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7 Conclusions and Recommendations

7.1 Introduction

In Chapter 6, the last category, namely *Inhibiting Factors*, identified during the data analysis and coding process of this study, was discussed. This chapter presents the conclusions drawn from the study. An overview of the study is provided, the research objectives restated and the main findings presented. My reflection on the study is included, and recommendations for future research are made.

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7.2 Summary

A number of researchers (Adkins 2004; Bastable 2003:332; Lee *et al.* 2004; Murray 2002) are of the opinion that inadequate attention is given to the affective domain of online learning, and this is also reflected in the limited research done in this area.

Cognition and emotion are two closely related, ongoing and changing streams of experience that interact with one another and influence overt behaviour in subtle complex ways (Cousin & Davidson [Sa]). Affective learning forms part of all kinds of educational experiences, regardless of whether the primary focus of learning is on the psychomotor or the cognitive domain. When students are exposed to these different types of educational experiences, their feelings or emotions will be stirred (Bastable 2003: 333).

The aim of this study was to investigate the affective experiences of MEd (CAE) students who were enrolled for an online module, called *CyberSurfiver,* as part of their study programme*.* Specifically, the study aimed to investigate the meanings that students attached to their affective experiences during the *CyberSurfiver* module.

There are numerous reasons why students stay on an online course. The rationale of this study was based on the fact that students have affective experiences that influence their decision to persevere with a course. The purpose of this study was thus to explore and interpret the participants' affective experiences in an online learning environment and to discover important categories of meaning about their affective experiences (Marshall and Rossman 1999:33).

The research question for this study was:

> **What are the affective experiences of students in an online learning environment?**

The following sub-questions were asked in order to answer the research question:

- How do online students cope in an online learning environment?
- Why do online students ask for help?
- Why do online students offer help?
- What are the principal causes of motivation and frustration?

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- ✆ What is the nature of the cooperation between group members (the nature of peer support)?
- ✆ How, and to what extent, do affective experiences of students contribute towards the successful completion of an online course?
- ✆ What could make a student drop off a course regardless of volition?

The above information was also presented in Chapter 1. In Chapter 2, a literature study, related to the context of this study, was presented. The literature study addressed aspects such as active learning, cooperative learning, constructivist learning, the learning environment, the affective domain, and online learning. A conceptual framework, taking into consideration the nature of the *CyberSurfiver* module, as well as the specific research objectives, was developed from the literature study.

Chapter 3 provided an overview of the research methodology and process that was followed in this study. This study falls within the *constructivist-hermeneutic-interpretivist-qualitative paradigm*. As the affective experiences of participants within an online learning environment were explored and interpreted, the research design was exploratory, descriptive and contextual in nature. A schematic representation of the research design was also presented in Chapter 3.

Chapters 4, 5 and 6 dealt with the three categories identified during the data analysis and coding process. In Chapter 4, the first category identified, namely *Curative Factors*, was presented. The concepts, presented in the three different clusters of this category, were discussed.

Chapter 5 contains discussions on the second category, namely *Process of Affective Development*, which was also identified during the data analysis and coding process. The discussions include explanations of the concepts identified in the three different clusters of Category 2. After comparing the quotes of the participants to the five levels of Krathwohl's Taxonomy, it was concluded that the participants' affective development increased in complexity and could be compared to the levels of Krathwohl's Taxonomy. The participants' affective development was further assessed by means of a learning cycle model developed by Kort and Reilly (2002a:60-1). The comparison drawn to Kort and Reilly's model turned out to have the same result as that of the comparison to Krathwohl's Taxonomy.

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The next category, *Inhibiting Factors*, was discussed in Chapter 6. The inhibiting factors discussed, as experienced by the participants, were not necessarily affective in nature, but complemented the affective nature of their learning experiences.

The discussions in Chapters 4, 5 and 6 included quotes obtained from the transcripts of focus group interviews, printouts of synchronous conversations on *Yahoo! Messenger* and e-mail text messages that students sent to each other and the lecturer during the time that the module was active. Literature applicable to the three categories was discussed in Chapters 4, 5 and 6 in order to compare the experiences of the *CyberSurfiver* participants to those of participants in similar studies.

7.3   Discussion of the sub-questions set for this study

In order to answer the research question, the sub-questions set for this study will be discussed.

7.3.1 How do online students cope in an online learning environment?

A priority for the participants of the *CyberSurfiver* module, as adult learners and employees in educational positions, was to ascertain that their peers, colleagues and families would not think less of them. It was important to them that their image to the outside world, as role models who teach others and who are supposed to be knowledgeable, should not be tarnished. Secondly, the participants were also concerned with being exposed as a result of their lack of knowledge and skill with regard to the requirements for the module. They were concerned that their peers would think less of them. This anxiety triggered coping mechanisms that were exhibited in a number of different ways.

Some participants exhibited behaviour that was more individualistic in nature. One way in which participants exhibited this kind of behaviour was to do individual assignments only and not to take part in the group activities. By doing individual assignments, they hoped to accumulate sufficient marks to pass the module. This indicated that they engaged in risk-taking behaviour, as the module was developed and based on group activities.

In contrast to the individualistic behaviour, some participants exhibited more altruistic behaviour. Altruistic behaviour is motivated by a need not to let the group down.

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Participants who engaged in altruistic behaviour concentrated on doing collaborative assignments only. Again, in this instance, risk-taking behaviour was exhibited, as the participants could not have known for certain that their efforts were sufficient for them to pass the module. The participants exhibited further risk-taking behaviour by breaking the rules of the game, specifically the ruling on how communication was to take place. The reasons offered by the participants for breaking these rules were their need to communicate feelings of incompetence and stress, their need for immediate feedback and support, and their need to give support.

As time went by, and pressure increased with regard to deadlines and assignments, the issue of 'surviving' the *CyberSurfiver* module became priority. The participants realised that they were all experiencing the same hardships, which made them feel closer to one another. This could be seen in the statements of participants: one participant stated that he realised he was not struggling alone, and another participant indicated that, after the module was completed, she missed the interaction she had with her peers when they were online in the middle of the night.

Many of the participants used emoticons to express emotion and to emphasise the messages that they wanted to convey. Some participants used humour as a coping mechanism and as an antidote to anxiety and stress.

Realising that they lacked knowledge and skills with regard to the requirements for the module, some participants took extra courses that, at that stage, were not indicated as a requirement for the MEd (CAE) curriculum. Three of the participants took an extra course together, which may have been a way to ensure that they could support each other, as well as not feeling embarrassed by their need for extra tuition. However, it could simply have been a rational solution to the problem, ensuring the successful completion of the module.

The participants also indicated that they had to make lifestyle changes which included working on the module when their families were sleeping and adjusting their own sleeping patterns to be able to accommodate their families and their studies. The participants indicated that they experienced physical and mental exhaustion. They handled the situation by employing self-talk and personal motivation as coping mechanisms.

7.3.2 Why do online students ask for help?

The participants asked for help because they experienced feelings of anxiety, uncertainty and alienation while, at the beginning of the module, engaging in asynchronous communication via e-mail. It appeared that this was the period when the less skilled participants tended to work in isolation. The participants complained that the e-mails were too short and to the point, very much like sending a text message or SMS. They struggled with nearing deadlines and became desperate. This resulted in them engaging in face-to-face communication, which was against the rules of the game. As they realised that they had common problems, it became more acceptable to expose their inabilities and lack of knowledge to their peers. Failing to comply with the requirements of the module, and the role they played professionally and socially, became less important.

When the synchronous tool *Interwise* was introduced, some participants immediately made use of synchronous communication to request assistance. While this synchronous tool allowed participants to ask for assistance, it immediately exposed their lack of skills. However, it also ensured that they received immediate feedback. It demonstrated the participants' desire to be successful. The desire to succeed is related to self-image, as well as social image. By acknowledging their own incapabilities and requesting assistance, the participants demonstrated that they had developed affectively.

Participants asked for help when they:

- Could not find information posted by the lecturer;
- Did not know where they fitted into a group;
- Were struggling to master the technological/software requirements needed for the completion of assignments;
- Wanted to do something to improve their own knowledge and skills even if it was not needed for marks or the completion of an assignment;
- Struggled to build their personal Web sites;
- Did not know how to perform an FTP action;
- Could not get hold of their peers online;
- Wanted to know how to access the *Yahoo! Groups* Web site created for them;
- Wanted to know how to submit assignments.

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7.3.3 Why do online students offer help to their peers?

The first and foremost reason for students to offer help to their peers in the same group would probably be feelings of altruism. Participants offered help to their peers to ensure that the group assignments would be successfully completed and by doing so, the marks for the group and the individual assignments were influenced positively. Close bonds developed between some members of the groups, which, once again, increased their willingness to render assistance. The groups experienced group dynamics that are normally associated with groups. Participants who were most knowledgeable before the onset of the *CyberSurfiver* module offered the most assistance.

Assistance rendered to other groups resulted from friendships between individuals, which were established before the *CyberSurfiver* module commenced. This type of assistance was given *'under the table'*, implying feelings of 'treachery' which should be kept quiet. It was more important to participants to be a 'good friend' than to adhere to the rules of the game. Helping others often increases the self-image of the helper.

Participants who rendered assistance to others were perceived as having more status in their groups. They were, for example, addressed as *'boffins'*. This could have contributed to an increase in their self-esteem and self-image. These helpers received the authority to 'take charge' and structure the interaction of group members so that deadlines would be met and assignments completed, leading to the positive self-image of all the group members and feelings of satisfaction and accomplishment.

7.3.4 What are the principal causes of motivation and frustration?

7.3.4.1 Motivation

Most participants were motivated to stay in the game owing to the support that they received from other tribe members. Some individuals were motivated by their desire to do well. Participants expressed the opinion that synchronous communication by means of *Yahoo! Messenger* did improve the team efforts. The introduction of the students to *Interwise* did not only contribute to the dynamics of the group, but also motivated the students to further explore online communication. The fact that participants could hear each other changed their perception that online communication

was 'lifeless'. It became an enjoyable experience, which played a role in their continuous attempts to persevere and solve problems.

Small achievements served as internal motivation. Feedback received from friends and family served as external motivation. The participants indicated that it was important to them to uphold their social image and comply with the expectations of society with regard to people who were furthering their studies. They also indicated that they wanted to fulfil their functions as role models within their professions.

7.3.4.2 Frustration

Participants' reasons for being frustrated varied from being unsure of what was expected of them, being faced with time restrictions and feeling incompetent when tribal assignments had to be completed.

The limited English skills of some of the participants made it difficult for them to communicate or progress academically. They found the presentation of the course in English as challenging and functioned at a lower cognitive level. Some participants felt that they could not clearly express themselves by means of asynchronous communication, especially when emotions were involved. They were of the opinion that e-mail allowed the use of emoticons and words only, that it was indirect and clinical, and that it did not allow for spontaneous reactions. They also found it cognitively taxing to convey a message in such a manner that it would not be interpreted other than intended.

The lack of immediate feedback in asynchronous communication, from either the peers or the lecturer, proved to be very frustrating to some participants. The frustration was aggravated by the participants' working online at different times of the day and night. Answers to problems were often found through individual trial and error attempts rather than through group support.

The large number of e-mail messages also proved to be a frustration for some participants. The result of this was that participants read e-mails selectively and probably skipped important information sent to them by their peers and/or the lecturer of the module.

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Attempts by the lecturer to stimulate discussion and encourage e-communication frustrated some participants. Their reactions seemed to be related to work overload and time constraints. This led to some participants ignoring or selectively answering the questions the lecturer posed to them from time to time. One participant mentioned that the frustration experienced was the result of feelings of incompetence, and of their feeling exposed.

Some participants, especially those who had high performance standards, experienced frustration with the incompetence or lack of participation of 'weaker' group members. The 'stronger' members felt that their progress was inhibited to a certain extent.

7.3.5 What is the nature of the cooperation between group members?

Throughout the module, participants experienced spontaneous support from group members and members of other groups. Despite the late hours and the difficulties associated with asynchronous communication, participants would, in the middle of the night and early mornings, complain to each other about being tired, discuss what still needed to be done and encourage each other. Congratulations and encouragements were extended during formal and informal communications. The synchronous discussion tool *Yahoo! Messenger* specifically enabled more spontaneous support, which influenced the group dynamics and motivated the participants. The affective nature of support correlates to the findings of a study done by Talay-Ongan (2004), who states:

> 'We found that attending to the emotional agenda, the underbelly of all human pursuits, had a facilitative effect as much for the students as for the teachers. A climate of high intellectual demand coupled with high emotional and communicative support appeared to be a winning formula.'

Participants also requested and offered support on technical issues. Some received support on how to FTP or change a picture on their site. Others were informed of where to find free software to download. Some participants were given support without asking for it, for example when it was noticed that a participant lacked certain information. It is therefore evident that the participants supported each other on both academic (technical) and emotional level, in a spirit of camaraderie.

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7.3.6 How do the affective experiences of students contribute to the successful completion of an online course?

It became evident that one of the requirements for the completion of an online course is the creation of a safe learning environment. A safe learning environment is one where students are encouraged to express emotions and share personal learning experiences (Talay-Ongan 2004). A safe learning environment however also includes proper and sufficient guidance from the lecturer. Such an environment would necessarily include accessibility of the lecturer as well as optimal support from the lecturer. The support from the lecturer will include information and advice about technology and software, but to name a few. In a safe learning environment the lecturer will also allow and encourage students to support each other.

In this study, support was evident when students were congratulated on their good performance and when personal messages were sent. Positive experiences such as interaction, interdependence, communication, support, a feeling of belonging, and teamwork played a role in the successful completion of the module. Attaining the set outcomes and experiencing feelings of pride increased the probability of staying on the course.

Some participants' internal drive overshadowed any negative experiences they had. Some participants wanted to do well by putting in extra efforts to meet the task requirements. It is thus clear that the participants achieved success because they had the desire to succeed. Personal characteristics such as determination and perseverance also led to success. All these aspects relate to inner drive, self-image and self-motivation. Participants noted that it was not worth quitting after working so hard and achieving so much. They thus decided to remain on the course due to their positive affective experiences, and despite their negative affective experiences.

7.3.7 What could make a student drop off a course regardless of volition?

As mentioned in Chapter 1, this study excluded an investigation of the reasons students quit online courses. The topic of attrition rates is addressed by many authors, including Diaz (2002), Carr (2000), Terry (2001) and Martinez (2003). Because this study specifically addresses affective concerns, and the seven students who quit the course did so before the tribal module was in full operation, the focus is

placed on factors that influence quitting while the student still has a strong desire to complete it. In this study, no participants discontinued the *CyberSurfiver* module after the first two weeks.

In this study, the participants' workload and the resulting time restrictions affected their capacity to communicate and commit themselves to the game, as well as their ability to complete assignments for the *CyberSurfiver* game. It can be reasoned that, if the duration of the module was longer than six weeks, finances due to Internet access would probably be a determining factor in students quitting the course, or limiting their participation.

The rules of the game can also affect attrition rates. Rules, such as no face-to-face communication, compulsory voting off of peers and having to do all individual and group assignments, can seriously affect attrition. In this study, the students were not punished for not complying with all the rules and they were therefore willing to take risks. Being able to take risks helped the students cope as they felt they had some control over the situation. Less competent participants would be more affected by a no-online communication rule. The synchronous nature of the communication tools probably favoured attrition, as the nature of the game, which required of participants to attain various goals during the game, necessitated regular communication.

As was mentioned before (Section 6.2.6 in Chapter 6), a parallel course was presented at the same time as the *CyberSurfiver* module, which placed undue demands on the time and abilities of the students. The tempo of the game was also very fast, and a number of assignments had to be completed during the six weeks that the game was played.

7.4 Reflections

In this section, I provide an overview of my own affective experiences during the study. It was a gratifying experience to work with two other doctoral students who investigated related topics. This countered feelings of isolation and uncertainty, which can be experienced by doctoral students who enter a new and higher academic level. Though the different studies were not completed and submitted at the same time, the researchers could offer each other valuable support through discussions of the research methodology used, the problems encountered and the presentation of the data and the findings. It is therefore recommended that doctoral students are paired

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and assigned to the same PhD promoters, even if they are not involved in collaborative research.

7.4.1 Methodological reflection

The study focused on the identification and interpretation of feelings that students experienced in an online course. This research is significant, as experience has taught that the affective experiences of online students did not receive adequate attention from lecturers. Though it was found that many studies were done from the perspective of the lecturer, those were mainly based on the affective development and not on the affective experiences of online students.

The research design of this study was not as straightforward as one would expect. At first, it was thought that it would be easy to interpret the experiences of the participants by employing the hermeneutic phenomenology design. However, it was soon realised that other designs for this study had to be explored. It was also realised that using a hybrid design proved to be a huge challenge and that it was probably the reason why some researchers refrain from studying the affective experiences of online (or any other) students or why researchers use questionnaires for collecting data instead of doing qualitative research.

I believe that the objectives of the study were attained. The categories of affective experiences, specifically described in Chapter 4, were not found in existing literature consulted for this study.   However, it was found that it was possible to assess the participants' affective development by not only using Krathwohl's Taxonomy, but also by applying Kort and Reilly's (2002a; 2002b) learning cycle model. It was discovered that, according to Kort and Reilly's model, the affective experiences of the participants in the *CyberSurfiver* model were in line with general affective development.

During the six weeks of the game I had no contact with the lecturer or the participants of the *CyberSurfiver* module. I was only present at the introductory session, where the module was introduced by the lecturer, and at the reflection session on completion of the module, during which no conversations took place between the participants and myself. I only acted as an observer. I received all the e-mail messages that the lecturer and participants sent to each other as she was online for most of the day during the six weeks and was able to read the e-mails in order to get a sense of the participants' feelings and experiences. During the observing of the *CyberSurfiver* online communication, I did not realise that a developmental pattern would emerge

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during the data analysis. It was interesting to find that, though the feelings experienced by the participants seemed to present themselves in a chaotic and unstructured manner, they did follow a comprehensible pattern.

It was realised, during the data interpretation phase, that it would have been useful to utilise a questionnaire to probe the expectations of the participants before they embarked on the module. Although it was not an objective of this study to do comparisons, it would have been informative to see whether the feelings experienced by the participants during the module, were related to their feelings before they started with it.

The findings of this study cannot serve as an ultimate guide for lecturers who plan and facilitate online learning courses, as the *CyberSurfiver* module and its participants were unique. The explanation of the affective development process, the categories of experiences, as well as the inhibiting factors may serve as guidelines for lecturers who want to plan similar collaborative online learning projects. It may very well serve as inspiration or stimulation for prospective researchers on affective experiences in learning situations.

7.4.2 Substantive reflection

The importance of considering not only cognitive and technological issues, but also affective factors in online learning, has been addressed by many educators and educational psychologists, such as Adkins (2004); Bastable (2003); Huitt (1999a); Lee *et al.* (2004); Murray (2002) and Van der Horst and McDonald (2001).   It is also the opinion of Salovey (1997:195) that the '*integration of cognition and emotion has significant implications for education'*, which is applicable not only to face-to-face education, but also online teaching and learning.

Eisenberg (2002:1) and Adkins (2004) note that little attention is paid to studying the affective and social components of education. However, single studies were reported in 2003 and 2004 that addressed these issues. It would appear that the limited research done on affective factors in online learning was also important to this small number of educators. Articles published by Gabriel (2004), Talay-Ongan (2004), Picard *et al.* (2004) and Vonderwell (2003) addressed similar research as conducted in this study.

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Due to limited literature applicable to the feelings experienced by the *CyberSurfiver* participants, the researcher had to rely on literature not necessarily related to affective factors, but to other issues concerned with groups, communication, and interaction, such as that of:

- Atherton (2003), on group development;
- Buher and Walbert (2004), on small groups;
- Larson and Keiper (2002), on discussions; and
- McNamara (1999), on conflict management in groups.

These articles did not subtract from the value of the findings, as they were relevant and contributed to the discussion of the findings.

The quotes presented in this study show that it is necessary to consider the feelings and experiences of students in an online learning environment. The two focus group interviews did not provide enough opportunity to the participants to adequately verbalise their feelings and experiences. It was suggested that another focus group interview was needed for them to express their opinions and feelings more substantively. The intensity of student involvement and activity in an online course is very high and the novice online lecturer may underestimate the influence of the affective experiences of their students.

By reading through the statements made by the participants, it was realised that if online students were provided with an opportunity to verbalise the learning and personal difficulties they experience during an online course, and they know their opinions are considered, it would make the online experience affectively less frightening and overwhelming.

It is therefore important that lecturers should consider the online student as a holistic human being, and plan for online learning events and student-lecturer interaction, to accommodate the holistic nature of the student.

7.4.3 Study-specific reflection

As research on affective factors in online learning proved to be limited, it is believed that the structured identification of categories of the experiences of the participants presented in this study may serve as initiators for other studies of this nature. It may

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even be possible to develop a type of taxonomy for the affective experiences of online learners.

The description of altruistic and individualistic behaviour patterns based on affective experiences, as discussed in Chapter 4, is unique, and may be of value for lecturers who plan collaborative online courses. The description of these aspects, as well as the aspects with regard to communication and internal drive (and value system), as being curative in nature, promotes the view of how complex and intense the affective experiences and coping mechanisms of online students are. It was evident that online learners will engage in risk-taking behaviour to ensure that they are successful and perceived as being successful.

The risk-taking behaviour was justified by the fact that the participants experienced themselves as being in the same situation (which they were), regardless of how important or insignificant their contributions to the group assignments were. They exhibited interest in each other and used personal communication to congratulate and encourage each other, even when achievements were small.

The various aspects related to communication, such as loneliness and language difficulty, are discussed as separate entities in other studies. This study provides a cluster of all the factors involved in communication in online courses, such as loneliness, asynchronous and synchronous communication, language issues, sharing of similar emotions, and the difficulty of coping with large numbers of e-mail messages.

No online learning study was found where a comparison of the affective development of participants was done according to Krathwohl's Taxonomy or where Kort and Reilly's (2002a; 2002b) learning cycle model was applied. It can therefore be assumed that this is a unique feature of this study. Other researchers may want to employ the model as part of their research or take it into consideration when planning and facilitating online learning.

This complex nature of online learning experiences is also evident in the explanations as to why online students would ask for help, which was the second sub-question of this study. Online students can experience feelings of desperation at the same time that they experience high volition, which propel them to suppress their feelings of fear and embarrassment at their incompetence, and ask for help. At the same time, other students experience positive feelings because they know how to approach the assignments they have to do. In this study, the division of the participants into

groups of mixed abilities, in terms of Internet skills and knowledge, gave the stronger participants more status.

The value of face-to-face interaction, and telephone conversations as part of online learning, is clearly illustrated in this study. The participants perceived the ability to hear each other's voices, by means of hardware and software that allow synchronous online communication, as valuable. This is not always possible as the nature of online courses differ, but in this case it increased the motivation of the participants and allowed them to feel part of a group that had to attain a common goal, instead of feeling like adversaries who were competing for a prize.

7.5 Recommendations for practice

The recommendations are mostly applicable to situations where courses or modules, similar to the *CyberSurfiver*, are planned. As this study was conducted in a unique situation with a unique module and unique participants, it cannot be assumed that the recommendations are applicable to all online courses or modules.   It would be the prerogative of the respective lecturer, who plans the introduction of an online course, to extrapolate the findings of this study to that specific course.

It is of essence that lecturers inform students, who want to do an online course, with regard to every aspect of the course. This would include information about hardware and software requirements, as well as information about the required skills and knowledge for attaining the outcomes of the course.

Students should not embark on an online course without having a computer or an Internet connection at home. This requirement is especially essential when the course content is handled through computer-assisted education.

The requirements or prerequisites for an online course should be communicated to students before they commence with an online course. This should be done in order to avoid a situation where a student pays the course fees, starts with assignments and then finds out that s/he does not have the correct equipment or skills, and therefore does not comply with the requirements.   The disappointment and resulted underperformance might affect the future personal development efforts of the individual.

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Students should be informed not only of the hardware requirements of a course, but also of the required computer literacy level/s, such as the ability to use certain software or do programming, even when it is relatively basic.

Lecturers cannot assume that, because students apply for a course, they know all the requirements. While the learner might be an adult and has the responsibility to seek relevant information, the lecturer is still the source of information. Many students doing online courses are people who have not studied for a long time and are new to the online learning environment.   It is therefore recommended that information provided for prospective students be compiled as broadly as possible.   Information about where and how the student can do a short course, in order to close gaps in existing knowledge and skills, should also be provided.   Potential students, who are able to use word processing software, communicate by means of e-mail and know how to access and use the Internet, may perceive themselves as highly computer literate and skilled enough to do an online course.

If possible, an estimated time that students will spend online must be provided. This may sound impossible, but if lecturers have presented the same type of module before, they will be able to provide students with an estimated time frame.   Students should also be informed that they should budget for Internet expenditure according to the estimated time they will spend online. This will prevent the student from being faced with additional expenses, and additional psychological stress, at a time when they no longer have an opportunity to discontinue the course as they already have paid the necessary course fees. Adult online learners normally have other responsibilities such as being employed and having families to attend to as well.

Lecturers must plan for a psychologically safe environment where students can overcome feelings of disconnection and isolation. A safe environment must include ample communication opportunities for the student, not only with the lecturer, but also with peers. If financially viable, opportunities should be created for students to communicate synchronously and, if possible, verbally. The rule of no face-to-face or telephonic communication with the lecturer or peers should not be applicable to an online course where students are not well versed in the use of computers and the applicable software programmes. Students often have to cope with the anxiety of doing an online course and should not be excluded from face-to-face or verbal communication, which might provide them with the necessary support. Students should be encouraged to communicate in any possible manner when doing collaborative assignments. It is therefore suggested that lecturers employ educational

strategies, such as collaborative learning, to increase the positive and decrease the negative emotions of students.

It is recommended that online lecturers encourage online students to express their feelings, to the group or to the lecturer, by ensuring them that they will be supported and not ridiculed. The students who participated in the *CyberSurfiver* game indicated that their personal image, portrayed to family and peers, was important to them. Lectures should appreciate the concern that adult learners have with maintaining a good image.

A short introductory online session, or even a pre-test on content pertaining to the course, could be planned to allow students to establish whether they comply with the requirements of the course. This will allow the students to establish their competence and knowledge levels, and improve their chances of success. It will also avoid unnecessary anxiety and uncertainty.

Although an investigation of ergonomic and physical factors in online learning was not part of this study, it should be mentioned that physical exhaustion influences the emotional well being of people. Online students should be informed of how to plan their workstations or organise their desks at home to allow them to experience as little physical discomfort as possible whilst they are online or doing assignments.

7.6 Recommendations for further research

It is apparent that limited research had been done on the affective experiences of students in online learning and researchers are therefore encouraged to consider doing research of this nature.

As the research of this study pertained to a specific case, it is suggested that more studies of a similar nature are undertaken in different online settings. It would be interesting to see if a similar categorisation of feelings and affective development could be made. Lecturers who want to do research on the affective experiences of online students may consider using Kort and Reilly's learning cycle model to assess students' emotions (Kort & Reilly 2002a; 2002b), since it served an insightful purpose in this study.

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It would also be useful to investigate the correlation between the development of the cognitive, technological (psychomotor) and affective domains, and not only the cognitive and technological domains. It is suggested from the data in this study that there is a discrepancy between what facilitators/lecturers think students know, expect and experience during an online course, and what students who register for an online course really know, expect, and experience. Research in this area would be insightful.

7.7 Closure

This study was unique in the sense that it focused on the affective experiences of online students only. It investigated specifically the meaning that participants gave to their feelings. The findings of this study emphasise the importance of the recognition of the holistic nature of the online student and her/his experiences, which imply that affective development cannot be separated from cognitive and psychomotor development.