Linking academic emotions and student engagement: Mature-aged students' transition to university

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Abstract

Research into both student engagement and student emotions is increasing with widespread agreement that both are critical determinants of student success in higher education. Less researched are the complex, reciprocal relationships between these important influences. Two theoretical frameworks inform this paper: Pekrun's (2011) taxonomy of academic emotions and Kahu's (2013) conceptual framework of student engagement. The prospective qualitative design aims to allow a rich understanding of the fluctuating and diverse emotions that students experience during the transition to university and to explore the relationships between academic emotions and student engagement. The study follows 19 mature-aged (aged 24 and over) distance students throughout their first semester at university using video diaries to collect data on their emotional experiences and their engagement with their study. Pre and post semester interviews were also conducted. Findings highlight that different emotions have different links to engagement: as important elements in emotional engagement, as inhibitors of engagement, and as outcomes that reciprocally influence engagement. Two key conclusions can be made. Firstly, student emotions are the point of intersection between the university factors such as course design, and student variables such as motivation and background. Secondly, the flow of influence between emotions, engagement, and learning is reciprocal and complex and can spiral upwards towards ideal engagement or downwards towards disengagement and withdrawal.

Key words: student engagement, academic emotions, transition, mature-aged, distance

Linking Academic Emotions and Student Engagement: Mature-aged Distance Students Transition to University

Student engagement is widely recognised as important in higher education. A growing body of research shows engagement is positively associated with desirable student outcomes such as achievement, satisfaction, and retention (Kuh 2009; Trowler and Trowler 2010). Equally, increased theorising and researching of emotion in education means its importance for learning is no longer disputed. Little has been done, however, to explore connections between these two fields. The current study aims to contribute to this gap. Focussing on mature-aged (aged 24 and over) distance students, the project follows students throughout their first semester at university and aims to create a better understanding of the antecedents of academic emotions and to understand how different emotions influence student engagement.

Emotion

Research on emotion in education has grown exponentially in the past decade. As Askham (2008, 94) points out, there is an "emotional intensity attached to the experience of learning that is often overlooked". The current research takes a component process view, defining an emotion as a multifaceted phenomenon with coordinated changes in most or all of five subsystems: physiological, cognitive, subjective feeling, expression, and action tendency (Scherer 2005). According to Reisenzein and Döring (2009), emotions have three properties: immediate awareness, a phenomenal quality, and intentionality. Importantly, emotions are subjective, stemming from the individual appraisal, conscious or unconscious, of the situation (Fredrickson and Cohn 2008).

The current study focuses on academic emotions, those linked to learning, instruction, and achievement (Pekrun et al. 2002) that influence all stages of the learning process (Efklides and Volet 2005). In particular, the transition to university is recognised as an emotional time for students (Christie et al. 2008). Early research on emotions and learning was largely limited to negative emotions, in particular, test anxiety (Pekrun et al. 2002). More recently, recognising how critical other emotions are to learning, researchers have explored a wider range, including positive emotions such as interest and enjoyment (Ainley 2007; Pekrun and Linnenbrink-Garcia 2012).

Pekrun (2011) summarises the diverse ways that emotions affect learning, through attention, memory, motivation, and self regulation. Drawing together the diverse range of academic emotions, his taxonomy (see Table 1) has three dimensions: valence (positive or negative), physiological activation (high or low), and object (task or outcome). Different categories impact on learning in different ways; for example, while pleasant activating emotions such as enjoyment and pride may have a positive impact on motivation and performance, pleasant deactivating emotions such as relief and relaxation have a potentially negative effect (Linnenbrink 2007).

Table 1

Taxonomy of Academic Emotions (Pekrun, 2011, p. 25)

	Positive		Negative	
	Activating	Deactivating	Activating	Deactivating
Task/Activity	Enjoyment	Relaxation	Anger Frustration	Boredom
Outcome	Hope Pride	Contentment Relief	Anxiety Anger Shame	Hopelessness Disappointment

Emotion and engagement

A range of understandings of engagement are evident in the literature: a behavioural perspective defining engagement as student behaviour and effective teaching practices (Kuh et al. 2008); a psychological perspective depicting engagement as a multidimensional individual state (Fredricks et al. 2004); a sociocultural perspective highlighting the socio-political context (Mann 2001; Zyngier 2008); and finally, a constructivist approach focussing on student identity and perceptions as well as the educational context (Bryson and Hardy 2012). Kahu's (2013) framework of student engagement draws these perspectives together, embedding student engagement within the sociocultural context and aiming to more clearly distinguish between student engagement, its antecedents, and its consequences.

Pekrun and Linnenbrink-Garcia (2012) suggest that engagement mediates the relationship between emotions and learning and Kahu's (2013) framework enables a clearer understanding of how these relationships might function. Reflecting the ways that different emotions impact on learning, the framework shows how different emotions play different roles in student engagement. Firstly, positive task-focussed emotions of enjoyment and interest are vital elements of emotional engagement, one of the three dimensions of engagement along with behaviour and cognition. Secondly, student engagement has both academic and social consequences, including positive outcome-focussed emotions such as pride and satisfaction. Outcome-focussed emotions also have a reciprocal relationship with engagement, for example, pride can increase the student's engagement with the next task. Finally, the framework recognises that engagement is influenced by a wide range of both structural and psychosocial variables stemming from the university, for example policies and teaching practices, as well as the student, for example their background, skills, and self efficacy. Task focussed emotions such as anxiety, frustration, and boredom play a central role here.

Mature-aged students at university

The conceptual framework highlights the diversity of student experience and the need to study sub populations. One important population is mature-aged (over age 24) students who study by

distance, who make up approximately a sixth of bachelor degree students in New Zealand (Ministry of Education 2011). These students tend to be highly engaged but have different patterns of engagement compared to younger students (Chen et al. 2008; Southerland 2010). For example, a study of first year students found older distance students worked less with other students but had a greater capacity to integrate their learning with work experience (Kahu et al. 2013).

However, despite their high engagement, older students have higher first year attrition rates (Ministry of Education 2011). This may be because studies tend to use a measure of engagement that omits the emotional dimension and research into mature-aged students' transition to university has highlighted its challenging and emotional nature (Askham 2008; Baxter and Britton 2001). In particular, emotions such as anxiety and fear of failure are common, triggered by previous negative learning experiences (Stone 2008), a lack of study and technology skills (Murphy and Fleming 2000; Tones et al. 2009), and a sense of alienation in the predominantly young environment (Moore 2006; Read et al. 2003). The present study explores the emotional experiences of mature-aged distance students in New Zealand during their transition to university and examines how those emotions relate to their engagement.

While a few researchers have theorised the relationships between academic emotions and student engagement, few empirical studies have explicitly explored those links. In addition, much of the past research into academic emotions has been correlational, using survey tools such as the Academic Emotions Questionnaire (Pekrun et al. 2002). While this snapshot approach enables the identification of potentially causal relationships between emotions and learning outcomes, it is less effective for understanding the nature of the emotional experience for students, how their emotions change throughout the semester, what situations elicit different emotions, and how those emotions are related to their behavioural, emotional, and cognitive engagement. The present study aims, therefore, to complement and add depth to our current knowledge by using a prospective qualitative design to better understand the links between academic emotions and student engagement.

Method

Participants

Nineteen first year students participated in a semester long project on student engagement. With the exception of gender (males were underrepresented) the sample was broadly representative of the population. There were four male and fifteen female participants aged between 25 and 59. Fifteen were European New Zealanders, five were Maori, two Asian, and one Cook Islander (some participants recorded multiple ethnicities). Participants were diverse in terms of family structure, occupations, and geographical location. Four were taking a full time student work-load (four courses), twelve were enrolled in two or three courses, and three were taking one course. The students were enrolled in a variety of first year distance courses, including education, business, humanities, science

and social science subjects. Most courses consisted of a mix of print and digital resources supported by a Moodle based learning management system including asynchronous discussion boards. Use of the discussion boards varied; for example, some were closely monitored by staff, some were well used, some were very quiet. A few of the courses had a short (two to four days) on campus component and others a few synchronous webinars. All the students had online access to the learning environment at home for most of the semester, although one had just dial-up access.

Data collection and analysis

Before the semester, semi-structured interviews focussing on preparation, expectations, and motivations were conducted with participants and their families (11 partners and 10 children aged over five). Participants then recorded weekly video diaries: 16 used Skype from their home computers while one student without broadband access used a handheld camera. Diaries are a useful tool for exploring student emotions (Hascher 2008) and video diaries in particular have the potential to provide a more immediate and personal account of the student experience (Willig 2001). Two students chose to complete written diaries. The participants were asked to talk about their thoughts, feelings, and behaviours, and about what influenced their engagement with their study. To encourage deeper reflection, the first author listened to each diary and responded by email with prompts for the next entry. Four students withdrew from study early in the semester and were interviewed by telephone. At the end of the semester, 13 students and their families took part in follow up interviews; two were unavailable.

The data from all the participants, including those who dropped out of their study, were analysed with a thematic interpretive approach that takes language as a neutral expression of participants' experiences but takes account of social context (Braun and Clarke 2006). The emotions the students experienced were coded as were the context, focus, and effects of the emotion.

Findings and discussion

The findings illustrate the complex relations between academic emotions and student engagement. While the students talked about emotions in relation to other events in their lives (for example guilt for not spending more time with children) this analysis is limited to academic emotions: those directly related to study. Students experienced the full range of emotions, fluctuating rapidly, as was evident in the use of spatial metaphors such as a rollercoaster and a seesaw: *"I have had the highest of highs and then the lowest of lows" (Natasha).* This parallels previous work on the 'emotional rollercoaster' that is the transition to university (Christie et al. 2008).

Some emotions within Pekrun's (2011) taxonomy of academic emotions, such as enjoyment and anxiety, were common while others such as hopelessness and relief were rare. As per the taxonomy, academic emotions focussed on study tasks or study outcomes and were positive or negative. The distinction between activating and deactivating positive emotions, however, was much

less clear. For example, when Scott says: *"I got 67%, which I was reasonably happy about"*, is this activating pride or deactivating contentment? One of the challenges of emotion research is the hundreds of emotion words which makes categorising participant emotions challenging (Saldaña 2013).

The findings highlight that the students link their different emotions to engagement in different ways. Enjoyment and interest were strongly evident and were central to emotional engagement and seen as an important influence on behavioural and cognitive engagement. Also commonly experienced were the negative emotions of boredom, anxiety, and frustration which, at times, inhibited engagement. Finally, study outcomes elicited pride and disappointment and these were described as having a powerful reciprocal effect on engagement, often through their influence on self efficacy.

Emotional engagement: interest and enjoyment

The power of interest to emotionally connect students with the course content and therefore make it easier to do the study and learn the material evident. For many, a love of learning, despite negative schooling experiences, was a key motivation for returning to study: *"I hated school, ... I liked learning, it was the going to school" (Lexi)*. The notion of a "love of learning" was articulated through a metaphor of knowledge as nourishment for the mind:

> *Melissa: I am so hungry for knowledge, I'm loving, absolutely loving learning.*
> *Charlotte: I like to learn... I think it keeps your brain alive.*

Interest involves alertness, attention, and concentration and is a relation between a person and the task or topic (Ainley 2006). Enjoyment, a separate but related emotion, arises from a combination of interest and a feeling of competence for the task (Pekrun and Linnenbrink-Garcia 2012). Dewey (1933) described this ideal combination as serious play. For these students, this emotional engagement was triggered by a range of connections with the course content. For those seeking advancement in their current job, links with their work were important: *"The reason it was interesting was because that's what I've done for the last 20 years so it actually made me go, oh yeah, is that why that happens" (Scott)*. For students developing new careers, the future application of knowledge sparked interest: *"I've been really excited about the soil paper and I'm like Oh, Oh, I can <u>do</u> stuff with this and it fits with my values... soil conservation, I could help farmers" (Maria)*. Interest wasn't just sparked by work however. For some students, personal interest in the topic triggered enjoyment for the learning: *"I love history, and so just having a little test or a taste of anthropology was really good, really good" (Toni)*. For others, connections with broader life experiences were important: *"I enjoyed the human health and development; it definitely is something that I use within my life and with bringing up the children" (Samantha)*.

Interest and enjoyment positively influenced both behavioural and cognitive engagement. Firstly, it increased perseverance: *"I want to learn about it. That's the thing that keeps me going, the*

thing that keeps me wanting to read and learn about it" (Toni). It motivated them to work harder and do better, to behaviourally engage with their study*: "I'm really really trying hard to do well because I'm enjoying the paper and I'm enjoying the ideas" (Maria).* In addition, interest motivated students to extend their learning beyond the prescribed content: *"I'm going further into a topic... I'm interested enough to keep reading beyond the question" (Daniel).*

Secondly, the interest triggered cognitive engagement, students found it easier to understand and remember information that was interesting to them:

> *Melissa: That I find it quite fascinating and interesting certainly helps me with my learning because my brain is going 'ok I've just read about this' So I'm making the link between what I am studying and what is actually in front of me.*

Being interested, enjoying the study, and therefore working harder and learning more effectively represents the highest level of engagement. This triggers a sense of satisfaction and pleasure that is intrinsically motivating. This positive spiral is clearly described by Melissa:

> *I am absolutely loving my study. School goes back tomorrow and I can't wait. I'll be up early, my head will be in that computer and I'll be head down and bum up and rather than that being a chore, I just love it. My brain just needs feeding (laughs). The more I learn, the more I want to learn. It's like I'm addicted to it almost.*

These findings support previous work illustrating the role of interest in encouraging persistence (Sansone and Smith 2000) and intrinsic motivation (Bye et al. 2007). The findings also support Fredrickson's broaden and build theory, which argues that these positive emotions have an upward spiralling effect, motivating exploration, broadening people's thought-action repertoires, and leading to expansion of the self (Fredrickson and Cohn 2008).

The importance of interest meant that choice was a critical determinant of student engagement. Students didn't work as hard on compulsory courses as they were less likely to align with their interests and so were less enjoyable. Similarly, the ability to choose a topic of interest, increased motivation and engagement:

> *Kaitlyn: I am studying to be a teacher so it was clearly a matter of interest for me to select that particular article...planning for this assignment has been quite exciting, almost a feeling of ready to go, the anticipation of a new challenge.*

Emotional inhibitors: boredom, frustration, and worry

The commonly experienced negative emotions were boredom, frustration, and worry. Even the most passionate learners could lose interest depending on course content and design*.*

> *Melissa: History and statistics I find incredibly boring because it's not something I can apply… I do get bored with just having to remember data for the sake of remembering data".*

Lexi describes how this impacts on her engagement*: "The moral stuff was just as boring as cardboard and it was just really hard to connect to."* Boredom was consistently associated with lower

behavioural engagement: procrastination, fewer hours spent studying, and reduced effort. It was also associated with lowered cognitive engagement, learning was more difficult: *"Ohh my god, I just cannot absorb this information, I'm not interested" (Daniel).*

Frustration was triggered by teaching practices and university processes. Poorly designed course materials and high workloads were key sources of ongoing frustration that was powerful enough to override strong student interest:

> *Maria: It's funny because I really thought that particular paper with the high workload was going to be one that I was really interested in. And it's not, I'm not that excited by it any longer. I think if they just cut down the workload or whatever it would be a more enjoyable paper to work with.*

Anxiety was common with students describing themselves as nervous, worried, scared and, more extremely, overwhelmed, terrified, and freaking out. The focus of these concerns shifted throughout the semester. In the early stages, anxiety about the unknown was paired with excitement from interest in the topic: *"When I'm not being panicky about how it's going to go, when I can actually stop thinking the anxiety thoughts related to it and just go, wow, I'm finally studying psychology! I'm going to love it!" (Sarah).* Most of the students had been out of education for years and so much of their early worry stemmed from not knowing what was expected and how to study: *"That's what I'm freaked out about, is how you actually do it" (Vee).*

As the semester progressed, worry focussed on specific tasks, often assessments, but also other aspects such as time management and participating in discussion forums or campus courses. Lack of recent experience continued to be a problem: *"I knew I was going to get stressed before the exam, crikey first time I'd had an exam in 30 something years" (Jeremiah).* Academic writing was a major source of anxiety for many students, including fears about referencing: *"the whole plagiarising thing scares the shit out of me. And I'm too scared to paraphrase... my fear is that I might think I'm paraphrasing, when actually I'm quoting" (Natasha).* Melissa attended a day long course for new students where the focus on academic writing had a powerful impact:

> *I went there feeling very confident about what I was doing and I left there feeling very unconfident. And feeling very, um, dumb actually (laughs)… I'm going to struggle. And it's worrying me, it's worrying me a lot. I have an understanding about what I'm studying but, I'm really nervous about the technical side of things, you know like academic writing, command words.*

This illustrates the importance of academic self efficacy, a student's perceived confidence in their ability to adequately complete a task (Schunk and Mullen 2012). The students appraised the task ahead and if they doubted that they were capable of doing what was required, this triggered worry. Not knowing what was expected compounded this. Past research has also highlighted the important role of self efficacy. High self efficacy is seen as necessary for enjoyment and enthusiasm while low

self efficacy can trigger negative emotions for a task, such as boredom and frustration, which impact negatively on engagement (Goetz et al. 2008; Pekrun et al. 2010).

For most of the students, anxiety reduced as they progressed through the semester; they gained an understanding of what was required and also evidence of their capabilities. This made them feel good and increased their motivation for the next task. Daniel explains this cycle:

I hadn't written since I left school after fifth form and went in the army… and then having to write that, I was quite nervous. I was like, oh my god, 1500 – 2000 words, oh my lord (laughs)… when I got my first result back and I got a B- it boosted me quite a bit, I was like oh my god I actually can write still.

Contact with other students was another important antecedent of anxiety. Worry about being judged negatively prevented some from participating in online or campus course discussions. At times this was linked to their age: *"I don't want to, you know, I'm older I don't want to come across as being stupid" (Maria).* Students also compared themselves to others and this influenced anxiety levels. For example, initially Melissa doubted herself because others students came across as 'really intelligent'. Later, online comments from struggling students boosted her:

Lost my confidence, lost my mojo. Because the level of people that were there they seemed to be really intelligent and they seemed to be able to pick up technically really quickly and academically what was required.

Some people are struggling more than me... I feel sorry for them because I can hear they're struggling but I'm saying it doesn't make me feel so dumb...when you see other people struggling, it doesn't feel quite so heavy, heavy on your shoulders. You don't feel quite so isolated.

Other students also found distance study an isolating experience at times. Bird and Morgan (2003) suggest that connecting with other students can help to normalise and thus diminish fears and that the lack of such opportunities for distance students can be problematic. The benefit of online discussion boards was evident in the current study with many of the participants feeling reassured by reading about other students' experiences, problems, and grades. As Jeremiah says, *"I'm not necessarily going through anything that nobody else is going through. It's not unique. It's, um, it is very reassuring".* A few, however, commented that online contact is not as effective as face to face: *"I know you've got the websites and things like that, and the forums, but it doesn't feel the same for me" (Samantha).*

Similar to previous studies, the effect of frustration and worry on engagement varied: anxiety and anger can reduce intrinsic motivation and subsequently effort, or it can trigger greater effort in an attempt to avoid failure (Pekrun and Linnenbrink-Garcia 2012). In the current study, the length and depth of the emotion were important. Short term frustration from a passing problem appeared to have

little or no impact on student engagement. A certain amount of anxiety, however, increased motivation and led to greater behavioural engagement:

> *Natasha: I've got assignments on two, three, four, of the courses that are due in the first week of April. And quite frankly at the moment I'm a little bit daunted as to whether or not I'm going to get them done. Having said that, I think that fear gets me moving a bit better.*

The motivating role of anxiety is well illustrated by Toni who, after getting a higher grade than expected on her first essay found she worked less hard on the second essay: *"It's because I'm not worried about it this time round. I'm just very, ah, blasé about it. I feel, you know, it's stress. I felt better being pressured, pressurised in the last assignment than now".* However, while moderate anxiety can be valuable, at the other extreme, if anxiety was too high and self efficacy too low, the fear could become paralysing and prevent the student from engaging: *"I didn't submit the assignment...I just freaked out. I just really didn't do it" (Bex).*

The effect of chronic anxiety and frustration, usually from university factors such as poor course design, was more consistent, impacting negatively on behavioural engagement: *"I didn't know what the hell was going on with my paper ... I was just like oh I'll flag it, I'll just hopefully pass it, you know" (Daniel).* For some students, ongoing frustration led to the ultimate disengagement, withdrawal from the course: *"It was just frustrating me too much, and then I thought you know what, I can do without this, it's making me feel crap about studying" (Sarah).* This illustrates the idea that with ongoing problems negative emotions can generalise as moods and feed back into the learning situation (Linnenbrink and Pintrich 2002).

Emotional outcomes: pride and disappointment

Outcome-focussed emotions also impacted on engagement. Students experienced pride and satisfaction from grades, from achieving milestones such as submitting an assignment, and from coming to grips with a difficult module. Receiving their first grade was an emotional time for all; it was evidence that they could do this: *"It just made me feel, oh gee I'm still able to do it. That's good. You know. Especially getting older" (Toni).* If they felt they had done well, the pride increased motivation and self efficacy which led to greater behavioural engagement in the next task. This is well illustrated by Jeremiah who was delighted to earn a B+ on an essay:

> *The next few days at least, every time I opened up one of my books or tried to figure out a question or whatever it might be, it was a case of, 'oh I know I can do this'. I had a more positive attitude to what I was approaching, it was like, oh okay I know I can do this. I did that, I can do this.*

As mentioned earlier, Toni was the exception. While she was proud of her mark, rather than being motivated by it she became complacent and found it hard to get going on the next assignment. This highlights the individual subjective nature of emotional experiences.

Grades also often triggered disappointment: *"I got 25 out of 40 so 62%. I was really disappointed with that and thought that I probably would have done better"* (Samantha). Such disappointment could reduce behavioural engagement: *"I struggled to accept it for a couple of days and didn't feel like doing anything"* (Natasha). A particular issue with grades that triggered disappointment and frustration was the university's attention to detail regarding academic writing and referencing. Some students struggled with these skills and were frustrated when they felt they were demonstrating knowledge in their assignments but lost marks for writing:

> *Natasha: Because the topic is the media, not academic writing…so if I'd missed the mark entirely on the content, I could understand a low mark, but the fact that I was spot on… it did feel like a real slap in the face.*

Whether students were proud or disappointed, and therefore their future engagement, depended on expectations. For example, Jeremiah was pleased with a C+ grade whereas Lexi was initially disappointed with an A: *"I wasn't overly happy. I thought I could have done better"*. Expectations stemmed in part from past learning experiences:

> *Charlotte: I am a total perfectionist, and coming from a background, from flying, we were always pushed so hard to aim for 100% in theory subjects, it felt that anything less than an A- on my assignment was like a failure.*

Their interests and strengths were also important. For example, Vee was *"aiming for 50%"* on her essay assignment and *"literally jumped for joy"* when she got 70%. However, she was disappointed with 93% for the second assignment *"because assignment two was my forte. It was all spreadsheets. I actually enjoyed it. That's why I wasn't happy with 93%; I could have got 98%."* Perceived effort also influenced their emotional response to a grade. If they felt they tried hard but still did poorly then they saw little point in future effort:

> *Melissa: I got a C+. Which I know is a pass but I feel soooo disappointed because I put so much time, passion and energy into it … This next paper I'm not going to put as much into it… I won't mind getting a C if it reflects my input.*

Their lack of knowledge of university grading was important. Melissa was disappointed with 70% on her essay and it was only during the research interview at the end of the semester that she realised that this was a B+ grade:

> *Getting the 70% you see, I wasn't happy with that either. Because I'm used to, at school you see, going back to school days, I'm used to being that A B student... it might have helped me if I knew that 70% was a B, that would have psychologically helped me, but 70% I sort of saw as a C.*

Conclusion

Examining academic emotions through the lens of Kahu's (2013) framework of student engagement enables a greater understanding of the relationships between emotions and engagement.

As discussed, different emotions act as part of engagement, as inhibitors of engagement, and as outcomes which, in turn, influence engagement. It is recognised that academic emotions emerge from a transaction between the person and their environment (Pekrun 2011; Schutz et al. 2006) and this is reflected in the findings. Emotions are the point of intersection between university influences, such as teaching practice and course design, and student influences, such as academic skills and self efficacy. For example, interest and enjoyment occur when course content aligns with the student's life experiences. Worry also lies at the intersection of university and student, triggered by the nature of the learning task in relation to the student's skills and self efficacy. Finally, outcome emotions of pride and disappointment stem from university grades in relation to student expectations and past experiences.

Also clearly seen are the reciprocal relationships between student, emotions, and engagement. Interest and enjoyment influence engagement leading to positive outcome emotions, and these cycle back to further increase motivation and self efficacy, which further increase engagement. Similarly, frustration and anxiety can trigger disengagement, leading to poor outcomes and disappointment that reduce motivation and subsequent engagement. These relationships between motivation, affect, and learning are widely agreed to be reciprocal (Linnenbrink 2006; Meyer and Turner 2006) with Schutz et al. (2006) suggesting that, given the strength of the influences, it is difficult to consider them as distinct constructs. This complexity of reciprocal relationships is recognised within the student engagement literature with Zepke (2011, 9) recommending that student engagement is best understood as a "dynamic and non-hierarchical framework".

Greater awareness by institutions of the roles that academic emotions play in student engagement is vital. Understanding the antecedents of emotions and the impact on student engagement enables improved course design and institutional support. For example, the importance of interest highlights the need to give students opportunities to connect learning with life experiences. Equally, understanding the negative emotions stemming from low self efficacy and lack of academic skills (Murphy and Fleming 2000; Tones et al. 2009) suggests the need for greater information, guidance, and preparation for adult distance learners to smooth their transition to study (Bird and Morgan 2003).

The focus on older, first year students may mean that some of these findings are particular to that population. Student engagement occurs within, and is influenced by, the sociocultural context. In addition, as Brown (2000) reminds us, while we are born with the capacity to experience emotions, society shapes how and when they are expressed. More research is needed therefore to explore academic emotions and student engagement in other populations. In particular, the current study had only four male participants. This underrepresentation of men is compounded by a general reluctance of men to share their emotional experiences (Schwalbe and Wolkomir 2002). This was evident in the current study where the men's video diaries tended to have less rich emotional detail.

      The qualitative prospective design of this project enabled important insights into emotions and their relationships with student engagement. Corbin and Strauss (2008, 7) argue that "one cannot separate emotion from action; they are part of the same flow of events, one leading to the other" and this encapsulates the findings of this study: emotion is central to student engagement.

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