test 2, also mentioned the fact that this module was expensive:

A lot had to be done on the Internet in the module in a very short space

of time and this means a lot of money at the end of one month.

Geronimo was one of those learners who frequently commented on the high costs involved in successfully engaging in the module. His comments constitute an interesting observation:

Because the course is accessed from home, it becomes very expensive. It would be ideal to be able to access the course from work – as part of your job!

Geronimo was a primary school teacher with lots of extra-mural obligations. He was also married and had quite a number of personal responsibilities to attend to. As his only available access was from home, being online for long periods on end tended to become extremely expensive for him. But he did not make use of the free campus access because of the inconvenience of having to drive to campus.

Other learners such as Warren and Gabrielle did not experience the problem so acutely. They were both lecturers at the University of Pretoria and therefore had reliable 24-hour unlimited access to the Internet from the comfort of their offices. As Geronimo implies above, they were both in a position in which some of their assignments, such as the one for which they had to write a scientific article, coincided with what their jobs as academics

required. It was therefore easier for them to cope with both the cost and time implications of the module because they could complete their assignments at work.

Apart from the cost of Internet access, the only other item that had cost implications was the microphone that was needed for two of the assignments. A microphone could cost anything between R30 and R80 at that time, and this was not considered to be an excessive expense by any of the learners. Without the microphone, a learner would have missed experimenting with the sound capabilities of *Yahoo Messenger* and *NetMeeting* and the *InterWise* session that depended rather heavily on the sound capabilities of the linked computers. But the microphone was not a compulsory item, and it would not have influenced the learners' chances successfully to complete the module.

Even though the introductory e-mail telling the learners about the upcoming synchronous *InterWise* session specifically mentioned the scheduled time frame of two hours, Brian was under the impression that it would only last for an hour.

1 hour became 2.5 hours – that is a lot of money online lecturing.

In reality the session lasted only two hours. It started at 20:00 and ended at 22:00. This showed how important it is for learners to

know exactly what to expect from an online learning experience – especially in those cases where synchronous contact that may affect the overall costs.

At one stage Catherine (Response to Question 4, Test 2) stated:

Biggest technical problem is the size of the telephone account which has not yet arrived.

Jasmine agreed on the high costs in her WebCT posting, Thursday, 15 August 2002, 08:35, by responding to a complaint by Catherine:

The sound of \$\$\$\$ is haunting me as well!

Roleen (WebCT posting, Monday 12 August 2002, 22:07) also mentioned the telephone bill.

I enjoyed it very much, but still waiting for the phone bill.

It seemed that everyone feared the telephone bill. Geronimo (WebCT posting, Tuesday 13 August 2002, 20:03) stated:

My wife is going to kill me if she sees this month's phone bill!!!

Brian responded a couple of hours later (22:18) with a similar reference to his spouse:

Geronimo, I agree with you. My wife is talking about divorcing me (money for my child's clothes used for the discussion). You know [that you] said that if you take this course and see what you learn each day, money mustn't be a problem. What if you have R 350 to survive with until 23 August 2002? That's the facts!!!

The financial implications of being constantly online were a source of great anxiety to Brian and others. I appreciate the fact that he did not simply withdraw from the module (his attitude may tell us something about why some learners do not complete their online courses). Brian was highly motivated to complete the module successfully (remember his constant emphasis on high marks), and was not deterred from actively participating even though he complained bitterly about the costs. Another less-motivated learner, simply withdrew from the course and adduced costs and limited time and access as reasons.

Another response mentioned the indirect financial implications caused by the large number of hours spent in front of the computer doing work related to this module:

Unfortunately to me time is money – not in the sense of the few rand paid on a telephone bill, but to the projects that I did not work on as

hard as I was supposed to. I am self-employed ...

Because of the number of complaints about the high costs, I was amazed to see the responses from some of the learners in the tests. Warren (Response to Question 2, Test 3) surprisingly suggested that elearning is

More cost-effective than in person training.

He also posted his advice to fellow learners and complained to them about the high costs (Response to Question 1, Test 2):

Join Telkom's R 7 a call, so that your call can never cost more than R7.

Telkom, South Africa's sole national telephone service provider, offers a service in terms of which one pays a fixed levy every month. Then, when you make calls after hours (19:00 – 7:00), your telephone bill only increases by only R7 – and the rest of the call is free. This deal was certainly helpful to people such as the learners and myself, all of whom needed to be online for long periods.

Catherine, in her response to Question 2, Test 3, agreed with Warren on the issue of costs and indicated that elearning is

a cost effective way of delivering education to people. Cost effective

both with regard to time and money.

Even Dan, who mentioned the high costs involved in the module, noted

savings in time and costs

as one of the advantages of establishing an elearning community.

While I had the greatest empathy with the learners who complained about the costs of the Internet connection, I initially felt reasonably reassured because I knew that those learners with personal financial budgets to consider would be able to access the course and the discussions from the campus computers. But even though most learners voiced their concerns about the high costs, only those learners whose own home computers gave them problems ever made use of the campus option. This fact simply confirms that for adult learners, easy, cheap and convenient access to Internet-connected computers is exceptionally important.

Online culture

The learners generated quite intensive volumes of online discussions by means of messages. For example, during the first week of the module, 142 messages were recorded in *Yahoo Groups* alone, and the

second week, 272 (on average that meant almost nine messages per day). Although these volumes indicated a lively and engaged class, I soon found that reliance on e-mail exposed some underlying problems.

Firstly, some learners did not access the Internet regularly. The result was that they were confronted with large volumes of e-mails when they eventually did. Wegerif (1998) reports that learners may see the activity of reading all these mails as a 'daunting prospect'. Being way behind in reading messages certainly affected the efficiency of the communication system because some learners (because of time constraints) did not read through all the messages and simply focused on those they thought were directed to them personally.

Many learners reported that the sheer volume of e-mail overwhelmed them, and that they fell behind in reading and responding online. In a sound clip on her personal website, Gabrielle commented as follows:

At times, I actually felt claustrophobic with all the e-mails coming in and not having enough time to read through and appreciate them all.

Warren (*Yahoo Groups*, Friday 26 July 2002, 13:26) also mentioned the high number of messages:

Maybe I missed something due to our network (which was down) and the fact that I don't have time to read all 75 plus e-mails (from this group alone!!) from the past three days. PLEASE HELP!!

Some learners also posted their own questions before reading the other learner's e-mails, and thus repeated questions and requests for information that had already been dealt with publicly in a previous posting.

I realise now that this is one of the most important aspects of an online course: making sure that everyone understands the *culture* of the course and the demands that this particular culture will place on them as individuals. This could be accomplished if I had put my expectations in writing or had asked learners sign a joint contract with myself, with other learners and with themselves – a contract that defined their roles and obligations, their expected commitment to the course and to minimum levels of their participation. In future designs of this module, expectations about regular access will be emphasised.

Retention rate

While elearning seems to answer a lot of learner's needs, dropout rates seem to be higher than those in contact-based learning. Some people thrive on the face-to-face social interaction of others, and lose interest when they are placed in environments that lack social events in which others are physically present, or that are deficient in peer pressure, opportunities to do perform well in front of others, or a face-to-face spirit of competition or cooperation. When I designed *CyberSurviver*, I included these important attributes of a contact class in the Cybersland learning environment.

The literature seems to indicate that the retention rates of online courses are lower than those generated by their face-to-face counterparts (Distance Learning Impact 1999).

While e-learning seems to answer a lot of learner's needs, drop-out rates are higher than those for campus-based learning.

The Deputy Vice-Chancellor (Academic) of Deacon University, John Rosenberg, has said the main cause of the fact that their drop-out rate is 40% of the university's enrolment can be traced to the distance-education students because this group has a much higher drop-out rate. Professor Rosenberg (Rood 2004) states:

If you look at attrition rates for off-campus programs anywhere in the world, you'll find they are significantly worse than on-campus students.

Vicky Phillips, founder of Geteducated.com, a consulting agency for distance educators in the United States of America, estimates the online student dropout rate at around 35%. The average attrition rate for college freshman at United States universities is around 20% (The Virtual Classroom Vs. The Real One, n.d.). National statistics were unavailable at the time of this study.

Thurston and Reynolds (n.d.) also refer to recent studies comparing classroom and web-based courses that reveal completion rates that are as much as 40% lower for learners who use the Internet as their educational platform.

These higher drop-out rates are often associated with the difficulty that learners have with maintaining sufficient motivation to work their way through courses without feeling either lost or isolated to the point where they simply stop working on the material. Another inhibiting factor background preparation of learners.

One of the main concerns related to the *CyberSurviver* module was the relatively low retention rate since only 14 of the initial 24 learners completed the module. However, as one of the first year student assistants was initially mistaken for one of the enrolled MEd

learners, this total should actually be reflected as 23 initial learners. This produces a retention rate of 60%.

Many of the learners in *CyberSurviver* who did not complete the module had a few things in common. They all had little or no prior Internet experience. Another commonality was the fact that they did not participate actively in the learning activities. These weaker learners, most of whom were voted off and into Tribe 5 early on in the game, did not do well at all. A number of reasons may be adduced:

- These learners did not demonstrate a high level of commitment towards the rest of the tribal members. Active learners voted off those who did not participate in the first couple of weeks. As the initial members of Tribe 5 did not access the module on a regular basis, they missed important deadlines, did not grasp the urgent nature despite the asynchronous nature of the communication, and did not participate in building a feeling of group cohesion. They therefore missed their deadlines for the first couple of assignments.

It is important to emphasise the fact that there were many learners with limited prior Internet experience but who were also self-directed learners

who possessed an intrinsic motivation to succeed. Although these learners were not voted off in the early rounds of the game, they were strongly supported by those learners who already possessed a high level of skills.

- Many of the learners who were voted off because of their lack of active participation were not capable Internet users and battled with even the most basic tasks such as accessing the assignments that they had posted in the web-based version of their *Yahoo Group*. Because of this, it would have been difficult for them to produce the outputs (web pages, polls, clickable maps, etc.) required by both the individual and tribal assignments without the support of the more experienced learners in the tribe. Without intrinsic motivation, strong leadership, and a skilled Webmaster in a tribe, no one accepted responsibility for the tasks and they simply were not done.
- An analysis of the eight courses conducted by Thurston and Reynolds (n.d.) indicated the relative capacity to unite, react, and interact, and, to a lesser extent, the ability to deliver timely and appropriate feedback, and module

succinctness as factors that might increase completion rates. Boyle and Boice (1998) also argue that cooperative learning models provide opportunities for interaction among learners themselves and between the facilitator and learners, and that this type of interaction might yield increased retention rates. In the *CyberSurviver* module, some of the learners did not understand that the effectiveness of the module was heavily reliant on this type of online collaboration and meaningful interaction. This meant that such learners were under the false impression that they could always complete the assignments later as *individuals* in their own time and place and without having to collaborate with the other members of the team. These learners did not understand the value of experiencing the pros and cons of collaborative learning online as part of an authentic learning experience.

- The academic culture and schooling experiences of these learners did not necessarily prepare them for self-directed constructivist learning in which the emphasis is on what the learner brings to the learning experience rather than that which the facilitator prepares and presents. Kearney (1997) states that

learners must become more active and self-directed, and argues that this might present a major challenge for those who tend to be passive about their education.

It is clear that the understanding of the learners about the roles and responsibilities of the learners and the facilitator respectively did not coincide with those of the facilitator. Most of the learners who were voted off in early rounds were accustomed to a behaviouristic instructivist approach to teaching and learning, and were not enthusiastic or eager to adapt to the more constructivist style that the module required. They were not used to being asked to perform as self-directed learners who take responsibility for their own learning.

- Lack of leadership was another contributing factor. No one in Tribe 5 took the initiative to summon the others into action. Without leadership and a strong component of project management, they were bound to fail because the momentum of the module was strongly based on the successful completion of weekly activities and meeting deadlines.

While this module seems to have answered many of the self-directed, mature learner's needs, the dropout rates among the other learners were higher than is acceptable. The current design of the *CyberSurviver* module did not support these learners sufficiently, mainly because of time constraints, and these need to be revised to make provision for learners without a sense of intrinsic motivation and self-directedness and those who need extra (often quite basic) support to be able to succeed.

Conclusion

To balance the expectations of both a facilitator and those of learners is a challenging act. Barreau (2000) states:

Factors that influence student performance and satisfaction in [online] programs vary and are often dependent on individual attitudes and prior preparation. Students enroll in courses with certain expectations and preferences. Some may expect traditional, instructor-centered courses consisting of lectures, assignments, and tests... Expectations are likely to influence the quality of the experience.

It is clear to me now that learners in this module expected a more traditional format of teaching, not necessarily because of the introduction of games, but rather because I expected them to become active in their own learning processes and to construct their own knowledge. It is evident though that learners expected and wanted pre-digested information and lecture notes, step-by-step workshops, and summative tests that would determine their final marks. Traditionally most of these learners would only have needed to learn that which the instructor had identified as important. This type of teaching does not usually require the learners actively to participate in class or to work together with others to meet deadlines, and it encourages a surface approach to learning. This means that the learners would have preferred to have focused on what appeared to be important and would then have liked to reproduce that as accurately as possible.

I, in contrast, *expected* a rather substantial measure of independence from these master's degree learners, and stated this explicitly from the start. What I have learned from this module is that it is a difficult adaptation for most learners to move from their traditionally passive approaches to learning and to participate in an active and self-directed manner. It was an adaptation that required much more scaffolding than I had originally placed in the course to help learners to make such a transition. The

learners who were voted off during the first two voting sessions would in particular have benefited if I had been able to spend more time in dealing with them as individuals and if I had been able to help them to form a new tribe and support them with more in-depth technical assistance. Moore (2001) states that online facilitators should give specialised attention to learners with low levels of self-directedness and help them to become more self-directed.

Some of the learners felt the struggle to obtain, and complete, the tribal and individual assignments online became too burdensome and that it was simply too different from what they were expecting and were used to. A handful of the learners therefore decided that the effort was not worth it. But the design experiment also showed me how many learners made huge strides in their ability to learn independently and to overcome technical challenges, whether they were computer hardware configurations or websites that could not initially be FTP-ed.

I realised also that I had designed too much complexity into the module and had not allocated enough time for learners to absorb the most critical elements. By the fourth week, I shortened the assignments and restructured some others so that they concentrated only on what was essential.

Although the active learners were excited about learning how to use the Internet in a teaching and learning environment, the actual experience created feelings of anxiety in most of them. Passing the module, and (for others) passing it with distinction, was centremost in their minds rather than gaining a better understanding of what was possible in online teaching.

Finally, I believe that learning and the evidence that learning has taken place are a combination of an individual's learning style, motivation, previous learning experiences, and learning and feedback strategies. These strategies are composed of many sub-skills and resources such as time management, task organisation, critical reading, completion of assignments, preparing for tests and exams, researching in libraries and on the Internet, collaboration with others, memory, concentration, health, adequate financial resources, and ownership of the learning. *CyberSurviver* strived to accommodate individual styles while still focusing on the learning outcomes. Those learners who demonstrated that they took responsibility for their own learning through continued active participation and collaboration with their fellow learners, succeeded not only in obtaining good marks for the module, but also in their understanding of what the Internet has to contribute to teaching and learning processes.

Closure

This chapter dealt with how I focused on, described and reached conclusions about the following factors: the development of covert and overt dynamics in the group and the way in which they related to the learning outcomes and expectations, peer support, feedback, peer assessment, interpersonal conflict, the use of language, stress factors, time concerns, competition, humour, participants' personal lives, synchronous and asynchronous communication, cost implications, the online culture, and retention rates.

Chapter 8 will conclude with a summary of the research question and its results, the problem statement and its rationale, the literature review and the design. It will also include a section on the methodological, substantive and scientific reflection. The chapter will close with some recommendations for policy and practice, for further research, and for further developmental work.