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1997

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Publication Details

Bell, M. E. (1997). Flexible learning within a Tertiary Teaching Subject. What works and why? Proceedings of the 14th Annual Conference of the Australian Society for Computers in Learning in Tertiary Education (ASCILITE), 8-10 December 1997 (pp. 61-67). Perth: ASCILITE.

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Flexible Learning within a Tertiary Teaching Subject

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Abstract

There is a growing awareness within higher education institutions of the need to provide teaching development programs for academic staff. The challenge is to provide effective programs for staff from across all disciplines, who have varying schedules of work and are under pressure to spend much of their time engaged in research in their own field of study. At the University of Wollongong the already highly effective Introduction to Tertiary Teaching (ITT) subject for academic staff has been redesigned as a flexible, modular program within a Resource Based Learning (RBL) environment. This redesign is in response to the need to eliminate barriers to participation and acceptance of the program and to provide a more learner-centred course experience. Participants' initial responses to the new program design offer some early indicators of areas for further exploration in Resource Based Learning at the tertiary level.

Background

At the University of Wollongong new members of teaching staff are required to complete the Introduction to Tertiary Teaching subject (ITT). The ITT was implemented in 1992 and aims to meet specific learning objectives, satisfy the diverse needs of participants and model good teaching practice through integrating a variety of teaching approaches and technologies.

The subject has proved highly effective in changing conceptions of teaching and learning and developing academic teaching skills (Gillett and Bell, 1996). The ITT curriculum always offered a flexible learning environment aimed to support participants in developing their pedagogy through a process of reflective practice (Bell & Gillett, 1996). Participants have always been expected to take responsibility for their own learning and to engage with learning activities that meet their particular needs (a broad description of flexible learning, according to Wade *et al*, 1994: 12).

The course review indicated however that the traditional method of delivery, including set patterns of attendance and study created barriers to participation and acceptance of the program for some staff. In addition there was a need to provide more learner centred learning experiences. The subject was restructured as a RBL environment using a modular format.

This shift to RBL within the ITT reflects the fundamental changes in the teaching and learning context of higher education which have led to increased use of RBL environments across all disciplines. The RBL Working Party Report to NCode (Report 11, 1996) predicts that by the year 2000 at least 30% of all undergraduate teaching will involve the use of specially designed learning resources. "High quality interactive learning materials exemplify new and exciting approaches to the provision of higher education ..." (HEC Report, June 1997: 7).

Conceptions of RBL range from RBL as a data retrieval system to RBL as the outcome of a holistic pedagogy enhanced by teaching technologies (see for example Noble, 1980; NBEET Report: 33, 1994; Report to NCode 11, 1996; Ling, 1996; Telford, 1995). The RBL design model for the ITT conceptualises RBL as an active learning process in which a major component of learning is a set of educational materials specifically designed to support the learner in achieving learning objectives within their own learning context. The subject therefore depends on a bank of materials that form the main vehicle for the study program but while RBL focuses on 'resources' by definition it would be a mistake to conceptualise this program in terms of information, no matter how mediated. The ITT conception of RBL appropriately shifts the focus from information provision to learning processes and outcomes.

The RBL redesign provides more flexibility than the previous program in terms of:

- modularisation
- course entry and exit times
- place of learning
- pace of learning
- level of accreditation attainable
- methods of assessment
- opportunity for interaction between participants and facilitator
- use of communication technology
- increased access to learning resources
- feedback on work in progress.

The learning objectives of the ITT subject are specified and listed on the course outline which applies to all participants. The program therefore provides the opportunity for learning within a defined curriculum that, because of the RBL environment, is flexible enough to adapt to the experiences, needs and circumstances of the learner in their own time and at their own pace with choice as to how they will approach the structure of the curriculum presented. Theory and to a large extent method is still prescribed because method is intended to model effective educational practices as well as provide learning experiences, however much of the content is mediated by the learner according to their professional circumstance.

A Model of Flexible Learning

Diana Thomas (1995) conceptualises flexible learning as the dynamics of the learning process which take place between the expert, the learner and the learning resource (which includes human resources) see *Figure 1*. The relationship between these is determined by the purpose of the learning as well as the capabilities and needs of the expert, learner and learning resource.

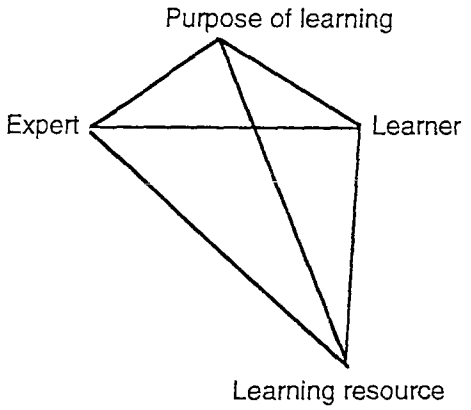

Figure 1: Model of Flexible Learning (Thomas 1995:5)

A model of the relationships that form the framework for the ITT was developed from Thomas' model and may be conceptualised as in Figure 2.

In this model a focus on the learning that takes place underpins the ITT conception of RBL. The relationship between elements is determined by:

- the purposes of learning as envisaged by the facilitator, the learner and the institution
- the purpose, characteristics and conception of teaching of the facilitator
- the needs and characteristics and conception of learning of the learner.

{The resource has neither needs, capabilities or conceptions however those of the developers are implicit within the resource.}

The facilitator's purpose recognises that tertiary teaching is a profession and that certain skills, knowledge and attitudes make teaching effective (Ramsden, 1995). This tertiary education subject is designed and taught by academic staff to teach the accepted theory and practice of the discipline as accepted by the tertiary teaching professional bodies. The

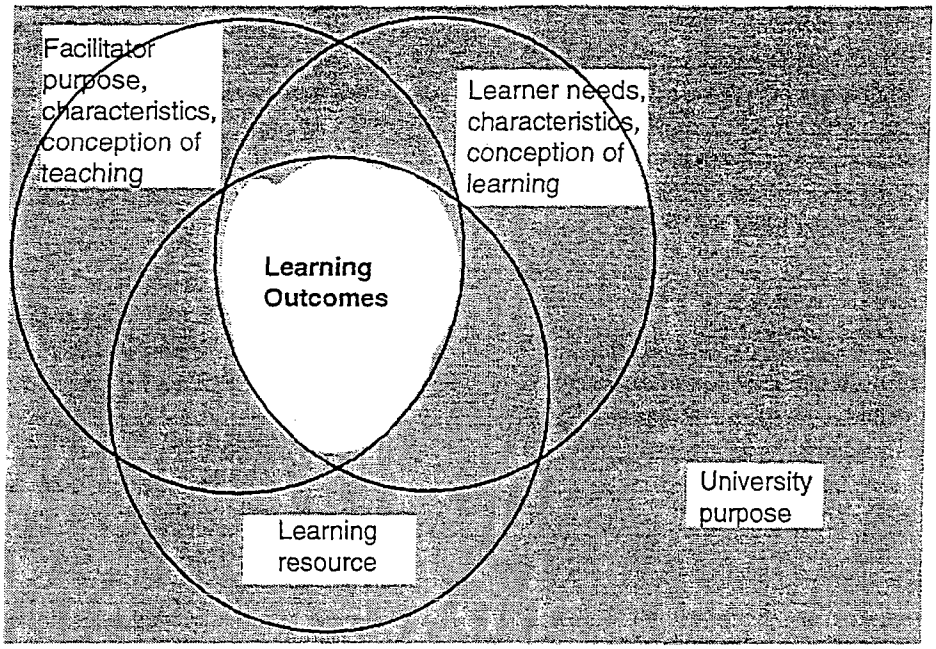

Figure 2: Model of Resource Based Learning within Higher Education

University purpose is to ensure that academic staff have the skills and knowledge required for quality teaching and institutional accountability. Learners each have their own purposes related to their needs. Unlike Thomas' model which subsumes organisation and infrastructure in the 'learning resource' because these "serve no other purposes ultimately than to support learning" (Thomas, 1995:5) the ITT model conceptualises these elements as having powerful influence on planning, process and therefore learning outcomes. {Thomas later indicates an organisation may have a significant learning purpose and this may be met within her model.} Facilitator and participants interact with the materials and each other according to purpose, need, characteristics, and conceptions of teaching and learning such that the participant may achieve the learning objectives indicated in the subject outline in the context of their own discipline.

The University of Wollongong RBL program

The ITT is now a more flexible subject offering a series of modules in the basic skills of tertiary teaching. Each module consists of a print-based resource package providing an integrated set of learning activities through a variety of educational technologies including videos, a CAL package, asynchronous computer mediated communication, an electronic mail network and face to face workshops. ITT may be studied as a postgraduate subject within the Faculty of Education {EDGA997} or as a professional development program {ITT - PD}.

The ITT modules comprise:

- Learning and Teaching
- Assessing Student Learning
- Teaching Small Classes
- Teaching Large Classes
- Evaluating and Designing a Subject
- Elective/Independent study

Participants are challenged to consider their existing conceptions of teaching and learning against accepted educational theory and practice, to choose and utilise a variety of educational technologies to support their teaching and to implement and reflect on some of the ideas developed within the course.

A total of twenty five participants have been involved in the RBL program at the time of writing. Eleven ITT participants are presently involved in the complete modular program. In addition to this group another fourteen members of staff have previously used the introductory module either as a stand alone program or as part of the ITT before redesign.

Discussion - What is working?

Evaluation of Module 1 was carried out by individual questionnaire, reflective writing and

group interview. This information provided formative evaluation for development of the complete RBL program. Formative evaluation of the full modular program is being carried out by written questionnaire, group discussion and open ended email survey. The following key issues have emerged during the early stages of implementation.

Meeting individual needs

Can the individual learning needs of academic staff be met through a program that provides all learners with a standard set of learning resources?

Most responses to the RBL program have been positive, although varied as would be expected from a mixed group of experienced and inexperienced teachers and students. Yet it is this variety of responses that poses one of the greatest challenges for RBL methodology. How can a single learning package meet the individual needs of a variety of learners, particularly where the institutional and professional requirements are so influential and the learning experiences are carefully structured to meet specified learning outcomes and develop required skills?

The design intention within the ITT materials is that the materials should be interactive, that is flexible enough so that learners can bring their own experiences, needs and situation to the learning process. The resources are structured such that learning through reflection on experience and action takes place. Learning is mediated by the facilitator through direct written and verbal feedback within a positive learning environment and supported by face to face workshops. The materials are designed such that there is a progression along a clear learning pathway in which key concepts are reinforced. Objectives of the program and each module are clearly specified and assessment is related to intended learning outcomes. These characteristics are indicators of good practice in RBL (HEC Report, 1997). Positive responses from twenty three of the total of twenty five users so far, suggest that most found the program they have participated in has met or is meeting their needs. Some mentioned the individual applicability of activities requiring experience-based reflection, others indicated the suitability of the RBL approach to their own perceived learning style.

> "It was good for me to look at how I learned, a better process than a lecture where people tell you these are the ways you learn. Learning by myself suits my learning style. This has made me more aware of my learning style and my teaching style."

> "It was good for me as it gradually and systematically led me through the material in a way which was manageable in the context of the rest of my workload."

> "... a good method of focusing attention on ... teaching practices."

> "It was very relevant to what I do in Nursing. This made me think that I am too didactic in my teaching."

Comments from two participants indicate they were not able to meet their own needs using the materials:

> "... should include information for advanced teachers" .... a bit too prescriptive"

and:

> "For my learning style and personal circumstance it might be better in a shorter sharper time. I did not appreciate the sectioning ...an essay on the content of the module would have served me personally better."

{Note the time frame was at the discretion of the participant}.

Two of the participants who found RBL stimulating cautioned against its 'overuse':

> "because teacher assisted learning is more effective."

and

> "I'm a real class attending person. I love interaction".

While it may be tempting for the designer/facilitator to discard the negative opinions of a minority of learners given the positive response from most other users, further investigation is needed to ascertain how RBL can meet the needs of all learners and to avoid the danger of developing teacher-centred curriculum in the design of planned RBL experiences.

Providing feedback

How much feedback do academics involved in teaching programs really want?

The necessary characteristics of teaching strategies that incorporate the use of educational technology have been identified by Laurillard (1993) as discursive, interactive, reflective and adaptive. The development of a dialogue between participant and facilitator through the provision of written feedback is considered essential to effective participant learning in this program. The resources are interactive and discursive such that the facilitator provides feedback on actions during, rather than after, the learning activities through a process of written and spoken dialogue between learner and facilitator. Some comments on the provision of feedback were:

> "Writing for feedback is really hard, have to really get ideas into order."
>
> "I enjoyed writing for feedback."
>
> "Feedback made me feel better."

The reflective nature of the materials is also a vital element the intention being to support reflection-in-action and reflection-on-action (Schön, 1987). One participant commented:

> "It made me observe my own teaching and my students' learning more closely and reflectively. I was also encouraged to try some different activities in teaching ..."

And another with significant secondary teaching experience:

> "I seem to make students do things all the time rather than listening ... I was worried whether this way of teaching is appropriate in the tertiary setting. After doing this module I am comfortable in my teaching approach ..."

Few of the ITT Group actively sought feedback despite the facilitator's constant prompting. Only six of the twenty five participants submitted work for feedback prior to completion of a module and of these, only three regularly sought intensive face to face discussions.

The inclusion within the print-based resources of specific exercises, directions and reasons for gaining feedback had little effect on most learners' behaviour. It appears that individual needs for feedback and support vary and feedback is not considered an essential element by some. By way of contrast it was the facilitator who felt a strong professional need and responsibility to provide feedback and monitor participants' progress. This need is recognised in the RBL model, *Figure* 2.

Encouraging a deep approach to learning

Outcomes of studies into student learning in higher education indicate that learners may take a *Surface* or a *Deep Approach* to learning and that the teaching context is an important determinant of the approach taken (Marton and Säljö, 1976a, 1976b; Ramsden, 1985; Entwistle, 1988; Biggs, 1987). The research into approaches to learning, student centred learning (Boud, 1988; Candy, 1988) and the use of educational technologies (Laurillard, 1993) indicates resources that motivate a deep approach to learning need to integrate the discovery of meaning, development of understanding and exploration of structural complexities. Although Gibbs (1984) suggests that learner dependence can be encouraged by highly structured self study packages there is some evidence emerging that students who are more inclined to take a deep approach to learning are more likely to accept the introduction of RBL packages (Jones and Kember, 1994; Relf and Geddes, 1992).

Within the ITT learners are expected to adopt a deep approach such that meaning is sought rather than reproduction of information. The resources encourage participants to actively pursue knowledge within their own teaching, problematise, critically analyse theory and practice and evaluate their ideas. Responses to RBL in this program were that most participants felt that they had been working at depth. Some comments on this issue:

> "I liked the links between ours and students' learning."
>
> "I appreciated the opportunity to spend time thinking deeply about issues,"
>
> "... made me think about teaching in new ways and also made me consider learning and how important it is in teaching, something I hadn't given enough attention to."
>
> "I think the modules are a very impressive way of structuring learning. I think that

the way they combine readings, reflection, structure, enuf (sic) direction and space to wander/wonder is perfect."

"Thinking is hard work and grappling with new ideas is hard work as well ... so something which combines discussion and really specific tasks seems to me a better combination."

The 'human face of dialogue'

How can human interaction be retained in RBL? Is computer mediated communication a substitute for, or an adjunct to, face to face interaction for learners on the same campus?

Knowledge is articulated through human interaction, in this way it is argued, tested and improved (Laurillard, 1993). Computer mediated communication is one of the accepted tools for effective collaborative learning at a distance (see for example Harasim, Hiltz, Teles, and Turoff, 1995; Gunawardena, Anderson and Lowe, 1996) so RBL strategies should integrate student/student and student/teacher dialogue. ITT introduced an On-Line forum to provide wider CMC opportunities for discussion and debate. Most participants were introduced to CMC through a hands on workshop session contrasting Chat Space and an On-Line Forum.

Autumn '97 participants accessed the session from their own terminals on campus. Participants found this an interesting exercise yet felt the Chat Space encouraged superficial discussion if they could get it to work. Some found the different strands of chat were confusing. Some of them indicated that neither Chat nor the On-Line Forum were particularly useful for their teaching purposes at present but that if they were teaching at a distance they would probably use an electronic forum. After the workshop there were no further postings to the forum.

Participants in Spring '97 semester were introduced to the forum through a workshop and practice session held in the multimedia lab. This was a much more successful method of introduction as any problems participants had in using the technology could be addressed by direct instruction. In addition a quick verbal response from a colleague could solve an irritating problem arising from lack of familiarity with the technology. Most members of this group were reluctant to leave the discussion and take the scheduled break. This group was positive in terms of the usefulness of the forum for discussion:

"It is a way you can have a conversation at your leisure. You can write a reply at midnite (sic) and check a week later to see if anyone has said something."

Despite the interest shown and reminders from the facilitator, no participant has posted a message since the workshop:

"I must admit that I am not completely at home with the electronic talking system and so it took me some time to figure out how it worked. Just now I went back to look at the forum and I must admit I still found it confusing ..."

"This is an interesting idea provided you have the time. If you do not have the time, it is almost impossible for you to think and reply/comment on others' questions and remarks. It should have been a real source of intellectual discussions but it failed because of lack of time."

"Haven't used the electronic forum yet but think that it is a good idea and all should be encouraged to use it, even after we have completed the course."

Perhaps this is related to the optional nature of the forum, the availability of face to face discussion within the workshop sessions and the competing demands of participants' academic workload. Some participants may need to gain confidence in posting their own ideas for discussion:

"I looked but nobody had written anything."

A significant email culture already exists within the University of Wollongong. Almost all staff use email as a daily tool to post messages to individuals and groups on and off campus. A positive attitude to the use of information technology as a communication medium might be engendered by this email culture. On the other hand the absence of ongoing use of the On-Line forum within ITT might also be a direct result of this culture. People who are used to the simplicity of email may find the forum too complicated:

> "I prefer email to the Net. Why not do it on email - you could always archive the postings."

Other teachers who have a vision of electronic communication as an administrative, information sharing tool rather than a teaching technology, may not immediately recognise the pedagogical possibilities of an electronic forum.

Conclusion

A flexible approach to learning within university courses for tertiary teachers may offer a highly effective learning experience through RBL if resources are thoughtfully designed and implemented on sound teaching and learning principles.

This early study of emerging trends suggests that designers developing RBL programs at the tertiary level may need to consider carefully the purposes of, and requirements for, provision of ongoing feedback. Teaching methods that encourage a deep approach to learning, the use of computer mediated communication as a substitute for or an adjunct to face to face interaction, and the means to meet different needs of learners using a standard set of resources should also be further explored.

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