WORKSHOP 6 - RESEARCH PRESENTATION

Strategies for Retention and Success of Special Group Students Utilising a Technological Approach

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Abstract

Groups of students with specific needs have been identified within a learning situation. This paper will address strategies that utilise technology (amongst other methods) to enhance the students' effectiveness as learners, thereby leading to an increase in student retention and academic success. Additionally, it will suggest teaching techniques to augment the effectiveness of teachers of special groups. The groups considered are mature women students, students from a non-English speaking background (NESB) and late arriving international students. These groups exhibit particular problems and needs over and above mainstream students, and coping strategies have been developed, utilising technology wherever possible.

Issues raised by these groups are identified and described, as are their characteristics and behaviours, for example:

- Mature women students often have heavy additional family commitments. They often struggle with technology, as it may be completely new to many of them. In fact, some of them display all the characteristics of a technophobe.
- NESB students, whilst often New Zealand citizens or residents have the disadvantage of a language barrier and a different learning culture
- International students often arrive after the course is underway and, consequently, have two barriers to overcome – that of language and that of trying to catch up.

The special needs of these groups of students, if not met, can impair their learning experience and lead to their dropping out, or failing assessments. In conclusion, we will show that a range of coping strategies can assist in overcoming these barriers, and this paper outlines the suggested strategies for each of the above groups.

INTRODUCTION

The student groups identified were enrolled on the one semester Level 3 and 4 programmes, UNITEC Certificate in Business Administration & Computing and the Level 4 Certificate in Computing. A large proportion of students on these programmes were mature women students, NESB and International students arriving after the commencement of the course.

MATURE WOMEN STUDENTS

Mature women students may be new to tertiary education or returning to formal education after a long absence. They frequently have additional demands such as family commitments which many other students do not have.

Behaviours and Characteristics

Research has recognised mature students as a growing student group with special needs and characteristics. The Higher Education Funding Council For England

(**HEFCE**) provides some alarming statistics, showing drop out rates in Great Britain in 1998 of around 15% for mature students (over 21), compared to 7.5% for younger students (under 21). This dropout rate comes at a high financial and emotional cost and may be losing students who could in fact achieve well. Appropriate strategies could reduce this dropout rate.

Kerka (1995) in her research on adult students noted several recurring themes: that the first few weeks of study are of crucial importance; that a major cause of early withdrawal from programmes is a gap between learner expectations and reality; and that non-completion has complex causes. Mature women students particularly have many additional demands on their time and may be suffering under financial constraints: drop-out may be from many causes, not necessarily related to the programme of study.

The Business Administration and Computing Certificate focuses on providing skills that will allow the student to enter/return to the workforce in an administrative or support role. These are traditional roles for women workers, but the technology skills now required can be very challenging for more mature students. A large proportion of the students' time is spent on computers which can increase anxiety for some students, who may be already having difficulty coping.

"Computer anxiety" is well recognised by researchers (Chua, Chen & Wong, 1999). Computer anxiety has been defined as having two different types, state anxiety and trait anxiety. Trait anxiety is related to personality type and may be permanent. State anxiety is circumstantial and may be changed as circumstances change. This "state anxiety" may be a cause of drop out by mature women students and recognition of this condition and the application of appropriate strategies can remedy this condition and assist student retention.

Mature women students may be more likely to experience feelings of isolation and alienation within the educational environment and less likely to ask for help or admit to inadequacies, especially in the early weeks of a course. Mature women students (especially NESB students) may be used to a more directed instructional learning approach and have difficulties coping with constructivist learning.

The practical nature of the BAC programmes offered is authentic to current office practise and is popular with adult learners (Knowles, 1973).

Coping Strategies
Marie Morrisey (2001) in her paper "Mature Students in the Higher Education Sector" suggests that tertiary institutes need to put specific strategies in place to ensure retention and success of mature students.

Specialised Support Available
Campus wide mature student support groups and an online discussion board, together with a mentoring system from mature students who have completed the first semester could help mature students. Research has identified a particular need for induction and familiarization sessions for mature students (Coffield and Vignoles, 1997).

Childcare Facilities
Subsidised childcare, including after school facilities should be readily available to meet the needs of adult students.

Flexible Courses
Academic courses should be flexible to suit the family and work needs of mature students (Morrisey 2001). More part-time and online courses may need to be provided.

Staff Training In Adult Teaching And Learning Methodology
Academic and administrative staff need to be trained to recognise and support the particular requirements and needs of mature students. Mature students may not initially be comfortable with constructivist learning, and need support and specific help and direction as they go through a period of transition from their old learning style. Brawer (1996) focused on the importance of integration to prevent early drop out of students who are struggling to cope in an unfamiliar environment.

NESB STUDENTS
To be accepted as a student, the student will need to have a prerequisite standard of English from our New Zealand schools or else an IELTS certificate with an overall score of 5.5 with not less than 5 in written English. Almost all NESB learners have two similar needs: to learn English and to adapt to a new learning community (Spelleri, 2002). Graduates from the BAC programmes can expect to find employment in a wide variety of office environments.

Behaviours and Characteristics
The new New Zealanders are often new immigrants who will have been living in New Zealand for a while but who wish to improve their employment opportunities. Newcomers to New Zealand can be already competent students, often with tertiary qualifications from their own country but are unable to find work due to a poor level of English. Other more disadvantaged newcomers have not had the opportunity of higher education and will find the BAC course very challenging but embark upon it as a means to improve their English, assimilate into New Zealand life and to acquire skills and a qualification.

The number of NESB students is increasing and their poor English will impair their learning ability. Additionally, if their level of understanding is poor, they will find their course very difficult, particularly at the beginning. Students that have poor English may work well when supported in class but often do poorly in written assessments.

NESB students are likely to experience impaired learning due to taking longer to assimilate the information conveyed by both the spoken or written word. They will be reluctant to participate in class discussions as they lack confidence in themselves and their level of English.

It is important to note that cultural aspects of their background also impact on their ability or willingness to participate in class. Many NESB students may consider it inappropriate to ask questions in class so as not to disturb the teacher. Because of pride, shame or shyness they may be unwilling to speak in what they feel is inferior English and expose themselves to their teacher and classmates. Some female students may defer to a more dominant male student in class in response to their own cultural expectations.

With regard to reviewing the student work, students might not understand the teacher's comments on their marked work (Ridsdale, 2001). The teacher's comments will be handwritten and may include comments and abbreviations that may be undecipherable to the NESB student.

Some students will find that it requires a lot of concentration to keep up with what is happening in class, and this will be tiring for them. NESB students may keep up well in class but may disconnect themselves from the class discussions when they believe that the formal teaching has ended. This can disadvantage the student as it is often when the formal teaching is complete that other information such as "housekeeping issues" are discussed and clarified in an informal manner. Without this understanding the fine details in the rules of how and when to submit an assignment may be missed or the student may not fully appreciate the routines of a formal in-class assessment.

The tutor asking questions of the student can cause embarrassment to a student. The student may not understand the question, fear that they have misunderstood the question, or be lacking in confidence in their ability to respond and therefore remain silent and avoid participating in any way. Some students will avoid eye contact for fear of being engaged in a discussion.

COPING STRATEGIES
Preparation of Materials
Avoid use of any handwritten materials as they may not be easily read and understood by NESB students. Use word processing in creating OHT slides and PowerPoint presentations for consolidating important items of work.

Allow Time for Clarification of Marked Work
Always have time available for the student to clarify any arising matters from any marked work such as assignments and assessments, as they may not understand the brief comments on the returned work (Bartlett, 2001). Language and cross-cultural issues as well as lack of experience of written feedback often compound the NESB student's confusion. The tone of the comment may be hard for them to perceive so they may not know how to respond. The student will often interpret guidance as criticism (Ridsdale, 2001).

Staff Training and Development
Teaching staff need to be made aware of the cultural differences that impact on a student operating successfully in a new educational environment, (Zuvich, 2001).

Assistance with Vocabulary and Specialised Terminology
- Provide a glossary of all technical terms as part of the course materials available on the student drive of UNITEC's internal network and also on Blackboard or the UNITEC website.

- Allow students to use Electronic dictionaries/translators in class.

- Allow students to record tutorials and lectures.

- Encourage students to use UNITEC's language laboratories as a tool for improving their language skills.

LATE INTERNATIONAL STUDENTS
These are International students enrolled in the UNITEC Certificate of Computing (Level 4) who join the course two to three weeks after it has commenced. This group has needs additional to those of the NESB student – as well as English not being their first language, they have the added disadvantage of arriving late, thus losing valuable contact time. They may also have a third disadvantage – no prior knowledge of computing. The students in the course range from school-leavers to mature students, with a mix of ethnic groups.

Behaviours and Characteristics

International students may at first feel isolated in a new country far away from their homeland and may be somewhat shy, reluctant participants and speakers. They might also appear rather confused, especially as they have missed orientation and the first two or three weeks of their course. They will seldom request clarification in class – as described on page two of the article "Teaching NESB and International Students at the University of South Australia: "... However, many South East Asian students share a Chinese and Confucian heritage which traditionally emphasises the value of knowledge and respect for those who preserve and teach it. In this cultural climate good and successful students will not openly question the point of view of their teacher or argue alternative points of view..."

These students are not disruptive per se, but because of these cultural differences may not request assistance. They need to be carefully observed and may require additional assistance in class (or out of class as well). However, a teacher has to be very careful that these students do not take up a large proportion of the teacher's time to the detriment of the rest of the class who commenced the course on time.

COPING STRATEGIES
Internal Resource Book

An internal resource book has been produced which has easy-to-follow, step-by-step instructions, with screen dumps, allowing students to see that they are carrying out the instructions correctly. In addition, a constructivist approach is applied and students are encouraged to "explore" on their own (Roblyer, 2000).

When it is found that some of the information in the book needs elaborating or modifying, handouts are created and given to the students (also online). One of the factors contributing to this is the speed of the advancement of computing, eg students may bring in sound files in formats not covered by the book or previous handouts, and so a new handout is prepared and distributed to the students.

English-speaking "buddy"

This is not always well received as some students do not wish to encumber themselves with this task as they feel it hinders their own personal development. However, when a willing buddy is arranged this can work effectively. It is suggested that the buddy be an English-speaking student to encourage the International student to speak English, rather than arranging a buddy of their own ethnicity.

IT Training

If students are having problems, they are encouraged to book into the training sessions run by the IT Department during lunch times. This encompasses such things as logging into the network, file management, using Blackboard, etc.

COMMON STRATEGIES
Detailed Course Schedule

This schedule shows the topics covered every week with the page references to the resource book and any handouts. The schedule, therefore, assists any late International students (or any students who miss sessions for that matter) in catching up. It is also available online.

Online Copies of Course Material

Soft copies of all course material are placed on the SCIT student share drive and also on Blackboard. Blackboard is especially useful as students are able to access this from home through the Internet. This includes any PowerPoint presentations

by the lecturer, past exam papers with model answers, exam techniques, etc. All materials available to the student should be carefully updated and maintained.

On-line Student Samples

Online student samples are available for them to browse (Abbott, 2002). To cover any ethical issues that may arise, permission is requested from all students whose work is selected as samples before placing on the network. Online templates are also available on the student share drive and Blackboard.

Blackboard Quizzes

Each Blackboard quiz immediately marks the quiz for the student and provides feedback, for both correct and incorrect answers. The students can view the result and the feedback instantly. They have the option of redoing the quiz as many times as they wish. This can be viewed as a type of tutorial (Taylor, 1980) and also a good method of positive reinforcement, even when their response is incorrect (Skinner 1938, 1968). Students do not feel threatened as no one else, apart from the tutor, is aware of their results.

Computer-based Training (CBT)

CBT is a computer based training programme offering a large library of computer based courses for e-learning.

The courses are designed to be self paced and there is an assessment at the end of each module as well as questions throughout each section of every module.

CBT provides positive anonymous feedback and follows recognised education theories in its construction. Many behaviourist principles including stimulus/response and positive reinforcement are applied in these courses, and Gagne's nine "Events of Instruction" appear to underlie construction. However there seems to have been a real effort to include constructivist principles. Students are encouraged to scaffold on knowledge they have acquired on the course (Roblyer, 2000) CBT can allow students to work at their own pace to consolidate or work through areas they have had difficulties with.

Establishment of Classroom Ground Rules

Teachers and students must be in agreement as to what is acceptable in terms of behaviour in-class – for example, aspects of punctuality, appropriate timing of questions, domination of the teacher's time, absenteeism and the use of cell phones. Most students will need to adjust to a new learning community and it helps to know some of the rules (Zuvich, 2001). Sharma's comments (1999) are extremely applicable to newcomers to New Zealand tertiary institutions where students go through nine stages of transition from their old learning style to a new learning style, so adaptation may take some time.

Group Work

Collaborative learning is encouraged and, in fact, students themselves are observed working together without any encouragement: one student may be observed demonstrating to other students some feature they have learned by themselves (or of which they have prior knowledge). Often, in this situation, the teacher can also be a learner.

It is felt that some of the comments in the article "Critical Issue: Using Technology to Enhance Engaged Learning for At-Risk Students" apply here as well. "...These role changes – with students moving toward more self-reliance and peer coaching, and teachers functioning more as facilitators than as lecturers – support reform goals for all students."

Listed action options for teachers includes: "Ensure that the classroom reflects a collaborative atmosphere as a prelude to implementing technology-supported projects..." Such an atmosphere must encourage all students towards self-reliance and learning.

Group work also supports the constructivist method of learning: "...Most constructivist approaches heavily emphasize work in groups..." (Roblyer, 2000, p68).

Lecturer out-of-class Contact
Lecturers could have a scheduled time when students may contact them, should that be required. On-line and constructivist learning environments may not suit all students and at the commencement of the course they will prefer familiar face-to-face teaching encountered in their earlier years of learning (Payne, 2002). Lecturers should respond promptly (within 24 hours) to all messages, email or voicemail. Emails are a stress-free and confidential way for the students to ask questions, allowing time for them to construct appropriately-worded messages (Ryba and Selby 1995).

Online Frequently-Asked Questions (FAQs)
Students may be reluctant to ask questions in class, and often questions are repeated across different classes A very useful and efficient strategy is to put Frequently Asked Questions online to assist students (and lecturers), particularly if the student was absent when the issue was first addressed.

Staff Training
Staff awareness of the needs and characteristics of these particular groups of students will assist in student retention and success. M Morrisey (2002) recommends academic and pastoral support from staff trained and experienced in dealing with special groups of students. Many tertiary institutes have such strategies in place, but students may not be aware of this, and any student orientation should focus on this. However orientation can be an overwhelming experience, and student handbooks should also include such information.

Mock Exams
"Practice makes perfect." Loma Linda University in California found compulsory mock exams for students resulted in a steady increase in student success in national exams. Encouraging students to sit old assessments under exam conditions can help reduce exam nerves: mock exams allow students to become conversant with the style and standard of the assessment, assist in their time management skills and exam techniques and highlight areas of weakness.

Encourage Use of Student Support Facilities on Campus
Ensure students are aware of UNITEC's Te Tari Awhina department who provide assistance with how to study in New Zealand and to coach study skills. This is very important as the student from another country and culture may have very different expectations of what it is like to study in New Zealand. It is also critical that they attend these sessions either before formal classes begin or early in their course.

Ensure students are familiar with the library and the services it offers. UNITEC's library offers tours and information sessions to familiarise the student with the library as the semester starts.

Ensure that students are aware of the support that the Student Union, Student Services and the specialised Student Support Groups can give. At the beginning of each semester these organisations will be on display to show the range of services they offer.

Encourage students to use the UNIWEB intranet by giving them a handout by which they are required to explore the intranet to find the support facilities available to them – a type of electronic "treasure hunt".

CONCLUSION

As the mix of students may differ from year to year, lecturers need to be constantly aware and reminded of the different needs of the students (whatever these may be) and how this affects their learning. Computing (which is the subject taught) is new to many students and this exposes them to another type of language – computer terminology.

Because of the constricted time frame due to the length of the courses, it is not possible to spend sufficient time on some of the above methods of coping. However, it is suggested that a combination be used depending on the makeup of the students and their abilities.

REFERENCES

Abbott, C. (Ed.). (2002). Special Educational Needs and the Internet. Ch 2 p13. London: Routledge Falmer.

Bartlett, A. (2001) Confusing the NESB Student: When Academic Feedback Unwittingly Contributes to Masking the Linguistic and Academic Issues http://www.latrobe.edu.au/lasu/conference/bartlett.doc

Brawer, Florence B. Retention-Attrition in the Nineties. ERIC Digest. ED393510 http://www.ericfacility.net/databases/ERIC_Digests/ed393510.html

Chua, S.L., Chen, D. & Wong, A.F. 1999. 'Computer anxiety and its correlates: a meta-analysis'. Computers in Human Behavior: Journal of Research on Computing in Education. V31 n2 Pp123-139

Coffield, F. and Vignoles, A A Widening Participation in higher education by ethnic minorities, women and alternative students. Department of Education, University of Newcastle. Report 5, The National Committee of Inquiry into Higher Education http://www.leeds.ac.uk/educol/ncihe/r5_009.htm

Kerka, S. Retaining Adult Students in Higher Education. ERIC Digest No. 88 http://www.xmsonger.net/tengtuzl/jxglzl/foreign/english/ed308401.htm

Knowles, M., Holton, E. and Swanson, R (1998) The Adult Learner 5th ed Houston: Gulf Publishing

Morrissey, M. 'Mature Students In The Higher Education Sector: A Review Of Developments In The Context Of The European Year Of Lifelong Learning' http://www.ucc.ie/ucc/units/equality/pubs/Mature/mature_6.htm

Payne, C. (2002) Education in Cyberspace – An Essay Considering Some of the Significant Factors in Developing Sound · Online Learning Environments c.e.payne@monach.net

Ridsdale, M. L. (2001) "I've read his comments but I don't know how to do": International Postgraduate Student Perceptions of Written Supervisor Feedback. http://www.latrobe.edu.au/lasu/conference/ridsdale.doc

Roblyer, M.D., Edwards, J. (2000). Integrating Educational Technology into Teaching. Ch 3 p59-62, p67-69. Prentice-Hall (2000).

Ryba, K. and Selby, L. (1995). Empowering Learners with Computers. Learners with Special Needs in Aotearoa New Zealand. Palmerston North Dunmore Press.

Sharma, A. (1999) In their own words: A practical guide to helping the migrants in your TAFE class based on the experiences of successful migrant students, Canberra institute of Technology.

Skinner, B.F. (1938) The behaviour of organisms. New York: Appleton.

Skinner, B.F. (1968) The technology of teaching. New York: Appleton.

Spelleri, M. (2002) From Lessons of Life: Authentic Materials Bridge the Gap. http://www.eslmag.com/maraapr02art.html

Taylor, R. (1980) The computer in the school: Tutor, tool, tutee. New York: Teachers College Press. Critical Issue: Using Technology to Enhance Engaged Learning for At-Risk Students, North Central Regional Educational Laboratory, http://www.ncrel.org/sdrs/areas/ issues/students/atrisk/at400.html

Teaching NESB and International Students at the University of South Australia, Flexible Learning Centre, University of South Australia, http://www.unisanet.unisa.edu.au/ learningconnection/teachIS/

Zuvich, M. (2001) In Their Own Words: What Migrants say about succeeding in TAFE http://www.latrobe.edu.au/lasu/conference/zuvich.doc

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