DEVELOPING STUDENTS' LEGAL PROBLEM-SOLVING SKILLS: AN INTEGRATED MODEL

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It is important for business students to develop the ability to identify and analyse problems that have legal significance. This paper discusses the results of research into a successful problem-based approach to the development of students' legal problem-solving skills in the third semester of a Bachelor of Business Studies degree. The course is structured to promote "high-level engagement" with a diverse group of students, some of whom are relatively "non-academic" (Biggs, 1999). Students were asked to identify the aspects of their learning experiences that they believed helped them develop insights into and understandings of their own legal problem-solving processes. Key themes and issues arising from the data were then explored in depth using focus groups. The study highlights the importance of skilled facilitation in creating successful learning experiences for students. Especially important were the stimulation and challenging of student thinking, and the modelling of appropriate analytical processes. An integrated model of the key factors contributing to the development of process skills is presented. Implications for future development are considered.

INTRODUCTION

How can we make problem-based learning effective when student groups comprise a range of academic and linguistic abilities? How can we achieve what Biggs (1999) terms "high-level engagement" with these students? And how can we structure learning experiences in ways that help students to develop the confidence, skills and knowledge necessary to solve professional problems and become independent thinkers and learners?

High-level engagement occurs when students are actively engaged with higher cognitive processes. According to Biggs (1999), problem-based learning promotes high-level engagement with the learning process because it requires students to question, reflect, analyse, theorise and generate solutions.

Woods (1997) and others have pointed out that the skills of problem-based learning do not come easily to students and may require direct instruction as well as careful modelling. When student groups are academically and culturally diverse, the issue of skill development becomes an even more critical one.

In this paper, we propose a model of problem-based learning that promotes high-level engagement of students. The model (derived from our recent research) builds on the work of Ryan and Quinn (1994), and integrates the principles of effective facilitation (Brookfield, 1995) and good teaching (Ramsden, 1992) with key aspects of cognitive apprenticeship (Collins, Brown & Newman, 1989). In this model, students are carefully guided towards greater independence while at the same time acquiring essential learning and discipline-specific professional skills. Such a model may prove a powerful instructional tool for diverse student groups.

CONTEXT FOR THE STUDY

The Bachelor of Business Studies (BBus) at the Auckland University of Technology has a student-centred, vocational focus. The degree aims to prepare students for professional practice by developing professional skills and capabilities (The Auckland University of Technology defines 'capability' as the personal and interpersonal qualities that enable people to take effective professional action) as well as holistic understandings of the professional areas for which they are being prepared. As with many modern universities, our students tend to be highly diverse in terms of academic ability, cultural background, English language skills, motivation and educational goals.

The problem-based course which is the focus of this study is a law discipline component embedded in the third semester of the BBus programme (IM3). The course aims to provide students with preliminary legal problem-solving skills and legal knowledge important to business people.

As with many disciplines, law has its own very specific approach to problem-solving. The legal problem-solving process used in this course requires students to: analyse the facts, frame research questions, conduct their own legal research, state the relevant law, apply that law accurately to the facts, and reach a conclusion that is justified by the analysis. At the heart of legal problem solving is a process of precise and thorough analytical reasoning.

In this course students are introduced to legal problem solving with a simple puzzle that is carefully designed to parallel the legal problem-solving process. This introductory session demonstrates to students that they already have and use many of the required analytical reasoning skills, and thus provides a conceptual bridge between prior knowledge, existing problem-solving behaviour and the development of discipline-specific reasoning skills. The model is 'fleshed out' in terms of useful questions and lines of enquiry in subsequent sessions.

The content of the course is based on a series of case studies that closely approximate real life situations. These case studies are of increasing legal complexity and students engage with them in ways that demand increasing finesse in legal reasoning. It is intended that the outcome of this engagement will be the integration of discipline knowledge with a developing understanding of and skill with the legal problem-solving process.

DESIGN AND IMPLEMENTATION OF THE STUDY

Both formal and informal feedback on the law component of IM3 has been consistently positive over recent years. Such feedback, however, tends to be general and somewhat superficial. We wished to obtain specific data about the aspects of the course that contributed to its success. We wanted in-depth, rich data comprising student-generated concepts.

A case study design (Merriam, 1998) was used. This suited our context and our aim of identifying students' perceptions of the aspects of their learning experiences that they believed helped them develop legal problem-solving skills and the associated legal knowledge. Case studies have a heuristic quality and, because of this, a potential applicability to a wider audience.

The sample consisted of 18 student volunteers (10 female and 8 male), who represented a cross-section of ages, cultures, and academic abilities. At the end of each class over a 10-week period, students completed a very brief open-ended questionnaire (adapted from Brookfield's, 1995, 'Critical Incident Questionnaire'). The aim was to identify what new insights and understandings (if any) students believed they had gained in that session, as well as their perceptions of particular learning experiences that contributed to those new insights or understandings. Key themes and issues arising from this data were explored in depth, after weeks 4 and 10, using student focus groups. All data was analysed using a modified grounded theory approach (Merriam, 1998).

OUTCOMES OF THE STUDY

Evidence Of Course Effectiveness

The data provided clear evidence of students' development of legal problem solving and self-directed learning skills, and the relationship of those with the integration of new discipline content. Students highlighted a range of ways in which their legal problem-solving skills had improved. In particular they commented on the development of their questioning skills, their ability to focus on relevant legal issues, and the precision and depth of their analysis. They emphasised that they were less likely to jump to conclusions, and they stated that they understood much better the methodical nature of the legal reasoning process.

The study also provided evidence of students' increasing 'ownership' of their individual learning processes. Students identified their increasing awareness of and insights into their own thinking behaviours and skills. They indicated that they were actively taking responsibility for doing the assigned pre-reading, as well as undertaking their own legal research beyond the set texts. They highlighted the fact that they had worked through the problems individually prior to class and commented on the pride and satisfaction this gave them. In addition, some students were re-evaluating and reviewing their analysis after class discussion of the case had been concluded. Students also demonstrated that they were actively synthesizing new discipline content (for example, aspects of contract law) through engaging with the legal problem-solving process.

Student Perceptions Of Factors Contributing To Effective Learning

Some factors that the students highlighted were perhaps to be expected, other aspects were both interesting and surprising. The main themes from this data are summarised below.

Very Important That It Was OK To Be Wrong

Students described how vital it was to the development of their reasoning skills that they were never made to feel inadequate, that all reasoning was overtly valued, and that their exploration of learning was interesting, enjoyable and challenging.

The Motivating Power Of Lecturer Enthusiasm And Commitment To Student Support

Students commented on the lecturer's ability to communicate her enthusiasm for her subject as well as her commitment to supporting students' learning. Both attributes were viewed by students as contributing significantly to their motivation and skill development.

The Importance Of Constant Quality Feedback

The ongoing provision of quality feedback was viewed as being crucial to students' developing confidence as well as their actual learning. This feedback came not only from the lecturer, but also from the high level of interaction at both the class and small group levels.

The Value Of Using A Model Of The Legal Problem-Solving Process.

Developing a legal problem-solving model and learning to use it with increasing finesse were very important to students' learning throughout the course. Students stressed how important the model was in helping them develop the methodical and careful analytical skills so critical in legal problem solving.

The Value Of Creating Visual Models Of Reasoning Processes

The lecturer's use of diagrams and models was identified as particularly helpful in orienting students' thinking. The diagram became a "visual anchor", an important tool which guided their ongoing analysis and their articulation of the reasoning process. This was especially important in helping students understand the methodical nature of legal reasoning.

The Importance Of Consistency In Both Interaction And Structure

Aspects of consistency that students identified as important to their learning were: consistency in the way the lecturer modelled the legal reasoning processes; consistency in applying the legal problem-solving model to a case; and consistency in the structure of each classroom session.

The Importance Of A Lecturer's Questioning And Discussion Skills

Students frequently identified the lecturer's questioning skills as vital to their learning. They emphasised the importance of questions that guided their thinking, and helped them achieve greater clarity in their reasoning or important shifts in perception and understanding. They also believed that the highly interactive whole class discussions contributed considerably to their understanding and their motivation.

The Value Of Small Group Work

Working in small groups provided a variety of important learning opportunities. Students made particular note of how important it was that group members were able to communicate or explain complex concepts to each other in everyday language. They valued the opportunities for collaboration, the shared challenge and critique and the mutual insights they gained. Small groups also provided a safe environment as well as an equal opportunity for everyone to participate.

DISCUSSION

The student data has interesting parallels with three main bodies of theory: the importance of skilled facilitation in establishing an effective environment for learning (Brookfield, 1995); the features of good teaching (Ramsden, 1992), and cognitive apprenticeship (Collins, Brown & Newman, 1989).

One of the most interesting outcomes of this study was the strength of students' emphasis on the importance of a lecturer's personal qualities in creating an environment that fostered learning. Key aspects of this were: the ability to create safety and trust; respect for and valuing of all students, enthusiasm for the subject, the ability to motivate students, and a commitment to supporting them throughout the learning process. These are the qualities and skills of an effective facilitator (Heron, 1989). What needs to be stressed is the inevitable impact of a lecturer's attitudes and facilitative skills on the ultimate effectiveness of students' problem-based learning experiences. We believe this to be especially important with diverse student groups.

The qualities noted above are also features of good teaching. The student data strongly confirmed the importance of many principles of good teaching such as: providing high quality feedback; ensuring that students learn actively, responsibly and cooperatively; and encouraging student independence (Ramsden, 1992).

Biggs (1999, p. 4) identifies good teaching as that which gets "most students to use the higher cognitive level processes". According to Collins, Brown and Newman (1989, p. 480) a key goal of teaching is helping students "acquire and integrate cognitive and metacognitive strategies for using, managing and discovering knowledge". If students are to become active metacognitive participants in their learning, cognitive and metacognitive processes need to be valued and overt. Metacognitive awareness also develops out of collaborative exploration of learning.

In this course, students used the legal problem-solving model to guide and monitor the development of both cognitive and metacognitive skills. Through using the model, students could identify where to start, how to proceed and the kinds of questions to ask themselves in order to create direction in their reasoning. Their increasing understanding and skill with the process contributed to successful learning outcomes and these in turn had a significant effect on student confidence and motivation.

Throughout the study, students continued to emphasise aspects of their learning experiences which belong under the concepts of modelling and consistency. It is clear from the student data that consistency over a reasonable period of time is critically important if students are to develop skills to an appropriate level of competence. By maintaining consistency of process and format, students' attention can be more easily focussed on the reasoning processes and on subtle analytical distinctions (for example, of law and fact). In this study students specifically linked the consistency of their learning experiences to their developing self-confidence and skills with the legal problem-solving process. This accords with the notion that increasingly sophisticated concepts and skills evolve through consistent, repeated and authentic engagement with them (Brown, Collins & Duguid, 1989). A key aspect of consistency in this study is the way in which the legal problem-solving model is used, the model itself remains invariant throughout the course although it is used in increasingly complex contexts.

There are interesting parallels between the student data and the concept of cognitive apprenticeship (Brown, Collins & Duguid, 1989). Ryan and Quinn (1994) describe cognitive apprenticeship as the pedagogy of thinking skills development, key aspects of which are modelling, coaching, scaffolding, articulation, reflection and exploration.

Our view of modelling differs in some respects from that described in the literature on cognitive apprenticeship. We believe these differences to be important and will therefore discuss them in some detail. In relation to our study, there are both explicit and implicit aspects of modelling. The process by which the lecturer engages in questioning students provides an explicit model for the student of how to reason. This process, however, is not solely an expert / apprenticeship relationship. It is a collaborative process which engages students at both the cognitive and metacognitive levels. An important aspect of this process is the modelling of the reasoning and self-questioning behaviours that help students move beyond the many barriers, confusions and pitfalls of all learning experiences. It is highly demotivating for students and extremely damaging of their self-confidence, if they are allowed to flounder around in conceptual quicksand. Students need to be shown a path out of their own confusion. This does not mean handing that path to them directly, but it does mean helping them re-orient or shift their thinking so that the new path opens up, and they have the opportunity to understand and develop appropriate skills with which to avoid that particular pitfall in future.

An aspect of modelling that is implicit is the subtle way in which a lecturer might communicate her confidence in students' abilities to successfully reason their own way through their learning difficulties. Such communication of confidence helps build students' trust, as well as foster sufficient self-confidence for them to engage in the risks associated with open exploration of their thinking and reasoning processes. This in turn can become a model for students' interactions with each other.

Several writers have noted the importance of educators modelling the key learning behaviours and skills that they want to develop in their students. Brookfield (1995) writes that the authenticity of such modelling is a crucial factor in establishing a teacher's credibility.

Our view is that modelling and coaching are integral parts of a collaborative process which promotes high-level cognitive engagement and helps enculturate students into the thinking and reasoning processes of the profession. Collins, Brown and Newman (1989, p. 481) describe coaching as consisting of "observing students while they carry out a task, and offering hints, scaffolding, feedback, modelling and new tasks aimed at bringing their performance closer to expert performance". This relates closely to the practice in the course under study. It is interesting to note the inclusion of modelling as part of the coaching process. Our view is that the lecturer is one of the group and, in this capacity, models professional behaviours. When students witness as well as participate in spontaneous legal thinking they benefit from "legitimate peripheral participation" and gain a sense of how expertise is made manifest in that discipline (Brown, Collins & Duguid, 1989, p. 40). With refinement of skills, increasing confidence in the process and gradual fading of lecturer involvement, students are led into increased autonomy (Brown, Collins & Duguid, 1989; Ryan & Quinn, 1994).

The collaborative exploration of learning is a highly interactive process in terms of thinking and the articulation of questions and ideas. This on-going articulation, which is conducted in both whole class and small group settings, makes concepts overt and available for discussion and reflection (Brown, Collins and Duguid 1989). Small group learning has its own advantages. It has a particular propensity to give rise synergistically to insights and solutions which students would be unlikely to derive on their own (Brown, Collins and Duguid, 1989). It also gives opportunities to confront ineffective strategies and misconceptions (Ryan and Quinn, 1994).

Scaffolding refers to the guidance and support that a lecturer provides for students actively engaged in the construction of knowledge. It is a temporary means to an end - that is, the student as independent learner. For scaffolding to be successful, a shared understanding of and responsibility for the learning process needs to be established and maintained.

In our study, the lecturer's visual diagrams were a source of both modelling and scaffolding. The collaborative process of constructing these diagrams modelled necessary analytical reasoning processes, while the diagrams themselves provided scaffolding which assisted students in sifting data and methodically dealing with the issues raised.

Our study demonstrates the importance of scaffolding in many ways. For example, in the process of deriving the problem-solving model through metacognitive analysis of their problem-solving behaviours, students build on legitimate prior knowledge. Brown, Collins and Duguid (1989, p. 38) highlight the importance of establishing the "legitimacy of prior knowledge and making it available for scaffolding in apparently unfamiliar tasks" as a characteristic of cognitive apprenticeship. In this way confidence and motivation are built and maintained, a shared vocabulary and learning process are acquired, and the process of enculturation into the thinking processes of the legal discipline is begun.

Our student data also provided insights into factors which enhanced student ownership of their learning. It was clear that students took pride in the fact that the thinking was their own, and were motivated to devote considerable effort to preparing for each class by doing the prescribed reading and researching the problem. When students perceive knowledge as being immediately useful in context, self-confidence and motivation are increased. This is one of a range of subtle ways in which students can be encouraged to become progressively more accountable for their learning.

AN INTEGRATED MODEL OF PROBLEM-BASED LEARNING

The integrated model of problem-based learning shown in Figure 1 is derived directly from the research study. The foundation of this model is a 'problem-solving climate'. This consists of 3 key elements: a positive learning environment which addresses the basic areas of safety and trust, an overt valuing of all thinking activities as intrinsic to the learning process, and metacognitive awareness. Within this climate, students are able to make effective use of a discipline-specific problem-solving model to guide the learning process. Two threads run throughout: a collaborative engagement with and effective modelling of professional behaviours; and consistency throughout the learning process.

On this foundation, the lecturer chooses appropriate strategies to maximise collaborative learning, support the development of problem-solving skills and encourage student independence. Such a model is congruent with the established principles of problem-based learning.
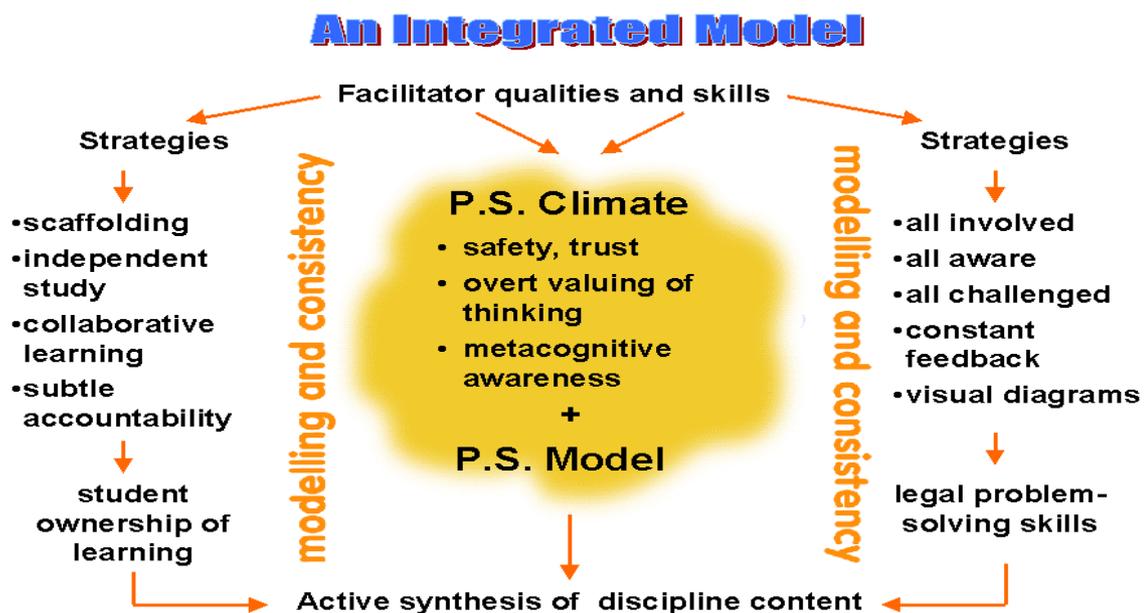

Figure 1. An Integrated Model of Problem-based Learning

CONCLUSION

We believe that when working with diverse groups of students, it is absolutely critical not to forget the principles of effective facilitation and good teaching. We must not be too concerned with developing independent learners and the guided discovery of the learning process that we neglect basic areas of safety, trust, motivation, enthusiasm and confidence in the learning process.

It is also vital that we harness the power of lecturer modelling in a collaborative learning environment to promote the acquisition of professional skills and to support students in their developing independence.

We suggest that these are the keys to creating high-level engagement and making problem-based programmes effective with diverse student groups.

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