Reflecting on the role of emotions in the PhD process

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This research project examined the role of emotions in the PhD process through an exploratory, qualitative, self-reflective study by six recent or current PhD candidates. Despite differences in the nature of the PhD fields of study, and in the personal backgrounds of the participants, a number of common themes were recognised. We developed an interactive workshop for postgraduate students in which participants were asked to reflect on their emotional experiences in their own studies. The combined information from these sources was used to suggest some strategies for management of negative emotions that may arise during the PhD process. Of critical importance is the multiple roles of the PhD supervisor in helping manage the negative emotions that most PhD students inevitably experience at some stage in their candidature. Most important, though, is the role of self-reflection in identifying potential emotional problems and their solutions; a process we recommend to PhD candidates and supervisors.

Introduction

Undertaking PhD study at an Australian University usually requires the candidate to undertake a lengthy period of independent research, generally three years minimum, which will culminate in the production of a thesis based on their work. Fulfilling the requirements of the PhD undeniably needs a major commitment by the student, in time, energy and financial resources (particularly as 'lost income' over the three or more years that it will take). The PhD will present many challenges; unfortunately, for a significant proportion of students, a combination of these and personal considerations will result in withdrawal from their candidature. For others the time taken to complete their research will expand greatly beyond that which was originally planned.

The two issues of high non-completion rates, and slow completion times for PhDs are well recognised, eg. at publicly funded universities in Australia, only 53% of students who commenced in 1992 had completed by 1999 (Martin et al., 1999). Underlying causes have been the source of a variety of study and speculation (eg. Rudd, 1985). Among the literature the importance of the role of the supervisor, and the student-supervisor relationship has emerged as a key issue in the success of the PhD process (Cullen et al., 1994; Cryer, 1997; Graves, 1997). At some universities this is now being addressed through provision of specific training or guides for PhD supervisors (eg. University of Western Sydney has produced a compilation of resources for supervisors of postgraduate research students, called 'Highways to Postgraduate Supervision'). While acknowledging the importance of the supervisor's role in the PhD, we sought to examine the relatively neglected issue of the role of emotions in the PhD process. Very few studies have considered this area, yet recent research into the role of emotions in education suggests that emotions can have significant effects on factors such as achievement and motivation. In the context of the PhD student, they may have influences on those who complete as well as those who withdraw from their PhD study. The aim of our study was to examine the nature and role that emotions play in the PhD process, and to develop strategies and approaches that can be used to help manage these emotions with the aim of helping students work more successfully towards their goals. There is plenty of guidance on strategies for conducting postgraduate study which are usually outcome oriented; in this study by focusing on 'emotions' we are concerned more with the personal response to PhD undertakings rather than the undertakings themselves.

While there is a comprehensive psychological literature on emotions including the roles of emotions in various aspects of society (eg. Manstead 1991, Barbalet 2002, Freshwater and Robertson 2002, Strongman 2003), very few studies
have examined the role of emotions in the PhD process. Even where emotions are acknowledged as a factor they are often given only brief consideration. Phillips and Pugh (1994) briefly describe some of the psychological and emotional aspects that may be encountered, such as enthusiasm, isolation, boredom, frustration, anxiety and euphoria. They suggest that part of the supervisor-student relationship needs to incorporate a helpful psychological 'contract'. Graves (1997) also recognises that students should share any worries about their research or other factors that might affect it with their supervisor(s), while Cryer (1997) makes a case for supervisors to have some involvement in their students' personal problems but suggests that they set limits to time and emotional energy they expend, and that they are aware of when students need to be directed to further professional help. Where emotions have been recognised as an issue, recurring themes do emerge. Denicolo and Pope (1994) note the solitary but challenging and rewarding nature of the work, its pressures and conflicts with other roles the student simultaneously has to maintain, and the associated feelings such as guilt and anger that may arise. They also suggest the need for supervisors to be involved in addressing such personal issues and concerns throughout their students' candidature.

Issues such as boredom, disenchantment, laziness and 'work ethic' were considered factors in failure or delays in completion of the PhD in only a small minority of cases according to Rudd (1985). Yet maintenance of motivation and enthusiasm rated as one of the greatest problems encountered with the PhD process in a survey of 26 recently successful PhD students from Monash University (West et al., 1988). Despite such findings, none of the recommendations for improving completion rates and times suggested by West et al. (1988) made any reference to the situation. Even the more recent 1999 Postgraduate Research Experience Questionnaire, which provides information about the educational experiences of students who have recently completed PhD or Masters by Research, includes no questions specific to emotional issues (Ainley, 2001).

An exception to the limited examination of the roles of emotion in the PhD process is some recent work on a number of sub-types of anxiety, including library and statistics anxiety. Library anxiety has been recognised in undergraduate and postgraduate students (eg. Onwuegbuzie and Jiao, 1998; Jerabek et al, 2001). In some cases it may be debilitating to the extent that it becomes difficult to write research proposals, a potential stumbling block for continuation of research study (Onwuegbuzie, 1997). Some of the research suggests that library anxiety may be related to the learning mode preferences of individual students (Onwuegbuzie and Jiao, 1998; Jiao and Onwuegbuzie, 1999). It also seems to occur at higher levels for students who perceive that they have to keep up with particular standards or expectations of others (Jiao and Onwuegbuzie, 1998). Students who perceive that they have lower levels of scholastic competence, intellectual ability and creativity also tend to have high levels of statistics anxiety (Onwuegbuzie, 2000). However much of this work is focused on the characteristics of the learner, rather than on ways of managing emotions.

For a better understanding of the potential role of emotions in the PhD process some idea of how the emotions will effect or impact on the student's ability to progress with their research would be useful. The small number of studies into the role of emotions and PhD students is reflected in understandings of the role of emotions in education more generally. In fact, few studies of the role of emotions on learning, other than of test anxiety and attribution theory, were undertaken prior to the 1990's (Pekrun et al, 2002).

While test anxiety has long been recognised as being inversely related to performance in certain conditions (Hembree, 1988) it is of little relevance to the PhD situation. However some recent research demonstrates the important but complex roles of both positive (eg. enjoyment, hope, pride, relief) and negative emotions (eg. anger, anxiety, hopelessness, shame, and boredom) on motivation and learning in school and undergraduate university students (Pekrun et al., 2002). The emotions related in significant ways to motivation, effort, learning strategy use, self regulation and academic achievement. The positive emotions, with the exception of relief, were correlated with higher achievement and the negative with lower achievement. Negative emotions were elevated in students who dropped out of their studies compared with those who completed, although the direction of causality could not be implied in the results (Pekrun et al., 2002).

Reactions to emotions are often complex and individual. Shame reactions to perceived failure in undergraduate students who did not achieve the result they wanted were found to result in increased motivation and effort in some students, but equal or reduced performance in others (Turner et al., 2002). Individual factors relating to esteem, self efficacy, and goal related processes seem to account for differences in individual responses. Individual responses to emotions were also noted by Pekrun et al. (2002) with for example, some individuals positively motivated by anxiety...
while others were negatively motivated. Goals seem to have an important role in emotional responses and emotional regulation as they provide direction, comparison points (eg. "Where am I in relation to my goal?") and the need to make judgements about goals within the context of other, perhaps conflicting goals, with the result that emotional responses develop (Schutz and Davis, 2000).

PhD students, as a cohort, are likely to have different characteristics when compared to school or undergraduates students. They have a proven record of academic achievement and could be expected to have more positive views of self efficacy, be better motivated, and are perhaps also more likely to have self regulatory strategies, learning strategies and strong study skills, compared with cohorts of school or undergraduate students. However the links between emotions, goals and motivation described in these recent studies are likely to be of relevance to the PhD cohort where motivation and its maintenance are recognised as an issue (West et al., 1988).

In view of the limited understanding of the roles of emotions in the PhD process, our research aims were to:

- develop a composite self reflective record of the emotions associated with completing a PhD in a multi-disciplinary school, in an Australian University;
- develop a suite of approaches for managing these emotions as part of achieving a PhD as an outcome;
- present this material in workshops to postgraduates from a range of disciplines and to reflect on participant responses; and
- identify and recommend future directions for this research as part of postgraduate practice.

This paper reports on the emotions involved in the PhD process, some of the experiences that workshop participants have shared with us and some strategies that candidates and their supervisors can utilise to help manage negative emotions in the course of a PhD.

**Methods**

To evaluate the role of emotions in PhD studies, we adopted an exploratory, qualitative and self reflective approach (in keeping with Nisbett and Wilson, 1977; Hixon and Swann, 1993; Wallendorf and Brucks, 1993; Gould, 1995). This type of approach can have advantages when searching out the views of the respondent such as when looking at the way individuals feel about and respond to a particular situation, and because the role of the researcher can be made relatively non-intrusive. Much of our own research in environmental science focuses on the perceptions of environmental managers and natural area visitors based on the methodological techniques advocated by Boyd et al. (1993) and Starbuck and Mezias (1996). We turned this process inward to self reflect on our own perceptions of the PhD process that we each had or were currently experiencing.

Our study was based on the experiences of six staff and students in the School of Environmental Science at Murdoch University. Of these, three of us are academic staff who had completed our PhDs within the previous six years along with three PhD candidates currently being supervised by us. The postgraduate students were at various stages in their PhD, with one in the first year of study, one in the third year of study and the other within weeks of submitting a thesis for examination. The six participants had varied backgrounds. Our ages at PhD commencement varied from 25 to 42. Gender was evenly balanced, with three male and three female participants. The PhD topics investigated covered a broad range of disciplines within the environmental science field (they included soil science research, environmental management of industry, policy analysis, tourism and surveys of visitors to national parks and analysis of their behaviour). A common feature to all of us was that our studies were conducted on an individual basis; ie. our supervisors had no other candidates or research centres working in that discipline area.

Our study took the format of reflection about the emotions each of us encountered as we worked towards our PhD. The six of us collectively designed the project and the questions that were the basis of the self reflection. We then completed an individual written account recounting our emotional state during our PhD in response to three groups of questions. These were:

1. How would you graph your emotions over the duration of your PhD? You might like to consider emotions such as elation/happiness and grumpiness/ disenchantment/ frustration.
2. What emotions did you experience during your field work and data collection activities? How did you manage/not manage them? How could you have made your emotions work better for you in your field work/data gathering?

3. How did you manage your emotions? Could you have managed them better in hindsight? Who helped you in this management? Who/what could have helped you?

We collated our response and identified common themes. We re-convened as a group to discuss responses, consolidate similarities and discuss solutions and strategies for management of emotions.

Despite the differences in research topics and approaches, and different types of study that were involved, many shared experiences emerged, and became the main focus of this study.

Our shared experiences also provided the basis for the development of an interactive workshop that we have presented to the Murdoch University Postgraduate Forum (2002 and 2004), the Murdoch University Environmental Science Postgraduate Forum (2004) and the Australian Association for Social Research annual conference (Moore et al., 2002). The workshop includes activities, in which participants reflect on the role of emotions in their own postgraduate studies, interspersed with presentations in which we share our experiences.

We have used the combined information from our study and the workshops to suggest some strategies that supervisors should encourage, and students could implement in order to cope with the emotions that arise in their PhD, with the aim of making the PhD process a more positive experience. Such a strategy across all PhD students, might perhaps help reduce dropout rates or decrease completion times.

**Reflecting on emotions experienced during the PhD process**

The six of us in the original study had a variety of personal backgrounds, as described previously. Our projects also covered a variety of disciplines, and although all were based around some form of field work, the field work and data collection components covered many diverse aspects. These included: interviewing experienced managers and staff, interviewing members of the public, surveying via questionnaires or survey forms, observations of visitor behaviours, taking biophysical measurements in the field, and physical survey and mapping work. Field work locations varied from local (Perth), within the state, interstate and, in one case, overseas.

These differences help to emphasise that a PhD is a very individual process. And since a PhD candidate is required to make an original contribution to knowledge, this necessitates the candidate conducting a new or unique study of some kind, which virtually ensures that they work largely independently in an individual manner. However, our study, and subsequent workshop responses, suggested that the emotional states experienced by any individual PhD candidate are likely to have common themes with those of other postgraduate students.

Emotions recorded by the six of us included: anxiety, boredom, excitement, fear, frustration, elation, satisfaction, loneliness and even what some described as 'slight insanity'. Over the period of candidature each of us typically experienced a plethora of emotions with swings from negative to positive and back at varied time scales, described by one participant as an 'emotional roller coaster'. More than one emotion could be experienced simultaneously. It was clear to us that these highs and lows are a normal part of the PhD process.

Three stages in the PhD process emerged as common themes for each of us. We present the emotions and associated issues for each of these phases (early, middle and end), and for the major task of data collection/field work in detail in the following discussion.

**Early phase**

We recorded positive and negative emotional states at the beginning of the PhD, however positive emotions (including elation and enthusiasm) seemed to dominate initially. Initial elation was related to factors such as being accepted as a PhD candidate, or being awarded a scholarship to undertake PhD studies. Enthusiasm was linked to the challenge and anticipation of undertaking the research in an area that the candidate was interested in and considered relevant and
Most of the negative emotions recorded in the early phase related to the initial major challenges of the project. Bewilderment and confusion were associated with the work of:

- deciding where to start, especially in tackling the body of literature that needed to be understood and reflected upon;
- focusing on a research area that would be manageable;
- focusing on a project that would make a valuable contribution to the field;
- ensuring that the research will be sufficiently original to fulfil the requirements of the PhD and;
- determining an approach for the project.

Anxiety could also be recorded in relation to these issues, and the additional concern of establishing a positive working relationship with the supervisor(s).

Although we recorded negative emotions in the early phase of the PhD, they are not necessarily problematic at this stage. Emotions can interact in quite complex ways with motivation, goals and performance. According to a cognitive-motivational model (Pekrun et al., 2002) positive and negative emotions may additionally be viewed as activating or deactivating based on their effects on motivation and performance. In the context of our own experiences, the negative emotions described in this early phase were more likely to be activating than deactivating, being viewed as part of the challenge. At this stage most of us described a high level of motivation for the task ahead, and were looking forward to 'getting our teeth into the project'. Although none of us recorded major problems with getting individual research underway, it is possible that becoming bogged down at this early phase could be a source of problems, if these negative emotions started to have a deactivating effect on motivation to proceed with the research.

**Middle phase**

Negative emotions were more prominent in the middle phase of the PhD than in the early phase. Emotions we noted for this stage were frustration, boredom, guilt and loneliness/isolation. In addition a large part of the work in this middle stage revolved around field work and data collecting; these were associated with particular emotional states and are discussed separately later.

The negative emotions noted in this stage were often associated with the realisation of the size of the project and the amount of time and effort it will require (eg. by comparison, earlier undergraduate experiences are of much shorter time scale). By this stage a PhD student may have experienced a number of issues such as:

- encountering a research dead end, or the need to change direction with some aspect of the project;
- things not always working out as planned;
- things taking longer than was planned for; or
- administrative requirements, such as budgets, progress reports or ethics approvals, causing slowing or stalling.

These issues were associated with feelings of frustration.

The repetitive nature of ongoing literature searches, or writing and re-writing drafts (for some participants) also gave rise to frustration, and even boredom. By this time a PhD student has been working for some time, as an individual, on a large and challenging project. Feelings of isolation and loneliness were more likely to be recorded now, than in the initial stages. The most common result described for this stage then seemed to occur, this was a slump in enthusiasm and associated motivation. Feelings of boredom, often about half way through the PhD, along with isolation, associated with dampened enthusiasm and output have been noted elsewhere (Phillips and Pugh, 1994).

Another cause of negative emotions related to employment. All of us undertook some casual teaching, or were in some other employment for all or part of their candidature. These activities could be very distracting, especially as work engagements had strict deadlines whereas the PhD could be viewed as having no real deadline. A result was that PhD activities were relegated to second place (even though temporarily), leading us to experience feelings of guilt and...
frustration.

Data collection

Gathering data is a core activity in the PhD process, whether it is via laboratory, field or archival research, and therefore warrants specific consideration in some detail. This is a major activity in terms of time and effort, and was associated with both positive and negative emotions for each of us. Data gathering for all was primarily a field activity, although some of us were also involved in laboratory or archival research.

The main positive emotion recorded was excitement, and this seemed to relate to a number of underlying factors:

- the initial thrill of being in the field and being able to apply the theoretical ideas in a practical situation;
- a sense of progress in actually getting real data after the time spent planning and designing the project;
- as the data collection progressed there was satisfaction that a body of data was accumulating, or if patterns began to show in the data that supported the initial ideas; and
- the excitement and joy of simply being 'in the field', as enjoyment of the particular environment may have been one of the initial reasons for choosing the topic for PhD study.

The excitement we noted in relation to field work was tempered by a number of negative emotions: notably fear, frustration, and to some extent loneliness.

Fear appears to have been related to two underlying factors - fear of the unknown, and beliefs in own self efficacy. We were all involved in field work and all of us experienced some degree of fear prior to and during initial trips. This fear of the unknown could relate to the remoteness of the field area, being in a strange new place, concerns about a lack of success, or an inability to gain access to experts or information. Belief in oneself and our own ability to 'get it right' (self efficacy issues) stemmed from issues such as the need to interview experts, or members of the public. Interviewing experts was associated with fears that they might not approve of the research, whereas for members of the public there were concerns related to cultural differences (eg how to communicate effectively with Japanese tourists visiting a national park).

Field work frustrations fell into two areas. The first was the need to collect a lot of data within a tight time schedule. We noted feeling rushed, things not going as planned, and of forgetting important equipment. Frustration was also associated with the fatigue of the demanding (emotionally or physically) and repetitive business of data collection. Some participants who were involved in large scale surveys and had enlisted the help of volunteers for data collection, experienced a second area of concern. If some volunteers were not collecting data according to the instructions then the data would potentially be flawed, giving rise to frustrations.

A number of the participants noted loneliness at some stage during this data collection stage of their PhD. This was a particular issue for those working in remote settings, or at least away from home. In these circumstances the issue was most serious 'after hours' when there was no one to socialise with.

Our self reflective study demonstrated that negative emotions are common and prominent during the middle phase of the PhD. Whereas the negative motions in the early phase are not necessarily problematic, they may pose more significant dangers in this middle phase. The feelings of frustration and boredom, and the underlying issues such as the repetitive nature of the work and realisation of the size of the project, have the potential to become deactivating in their effects on motivation and performance. We noted the possibility of a slump in productivity and procrastination over PhD tasks during this phase. Managing negative emotions during the middle phase, including data collection, appears essential for maintaining motivation, avoiding a slump in productivity, and ensuring progress towards long term goals.

However positive emotions are also associated with this phase and can themselves counter the potentially deactivating role of some of the negative emotions. The excitement of building a body of data is a progress marker towards the ultimate goal of achieving the PhD, and is one factor that is likely to have an activating effect on performance and motivation.
End phase

The end stage of the PhD is also characterised by a mix of strongly felt negative and positive emotions. Negative emotions recorded included fear, frustration, anxiety, boredom, and panic; while positive emotions included elation and satisfaction. This stage for most of us was one of data analysis and writing up (although due to the nature of individual projects, some had advanced drafts of parts of the thesis by this stage).

During the writing up phase most of us experienced satisfaction and elation when we completed final drafts of the thesis chapters and eventually, the complete thesis. But on the way to achieving this some also experienced strong negative emotions (frustration and boredom) associated with the need to think and write about the project constantly. Fear of failure also emerged. Often this was based on concerns that the research would not contribute anything new to our particular specialty. This emphasises the need for supervisors to ensure that their students clearly understand the different ways in which it is possible to make an original contribution (cf. Phillips, 1994).

Anxiety arose in relation to a number of issues, for example, did the work really justify the conclusions made? It could also emerge if a PhD student felt that their work contradicted expert opinion in their field, and was a particular issue if candidates were questioning the established views of their examiners within their thesis.

Frustrations were often reported with respect to the relationship with, and tensions between the student and the supervisor. Usually these related to the usefulness of guidance provided by the supervisor, and aspects of feedback on thesis drafts. Problems were noted where the supervisor was not able to discuss issues in the thesis at the depth required because they were not sufficiently close to the research area themselves, or where they requested the inclusion of additional material (e.g. data analysis or literature reviews) or changed their mind about how to approach a particular problem. Frustrations also arose when students had to wait, for what they considered unreasonable periods, for supervisors to provide feedback and guidance on thesis drafts.

For those of us who have been the recipient of a scholarship, the end of funding could be associated with feelings of panic. But while this might be expected to have a negative and debilitating effect on motivation, the opposite, a strong motivation to finish, was apparent.

Although some of these negative emotions (e.g. boredom) that characterise this phase are potentially deactivating in their effects on motivation to complete the PhD, they may to a large part be countered by the mix of other positive, and negative but motivationally activating, emotions. At this stage the long term goal of the PhD is closer, which in itself can be highly motivating. However our experience suggests that some students do falter at this stage and it is not unknown for students to withdraw their candidature even in this final phase of the PhD. The support of an understanding and helpful supervisor can be critical.

Submission of the thesis was described as anticlimactic rather than celebratory, since it is surrounded by the completion of many mundane and administrative tasks. However feelings of relief, pride and elation at completing the task were also experienced.

An ongoing issue throughout the PhD noted by most of us was the difficulty of trying to explain what our PhD was about to friends and family. While each of us worked incredibly hard on our studies, we could still be labelled unfavourably. For example it was often implied that because we were still studying at university after so many years (i.e. including previous undergraduate programs), we must be somehow ‘bludging’ off society or family. It appears that many people still do not appreciate the benefits or value of a PhD.

Reflecting on workshops with postgraduate students

During the various occasions that we have presented our workshop to current postgraduate students, many of our participants have empathised with our experiences and have shared similar accounts. The overwhelming feeling in the room has always been one of great relief that other postgraduate students experience or have experienced similar emotional reactions to the PhD process: that despite the individuality of a PhD study, there are common shared experiences and feelings. It has been a privilege to be able to help facilitate this sharing process among postgraduate
students and to encourage self reflection by participants, especially when 'revelatory moments' have occurred. Some particularly striking comments from workshop participants include:

- a psychology student preparing to collect her data which would involve observations of and interviews with victims of domestic violence realising that she would need to take care to 'look after herself' emotionally during this demanding process;
- a science student on fieldwork in remote locations working very long hours alone (having had the frustration of not being able to attract volunteers to accompany him) who found himself feeling slightly 'crazy' and deprived of human company;
- the frustrations and self directed anger experienced by a student who set off on a major field expedition only to discover when they got there (a whole day's driving later) that they had left vital equipment back at the university and had to return and start all over again; and
- a 'mature' age student returning to study after a number of years in the workforce who realised that it would most helpful to find a mentor (not necessarily from their discipline area) to help them adapt to and progress through the PhD process.

**Strategies for managing emotions**

Our preceding discussion provides a composite self reflective record of the range of emotions experienced during the PhD process by our study group and of participants in our workshops. All individuals responded in their own way to the challenges of the PhD, depending on their own abilities and self efficacy, but common themes can be recognised.

The PhD process is associated with varied and changing emotional states. The positive emotions we described previously are not likely to cause problems on the way to achieving a PhD as the main goal. Negative emotions are potentially a danger, but are not always a problem. In some circumstances they can result in an increase in motivation. However we believe that students need to be aware of those negative emotions that deactivate from the task and long term goal of the PhD.

The second objective of our study was to develop a suite of approaches for managing the problematic emotions during the PhD process with the aim of achieving more successful outcomes. The strategies suggested developed from several sources:

- reflection by the six participants in our study as to how we managed emotions, or think we could have made our emotions work better for each of us as we did our PhD;
- discussions amongst the six of us; and
- additional contributions from the various postgraduate workshops we have conducted at Murdoch University.

The strategies suggested include some in which the onus rests with the student, but there are others which require inputs from individuals other than a postgraduate student themselves. These inputs may be from peers, the supervisor or other individuals. The supervisor has an undeniably important role in the management of the student's emotional responses (particularly as some of the emotional responses will be related to aspects of the working relationship that is developed). And it is important that supervisors as well as students are encouraged to recognise and deal with the emotional aspects of the PhD.

Although the responsibility for many of the following actions rests ultimately with the student, the supervisor has an essential role in suggesting one or more of the following strategies as they see fit:

- Postgraduate students should be encouraged to participate in forums and discussion groups with their peers. These may also involve the supervisor(s). Sharing experiences and ideas is beneficial both emotionally and intellectually. It helps to break down feelings of isolation, and shared experiences allow a student to realise that their experiences are a normal part of the PhD process. The value of self reflection and discussion groups/forums has been noted elsewhere. Burnett (1999) describes the advantages of a meeting as a collaborative cohort for students who were at the 'all but dissertation' status in the coursework/research postgraduate studies. These included reduced isolation for some students, a greater likelihood of completion, and skill and knowledge
acquisition especially for writing and editing. The benefits to postgraduate students of self help and peer support groups (Phillips and Pugh, 1994) and supervisory groups (Elphinstone and Schweitzer, 1998) have also been recognised.

- Talk to experts from the research area and, if it is appropriate within the structure of the project, publish journal papers during candidature (but this won't always be possible). Both will help to reaffirm that what a student is doing is important and interesting, which should help with motivation. They are also a good source of feedback on the direction and progress of the research.

- Avoid working at home. Feelings of isolation may be reinforced if a student works at home most of the time. However, having to share offices with other postgraduate students at the university seems to be the norm, and these environments can be noisy and distracting, reducing the students' capacity to be productive. Working at home then becomes more attractive. If this is the case, be aware of isolation issues; if they emerge take measures to counter them.

- Make up a timetable for major activities and milestones, including both academic tasks and administrative requirements such as progress reports. A timetable helps to provide motivation and a sense of direction. It also allows progress towards the long term goal of the PhD to be measured. The timetable should be realistic, and a student should be encouraged to keep to it, perhaps rewarding themselves if they do.

- Take breaks and holidays. It is important to make time for breaks from the PhD, so include them in the timetable. Holidays allow for relaxation and rejuvenation. A break from 'the grind' and standing back a little from the project may have the additional benefit of producing new ideas or inspirations. If the routine has lead to feelings of boredom, or there is a tendency to procrastinate over the PhD (as one of our participants noted "cleaning the fridge, garden, office etc is much more appealing than writing") then set aside a specific time to do something different or rejuvenating, before returning to the more 'mundane'. Rudd (1985) commented that some students work too hard and "might have been more successful if they had eased up a little".

- Choose examiners you suspect may be supportive or accepting of your thesis findings and approaches.

- Be ready to adjust the explanation of what you are doing in your PhD project according to your audience. Have a simple explanation as well as a more detailed answer. The simplification of concepts and emphasising practical benefits of the project can be helpful; eg. describing it as a regular job avoids embarrassing or uncomfortable situations and can overcome the tendency to be labelled as being in an 'ivory tower' or a 'boffin' or other similar derisory comment.

Many of these strategies apply equally to field work and data collection activities. Some additional recommendations include:

- Carefully plan and organise field work well in advance of each trip. This way at least some of the potential frustrations can be avoided. Plan budgets, arrange vehicles, food and clothing, make equipment lists (check equipment off as it is packed) and ensure that all equipment is working properly.

- Be prepared for possible frustrations when methods are trialed. Initial methods or techniques may need to be modified to make them more effective or efficient.

- Have a timetable for data collection and keep to it. As with the PhD more generally, this provides a framework for action, and may reduce procrastination.

- Socialise while on field or data collection trips. This may be achieved by living in shared accommodation, through contacts with local staff or organisations associated with your research, or even visiting a local pub occasionally. Having a friend or relative along can really help, and can be a real bonus if they are able to assist with the research as well. But avoid taking along anyone who is likely to be a distraction from your work eg. if they are likely to become bored waiting around whilst you engage in data collection activities and put pressure on you to hurry up or stop work altogether.
- If the field trips are lengthy, timetable some time off to do something not related to the research. As with taking holidays during a PhD, it is important to relax and rejuvenate.

We suggest that a critical precursor to the implementation of any coping strategy is the awareness that emotional highs and lows are a normal aspect of the PhD process. We believe that it is important that both postgraduate students and supervisors are made aware of the issues surrounding these emotions.

Supervisors need to be aware of how their own actions and interactions can in fact be a part of the 'problem'. Issues surrounding communication, academic pressures, and supervisor availability may translate into emotional responses in students. Grant and Graham (1999) stress the important role of supervision and its quality, and consider it vital that students have an active role in the supervision process, despite the marked power differences. Furthermore, the supervisor needs to fulfil their academic responsibilities appropriately, eg. by providing feedback and guidance on thesis drafts within an acceptable time. Maintaining clear communication is also vital, a point stressed by Phillips (1994) with the caution that misunderstandings are very common.

However there is also a need for open communication about emotions. A student needs to be honest with their supervisor about their feelings and their progress. The supervisor needs to be able to provide guidance, encouragement, and strategies. Emotions also need to be seen, as a way of acknowledging the many different challenges of the PhD (O’Leary, 2001).

Negative emotions may remain, despite the use of many management strategies. Self reflection on the causes of these emotions may help the individual to deal with them. As Parsons (2001) comments, finding ones own strategies to deal with feelings is positive, and a good training for the professional life that would follow a PhD.

It is important to note that some of these issues may have been addressed indirectly in the grey literature in the form of university postgraduate student surveys. Such surveys often fail to ask specific questions about emotional issues although these may be included in student responses. Our main purpose here is to promote discourse on this issue through an exploratory self reflection on emotions in the PhD process. Although the study involved only the reflections of a small number of people, the findings have been supported by other's experiences in our workshops and the available literature. In the future modified postgraduate student surveys could be used as a tool for exploring this issue further and obtaining quantitative data on PhD student's experiences with emotions during their candidature.

Conclusions

The research has examined the role of emotions in the PhD process through a collaborative self reflective study, and subsequent further analysis and discussion through sharing in workshops. Despite different personal backgrounds, and widely different requirements of the PhD projects we recorded numerous underlying themes common to the participants. Emotional swings were experienced by all candidates. Even those for whom the PhD was overall a very positive experience, some negative emotions were encountered in relation to their study. We suggest that there is strong need for postgraduate research students to become aware of their own emotions and the particular role of these in their own PhD; this requires self reflection. We encourage identification and amelioration of potentially problematic negative emotions through the various management strategies outlined in this study.

Finally, it is clear that the PhD supervisor has multiple roles in the management of negative emotions in their candidates just as candidates have roles in their own self regulation and management. They should encourage their student to be honest about their feelings, and acknowledge these emotions as part of the PhD process. They also need to be aware of their own role, both directly and indirectly, in the creation of these emotional responses, and to be prepared to modify their own behaviours accordingly. Thus both PhD supervisors and candidates can benefit from self reflection on the role of emotions in the PhD process.

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References


