

Surviving the shipwreck: what makes online students stay online and learn?

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ABSTRACT

Although much is written about reasons why students drop out of online courses, little is said about what makes them stay. This article reports on an experiment whereby online students were exposed to a learning experience modelled on the US television series *Survivor*. Twenty-four students were put into *tribes* and allowed to vote one another off the island at the end of each week. Students who were voted out of their tribes, were still on the course, but could no longer rely on the support of their peers. The course had a very high dropout rate, and students reported that the experience was extremely stressful. Yet there were fifteen students who completed the whole course. The question is *why*? This article identifies and discusses three aspects that contributed to the success of those who completed: The game metaphor, the roles and competencies of the facilitator, and the affective dimensions of peer support in a non-contact environment

Keywords

Online learning, Peer support, Games, Metaphor, Facilitator

Introduction

In his examination report of the first PhD that came out of this project Tom Reeves called it “a shipwreck of an online course”. Although it was an apt pun on the *Survivor* metaphor that we used, it was disconcerting to think of our project as a shipwreck. Yet, in reflection, we concluded that in a constructivist paradigm one has to learn from one’s mistakes; and in order to do so, one has to make them in the first place.

In this article we reflect upon three PhD studies that investigated the *Survivor* experiment. Twenty-four Masters’ students enrolled for a six-week module on Internet-based distance education, which was to be presented almost entirely over the Internet. Instead of following a traditional approach whereby students would read and discuss documents and then finally write a term paper or an online test, the course was presented following the metaphor of a reality game show. Only fifteen students survived. The idea was to investigate the implications of using role-play and other games with adult online students. Games and case studies are not unknown in contact teaching of adults, particularly as icebreakers at training sessions, but there is little evidence of games being used in formal education, and no evidence of games being used in online education of adults.

The question asked, was: “What are the conative implications of using games and a game-show metaphor to motivate adult students to complete an online learning course?” (Conative means: “to do with staying power”). We were specifically interested in what makes them stay, and not in what makes them drop out, as much research has already been done on barriers to online learning (Galusha, 1997). This phase of an ongoing development research project built on previous studies in the use of co-operative learning to improve online interaction (Cronje, 1997; Cronje & Clarke, 1999), as well as an investigation into the use of metaphor in

maintaining the interest levels of online adult students (Cronje, 2001) and a small pilot study on affective aspects of online learning (Rauscher and Cronje, 2005). The main contribution of this article to the project is its enquiry on the implications of the game metaphor. Three classes of implications were identified, and each class formed the basis of an individual doctoral enquiry into the same case – the *Surviver* online learning game. The first enquiry was thesis topic of the online facilitator, who investigated the implications of playing games with adult students in an online learning community (Van Ryneveld, 2005:85). Adendorff (2004) investigated the roles and competencies of an online facilitator, and the third study by Meyer (2005) considered how students coped with the lack of physical contact in an online learning environment.

Course description

The learning event that forms the basis of this article is six weeks of coursework in partial fulfilment of the two-year Master's Degree program in Computer-Integrated Education presented by the University of Pretoria. It is an optional course presented in the second year, but not as the final course, so that learners could enrol in another course should they deselect this one. By its nature as a distance course, it tends to have a high dropout rate, and students who drop out should have the opportunity to select another module before the end of the course. The course has been presented since 1995 and, in the spirit of development research, each iteration is enriched by what has been learnt from the previous one, while new facets are often introduced by way of an experiment. The complete curriculum can be found at <http://hagar.up.ac.za/catts/ole/oro/outcomes.html>.

The students were highly motivated individuals who had already successfully completed more than two-thirds of the course. The students ranged from 23 to 55 years of age. There were eight male and sixteen female students. The course was presented in English; however, there were Afrikaans, Sotho, Xhosa, Zulu as well as English first-language speakers on the course. Within the first two weeks, nine students withdrew from the course while the remaining fifteen all completed successfully.



Figure 1: The *Surviver* island early in the course

The course was supposed to be presented entirely online. No physical contact was allowed between students, except for an initial briefing session and a final de-briefing session. It was necessary, however, to have an emergency contact tribal council meeting early in the course to get floundering students on track.

At the beginning of the course a Web-based island was created and students were required to erect their own shelters on the island, by way of modifying a graphic file in their home directories. Figure 1 shows the end result of their collaborative effort. Respecting the copyright of the television game, our game was called *CyberSurviver*; a play on the original game show's name and the fact that the participants surf the Internet. Five groups were formed; four competing tribes and one for those voted off the "island".

At the introductory meeting, the 24 self-selected participants were grouped into four groups according to their self-perceived Internet literacy. The rules of the game were explained to them while they sat in their groups to exchange email addresses, decide on a name for their group and to formulate a game plan. To stay true to the *Survivor* game format, they were given games to play. These were in the form of individual reward challenges and group immunity challenges. At the end of each week tribes had to vote one member off the team. The members who were voted off were not dropped from the course, but were put in a separate tribe where they would continue working, but they would no longer be eligible for the great prize, which in this case was not a million dollars, but a weekend holiday for one family. The winner would be the last one remaining.

The tasks given to students included finding free online typing tutors, completing the tasks and sending in a screenshot of their results. Other tasks included building online jigsaw puzzles as well as uploading sound files containing their thoughts at a particular stage of the module. The final exam was a reflective essay on a topic relating to Internet-based learning in an online community. Topics included motivation, affective considerations, conflict management, etc.

The academic importance of *Cybersurviver*

CyberSurviver was an unusual experiment in Internet-based learning in higher education. Firstly, it is conducted almost entirely online and secondly, it uses a game as a means to achieve the course's objectives. This course therefore had a wealth of information waiting to be extracted, analysed and, ultimately, published in order to positively contribute to the academic fraternity.

The focus of this paper is to present the studies of three doctoral students in a manner which allows the reader to obtain a holistic understanding of online learning in general and, in this specific case, particular focus is given to the role that games play in adult online education. Firstly, the game metaphor is discussed. Thereafter, the roles and competencies of an online facilitator are investigated. This is followed by a discussion on affective considerations, as well as peer support, with regards to online learning. As this article covers the findings of three doctoral theses it will necessarily be rather superficial. The individual theses are available online and are listed in the references.

Research methods

The artefacts produced by the students, online discussions, individual emails to the facilitator and the final essays formed the main data sources of the investigations for the doctoral students. The transcripts of the primary briefing, the emergency tribal council meeting and the final council meeting also contributed to the research the doctoral students conducted. In addition, an independent professional facilitator conducted two focus group discussions and provided transcripts and analyses for triangulation. Two separate interview schedules (Creswell, 1998:124) were designed. An independent interviewer and independent moderator were used to conduct semi-structured interviewing to avoid any bias during the interview sessions. The transcripts of the interviews were used to corroborate evidence gathered during the focus groups. Verification methods for this study included: Member checking, peer reviews and the crystallisation of various points of view. The three doctoral students analysed the same basic data using different techniques to arrive at answers concerning the game metaphor, facilitator roles and competencies, and affective considerations and peer support. Each doctoral student also conducted an independent literature survey.

The game metaphor

Introducing games in adult learning can focus the adult's attention. It can also garner positive attitudes, contribute to the adult's motivation and improve their concentration, all while they actually enjoy the activity (Krasnor & Pepler 1980; Malone & Lepper 1987; Cheng & Van de Ven 1998; Cordova 1993; Garris Ahlers & Driscoll, 2002).

Focus group interviews with our students, as well as comments in their individual essays, showed that they were motivated by the immunity challenges and reward challenges. An analysis of the artefacts produced by students showed that even those who said that they did not like playing games still produced work of exceptional quality. The interviews revealed that they were more motivated by the small, intangible rewards (in the form of digital photos of prizes) that they received for the reward challenges than by the idea of being the overall winner of the weekend away.

On the negative side, students felt that playing games was not central to their learning need. They perceived a mismatch between attaining the course objectives and reaching the game objectives; although in most cases these objectives were deliberately aligned with each other. A course objective, for instance, could be for students to improve their keyboard skills and the game objective was for students to see who types the fastest. The winner of this particular challenge, however, later admitted that she had asked her daughter to type for her, and sent in those results.

Like Burke (2002), we also found that social interaction played a central role in stimulating students to participate in and, ultimately, complete the course. They used *Yahoo messenger*, email and (even in breach of the rules) the telephone to obtain help if they were stuck, or to share their joy in getting something right. The reward challenges intensified the course to such an extent that some students reported a feeling of “flow” (Csikszentmihalyi, 1990). This phenomenon is characterised by time going by unnoticed; ironically presenting a problem to some students because local telephone calls (to Internet service providers) are billed per second and as a result, excessive telephone charges are incurred.

Students’ responses to the challenges of the games corresponded to O’Houle’s (1998) three categories of motivational styles: Goal, activity and learning orientation. An analysis of the students’ emails showed that goal-oriented students disliked the games, as they were mainly interested in achieving high marks. Activity-oriented students enjoyed getting to grips with new technology and reported enjoying activities such as participating in an online demonstration of *Interwise* software building, online jig-saw puzzles or participating in a virtual photo shoot. The creativity of the metaphor intrigued the learning-orientated participants who enjoyed the unusual learning experience.

Malone and Lepper (1987) identify challenge, curiosity, control, and fantasy as requirements for intrinsically motivating instruction. We found that in *CyberSurviver*, challenge was a powerful motivating factor. Participants often reported working late into the night to complete difficult and challenging tasks.

Participants received the topics of their assignments once a week. One student commented that she particularly appreciated that all topics were not issued at the beginning of the module because it had raised her levels of curiosity. The creative approach of the module ensured that students were keen to see what the next week’s assignments entailed – especially since they had just survived yet another turbulent week.

Participants often indicated their despair at not being able to control their learning environment. They could not always control their computers or their connectivity, and battled to work collaboratively with other students whose learning styles, timetables and personalities differed from their own.

The games in *CyberSurviver* stimulated students to conceptualise artificially created situations. They were on a fantasy island. By engaging in the tribal and individual assignments and the reward and immunity challenges students had to use their imaginations to meet challenges, exercise control and experience interpersonal motivations.

Even though the game metaphor of the course did stimulate and motivate the students to learn, they were still in need of guidance and support from an authoritative figure. This was made evident by the study done on the roles and competencies of an online facilitator.

The roles and competencies of an online facilitator

There is a misconception that teaching online is the same as teaching in the classroom (Broadbent & Legassie, 2002; Zorfass, Remz & Ethier, 1998). Although individual authors never list more than seven online facilitator roles at a time, when synthesised, these roles amount to at least 23, but some overlap and could be integrated into already mentioned roles. Choden (2001) suggests that the various roles could be divided amongst several people, both in synchronous and asynchronous mode.

To derive facilitator roles and competencies, White & Weight (2000) suggest various messages that online facilitators could write, while Anderson, Rourke, Garrison & Archer (2001:6-10) have a coding scheme for instructional design and organisation to facilitate discourse and direct instruction. Our own classification follows the Blignaut and Trollip (2003) taxonomy of facilitator messages, which distinguishes between those with academic and non-academic content. Academic content relates to the intellectual messages with sub-headings dealing with corrective, informative and Socratic messages. Non-academic content includes social, administrative, affective and other matters.

Although there are several tasks for online facilitators (Full Circle Associates, 2002; Schuman, 2000), they still do not identify the online facilitator competencies. Moreover, competencies alone do not tell us the roles played by facilitators to make them “visible” in a web-based environment. Palloff & Pratt (1999) suggest that online facilitators have both intellectual and social roles.

We attempted to isolate competencies that an online facilitator needs in the online environment. We selected the *Work Profiling System* (WPS) tool from Saville and Holdsworth Ltd (SHL) as the conceptual framework. The WPS has a cognitive component, (thinking competencies) an affective component, (people competencies) and a psychomotor component (energy competencies). Our analysis focused on the ‘visible’ roles played by the online facilitator and the identified competencies needed to fulfil in these roles. The data collected by the instruments already listed was analysed both by hand and using *Atlas.ti*. An unstructured face-to-face interview with the online facilitator was added.

The analyses following the Blignaut & Trollip (2003) taxonomy indicated that the online facilitator provided comprehensive administrative information, supported the students in an affective manner and ensured that students received individual feedback on their postings. There was still no indication, however, which roles made the online facilitator “visible” to the students or how conflict is managed (White & Weight, 2000).

Rourke, Anderson, Garrison & Archer (1999) suggest five units of analysis for research on computer conferencing: Proposition, sentence, paragraph, thematic and message units. We chose thematic units, defined as a “single thought unit or idea unit that conveys a single item of information extracted from a segment of information” (Rourke et al., 1999:60). It enabled us to capture the essence of each communication and more than one code could be assigned to each posting. The specific theme was “visibility”. Blignaut & Trollip’s (2003) categories were transformed into roles looking for indicators that would reflect “visibility” on the part of the online facilitator. We attempted to isolate what steps the students and the online facilitator recommended to improve the visibility of the online facilitator. Five roles of visibility (administrator, social supporter, instructor, guide and mediator) were identified.

The administrator role conducts timely administration. The online facilitator divided students into groups, established communication channels, supplied important administrative information, posted reminders and provided support in terms of time management. The role of administrator involves course management, rather than dealing with academic issues. For instance, the facilitator discovered that students did not have one another’s email addresses. Students often complained about the high costs of online time and the amount of time the assignments took to complete. The facilitator accommodated the students where possible with deadlines for individual assignments, because she understood the constraints of work, family, health and other unforeseen events.

The social supporter role ensures participation by, and retention of, students. This is achieved by providing emotional support and enhancing collaboration. Students need recognition, acknowledgement and positive feedback. The facilitator understood the students’ frustrations with the workload and the challenges they faced in terms of the technology and their fellow tribal members. She made a conscious effort to combat the feelings of isolation.

The instructor should not take for granted that students all hear, read and internalise important information. The module started with a short contact session during which the nature of the *Survivor* metaphor was explained; students were divided into heterogeneous tribes; and given detailed instructions of where to find the *CyberSurviver: Introduction* document as well as the first week’s assignments.

The facilitator explained that students would experience “what it is like to be an online student”. Most of the students did not initially hear the information about the document. Others could not access the web-based version of *Yahoo Groups*, so they could not read the rationale of game and the outcomes of the module. The online facilitator, fulfilling the instructor role, undertook to assess all individual assignments halfway through the

course and again at the end of the module. Apart from this official means of feedback the online facilitator stretched herself to provide the students with constant feedback online, both individually and for the group as a whole.

The role of guide concerns building new knowledge. Just because students are not physically present does not mean that instructors can forget about their students. The facilitator guided them through the process by encouraging collaboration, keeping the students motivated, providing a challenge, putting them at ease and working one-on-one with individual students to fulfil their potential. The diversity of student skills was considered in the design of teaching strategies and curricula. Students with a strong Internet background used *PHP* to design their websites, while novices preferred easy-to-use web-hosting services.

The mediator role ensures fair play. This module produced much conflict and some students missed out on the collaborative, group formation that the game should offer. Some could not co-operate, others would not and some never became involved, causing tremendous frustration for the rest. The facilitator managed the conflict within the groups and dysfunctional teams. Two students did not discuss their roles and contributions with each other, creating separate websites for one collaborative tribal assignment. Two students could not synchronise their online times, making all their collaboration asynchronous, very difficult and time consuming. Clashing individual personalities also affected the dynamics in the tribes.

The five online facilitator roles were put through the *Work Profiling System* Job Analysis Questionnaires (JAQs) to determine *people*, *thinking* and *energy* competencies. The results indicated that the online facilitator needed a total of 13 competencies to be visible in the five roles of an online facilitator.

The *people* competencies were: motivating and developing others, interpersonal sensitivity, teamwork and building and maintaining relationships. *People* competencies were mostly associated with the role of social supporter, where the facilitator established a friendly *virtual* environment. The *thinking* competencies were: judgment, information gathering, problem analysis, written communication skills, technical skills and competence. These were distributed fairly evenly across all roles, as were the *energy* competencies of self-confidence, persuasiveness and oral communication skills.

Once the roles and competencies of the online facilitator were examined, the question surrounding the emotional, or affective, responses of students who are being taught by a *virtual* lecturer were brought to the fore. What are the effects of being an “online student” and not being taught by a lecturer who is physically present? This problem was addressed; and the affective considerations of online learning as well as peer support were investigated.

Affective considerations and peer support

The data set generated by the methods already listed was analysed once again, but this time to determine how students cope with the absence of physical contact. The themes or *meaning units* were identified by means of *in vivo* coding (Graneheim & Lundman 2004:106; Holloway & Wheeler 2002:239,240). First-level coding was done by paraphrasing the words of the participants and collecting them into themes. Incorporating the themes into clusters (second level coding) and categories (third level coding) refined the themes (Holloway & Wheeler 2002:239,240). Three main categories were identified: Curative factors, the process of development and inhibiting factors.

Three clusters of themes form the first category, curative factors. These clusters were *altruism versus individualism*, *communication*, and *internal drive or value system*. Some themes indicated either altruistic or individualistic behaviour; resulting from feelings such as fear, trust, distrust, safety, insecurity, joy, and stress. Feelings of loneliness and isolation were experienced by a number of participants. Loneliness was a cause of increased levels of uncertainty and anxiety; particularly late at night and aggravated when they had a problem and requested assistance from their peers who would only read the email the next morning.

Participants experienced both positive and negative emotions, but not ambivalence. In their digital communication they used emoticons to transfer their feelings, and compensate for the lack of personal contact. Nevertheless, they felt that e-mail was indirect and clinical and did not allow for spontaneous reactions. Sharing emotions (positive and negative) bound the participants together as a group. A feeling of closeness developed between tribe members, so that one of the participants felt it would be wrong to get rid of a person by voting her/him out, because they “came a long way together”.

Feeling scared of being exposed also related to the self-image of participants. Some felt they had an image to uphold and should not be caught using English grammar incorrectly, as they were Master's students. One particular participant indicated that she typed her e-mail message in MSWord, spell checked it, and then pasted it onto the e-mail composer.

Another three clusters of themes were put together to form the second category of meaning, namely *process of affective development*. These phases included the initial phase: responding to requirements; the second phase: valuing, commitment and organising; and the third phase: internalisation. The phases correspond well with Krathwohl's taxonomy of the affective domain (Huitt 2001).

In the initial phase participants felt insecure, vulnerable and exposed because they did not know the level of their peers' knowledge and skills:

You sit there, totally naked and struggle. You do not know what the others knew [sic], and you know too little, but you do not know if they also know as little or less or more than you know.

The intense module requirements initially made participants struggle alone. After feelings of chaos and distrust of their own abilities early in the module, they began to feel competent. During the second phase they took charge of their situation accepting their inabilities and abilities. They took active responsibility for their situations and motivated one another. During the third phase, participants made cognitive decisions regarding their efforts and those of their peers. Participants who completed the module saw themselves as people who do not give up, even though some considered doing that in the beginning.

The third category of meaning was called *inhibiting factors*, and contained nine clusters: Giving up/being voted out; students' lack of preparation; lack of technological support and knowledge, troublesome group selection, language, overload, high financial costs; and telephone service provider problems. This category addresses the intensity of the volition of the participants who stayed and completed the module regardless of experiencing many inhibitors. Participants felt that there was a definite gap in their knowledge and skill levels at the onset of the module. Participants experienced frustration due to technical problems and a lack of technical know-how, aggravated by the use of unfamiliar software.

Conclusion

In summary, we found that the highly competitive reality game show metaphor caused excessive stress to the students, to such an extent that one commented that "this was no game". Nevertheless, those who survived reported a high level of satisfaction with what they had achieved, indicating, possibly some relationship between academic stress and a sense of achievement.

The reasons for the successful completion were identified as the game metaphor, the skill of the facilitator in making herself "visible" over the Internet, and the emotional concern that the students showed for one another regardless of the absence of physical contact.

The game metaphor allowed motivation through challenge, curiosity and fantasy. Students preferred intangible and insignificant email rewards, which seemed more attainable to them than the final prize, the weekend away. The downside of the metaphor was the perceived discrepancy between the goals of the games, and the learning goals. The main cause of conflict was the lack of availability of team members, lack of commitment and active participation, as well as contrasting personalities and strong individual wills.

The online facilitator fulfilled five roles to attain full "visibility". As administrator, she conducted timely course administration. She maintained social and emotional support. As an instructor she facilitated the learning process, but failed in providing explicit logistical guidelines. This was overcome by a database of frequently asked questions (FAQs). As a guide, she encouraged interactivity to foster the building of new knowledge. She did not risk losing students by abandoning them in cyberspace. As a mediator, she ensured fair play. If problems occurred, she intervened to resolve them. Filtering these competencies through a *job profiling system* produced five *people* competencies, five *thinking* competencies and three *energy* competencies.

Three aspects were identified regarding affective considerations and peer support. These were *curative factors*, including altruism versus individualism, communication, and internal drive or value system. Three phases were identified in a process of affective development. These included an initial phase of responding to requirements; a

second phase of valuing, commitment and organising; and a third phase of internalisation. Nine inhibiting factors were identified. These included the fear of dropping out, lack of preparation, lack of technical support and knowledge, group dynamics, work overload, financial concerns and connectivity problems.

Students dropped out mainly because they could not work with the technology. Students stayed mainly because they enjoyed the game, felt looked after by the facilitator, and supported one another.

More research should be conducted into the relationship between stress and a sense of achievement. Further work could include the development of a checklist for learners to determine how likely they would be to survive an online course, and an instrument to determine how likely a traditional facilitator would be to transfer to an online environment.

Acknowledgements

We acknowledge with thanks the excellent co-supervision of Prof. Dr Irma Eloff, and the pain of the participating students.

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