Recognising the expectations of mature age students, their value-adding, and enhancing of retention rates: A case study

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Abstract

Mature age students make up a substantial group within the larger University community. Adult learners enter tertiary education with many conflicting demands upon their study time. These obligations, though not exclusive to adult learners, include numerous working and personal commitments, such as family disruptions, years out of academic study, work commitments, even domestic chores and sporting commitments. However, mature age students when encouraged and valued for their unique skills and experience can not only add to their own learning, but can also have an influence on other students. They bring to the student body a wealth of knowledge and skills born of the workplace and their own life experiences. With appropriate coaching and handling, the mature age student can be an asset to the furtherance of andragogical teachings as well as an influence on reducing attrition rates. This paper reflects upon a first year course taught from Central Queensland University in the Occupational Health and Safety undergraduate degree program, utilising the contributions to teaching and course evaluations from students within the course and contemporary literature. Also highlighted within this study are the measures taken to embed the skills, knowledge and experience of mature age students in the course to assist all students to meet their learning outcomes. The findings of the study were that all students in the course found the bridging of the communication gap and the encouragement of mature age students to take a leading role in the course to be a positive move, leading to all students identifying strongly with the course learning outcomes. This was extrapolated to mean that students felt more connected with the program and saw value in completing the course.

Introduction

Adult learners are entering university education in ever increasing numbers, making up the majority of the student population in Australia (Richardson & King, 1998). With these particular students come special educational demands that need to be considered. Adult learners are rarely in a position to remove themselves from their day-to-day work and family commitments to immerse themselves in an on-campus existence (Kembler, 1999). Unfortunately because of this inability to

remove themselves from their environment, adult learners, particularly Distance Education students, find it difficult to develop a strong attachment to a particular campus, thus making it difficult for adult learners to build allegiances to a particular community of learning (Tinto, 1987). The difficulties for adult learners engaging can also be compounded by their doubt in their own academic abilities. Typical of these concerns were comments like these drawn from mature age students in the undergraduate foundation course *Introductory Health and Safety Risk Management* offered through the Occupational Health and Safety program in Central Queensland University in 2006:

> "… after 15 years of no study, I think I might need a hand"

> "I'm only one subject in so it's a long road ahead!"

> "I work about 60 hrs/wk so most of my spare time is spent at home, though Sundays I do play Touch (football). Now I have to find time to study … as well, wish me luck."

This sort of doubt by adult learners in their own abilities would seem to run contrary to the views proffered by Richardson and King (1998, p. 81) that adult learners generally exhibit approaches to learning more desirable than their younger counterparts. But in retrospect these doubts were few in number and quickly dispelled early in the course through encouragement and supportive overtones made to all students. In contrast the recent school leaver can often enter university life feeling more certain of their abilities in both their scholarly skills and knowledge. This was reflected in comments like this drawn from a recent school leaver in their first week of attending university:

> "I chose to study … because of my … scholarly performance …"

They can tend to see university education as an extension of their previous 12 years of scholastic endeavours. The arrogance of youth upon entering university takes the form of feeling that they can conquer the world. This was reflected in this comment by a recent school leaver, raised within the first week of attending University:

> "After the initial excitement of it all I've managed to settle down and started to get use to the place. Now I feel as though I know the place like the back of my hand."

In reality the recent school leaver is yet to encounter the real rigor of university education. Their expectation that university life is relatively simple and that all they have to do is turn up and acquire a qualification can be a somewhat inflated and bold opinion of their own abilities.

For both mature age students and recent school leavers, and a mixture of generations within these age groups, they commence their university degree with varying expectations, often unrealistic. Mature age students can tend to see their previous skills and knowledge of limited use to their further education, often playing down their own abilities. Recent school leavers are often bemused by this attitude and doubtful about studying alongside these grown adults. However, this doubt in fellow students' abilities is not all one way as reflected in the following comment made on 24 February 2007 with Trott, by an adult learner at a University Orientation for Distance Education students:

> "Do we have to work with school leavers in teams?"

It is most important to identify the expectations of the various age groups, and at the same time not destroy either student cohorts' confidence as an emerging academic. To advance these students as lifelong learners, educators must effectively utilise and amalgamate the skills and knowledge they both bring to higher education. To achieve this, these cohorts need to be provided with both hope and encouragement as the framework to which they can cling with confidence.

The focus of this paper will be those mature age students who undertook the foundation course *Introduction to Health and Safety Risk Management* offered as part of the Occupational Health and Safety undergraduate degree program at Central Queensland University (CQU) in 2006. The course is made available through the Faculty of Sciences, Engineering and Health. This is a faculty largely in its infancy being newly formed in 2006 as a result of the integration of two other faculties, the Faculty of Arts, Health and Sciences and the Faculty of Engineering and Physical Systems.

In 2006 this course was completely redeveloped one month prior to the commencement of term. This change in course structure and assessment came about for several reasons, foremost of which was the near complete change of the core teaching team for the Occupational Health and Safety program, with the exception of one senior lecturer. This change was enforced upon the program as a result of a key staff member relocating to another university, natural attrition, and non-replacement of staff. This upheaval in staffing was to be further exacerbated by reports from students that this particular course was failing to provide the foundational learning for the students.

The course profiles the process of risk management, as articulated in *AS/NZS 4360 Risk Management*, applying the process to both historical and contemporary disasters. This is further elaborated upon in the course learning objectives, where it is identified that upon successful completion of the course the student will be able to understand and apply the principles of risk assessment in a health and safety framework, define the terms utilised, identify and prioritise hazards and their identified risks in a variety of environments, identify human factors that contribute to a failure to effectively "manage" hazards, and participate as a productive member of a team in the development of a comprehensive response to a risk management case study (Central Queensland University [CQU], 2006).

The identified learning outcomes that the students should have acquired upon successful completion of the course were explicitly planned, as well as identifying both declarative and procedural knowledge (Health and Human Performance 1st year review team 2006, p. 12). Procedural knowledge being that described by Biggs (1999, p. 40) as "knowing how to do things" and declarative knowledge as "knowing about things."

The *knowledge* (cognitive) that the students would have acquired upon successful completion of this course would include the ability to:

- define the terms utilised in risk management, within a health and safety context, as outlined in lectures and on Blackboard (Bb) (*declarative knowledge*)
- distinguish human factors and design errors that contribute to failures (*procedural knowledge*)
- reflect on the feedback from fellow students and show evidence of ideas evolving through student interaction (*procedural knowledge*)

- contrast the various disaster scenarios presented in lectures and discuss them on Bb (*procedural knowledge*)
- analyse disasters for contributing failures, both human and organisational/physical design (*procedural knowledge*)
- generate reports that highlight the intrinsic and extrinsic failures that lead to the disasters (*procedural knowledge*)
- provide reports that summarise the learning that has taken place as well as corrective actions that may be considered for future scenarios (*procedural knowledge*).

The *attitude* (affective) that the students would acquire upon successful completion of this course would include the ability to:

- discuss their chosen disaster with others, both in class and online in a spirit of cooperation (declarative knowledge)
- listen to other students' comments with respect (*procedural knowledge*)
- participate as a productive member of a team in the development of a comprehensive response to a risk management case study (*procedural knowledge*)
- demonstrate a sensitivity to individuals and cultures (*procedural knowledge*)
- invite feedback from other students on materials submitted online with growing confidence (*procedural knowledge*)
- demonstrate self-reliance whilst working on their own (*procedural knowledge*)
- develop a questioning and inquiring attitude towards problems (*procedural knowledge*).

The *skills* (psychomotor) that the students would have acquired upon successful completion of this course would include the ability to:

- relate to other students, both online and in person (*procedural knowledge*)
- recognise one's own abilities and limitations (*declarative knowledge*)
- motivate and be motivated about learning a new process (*procedural knowledge*)
- utilise different methods of communicating, e.g., mind mapping (*procedural knowledge*)
- develop time management skills which will allow for appropriate communication as an effective team member (*procedural knowledge*).

The need to provide an opportunity for development of all individuals' learning outcomes within this course regardless of subgroup was the impetus for change.

This is the revamp of a large first year course creating an effective and inclusive learning environment that provided the potential to deliver appropriate learning outcomes for all students. This paper will describe the changes made to the course and the vital role that mature age students played in the learning process. How encouraging the recent school leavers to utilise the extensive body of knowledge encapsulated in the mature age student cohort within the course, both encouraged the recent school leavers to see the value of mature age student experience and knowledge, and the mature age students to see worth in their own knowledge and skills. Lastly, this is also a reflection on whether this modified curriculum in meeting student needs also assisted in reducing attrition rates.

The demographics of the course

The course provides core foundation studies in two CQU programs, *Occupational Health and Safety* and *Human Movements Science*. The course numbers for 2006 were 135 students (Toft & Trott, 2006). The breakdown of student numbers was 36 attending the weekly two hour face-to-face lectures on campus in Rockhampton, 8 attending the Bundaberg campus interacting in a synchronous manner with the Rockhampton class via a video link in Interactive System-wide Learning (ISL), and the remaining 91 students identified as flexible learners, taught predominately online via a computer mediated communication system (Bb). Within Bb the flexible learners were provided access to video streamed lectures within 48 hours of the face-to-face presentation. There was no mandatory requirement for the on-campus students to attend the lectures, so they could freely view the video link at a time of their own choosing, thus adding to the flexible nature of the course, adapting to the learners' needs and circumstances.

The make up of the class was predominately mature aged students and recent school leavers from the two previously identified core foundation study programs (Toft & Trott, 2006). The majority of students (57) were enrolled in the Bachelor of Human Movement Science (mostly recent school leavers); the second largest group were those enrolled in the Bachelor of Occupational Health and Safety (49), most of which were mature aged students. Due to the very flexible offering of programs at CQU, other students in the course came from a variety of diverse program areas, including business, education, accounting, engineering, human resources, and learning management. This broad range of program areas and prerequisite skills meant that effective engagement with all students would require the course be both flexible in delivery and generic enough to meet all student needs.

Learner focused

In the beginning a decision was made to restructure the course as to make the learning more flexible, focussing upon the learner's needs. The interpretation by Brande (1994, p. 2) best describes the thinking, defining flexibility for learners as enabling the learner to learn when they want (frequency, timing, duration), how they want (modes of learning), and what they want (that is learners can define what constitutes learning to them). This was particularly important as the course was to be taught with the potentially added burden of two lecturers in a co-teaching role, a senior lecturer and an early educator. Co-teaching in the sense that both lecturers would together actively develop the course and teach the course as a team, as opposed to each having sections of the course that they taught alone (Toft, Trott, & Keleher, 2006). This was to be a unique experience for the lecturing staff as the two had never taught together before, with the early educator coming direct from industry with limited tertiary teaching experience. The decision to co-teach, under the conditions identified, would normally be fraught with danger, but in this instance the sharing of experiences and knowledge was of great particular benefit to the professional development of the early educator.

Getting the mix right

Building bridges of communication and respect between generations was seen as a way of enhancing the learning experience for all, as well as encouraging an interest in further studies and lifelong learning. Every effort was made to reduce misunderstandings between mature age students and recent school leavers within online communications and face-to-face discussions in class. Mixing the

generations within teams for both assessment and study was identified as both a useful and positive approach to learning. It was also thought that by building enthusiasm and a thirst for learning, the added benefit would be a lessening of attrition amongst the student groups as well as modifying the perception of each other's worth to the course overall.

From the start the co-teaching team recognised the value of mature age students, their interaction and difference to recent school leavers was seen as a benefit to the course and encouraged. Likewise identifying the potential benefits to the mature age students of the recent school leavers' skills in computer usage was identified as a benefit to the group. The teaching team in developing appropriate learning would continue to encourage and draw upon both groups' abilities and needs throughout the term.

The adult learner has been much discussed by numerous researchers in the field of teaching and learning. Harper and Kember (1986) identified three reasons why mature age students show more desirable approaches to academic learning, including: mature students are more motivated by intrinsic goals; younger students acquire a surface approach to learning in the final years of secondary education; and that the prior life experience of mature students promotes a deep approach towards studying in higher education.

Some mature age students within this course were occasionally challenged by their lack of computer experience; poor typing proficiency; dislike for group work assessment; length of time for downloads on their home computers; voicing a preference for face-to-face lectures over computer mediated environments; and early in the course lacking confidence in working with computer mediated systems. Similar issues were raised by the recent school leavers but with fewer issues related to the use of the technology. This was to be expected due to the recent school leavers having grown up with computers and the Internet, and being very familiar with its usage. However, somewhat of a surprise for the adult learners as it would have been presumed that many would have access to sophisticated forms of information and communication technology in their workplace. With more acceptance and understanding of online work it was envisaged that the mature age students would become more comfortable with the computer mediated environment. However, a contradictory opinion to mature age students becoming more comfortable with the environment is that stated by Eisenbarth (2003, p. 12), in which he presumes that no matter how convenient not all adults have the ability, or want, to learn online, and without first assessing capabilities in the online environment, some will flounder, especially if support and mentoring are not offered. To account for this perceived difficulty with online communication the teaching team made every effort to encourage and support all students with all aspects of the course, from the computer mediated environment to the assessment and communication with the students.

Collaboration and cooperation driven—The mentors within

Assessment was based on an explicit expectation that the whole class could attain maximum marks if the whole class met the assessment criteria at that level, collaboration and cooperation to this end was encouraged (Toft, Trott, & Keleher, 2006).

The curriculum was designed with four items of assessment. The first piece was a "familiarising" activity within Bb. Students were given credit (weighting 10%) for venturing into Bb, visiting predetermined links and introducing themselves by creating a new discussion thread. Introductions at the start of term were helpful to all students in identifying their previous experiences and expectations for the course. At this point it became obvious that the previous experience and skills of the mature students would be important. Not more than once, the observation was made by a recent school leaver that "I don't have the sort of experience that they (mature age students) have." From this brief introduction the students could determine what skill sets each brought to the course and how they could align these skills with the assessment. Overwhelming as some of the work histories of the mature age students appeared to recent school leavers, they were encouraged to use this experience to their advantage in the assessment and in discussions held in the appropriate assessment forums. The intention was to use the skills and knowledge of the mature age students to "fill in the blanks" for all students, particularly those who had minimal life experience. A loose form of mentoring was encouraged, loose in that it was not one mentor having influence over one person or group; this was a non-specific collaborative structure, a building of community. The mature age students brought specific skills and experience, but all the while the mature age students and recent school leavers were reminded that the transfer of information was not one way. Recent school leavers brought a certain skill set to the group as well, familiarity with computers and recent study skills. As recognised in the development of this course and identified by Johnson (2001, p. 49), individual knowledge and collective knowledge should support each other (i.e. common knowledge vs. diversity). Further credit (weighting 10%) was allocated to all students for engagement on Blackboard that assisted their fellow students with their investigations.

The second assessment item was a formative piece where students were required to research and apply in context ("investigate") the risk management failures of an historical disaster of their choosing. Students were provided with a basic list of historical disasters and web links to some basic information on these disasters to get them started in their investigations. It was a blatant attempt to engage students by building on the popularity of the television drama series CSI (Crime Scene Investigation) (Toft, Trott, & Keleher, 2006). The students joined into teams or worked on their own to investigate a disaster then brought their findings back to the larger team (class) on Bb. The larger class then had the brief to help them build on their findings (and grades) by constructively criticising their work. The original investigator/s then reflected on the feedback and refined their work and submitted it to the lecturers (weighting 10%). This assessment item was formative in nature and students were encouraged to use the lessons learnt on the rest of the assessment items.

The third assessment item was the same task and process with a widened scope (weighting 30%). The process was modelled by the lecturers during class, i.e., unravelling the failures of risk management in high profile and diverse disasters with specific emphasis placed on one of the risk management steps each week (Toft, Trott, & Keleher, 2006). For both assessment items 2 and 3 students could submit their assignments using a genre of their own choosing, e.g., mindmaps, posters, reports or essays. These descriptive means of presenting information were also explained and modelled in class. This added to the flexibility of the learning for all, as previously described by Brande (1994, p. 2).

The final assessment piece was to compare and contrast the learning from a thoroughly investigated disaster, the Longford natural gas processing plant, South-

East Victoria, applying that learning to the Moura Mine disaster (weighting 40%). At this point the students had acquired numerous investigative skills and felt they could reasonably describe the potential failures of risk management.

Meeting their needs

The course delivered teaching methodologies both online and face-to-face. The differing needs of the learners from within these two teaching formats were substantive.

The design, construction and delivery of a meaningful online course that addresses the needs and motivations of online learners as well as face-to-face learners,was seen as paramount to the success of the course. The non-traditional learner is often drawn to online delivery due to convenience and flexibility. These non-traditional learners are historically described as adult learners being over the age of 25 years (Whisnant, Sullivan, & Slayton, 1992). The non-traditional learner is also described as being employed during class times, self-motivators, for various reasons they can not or will not be able to attend classes, homebound individuals, not having access to programs, or those who take courses for knowledge sake or for employment advancement (Charp, 2000). The mature age student would fit within this profile.

The three main elements that should be embedded into any well functioning online delivered course are technology, curriculum and instructor (Bedore, Bedore, & Bedore, 1997, as cited in Gibbons & Wentworth, 2001). The combination of face-to-face classes and online learning, and the often distinctly differing learners that are drawn to the two teaching formats would require greater emphasis on the skills of the instructor and an all encompassing curriculum.

Comparison is drawn between online learners and face-to-face learners, and the teaching theories of Pedagogy and Andragogy. As stated by Gibbons and Wentworth (2001, p. 1), pedagogy is the instructional approach based on traditional teacher-centred learning theory. Pedagogy's history is based around the instruction of children (Hiemstra & Sisco, 1990, p. 231). Andragogy, first termed by Knowles (1992, p. 12), is based on self-directed learning theory. As identified by Hiemstra and Sisco (1992, p. 232), andragogy is a system introduced for the teaching of adults. Due to the high presence of adult learners within the online learners, it was determined that their needs would be best met by an andragogical approach to teaching, as reflected upon in Table 1. However, the on-campus students, who were mostly recent school leavers, were to benefit from the presence of lecturers directing their learning in a more pedagogical fashion.

Table 1. Andragogical assumptions

(Source*:* Knowles 1992, p. 12.)

Assumptions		
About	Pedagogical	Andragogical
Concept of the learner	Dependent personality	Increasingly self-directed
Role of learner's experience	To be built on more than used as a resource	A rich resource for learning by self and others
Readiness to learn	Uniform by age-level & curriculum	Develops from life tasks & problems
Orientation to learning	Subject-centred	Task- or problem-centred
Motivation	By external rewards and punishment	By internal incentives curiosity

Due to the mixed nature of the face-to-face and online learners, an integrated and uniform approach to the delivery of the teaching was adopted. Face-to-face learners attended the lectures whilst collaborating with online students on their assessment problems, the online learners viewed the on-campus lectures via video streaming, but also benefited from the contribution of the on-campus students in Blackboard discussion forums.

Students, both on-campus and online, could not immediately see the benefit of requiring them to collaborate on Bb. Some on-campus students vented their displeasure at the perceived lack of choice in discussion forums and in course evaluations, and being forced to work with their online counterparts. However, the active encouragement of collaboration and communication amongst students in the discussion forums online was a means of identifying how the on-campus students input into the forums was important to everyone's learning. However some saw little value in this discussion if it was not linked to clearly defined learning objectives and was not assessable. It was this very feature of community building, however, which aided in establishing a feeling of belonging in the course, as evidenced by the informal teaching evaluations and typified by anecdotal feedback that espoused the friendships developed and the active participation of their fellow students (Toft, Trott, & Keleher, 2006).

Using the discussion forum, students provided unsolicited feedback on the structure of the course on a regular basis within the discussion forums. This feedback from students identified that they never felt more like they belonged at a university (Toft, Trott & Keleher, 2006). Students spoke of how they laughed, cried, and dutifully did all the learning activities that were asked of them, even singing out answers to questions from the online lectures. Students felt engaged in the course and developed a sense of ownership. Students felt comfortable enough to express their feelings, thoughts and alternative viewpoints to others in the course. This probably highlighted one of the major achievements of the course, i.e. the development of a connected community.

Discussion

This paper has explored the benefits of utilising the skills and life experience of mature age students, the following questions are advanced:

1. As a result of this collaboration of students did both the mature age students and recent school leavers meet their learning outcomes?

2. Were the mature age students able to integrate more seamlessly into this course, and ultimately university life, by taking a leading role in the course?

3. Do modifying student expectations play a part in student retention?

To all these questions there is a largely encouraging response. Reflecting upon the term, the feedback from the students, teaching and course evaluations and via personal communications with the students, the learning outcomes were largely met by the students. As identified by Toft, Trott, and Keleher (2006):

> When the term started the team had not planned on researching this experimental experience so formal data collection strategies with appropriate approvals were not put in place. However, the term proved to be very successful in developing peer collaboration and engagement as evidenced by the anecdotal feedback provided in informal evaluations completed by the students and these were confirmed in the formal teaching evaluations where the students rated (Likert scale 1–5) opportunities to interact and share ideas with other students highly (Rockhampton, 4.5; Bundaberg, 5; Flexible 4.8). The flexible students rated all facets of their learning experience between 4.3 and 4.9. The results of the teaching evaluation for on-campus students were variable (from 3.3 to 5.0). The students were scattered in their responses to curriculum related questions as the form of the teaching evaluation was not negotiable and congruent with a traditional curriculum approach rather than the problem-based approach taken in this course.

Specifically to the question were the mature age students more easily integrated into the course and ultimately university life, there were no formal findings. However, to this question the following feedback from specifically mature age students in the course is put forward:

> "I found the course rewarding and challenging … I like the why [sic] we (were) expected to express (ourselves)."

> "The interaction on the Blackboard … assisted me (to) not … be frightened of technology and also by working with a partner gave me the confidence to go out and learn more about technology."

> '… i [sic] really enjoyed being able to see the lecture on-line. I have studied at uni [sic] in the past, and although distance learning is harder, i [sic] found access to the on-line lecture a great help and well presented by all the lecturers."

Lastly, can modifying student expectations play a part in student retention? There is no clear answer to this question as no formal response on this matter was sought

from the students and with the changing of the curriculum it would be inappropriate to compare the 2006 course enrolment with the previous years' offering. However, encouraging comments were made by the students that they felt they had a valuable contribution to make. By having their previous skills and experiences acknowledged they contributed greatly to the learning of each other. Especially for the mature age students, the recognition and valuing of their skills highlighted their importance to the course overall.

The first assessment item asked the students to identify their expectations for the course prior to commencement. Students identified a mixture of comments from just wanting to get a pass, through to learning more about risk management. Student's expectations of the course prior to commencing were largely lethargic and typical of students that had poor expectations of enjoying the course let alone completing it. Upon completion of the course the unsolicited online comments were positive and attributable to a student group that saw a bright future. If positive feedback and encouraging statements to fellow students are signs of students less likely to withdraw from future studies then the teaching team took heart from this approach, and would encourage collaboration between the age cohorts, as a useful means of reducing attrition rates.

Conclusion

Despite the previous staffing shortages the program was successful, at least in part, due to the strong commitment of the current academic staff in maintaining a quality program of offerings. The program is home to many innovative practices supported by a strong culture of research and teaching and learning scholarship.

The one aspect of the mature age student's personality that was clearly addressed in this course was the need for respect of age and life-experience. By encouraging the mature age students to take on a leading role, the mature age students were identified for their personal knowledge and skills. From this demonstration of trust the school leavers were given insight and an appreciation of the skills they brought to the course. This aided the two major student cohorts within the class, the mature age student who felt they had self worth and recognition of previous experience and the recent school leaver who benefited from the motivation, depth of knowledge and life experiences the mature age students brought to the course.

The primary lesson to be drawn from this experience is "Know Thy Student." The students come to the classroom with differing expectations, born from their experiences to date. It is our responsibility as educators to draw upon these past experiences to increase their growth as lifelong learners. By encouraging the students, by modifying their expectations of scholarly life, by bridging the gaps between the age groups, we increase their interest, participation and thirst for lifelong learning, and ultimately reduce the rates of attrition.

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