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Research Notes

Is Enough Too Much? The dilemma for online distance learner supporters

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Abstract

We are a gregarious species, so it is not surprising that distance learners can be prone to feelings of isolation. In the days of traditional print-dominant distance education, attrition rates were often higher among distance learners than for their on-campus counterparts; but now, with the wider choice of communication options afforded by the online revolution, institutions have opportunity to look afresh at ways of compensating for the loneliness of long distance learners.

However, teachers in higher education have their own problems. By viewing an online program as a human activity system, we identify an issue of growing concern concerning system maintenance; specifically, how system survival depends on meeting the human needs of those involved. The authors are not only concerned for distance learners, but also learning facilitators, many of whom face their own context-induced pressures. From the case of their own institutional setting, the authors demonstrate the need to manage the twin risks of student dropout and lecturer burnout.

Keywords: learner support; distance learning; learning community; human needs; information and communication technologies; academic workloads

Introduction: Some conceptual preliminaries

As the institutional adoption of online technologies continues apace, the global market for higher education makes more insistent demands for what online learning appears to offer: the virtual dissolution of the isolation handicap. Dealing with this, however, is not an easy matter. Individual academics and their institutions ponder this question: "What kind of information and communications technology (ICT) solution will we embrace, and within what infrastructure, what pedagogical solution will be applied?"

Changes in educational practice can either be the result of top-down or collegial resolve, or, as the trial reported in this study shows, early adopters of new methodologies act as trail blazers for their less experimental colleagues (Cleary, 1999). Either way, change may be driven primarily by principle, or it may display more the character of compromise. We shall explore this idea through an explication of the authors' own institutional experience: we will focus on the case of an individual lecturer, who teaches a second year unit on business finance. After being a prime mover in the Faculty's earliest experiment in Web-based support for its distance education students, the lecturer set out to examine the outcomes of the support he was giving students.

In this scenario, the case captures the protagonist's personal account of the theoretical and research antecedents of his trial. The literature review that follows serves to locate his trial within the current state of research into supporting online distance learners. The opposing force, specifically the imperative for the watering down of principle, is the gap between what work he saw needing to be achieved, and what he had the time and energy to provide.

The contributions of cognitive psychologists such as Piaget, Bruner and Vygotsky has given prominence to the social nature of learning. For educators who accept learning as being socially situated, it makes sense to provide support within a community of learners (e.g., Scardamalia and Bereiter, 1994). Opportunities to do this with students at a distance have been afforded by ICT, which has caused educational practices to be reconsidered and re-engineered (Turvey, 1992). Constructivists maintain that the processes involved in online dialogue – engaging in discussion, reflecting on the ideas of others and receiving feedback – provides the scaffolding needed to achieve higher-order thinking (Slavin, 1994).

Distance educators have found that an important factor in successfully building online communities is the creation of a sense of social presence through participants projecting their personalities into their online discussions (Leh, 2001; Poole, 2000; Rourke et al., 2001). Of interest here is that such findings may appear to confound both media richness theory (Rice, 1992) and social presence theory (Short et al., 1976), which suggest that communication that is text-based, asynchronous, and online is a less personable experience than face-to-face communication. However, researchers such as Walther (1992), for example, argue that participants in text-based electronic conferences adapt their language to make missing non-verbal and vocal cues explicit, and are able to develop relationships that are marked by affective exchanges. Such researchers contend that personal perceptions of presence override media features (Gunawardena and Zittle, 1997; Poole, 2000; Richardson and Swan, 2001; Rourke, et al., 2001).

In an exploration of the role of a 'sense of community' in asynchronous learning networks such as online learning, Rovai (2002) draws a link between the quality of student–teacher interaction and persistence in university studies. Rovai endorses Cutler's (1996, p. 326) proposition that "the more one discloses personal information, the more others will reciprocate, and the more individuals know about each other, the more likely they are to establish trust, seek support, and thus find satisfaction;" and Tinto's (1975, p. 107) view that "social interaction via friendship support is directly related to persistence."

While attrition from distance education tends to be high (Tate and Mills, 2001), it is also multi-causal (Garland, 1993; Morgan and Tam, 1999), and a weakness in the relationship between student and university is a significant contributing factor in many cases (Retention Project Team, 2001).

In the present paper, we will attempt to sift through our experience within our institution, and allow the reader to gain a sense of how our ongoing inquiry is being shaped by several perspectives from the literature. One way of signalling the scope of our longer-range interest is to highlight Tinto's (2000) social constructivist notion that a learning community approach to educational design can induce a profound change in the texture of learning:

. . . a growing number of institutions [in the US in the nineteen nineties] have begun to reform educational practice and restructure classrooms to involve students more actively in learning. One such effort gaining increasing attention is that encompassed by learning communities and the collaborative pedagogy that underlies them. Unlike many [theory-driven] programs which exist at the periphery of the academic experiences of students, learning communities seek to restructure the very classrooms in which students find themselves and alter the

way students experience both the curriculum and learning within those classrooms [italics added] (Tinto, 2000, p. 48).

While Tinto's comments are written with reference to classroom contexts, we are encouraged even at this early stage in the evolution of online learning environments that online learning communities can aspire to similarly rich learning. In this paper, we wish to report on work that has sought to minimise the "*transactional distance*" that separates students and teacher in one of our institution's distance education units. Transactional distance for Moore (1993) is the psychological and communication space between learners and instructor. It varies from person to person, and is a function, says Moore, of the amount of control ('structure') exercised by the instructor on the one hand, and the degree of engagement ('dialogue') displayed by the learner on the other.

The cultivation of relationships between asynchronous distance learners and their learning facilitator presents fertile opportunities for universities and individual teachers (Morgan, 2001). It is reasonable to expect that providers who improve in this area could well be rewarded by higher completion rates. For some students who may be hovering on the brink of withdrawal, workable initiatives in this area can be expected to tip the balance towards them persisting with their studies. For the purposes of this paper, we shall consider that the "relationship" sought is a composite one that encompasses distance learners, their fellow students and the individual lecturer, plus, more loosely, the institution concerned. [The present study did not seek to explore the potential value of engagements *between* distance learners, but this clearly remains a critical area for future investigation. Note that there are empirical grounds for at least commencing with a focus on the learner-teacher relationship (i.e., Chen and Willits 1998, p. 7). We also note, in passing, Ainsworth's (2000) attempt to dismiss the educative value of social interaction via the Internet in learning; but it is one that social constructivists on the whole will not, we suspect, warm to.]

In the second part of the paper we wish to acknowledge the human needs of the teacher within the human activity system of online learning. We do so on this occasion by considering the problem of workload of academics involved in teaching online, and its effect on teacher wellbeing – that is to say, this discussion will only attempt to deal with one aspect of the online teacher's sense of wellbeing in the higher education sector today. Aggarwal and Bento (2002); Brabazon (2001); and Shedletsky and Aitken, (2001) are among those researchers who have contributed to a growing recognition that teaching online can significantly increase the teacher's workload compared with conventional classroom teaching. As we shall see, this case study suggests that optimising the online learning teacher/ class interaction places additional demands on the learning facilitator. The meta-narrative, the theme we hope will tie our two disparate stories together, is that all players in a human activity system require enough resources – plus the wherewithal – to sustain their inputs into the activity, or else their input is scaled down, weakened, or terminated. In the case study we report, the twin risks are *dropout* by students and *burnout* by the academic.

The position we are adopting in this paper is deliberately self-conscious and self-critical. We are, in part, reporting on work that helps shed light on the question of bridging transactional distance within an online, distance education program. As such, we see this as relevant to our concern about retention rates within the study unit in question. But we also wish to remind readers that an intelligent and critical approach to professional practice requires us to go beyond current conceptualisations of problems. The challenge is to not only understand and critique practice in terms of current theory, but to push that theory to the limits, to demand more of it and break new ground as a way of achieving the best practices of which we are capable. We may sometimes therefore seem to slip between the rigorous critique of our institutional practice in terms of ideas that researcher-practitioners have applied before, and more free wheeling thinking that makes use of ideas like 'human needs' and 'human relationships.' While our account leaves unresolved other dimensions of the human needs of the players in a distributed learning system, perhaps it will help us to refine the questions that we are – or could be – asking. We invite you to share the

meaning making process represented by this paper, noting not only the connections we make explicit, but others that might offer future and fruitful lines of inquiry.

Bridging Transactional Distance: A case study

In a deliberate attempt to improve completion rates by creating bridges and building a greater sense of community and affiliation among students at a distance, a lecturer in the Faculty of Rural Management, University of Sydney, implemented a small project – before an online learning management system became available. Distance learners engaged in the lecturer's particular business finance unit of study, had no face-to-face contact sessions. The unit was presented in an asynchronous manner to off-campus students who generally rated the unit highly in their evaluations. The medium used was printed study materials.

The first attempt at developing a stronger bond between the lecturer and students involved the lecturer initiating an early supportive personal phone call to each student. While it was felt that the students responded positively to this initiative and appreciated the personal contact, the exercise was particularly arduous for the lecturer. Such efforts involved the lecturer making many unsuccessful attempts to achieve telephone contact, leaving of messages and calling back, investment of a great deal of time and, as the majority of calls were over a long distance, it proved to be expensive. It was concluded that one successful call to each student at the start of the study period was not sufficient to build sustainable and meaningful bonds, and that the logistical and other problems meant that another less resource expensive approach needed to be found. It was not surprising that this approach had no discernible impact on retention rates.

While the lecturer remained strongly committed to developing a more palpable sense of belonging among those studying at a distance in his unit, a previous experience with audio-conferencing had resulted in logistical and other problems; hence the lecturer was not inclined to pursue this technology further. The tools of information and communications technologies (ICT) appeared to offer some potential, and were chosen as the medium for the next round of experimentation. The lecturer viewed this as an opportunity to provide the factors necessary for high quality support for distance learners as cited by Cowan (1994), namely timely prompting, encouragement and facilitative interventions.

A Subsequent Application using ICT

WebCT was available and its strategic use offered this lecturer the opportunity to interact with students in an ongoing manner. The goal was to use the technology to achieve social engagement for those who do not otherwise have it, thereby improving the quality of students' learning experience through building a greater sense of community and affiliation.

The distance presentation incorporating printed study materials was supplemented by the voluntary use of the *WebCT* platform. This supplementation was made available to all students over five consecutive years, but only a minority was able or chose to make use of it (85 of the 256 students over the five year period).

The lecturer regularly sent group messages throughout the semester when the unit of study was on offer and generated at least one such message each week. These messages frequently were focussed on facilitating the achievement of the learning objectives associated with the technical area of study. In addition, other more personal types of messages were sent. The nature of these messages varied and included matters such as requests for students to respond with details of their study progress, general items of news around the campus and in the life of the lecturer, notification as to when the lecturer would be away from the office, and progressive assessment performance details over the whole unit so individual students could monitor their own

performance against the total enrolment. The tone of all messages was conversational and students were encouraged to send their own group messages.

Each time students responded to a group message or else initiated one themselves, the lecturer sent an individual encouraging response to ensure their contribution was received and appreciated. The lecturer sent private individual emails to students who did not reply to a group message that required a response. Additionally, the lecturer initiated enquiry messages to individual students when they were late submitting their assessment, or when they were not heard from for a while. The lecturer also sent personalised messages of encouragement to students, urging them forward in their studies.

Other facilities available through the *WebCT* platform were utilised, such as asynchronous forum discussions where challenge questions were posed, synchronous chat sessions, models, and links. The thrust of the project, however, was to have frequent personalised interactions between the lecturer and students. Some management features were:

- The lecturer assigned to this task checked the website at least twice each day. In this project rapid response was regarded as a quality issue.
- Website visits were monitored to identify students who had not been in contact for some time. In turn, the lecturer would send 'missing' students a personalised message, either enquiring about some aspect of their study progress or following up on a previous interaction.

The outcome from building and maintaining personal contact was startling. Over the five year period of this study, 73 of the 85 (86 per cent) of those who were in the Web supported group completed the unit of study while only 107 of the 171 (63 per cent) of those who did not participate in this support process completed it. We subjected the data from this experiment to formal year-by-year analysis. When summed over the period a Pearson chi-squared value of 5.37 with 1 df was obtained with the probability level of 0.021. There was no difference in the grades achieved in the two groups. Of course, it is possible that those students who self-selected into the Web-supported group may well have been more engaged and enthusiastic, and therefore more likely to persist. It is noteworthy that students enrolled in other courses in the same programme of study in which online participation was a compulsory requirement of their units, exhibited completion rates similar to those reported here for the group choosing Web support.

Student Impressions and Lecturer Reflection

At the end of the semester, an independent third party surveyed participating students and evaluated their experiences. Students in all three offerings overwhelmingly reported that they enjoyed online interactions with their lecturer and looked forward to them. They acknowledged relatively low levels of interaction between the students themselves, but reported they were not particularly concerned about the student/ student aspect. However, because interaction between students was not part of the unit's design, such undervaluing of peer interaction is understandable. In other contexts, where collaborative learning is encouraged or required, expectations would be different.

Of particular interest is that students found their interactions with their lecturer motivating. Some commented that because of the relationship that they developed with their lecturer, they made time for their study, even when they did not think they had any time available. They reported that regular contact kept them on task and prompted them to maintain their study as a high priority among competing obligations.

Students responded positively when asked whether the online interactions contributed to their sense of affiliation to the faculty. They commented that the experience removed the loneliness associated with being isolated and gave them a sense of belonging to a learning community with other students and staff. Several volunteered the opinion that they would have been unlikely to persist had it not been for the regular communication they received.

Despite these positive responses, the lecturer reported that he faced a dilemma. Feedback from students and improved completion rates were professionally satisfying, but the personal investment needed to achieve these outcomes was considerable. The lecturer's perception mirrored that of his supervisor's: his workload was excessive and as a result, he considered scaling back such high levels of online support to students – despite his recognition of the value of doing this for students.

The Chance to Push Our Thinking Further

To recap, this paper seeks to report the authors' effort to make sense of online teaching and learning within the Faculty of Rural Management, against the backdrop of the growing body of theory and practice being reported in the literature. We do not apologise for reporting on a fluid situation. As practitioners, what we do in the classroom is *what we are able to do*, given the institution's culture-in-flux, coupled with our own values and understanding of the opportunities and constraints surrounding us. In other words, we are not undervaluing the importance of scholarship in informing the way we will do things, but rather recognising that the status quo too often wins against innovation, primarily because that is where the institutional momentum is heading.

Opportunities and constraints may be construed in various ways: the finite, often quantifiable conditions in which we must operate, our creativity, and the quality or texture of our own *pedagogical understanding*, which is in turn a function of the current state (stage) of our engagement with various theoretical discourses of our choosing. Had the lecturer in our case study embraced the aim of creating a learning community in the sense used by Tinto (2000) or Rovai (2002), there would have been different outcomes to evaluate. That the lecturer did not has made this paragraph possible. We see a place for reporting on situations in flux, and see a need for a scholarship of *practice-on-the-run*.

We turn now to the other side of the coin: the capacity of the academic in this teaching-learning interaction to give, and keep giving in a measure that a relationship-sustaining approach to teaching demands.

The Human Needs of the Online Learning Facilitator

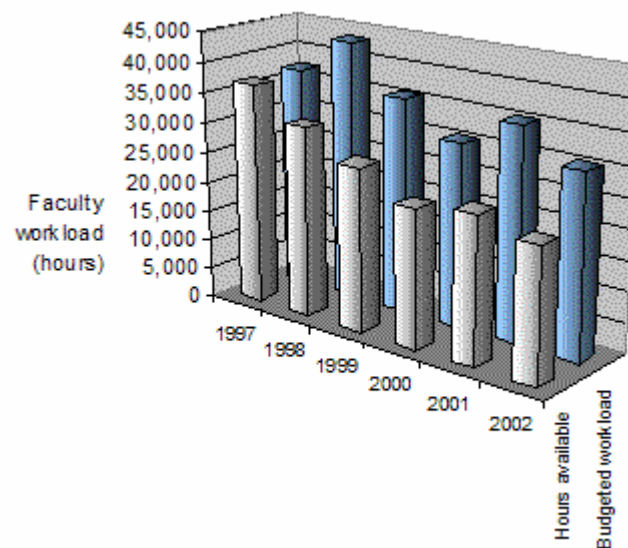
In this paper we will not attempt to do more than consider the Gestalt of what it is like to be an online learning facilitator amid the varying claims on one's time as an academic in Australian higher education today. We take our own institutional context as a case in point.

In preparation for this paper, the authors conducted a short survey of staff seeking to gain glimpses of the impact of academic workloads on job satisfaction, self-perception of teaching effectiveness, and coping strategies. We also obtained data on academic workloads from the Faculty against which to interpret the impressions of staff. What follows has a bearing on our foregoing account concerning online learning facilitation, in the sense that it shows the level of background noise (i.e., the distractions of other responsibilities) that likewise requires academics' attention.

A Macro View of Academic Workload within the Faculty

The University follows standard practice in seeking to share equitably the total workload of a faculty among academic staff, and the complex computations that flow from this practice make use of the notion of a ‘normal’ workload. Figure 1 shows the load being borne by academic staff in recent years by comparing total hours committed for the following semester – a workload agreement between each academic and the Faculty of Rural Management – with the notional normal workload (i.e., “hours available”).

Figure 1. Excess of total hours worked beyond notional ‘normal academic workload,’ Faculty of Rural Management, University of Sydney, 1997–2002. (Data refer to hours worked by full time and part time “permanent” staff, but excludes casuals.)



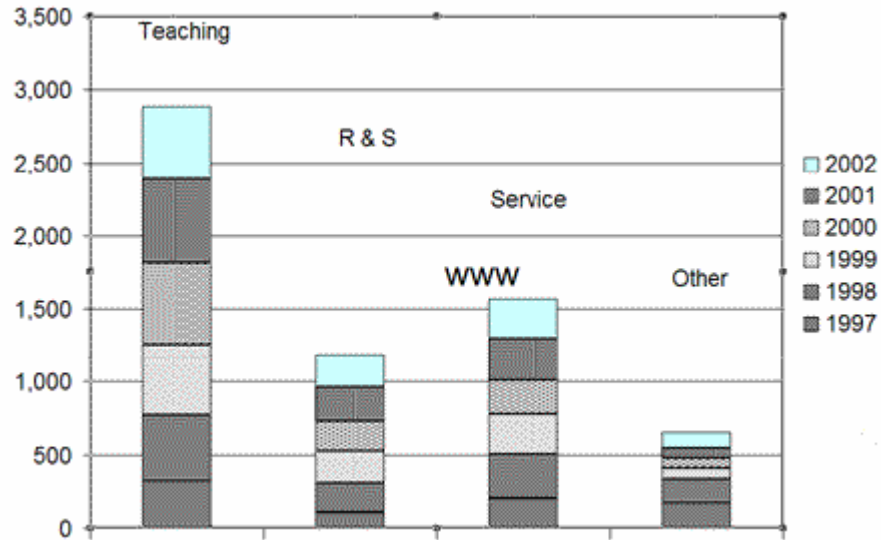
The statistics shown in Figure 1 reflect a period of declining staff numbers within the Faculty, ranging from a high of 46 faculty members in 1997 to 27 in 2002. This reduction in staff numbers was reflective of the faculty in response to financial imperatives. As a result, for many of those remaining, shrinking staffing levels brought additional responsibilities and pressures. In the context of our present argument, we table our untested hunch, specifically that academic staff energy is a limited resource, and that low staff numbers reduces lecturers’ ability to display concern for students in need.

More to Do than Hours in the Day

Teachers do more than teach. Public universities in Australia are offered financial incentives to maximise the research and scholarship output of staff. Academics are therefore expected to engage in research (or scholarship, more broadly), and give service to the institution and to the community, as well as engage in further professional development. In addition, staff are given opportunity to engage in outside consultancies and participate in outreach, short course programs.

Figure 2 shows the budgeted breakdown of academic staff workloads per semester within the faculty between 1997 and 2002.

Figure 2. Mean hours worked per semester per academic in the broad categories of responsibility: 1) teaching (undergraduate and postgraduate coursework); 2) research and scholarship; 3) service to the institution and the community; 4) other (professional development, consultancy/outreach). Data from Faculty of Rural Management, University of Sydney, 1997–2002.



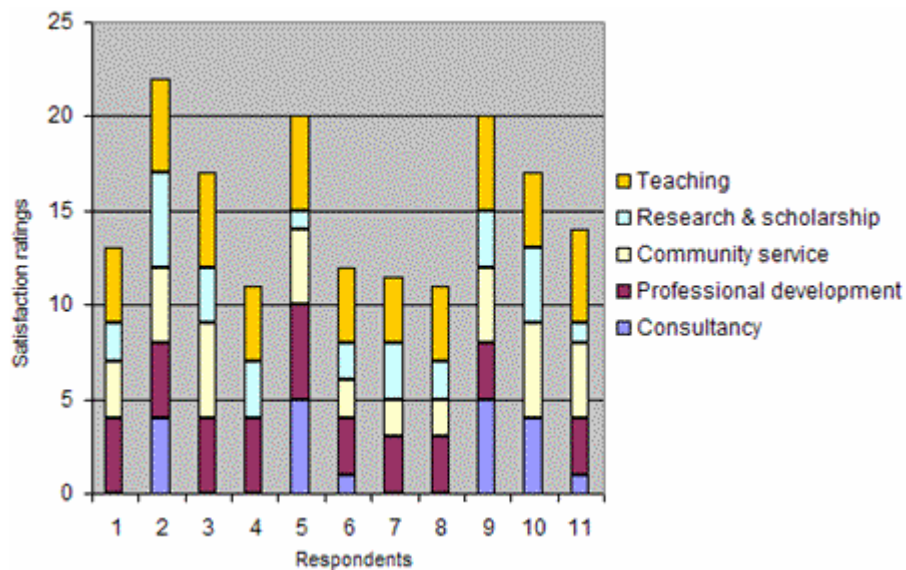
In 2002, academic staff members were surveyed on the topic “resisting burnout.” On face value, the survey was designed to elicit staff views on the impact of academic workloads on job satisfaction, self-perception of teaching effectiveness, and coping strategies. What we hoped to determine, in fact, was the actual *wellbeing* of academic staff. Clearly, online learning facilitators may be called on to expose their humanness as part of their efforts to sustain isolated learners. However, to muster such ‘humanness,’ they must be in a position of personal ‘wellness,’ or self-*centredness* in the noblest sense of the term. Selected responses to one survey item are shown in Table 1. Although responses are mixed, they suggest that concomitant with increased workload pressures, faculty are showing increased concern about their ability to teach well or maintain their disciplinary expertise.

Table 1. Perceptions of impact of academic workload on individual teaching effectiveness, Faculty of Rural Management, University of Sydney, 2002.

Question. <i>Is your workload having an influence on your perception of your own teaching effectiveness?</i>
<p>Responses</p> <ul style="list-style-type: none"> • Yes, I do not feel that I have enough time for lecture preparation, review or reading to keep up with the latest changes in my field • Not really, but it strongly affects my performance in other areas • Yes, because you are so pushed to try and fit in all that has to be done you end up with insufficient time to put together the polished performance you would like to do, regardless of the amount of hours you put in. • Main issue is the breadth of coverage of teaching duties. This puts at risk my ability to keep abreast of relevant knowledge and remain up to date. • Probably slightly. Teaching is an art and requires the teacher to continuously respond to changes that are associated with the units one teaches. When time is too limited, time for reflection may be compromised. • I don't believe the external notes get sufficient attention. I don't believe I have time to design interesting lectures/tutorials. I find WebCT is very time consuming and that in itself eats into my overall workload (more so than face to face teaching).

In the light of these comments, it is interesting to view respondents' job satisfaction ratings in each of the broad areas of responsibility (Figure 3).

Figure 3. Academic staff job satisfaction ratings in each of the five broad areas of responsibility, Faculty of Rural Management, The University of Sydney, 2002.



One survey question asked staff to give a separate satisfaction rating for each of the five components of their academic workload. (Category (iv) in figure 2, 'Other,' is split in Figure 3 into the separate areas of professional development and consultancy.) For each work category, staff rated their satisfaction as 5) consistently high; 4) OK most of the time; 3) fluctuating more than I'd like; 2) low most days; or 1) consistently low. Note that missing individual ratings indicate where ratings were not given. The chart reveals elevated frustration levels amongst staff in terms of meeting their individual goals in five areas of responsibility. Inferring the ratings as a kind of gauge of frustration is reasonable when interpreting them in the light of comments quoted in Table 2. While 11 may not appear to be a large number of respondents, it nonetheless represents a 40 per cent response rate. These results do not demonstrate a direct association between concern about increased workload and concern about capacity to support online distance learners. At this stage of our investigation, our hunch is that the overall pressure of academic life does effect one's teaching effectiveness, including the quality and quantity of the learning facilitator's individual interaction with learners.

Conclusions

We will now draw together the twin themes of this paper: 1) the importance of human support of online distance learners; and 2) the effort required from the learning facilitator to do this; and the difficulties that busy academic staff face in maintaining such high-level input into the distance teaching/ learning activity system. Both themes were developed with reference to operations within the authors' institution.

Human Support for the Online Distance Learner

Australian universities have been encouraging their staff to make more use of ICT for educational purposes. However, it is easy to become enchanted with technological developments and forget the human factors associated with learning. It is paramount that educators develop implementation strategies whereby they make use of ICT to engage with their students and create effective collaborative learning environments. Attention needs to be given to how the social dimensions of learning relate to curriculum issues.

Despite Lentell's (2001) concern that tutors in distance education remain unrecognised and unheralded, little doubt remains that tutors can build positive relationships with their distance students via regular, personable and committed use of ICT. The case study discussed in this paper shows that this approach clearly can have value for students who avail themselves of ICT, and can be rewarding for staff who enjoy the challenges of teaching in a university distance learning environment. The survey of students referred to in this article revealed that students felt that they mattered to the lecturer, benefited from intervention, and perceived their bonds with the institution as were strengthened. The quality of the distance education experience for these students was elevated.

An outcome of having more satisfied students is that the university can enjoy the consequent advantages of stronger student/ university bonds. It also appears that the social bonding that can develop between students and staff may lead to higher completion rates. By taking a personalised approach when using ICT, the tutor's involvement with each student can have a positive influence on study activity and perseverance.

To create and administer intensive online support that achieves high completion rates can be demanding on the tutor's time. Unfortunately, as Rocklin (2001) points out that university teachers are unlikely to be able to devote more effort to their teaching than they already do. Thus the realities of contemporary academic workloads will likely limit the capacity of many tutors to provide the commitment required for the kinds of learning enhancements outlined in this case study.

Rewards for those who are able to make such commitments can result in more satisfied learners and higher persistence rates. For the tutor to spend the time needed to connect with (absentee) students, utilising the technological tools to build and maintain bridges with students, requires considerable commitment.

Supporting the Online Learning Facilitator

The survey of staff and the faculty workload statistics point towards a situation of stress for many university academics in Australia. Such information tends to support the assertion that increased workload can have a negative effect on learning facilitators' ability to provide the levels of human support that online learners seem to need. A national study of academics has reported on an increase in perceived levels of stress, and one of the major contributing factors was adjusting to teaching with new technologies (McInnis, 2000). In a more recent report, Baldwin and McInnis (2002) examine the need to relieve academics of "the increasing demand on their time of providing academic support for students" (p. 45). For the busy learning facilitator, every minute spent in one-to-one dialogue with an online learner or in monitoring patterns of student engagement is one less minute available to write a report, confer with a colleague, or conduct research. The impression derived from this account is confirmed from the authors' own experience that work pressures can be difficult to cope with. Difficulties of the job in an institution at times can induce feelings of debilitation. When academics are in that mood, how do they then cheer up distance learners who are feeling discouraged?

The second theme of this paper, namely the difficulty for university academics in maintaining human support of distance learners, is relevant to the first theme. –Although online learners' need for such support, online learning facilitators can only give so much to students from the spring waters of their own wellbeing. Unless all players in a human activity system possess sufficient energy to sustain their inputs into the activity, their input will be scaled down, weakened or terminated. On the basis of our institutional context, we have highlighted the twin risks are *dropout* by students and *burnout* by academics. While we have not directly addressed these two extremities of system breakdown, we have explored some of the early warning signs of both. They are themes we will continue to explore and report on.

References

- Aggarwal, A. K., and Bento, R. (2002). Web-based education. In M. Khosrow-Pour (Ed.) *Web-based Instructional Learning* (p. 59-77). Hershey, PA and London: IRM Press.
- Ainsworth, D. (2000). The unbearable cost of interaction, in University of South Australia, September 2002 Conference Proceedings, *Distance Education: An Open Question?* University of South Australia, Adelaide.
- Baldwin, G., and McInnis, C. (2002). *The organisation of the academic year: Trends, implications and issues*. Centre for the Study of Higher Education, The University of Melbourne. Retrieved March 21, 2003 from: http://www.detya.gov.au/highered/eippubs/eip02_7/eip02_7.pdf
- Brabazon, T. (2001). *Internet teaching and the administration of knowledge*. Retrieved March 21, 2003 from: http://firstmonday.org/issues/issue6_6/brabazon/index.html
- Chen, Y. J., and Willits, F. (1998). A path analysis of the concepts in Moore's Theory of Transactional Distance in a videoconferencing learning environment. *Journal of Distance Education* 13(2). Retrieved March 10, 2003: <http://cade.icaap.org/vol13.2/chen.html>.

- Cleary, K. (1999). A pilgrim's progress: How the 'late majority' walk the high wire of technology-based innovation. Paper presented at the *HERDSA Annual International Conference* July 12-15. Melbourne.
- Cowan, J. (1994). How can you assure quality in my support as a distance learner? *Open Learning* 9(1), 59 – 62.
- Cutler, R. H. (1996). Technologies, relations, and selves. In L. Strate, R. Jacobson, and S. B. Gibson (Eds.) *Communication and cyberspace: Social interaction in an electronic environment* (p. 317- 333). Cresskill, NJ: Hampton Press.
- Garland, M. R. (1993). Student perceptions of the situational, institutional, dispositional and epistemological barriers to persistence. *Distance Education* 14(2), 181 – 198.
- Gunawardena, C., and Zittle, F. (1997). Social presence as a predictor of satisfaction within a computer mediated conferencing environment. *American Journal of Distance Education*, 11(3), 8 – 26.
- Leh, A. S. (2001). Computer-mediated communication and social presence in a distance learning environment. *International Journal of Educational Telecommunications* 6(4), 317 – 38.
- Lentell, H. (2001). The Renaissance of the Tutor – optimists vs. pessimists. *Open Praxis* 2, 32 – 35.
- McInnis, C. (2000). *The Work Roles of Academics in Australian Universities*. Canberra: Australian Government Publishing Service.
- Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.), *Theoretical principles of distance education* (p. 22-38). New York: Routledge.
- Morgan, C. K. (2001). Seeking perseverance through closer relations with remote students. In G. Kennedy, M. Keppell, C. McNaught and T. Petrovic (Eds.) *Meeting at the Crossroads, Proceedings of the 18th Annual Conference of the Australian Society for Computers in Learning in Tertiary Education*. Melbourne: Biomedical Multimedia Unit, The University of Melbourne, 125 – 128.
- Morgan, C. K., and Tam, M. (1999). Unravelling the complexities of distance education student attrition. *Distance Education, Journal of the Open and Distance Learning Association of Australia* 20(1), 96 – 108.
- Poole, D. M. (2000). Student Participation in a Discussion-Oriented Online Course: A case study. *Journal of Research on Computing in Education* 33(2), 162 – 177.
- Retention Project Team. (2001). *A strategy for improved student retention*. Internal Document OU/01/1. Open University, Milton Keynes, UK.
- Rice, R. E. (1992). Contexts of research in organizational computer-mediated communication. In M. Lea (Ed.) *Contexts of Computer-mediated Communication*. Wheatsheaf, NY.: Harvester.
- Richardson, J., and Swan, K. (2001). An examination of social presence in online learning: Students' perceived learning and satisfaction. Paper presented at the annual meeting of the *American Educational Research Association*, Seattle, WA.

- Rocklin, T. (2001). Do I dare? Is it prudent? *National Teaching and Learning Forum Newsletter*, Oryx Press 10(3).
- Rourke, L., Anderson, T., Garrison, D. R., and Archer, W. (2001). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education* 14(2), 50 – 71.
- Rovai, A. (2002). Building sense of community at a distance. *International Review of Research in Distance Learning* 3(1). Retrieved March 21, 2003 from:
<http://www.irrodl.org/content/v3.1/rovai.html>
- Scardamarlia, M., and Bereiter, C (1994). Computer support for knowledge building communities. *Journal of Distance Education* 14(3), 265 – 283.
- Shedletsky, L. J., and Aitken, J. E. (2001). The paradoxes of online academic work. *Communication Education* 50(3), 203 – 217.
- Short, J., Williams, E., and Christie, B. (1976). *The Social Psychology of Telecommunications*. Toronto: Wiley.
- Slavin, R.E. (1994). Student teams – achievement divisions. In S. Sharan (Ed.) *Handbook of Cooperative Learning* (p. 3-19). Westport, CT.: Greenwood.
- Tait, A., and Mills, R. (2001). Introduction: Supporting the student in open and distance learning. *Proceedings of the 9th Cambridge International Conference on Open and Distance Learning*, Cambridge. England.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research* 45(1), 89 – 129.
- Tinto, V. (2000). Learning better together: the impact of learning communities on student success in higher education. *Journal of Institutional Research* 9(1), 48 – 53.
- Turvey, M.T. (1992). Affordances and prospective control: An outline of ontology. *Ecological Psychology* 4, 173 – 187.
- Walther, J.B. Interpersonal effects in computer mediated interaction: *A relational perspective*, *Communication Research* 19(1), 52 – 90.

