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Learning From a Distance: The Experience of Remote Students

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Abstract

While there has been research into the provision of 'distance' and 'off-campus' education, both in relation to technology and to curriculum, little attention has been given to the experiences of students studying in geographically remote locations, where the remoteness has been an aspect of investigation. This study aimed to investigate the experiences of such students, and to suggest strategies to support them. The students recruited for this project were undergraduate and postgraduate students from remote locations around Australia who had studied at an Australian university between 2003 through 2007. They were interviewed by telephone. The three key issues identified by participants were a sense of isolation, the attitudes and knowledge of the teaching staff; and students' knowledge and use of learning technologies.

Résumé

Alors qu'il y a eu de la recherche portant sur la dispensation de l'enseignement « à distance » et « hors campus », à la fois en lien avec la technologie et avec le curriculum, peu d'attention n'a été accordée à l'expérience vécue par les étudiants qui font des études dans des lieux géographiquement éloignés et où l'éloignement a été un des sujets d'étude. Cette étude visait à enquêter sur le vécu de tels étudiants et à suggérer des stratégies afin de les soutenir. Les étudiants recrutés pour ce projet étaient des étudiants de premier cycle et des cycles supérieurs provenant de sites éloignés à travers l'Australie et qui ont étudié dans une université australienne entre 2003 et 2007. Ils ont été sondés par téléphone. Les trois enjeux principaux qui ont été identifiés par les participants étaient un sentiment d'isolement, les attitudes et connaissances du personnel enseignant et la connaissance et l'utilisation des technologies d'apprentissage par les étudiants

Introduction

The rapidly developing capacity of information technology to provide online education is revolutionising the means by which higher education is delivered (Natriello, 2005).

Increasingly, students are completing their courses outside traditional face-to-face teaching environments and instead are relying on online course materials as a basis for their study (Clerehan, 2002). The growing

popularity of distance education and the increase in the diversity of students, including those who study from remote locations, has created new challenges for educators. Although distance courses seem comparable to face-to-face courses in terms of performance-based outcomes, a meta-analysis conducted by Allen et al. (2002) found that the satisfaction levels of students enrolled in distance courses is much lower than students studying in a face-to-face environment, suggesting that these students are more vulnerable to drop-out (Levy, 2005; Simpson, 2004). Consistent with this, the Australian Government has identified students in remote areas as an equity target group, recognising that their physical and geographical isolation may act as barriers to successful study outcomes (Department of Communication Technology and the Arts, 2000).

The term 'distance education' is used to describe education delivered to distant or remote locations "via print, audio, video (live or pre-recorded) and/or computer technologies, including both synchronous and asynchronous instruction" (Cain, Marrara, Pitre, & Armour, 2003, p. 42). While there has been research into the provision of 'distance' and 'off-campus' education, both in relation to technology and to curriculum, there has been a paucity of research on the experiences of students studying in geographically remote locations, where the remoteness has been an aspect of investigation.

A recent review of enrolment figures at a large Australian university showed that the course attrition rate of students in remote areas was 26 per cent, compared to 15 per cent for off-campus students. To address this, the university supported a project that explored the experiences of remote students.

Background

Although there has been little research attention directed towards remote students, research has nonetheless identified a number of issues affecting distance learners generally. Constructivist approaches highlight the importance of the way that students construct their knowledge and learning as a result of their educational experience. These approaches suggest that instructors should try to provide a realistic, authentic environment that challenges students and works to build intrinsic motivation (Martens, Bastiaens, & Kirschner, 2007). Although technology may assist with providing materials to remote students, their geographical isolation nonetheless underlies a number of barriers that make the provision of authentic learning experiences difficult. Meta-analyses have suggested that there is large variance in the effectiveness of distance programs and have identified numerous course-related variables

that contribute to successful outcomes (Allen, et al., 2004; Cavanaugh, 2001; Zhao, Lei, Yan, Lai, & Tan, 2005). Such variables include: type of communication or mode of delivery; relationship with teaching staff; technology and support; psychosocial aspects of studying 'at a distance', including interaction; and course content.

Type of Communication

In the context of online education, two types of communication can be identified: synchronous and asynchronous. Synchronous communication requires participants to interact at the same time (Bates & Poole, 2003). Examples are a live one-way broadcast of a lecture and live two-way interaction among a number of students and instructors (as in an online tutorial). Asynchronous communication does not require the interacting participants to be present at the same time; discussion forums and emails can be used. In their meta-analysis, Zhoa et al. (2005) examined the effects of type of communication in distance courses. They found that courses incorporating both synchronous and asynchronous means of communication were more effective than courses featuring only one type.

A meta-analysis conducted by Allen et al. (2004) found no change in the effectiveness of synchronous versus asynchronous communication in distance education and concluded that one type of communication was not superior to the other. There is evidence that multiple, or 'blended' modes of learning tend to produce the best outcomes (Bates & Poole, 2003; Bullen, 1998; Rennie, 2003). 'Blended learning' approaches that include a range of delivery modes, including print, asynchronous and synchronous, have been found to offer maximum flexibility, and a sense of security for students (Rennie). Rennie found that "a mixed format spreads the risks and benefits of synchronous and asynchronous support between a wide range of 'high' and 'low' technologies and provides a backup" (Rennie, p. 33). While a variety of modes may be ideal, student access to these is influenced by cultural, geographic and economic factors (Mills, Marchessou, Nonyhongo, & Tau, 2005).

The effect of communication type may differ according to the intended outcome. Allen et al. (2004) suggest that the type of communication used in a distance course may influence satisfaction of students. Even if communication type was unimportant in terms of students' grades, it may still be important because student satisfaction is a major factor predicting drop-out and retention (Allen et al. 2002). For instance, Bullen (1998) found that students appreciated having access to other students' ideas and comments in online discussion, and reported that that this had a positive impact on their involvement in a unit.

Teaching Staff

The knowledge, skills and attitudes of teaching staff are important to distance learning students. The instructor's involvement with students in an online environment is critical to students' success and satisfaction (Bates & Poole, 2003; Bullen, 1998; Cain, et al., 2003; Mummery, 2002; Rovai & Barnum, 2003). Rasseneur-Coffinet, Smyrniou & Tchounikine (2007) endorse supporting the development of students' awareness and understanding of course content and organization. Providing quality learning materials and coherence in the use of these with audio-visual resources is also essential (Hope, Prasa, & Barker, 2005). In addition, providing discussion topics that require critical thinking and engagement, stimulating online discussion, monitoring of disagreements, and feedback, encouragement and support are instructor skills that contribute to student participation.

Technology and Course Delivery Support

Improving technology has led to an increased capacity of universities to deliver quality distance courses (Bates and Poole, 2003). However, the rapid pace at which technology changes means that relevant skills such as web navigation can also become quickly outdated. Students need to be able to access course content confidently in order to utilise course materials fully. Distance education is now attracting students who have limited or no experience with computers (Bates & Poole, 2003). Given this, an important part of online distance education is the training of both staff and students in the use of technology (Bullen, 1998; McAlister, Rivera, & Hallam, 2001). In particular, student training has been found to lead to better outcomes for those students (Althaus, 1997; Hiltz, 1986).

In addition to training skills specific to accessing course content, students can also benefit from training in more general skills such as how to seek support, how to apply for special consideration and how to access other resources such as the library (Bullen, 1998; Clerehan, 2002). Galusha (1997) has argued that distance students' performance is often compromised by a lack of support and services including lack of access to and feedback from teachers, lack of experience and a sense of isolation. Distance students may also choose not to use the student support services that are available, preferring to seek their instructors for support (Cain et al., 2003).

Psychosocial Factors

Compared to students studying in traditional settings, Knapper (1988) found that distance students were more likely to have insecurities about learning. First time students are particularly vulnerable, and can find it

difficult to establish study habits, or to maintain motivation (Galusha, 1997; Knapper). These insecurities seem to develop from concerns related to a number of challenges involved in studying at a distance; such as financial costs of study, access to resources, disruption to family life, perceived irrelevance of their studies and lack of support from employers (Palmer, 1998). These issues place additional stresses on distance students and may explain the higher drop-out rates compared to students studying in traditional face-to-face settings (Sweet, 1986). Mills et al. (2005) and Hope et al. (2005) stress the importance of universities understanding students' concerns and responding to these through provision of different types of information, support, and learning and assessment opportunities.

A significant factor underlying the attrition of distance students has been reported as a sense of isolation, influenced by physical isolation and a sense of not belonging to the learning institution (Alston, 2005; Bontempi, 2003; Buchanan, Myers, & Hardin, 2005; Galusha, 1997; Macauley, 2000). A recent study on levels of engagement of Australian tertiary students found that campus-based students reported higher levels of engagement than did distance students (Australian Council for Educational Research, 2008). Distance students, including those who study in isolated and remote locations report a perception that their course is delivered differently (and less adequately) compared to on-campus students (Rovai & Barnum, 2003).

Central to the engagement of students in their learning is the quality of interaction. Interaction is one of the factors affecting student satisfaction and retention (Moore, 1989; Moore & Kearsley, 1996; Muirhead, 2001). Thurmond (2003, in Thurmond & Wambach, 2004) defined interaction as "the learner's engagement with the course content, other learners, the instructor, and the technological medium used in the course". An early definition of interaction encompasses the key elements in good educational practices: in encouraging contact between institution and student, developing reciprocity, engaging in active learning; providing timely feedback, providing accurate information about requirements and assessment, communicating high expectations; and respecting diversity (Chickering & Ehrmann, 1996).

Course Content

Results from both the Allen et al. (2004) and Zhao et al. (2005) meta-analyses suggested that one variable related to the effectiveness of distance versus face-to-face education is the type of course. Zhao et al. found that distance education was better than face-to-face delivery for business, computer science and medical science courses. There were no significant differences between the two methods for social science and

science courses. In contrast, Allen et al. (2004) found that distance education resulted in slightly better outcomes (although there was considerable variability in this finding) for social science courses compared to face-to-face methods of course delivery. Although these findings are far from consistent, it has been suggested that courses with more 'objective' content, where debate about key constructs is less important, tend to be better for distance education courses compared to courses whose subject matter is more subjective (Zhao et al.).

Overall, research shows that there are barriers for distance students, which do not exist for on-campus students. Distance students tend to be less satisfied with their study experience than are on-campus students, and this has implications for learning outcomes and retention. Whether there are unique issues for distance students from remote locations, (that is, more than 100 kilometres from a town with a population of 10,000 or more), is not well understood and is a focus of this study.

The Study

The study had two aims:

A. Investigate the experiences of current and former remote students
B. Suggest strategies to support remote students and to enable them to successfully complete their courses.

Participants

The students recruited for this project were undergraduate and postgraduate non-Indigenous students from remote locations around Australia who had studied in a course at a specific university at any time between 2003 through 2007. They included current and non-current undergraduate and postgraduate students as well as those who had enrolled in a module, unit or short course. These students were identified and invited to participate in the project. Sixty-eight contactable students indicated their willingness to participate. After multiple attempts to contact these eligible students, a total of 49 were interviewed.

Procedure

Students identified as 'remote' in the university data base were contacted by telephone and/or email. Information about the study was sent by mail to students who could not be contacted by telephone or email. If they agreed, they were interviewed for approximately 45 minutes. The interviews were taped and transcribed. The data were then thematically analysed for patterns and consistency.

Instrument

A semi-structured interview schedule was developed. The first section asked for demographic information relating to the participant's age, gender, enrolment status and access to the technology required for studying from a remote location. The second section contained questions about their experiences as a remote student, their use of the university's on-line studies system and other technologies, their awareness and use of student support resources, their satisfaction overall and suggestions for making studying a successful experience for remote students.

Analysis

Descriptive statistics were used to analyse the demographic data. Category construction was initially used to organize the qualitative data by question (Merriam, 1998). Two members of the research team analysed all data thematically, identifying patterns and consistency using a constant comparative method (Goulding, 2002). Saturation of the data was reached when no new information emerged from the data.

Results

Participants

Consent forms were returned from 68 people (54 females, 14 males) and attempts were made to organise telephone interviews with each of these. Ultimately 49 people were interviewed. (11 males, 38 females; age $M = 37$, $SD = 11$). Of those interviewed, all had lived in a remote location while studying. Students were enrolled in all faculties but were not compared on basis of faculty.

Participants were asked about their study context. All had access to computers that met the university's minimum technology requirements, with the majority using PCs. Most used their computers for study at home but a small number used them at work. Seventeen participants had access to dial-up only, 25 had broadband and 2 had the more expensive satellite broadband. Four participants' computer and internet access details were unknown.

The tables below provide a demographic breakdown of the sample by enrolment type, that is: undergraduate or postgraduate; traditional or non-traditional. 'Traditional courses' are courses that involve school and faculty-based units. These include, for example, Bachelor of Arts and Master of Business Administration. In contrast, 'non-traditional courses' are typically not degree-based courses and are taught using different methods to those used in traditional courses (e.g., they may use the on-line studies system and may include face-to-face components). Examples

of courses included in this category are those accredited by professional associations.

In addition, a number of the university's remote students are completing courses that are not run by a particular faculty, but are cross-institutional or delivered through the commercial training arm of the university. In the following tables these students' enrolment type is classified as 'other'. Included in 'other' are enrolments in professional development units, which were not clearly undergraduate or postgraduate.

As Table 1 shows, a majority of remote students in traditional enrolment are completing postgraduate courses. Mature aged students vastly outnumber non-mature aged students, which means that a majority of remote students are part of more than one identified disadvantaged group. This is consistent with demographic information on the total population of remote students for the university as a whole; the majority were post graduate students over 25 years of age at the time of enrolment.

Table 1. Age, level and enrolment status of remote students in traditional study.

	Undergrad		Postgrad		Total
	<25	25+	<25	25+	
Enrolled	25	34	6	87	152
Completed	12	8	3	38	61
Inactive	4	11	1	18	34
Discontinued	16	45	5	86	152
Total	57	98	15	229	399

Table 2 presents the age and enrolment status of students in 'non-traditional' courses. More than half the sample was enrolled in such courses. There are different course structures in non-traditional courses (e.g., they often involve short professional development modules). It seems that completion rates for non-traditional courses are much better than those for traditional courses.

Table 2. Age, level and enrolment status of remote students in non-traditional study.

	Undergrad		Postgrad		Other		Total
	<25	25+	25+	<25	25+	Unknown	
Enrolled	1	12	3	20	45	87	168
Completed	0	1	0	49	104	0	154
Inactive	3	6	2	4	23	46	84
Discontinued	4	3	1	15	23	4	50
Total	8	22	6	88	195	137	456

Table 3 presents a break down of enrolments by gender across the university and shows that about 70 per cent of remote students are females.

Table 3. Gender, type of enrolment and enrolment status for all remote students.

	Traditional		Non-traditional		Total
	M	F	M	F	
Enrolled	60	130	53	115	358
Completed	22	42	22	132	218
Inactive	12	37	33	51	133
Discontinued	77	109	14	36	236
Total	171	318	122	334	945

Analysis of Interviews

The responses to the interview questions are reported below. Findings have been grouped according the main components of the questionnaire:

1. Personal aspects related to studying
2. Use of technology and course delivery
3. Contact with staff
4. Infrastructure and support
5. Course content
6. Suggestions for making studying as a remote student a satisfying experience.

1) Personal aspects related to studying

Most participants in the study worked full-time, many had family commitments, and some travelled in their jobs. They cited self-

motivation, time management and achieving a work-life balance as important factors in completing their studies. They expressed little need or desire for interacting with other students on a social basis. Participants were goal-oriented and focused on their unit content and assessment.

> I found part time difficult - having to give up weekends and evenings. I was in transit during exams. I am in a new job, with higher role.

Some participants expressed a sense of isolation:

> [The] challenge is feeling isolated. So much reading and suddenly you have to have knowledge - but with no confirmation that you're on the right track.
>
> It's the isolation - I missed face-to-face, you feel so alone.

On the other hand, maturity and the self-confidence it brings could be helpful:

> When I started I used the telephone, then email. Here my maturity paid off - got onto enrolment officers - kept emailing lecturers …

2) USE OF TECHNOLOGY AND COURSE DELIVERY

Experience and age were factors in managing the technology. The majority of participants were mature aged. Those with previous study experience were confident of their ability to study and use online technologies. However, participants without recent experience of study and use of the internet were less confident:

> As a mature aged student I'm not used to study and found lack of face-to-face a problem …not used to computers.
>
> [It] could be my age but I got quite stressed about the instructions to get connected, get password etc.
>
> Technology is challenge - all modules on disk by post … I had no larger perspective - no idea what goes on overall. Passwords, trying to get through at midnight, chat sessions confusing, overwhelming.

These difficulties can have serious consequences, as demonstrated here:

> I gave up after three and a half weeks because of access problems. Got broadband only a week before classes started. Line was down for 3-4 days sometimes. I'm going to be more remote soon. It could take four planes to get here.

Participants using broadband and satellite connection reported availability, cost and contractual obligations of connection as issues affecting their study. Those who had difficulties with the Internet and the

university website were those using dial-up connection. Connection and transmission speed were issues, particularly when participants attempted to download documents, upload assessment items or complete timed tests online. Quality of transmission of synchronous discussion (using *eLive*) was also problematic for some participants using dial-up connection. For example:

> Problem with dial-up … files too big.

> Dial-up problematic. Audio downloads are intermittent - fantastic when they are there.

On the other hand some participants reported positive experiences. Participants who had successful experiences with eLive were enthusiastic:

> Fabulous - but not used in enough units.

Incompatibility of software upgrades with the university study site was also noted as an issue as were problems with links. For example:

> I have problems with Java - can't download slides from lectures. Also the system is often down. No pattern to it - sometimes it's [the university], other times it's my connection.

Participants who lacked confidence with technology reported finding the website confusing:

> Too many 'hot links'. It's overwhelming for people new to technology.

Participants who were completing 'non-traditional' units or courses were provided with hard copy materials and assessment information. These participants were generally not required to use a unit website during their studies although they may have used resources available through the university website.

Participants who were completing an undergraduate or postgraduate course, or single units were required to use the online studies website. They noted these issues as problematic: navigating the website; downloading materials; perceived difference for on- and off-campus students; inconsistency in web design; assessment; use of discussion boards and synchronous tutorials.

Most participants reported that when they commenced their studies they had navigational issues with the software used for enrolment and with the university website generally. In their early efforts, participants used a 'hit and miss' approach to find what they were seeking:

> I accessed what I needed to - too confusing - what connects to what. I did the library 'how to' but found it too complex.

Some participants reported that resources that were listed in a unit guide were not always available, e-readings were not on the unit website or in the library. Most participants stated that they preferred hard copy materials and used online references to supplement those.

Most participants successfully downloaded lecture notes or text-based slides (*iLectures*) from the online site. However, the format and file size of *iLectures* and slides with graphics and other visual information were problematic for students using dialup Internet connection. Participants expressed a preference for audio recordings of lectures as these could be more easily downloaded and were portable on an MP3 player.

Some participants mentioned the disparity between the course materials provided for on-campus students and those provided for off-campus students. Some had evidence of this when they attended some on-campus classes then accessed the materials from the unit site and found that some slides were missing from the *iLectures*.

> We didn't get everything the on-campus students did.

Participants also noted inconsistencies in the on-line resources and the way they were presented via links and icons:

> Found great inconsistency in unit materials - a 'mish mash' from subject to subject … where lecturers had put things, for example.

Questions were asked about use of online delivery for assessment. Few participants interviewed had used online for submitting assignments or completing other assessment tasks. Participants felt insecure in using the online environment for assessment and mentioned that the time to upload answers was problematic, particularly if they had dialup Internet connection.

Assignment submission procedures were a major concern for many of the participants. They felt there was inequity in the procedures; they had to complete and post assignments much earlier than on-campus students in order to meet deadlines. This was particularly the case for participants in Australian inland settings who were reliant on air mail services, as these could be significantly delayed by inclement weather. Although the university's distance education support service provides information about electronic submission options for students who live more than three days' mail service from the university, many participants were not aware of this information.

When asked to comment on their use of discussion boards some participants reported finding this useful for accessing and exchanging information about issues raised in a unit. They also felt that the discussion board helped them engage with the unit content. Some participants talked about social contacts and friendships that had developed through

unit-based discussion on the board. The only negative point made about the discussion facility was that it could lead to a "sharing of ignorance", with students misleading each other.

Some participants looked at their discussion boards but did not participate. Examples included students who had experienced delayed enrolment and had no access until the second or third week of the semester. This delay created stress and they then paid attention only to the essentials required to complete a unit. Some had a pragmatic view of participation in discussions; if they were not required to use the discussion board they did not do so:

> Used it a little bit - would like to do more but it doesn't count towards assessment.

> More participated in 1st year, but now in 3rd year few participate. This is a pity as it's really good for remote students.

In relation to synchronous discussion (*eLive*) few participants had used it or knew what it was. Of those who had used it, common concerns were the quality of transmission and the 'east coast' bias in the choice of session times (there is a three-hour time difference between western and eastern Australian states).

> I couldn't do eLive - timing not suitable, connection insecure, drops out.

In addition, participants lacked knowledge of where and how to purchase headphones for *eLive* sessions. Some participants also experienced a delay in the arrival of their headphones, and this affected their ability to participate.

Finally, with few exceptions, the participants were not interested in using the on-line study technology for creating social networks.

> I use the computer all day …. I would find it tedious to use it for social reasons as well.

In regard to format of materials for unit delivery, participants wanted to have hard copies of materials and a consistent approach to their design and format. Hard copy materials allowed students to study at their own pace. Several participants said there were too many electronic resources, such as e-readings, and that accessing them required excessive time, and being in one place. Those with family and work commitments found this difficult and preferred the flexibility of portable materials, such as print and audio.

3) CONTACT WITH STAFF

Staff behaviour was a significant factor in a positive university experience for these remote students. Negative experiences included the perception

of lack of respect toward the student and lack of response to student queries via the course study site, email or telephone. Participants also found that when lecturers were inexperienced with online delivery this resulted in confusion and "chaos".

Some participants had been supported extremely well by academic and general staff. Staff from the library were also frequently cited for being very supportive of remote students and for providing excellent service.

Variation between lecturers and levels of their support were noted by participants. Issues included contact with lecturers and other students for curricular purposes, lecturers' responsiveness, timeliness of assessment feedback, and provision of electronic readings and lecture materials on the website. Students liked to "hear a voice" or "have a name" when they had queries. They also wanted to have timely responses to their queries:

> When you have questions you need the right answer. You email a lecturer and then don't hear for ages. By then it's too late.

Many participants felt that lecturers and other students were not aware of issues for remote students. Some participants said they felt marginalised and insignificant and that units had not been designed with them in mind.

> I feel that staff forget about remote students.

> An assessment task required partners - had to be done together on line - but my partner was in Sydney and we couldn't get together.

Responsiveness of staff was a key factor in participants' satisfaction with their study experience:

> Excellent course…wonderful professors … impressed with relevance of their research. Assignments were returned promptly - feedback was excellent and really helped me.

4) INFRASTRUCTURE AND SUPPORT

Questions on support services asked about awareness and use of the library, support from the students' association, and academic skills support.

Participants reported receiving excellent service from the library. Where there was an issue it centred on the time required for library resources to reach participants via the post:

> Books took too long to get here - limited selection by the time the other students had had a go.

Many commented on the ease of returning resources in the return paid envelope provided. The library staff were consistently praised:

> Library staff did their best for me - but I am obviously too remote for off-campus study.

The participants demonstrated a general lack of awareness of special services provided by the university, including services for students with a disability, study skills support and distance support from the students' association. Even when they were aware of these services and resources, participants felt they were more accessible and relevant to on-campus students.

Several participants said that when they first enrolled they were aware of the on-campus orientation program but were unable to participate because of their remote location. While some participants were aware of the online orientation program, few had looked at it. Some had completed the library online orientation and found it helpful.

5) COURSE CONTENT

Some participants expressed great satisfaction with the currency of information and skills demonstrated in their units and their relevance to their personal and professional goals. They said that it was important that the materials reflected recent research and that they were related to current workplace practices.

A few participants reported that course content was not current or relevant enough. They commented that their workplace experiences following completion of their studies confirmed a gap between the course information and the knowledge and skills required in their workplace. Some admitted that their course appeared more relevant as they neared completion. However, most participants commented that their studies were meeting their career needs:

> I have been promoted at work. This is the reason I'm studying.

6) SUGGESTIONS FOR MAKING STUDYING AS A REMOTE STUDENT A SUCCESSFUL EXPERIENCE

Participants' responses to this open question were categorised under the following themes: isolation; orientation to studies; assessment and feedback; submission of assignments; and relationships with staff.

Some participants suggested that *eLive* contact with academic staff and peers would have helped counteract the isolation they felt. Some mentioned that having a mentor had helped them.

Participants reiterated the importance of orientation and the need to feel that they "belonged" to the university community. They stressed the need for a clear first point of contact:

> Would it be possible to have some personalised contact, such as a phone call, a welcome letter or personalised email?

Assessment feedback needed to be timely. Participants also wanted clearer guidelines at the beginning of the unit, including assessment dates. Some participants mentioned needing consistent information about referencing and other assignment requirements. They also wanted consistency between teaching approaches and the delivery of information and course content.

Most participants mentioned their preference for electronic submission of assignments. They noted the lack of equity when required to post assignments up to a week before on-campus students needed to.

Finally, participants wanted more sympathy from lecturers for people studying from remote locations, and an understanding of the barriers for this cohort. They appreciated lecturers who had knowledge of synchronous techniques and who were able to maximise the benefits of online teaching technologies.

Discussion

Analysis of participant responses indicated distinct differences in participant perceptions, particularly in relation to the kind of course they were doing (or had completed) and their purpose for studying. A brief profile of the two 'types' of remote student participating in the study will provide a context for this discussion.

The first profile is of postgraduate remote students who were studying a unit or short course. These students received hard copy materials and assessment requirements in a package and completed these in their own time. They used the website to access the library and other information, including email with staff. Such students had high levels of satisfaction with their study, particularly when the content related to skills required in the workplace, and/or the course was required for promotion. They were less satisfied if currency of skills was not reflected in their course.

The second student profile represented in the sample was typically completing an undergraduate or postgraduate course, and was mature-aged with family and work commitments. These students were self-motivated to study. They were not interested in forming social networks via off-campus study. They had some awareness of the support services offered but did not necessarily feel that these were relevant to them. An exception was the library, which provided them with excellent service. Getting started was challenging for these students, particularly if they had not been in a program of studies recently. Lack of knowledge regarding the terminology and navigation of the university's website presented difficulties. However, confidence managing the technology increased as they progressed in their course. They were not necessarily aware of synchronous communication methods unless their teachers used

these. When these were used time zone differences made access difficult. These students felt that they were disadvantaged in comparison with on-campus students in relation to assignment submission, getting timely answers to questions from staff and being able to share problems with peers.

For both these student 'types' the three issues that stood out were the sense of isolation, the attitudes and knowledge of the teaching staff, and students' knowledge and use of the study support technologies. The overarching issue, encompassing these, is the kind and quality of the interaction.

Feeling isolated was a major issue for these students. This has been found to be associated with attrition and lower levels of satisfaction (Alston, 2005; Bontempi, 2003; Buchanan, et al., 2005; Galusha, 1997; Macauley, 2000). However, in contrast to the findings of Alston et al., participants in this study were not seeking contacts with other students for social reasons. Rather, what they wanted was the opportunity to share learning experiences with other students. Connected with this feeling of isolation was the perception that they were treated differently, and not as well, as on-campus students, as previous studies have found (Rovai & Barnum, 2003). There has been research on the benefits of mentors in reducing the sense of isolation for distance students (Bontempi, 2003; Buchanan, et al., 2005; Male & Lawrence, 2002), and, interestingly, some participants in this study suggested mentoring as a strategy for improving satisfaction with distance education courses.

Second, students' perceptions of the teaching staff were important. They distinguished between staff who knew about the specific issues for remote students and those who did not know and perhaps did not care. As other authors have found, (Bullen, 1998; Cain, et al., 2003; Rovai & Barnum, 2003; Zhao, et al., 2005), staff communication and timely responsiveness are very important to distance students. The importance of timeliness was emphasised in this study, both in relation to getting information and to receiving useful feedback on assignments.

Also important to these participants was the level of staff expertise with distance learning technologies. Participants wanted consistency in course delivery and equity with on-campus students. Those who had experienced synchronous discussions wanted staff in all their units to use this capacity. However, students in locations with time zone differences were disappointed when staff had no appreciation of the implications of the time zone difference when scheduling synchronous sessions.

In relation to asynchronous strategies, such as online discussion boards and downloaded lectures, students expected and wanted staff to be skilled at managing these, and aware of issues for students, such as the size of files and problems in downloading them.

Importantly, as Cain et al. also found (2003), participants expected staff not only to be supportive of them in relation to their learning, but also to have knowledge about other university support structures, including administrative and technological support.

The third main issue for these students was their own confidence in using communication technologies. Participants with limited experience of these technologies reported the most dissatisfaction, citing difficulties in getting connected, in understanding the on-line study system, and in navigating the university site. Almost all participants wanted printed materials as a back-up, a number stating that delays in getting connected and difficulties in accessing materials were alleviated by having hard copies of materials.

In relation to the quality of interaction, these students responded most strongly to contact between the university and student, developing reciprocity between staff and student, the provision of timely assessment feedback, and respect for diversity, in relation to what they saw as their special needs.

Conclusions

Many of the issues reported by participants in the study relate to distance study in general, rather than being specific to studying in a remote location, although no comparison between the two kinds of off-campus study has been made. These general issues include feeling isolated, missing face-to-face contact with staff, and lacking confidence in managing the technology associated with study.

The issues that appear to be specific to remote students include lack of orientation to study, provision for assignment submission, barriers to engagement with synchronous learning activities, and staff ignorance of these barriers.

There were discrepancies between perceived and actual support. One example was the perceived lack of effective orientation. In fact the university does have an orientation link for distance students. Participants' perceptions may be due to their lack of familiarity with terminology and web site links and of web navigation principles in general. On the other hand, the web links may be unclear or confusing, especially for students new to off-campus study. Similarly, there were discrepancies between participant observations and existing provisions for submission of assignments. The university does allow electronic submission of assignments for remote students, and this is clearly addressed in the university's Distant Support Guide.

The barriers to synchronous learning were identified as time differences between eastern and western Australian states, internet

connection failures and lack of staff knowledge and/or commitment to these learning technologies. While the logistical challenges of conducting synchronous sessions in different time zones can be overcome with creative scheduling, staff expertise and awareness of the issues for remote students needs more attention. More training of staff and students in the use and the advantages of on-line teaching and learning would improve the study experiences of all students, on-campus, off-campus and remote off-campus.

There were a number of recommendations arising from this study, which related to infrastructure and support, use of technology and course content. They reflected the need to raise staff awareness of the barriers to engagement for students studying from remote locations. Also recommended was the enhancement of the current orientation programs and increasing user knowledge of the full range of information and communication technologies.

In relation to infrastructure and support, it was suggested that the student orientation program be expanded to include *eLive* sessions, student representatives, a help desk and a 'frequently asked questions' link on the university website. It was recommended that staff should be apprised of issues for remote and other students with special needs, and that there be ongoing staff development programs that focus on diversity, conceptualised to include cognitive style as well as personal and contextual circumstances. The commitment to improving infrastructure for off-campus students in all locations, including remote and isolated, should be actively promoted.

It was recommended that staff should be encouraged to make greater use of on line technologies such as *iLectures*, *eLive* and audio technology in their teaching. Headphones and microphones should be issued to all students and relevant academic staff. The university websites should be reviewed to promote improvements in site navigation.

Finally, although the university has in place regular course review processes, the importance of maintaining relevance of content to workplace changes was reiterated.

Further, the views of isolated and remote students about content and delivery of courses must be regularly sought as part of continuous quality improvement processes.

In making recommendations for increasing the levels of satisfaction of remote students and reducing attrition rates for this cohort, it is recognised that all groups of students in the university will benefit.

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