ABSTRACT

The paper takes up the challenge introduced by Ramsden (2003) to transform an imitation subject into a real subject. The paper explores the author's experiences as a lecturer teaching construction law to surveyors and construction managers. The paper explores the multiple meanings of Action Research and adopts Problem Based Learning (PBL) to try to transform the subject. An example of how a complex and difficult legal subject was tackled by PBL is documented. Statistical tests and qualitative evaluation were used to gauge whether PBL made an impact. The conclusion was that PBL can transform an imitation subject into a real subject.

KEYWORDS: Construction Law, Education, Problem-based Learning, Pedagogy

1. INTRODUCTION

This paper provides an insider perspective on the teaching of law to non-law undergraduate students in a built environment department of a university. The paper was inspired by the work of Ramsden (2003) who argued that when considering teaching in Higher Education (HE) there ought to be a distinction between "imitation and real" subject teaching.

Ramsden (ibid.) described an imitation subject teaching as one where "students … have been involved in a certain process that has enabled them to acquire factual knowledge which is useful in a very limited range of situations. Much of what has been learned has no personal relevance to them (except as a form of gaining qualifications) or any connection with the real world it is supposed to explain."
Powell (1985) studied autobiographical accounts of graduates on their experiences of university teaching. An extract (from a student autobiographical record) stated that the student “… latched on to the idea that to pass you got a clear view of what you were expected to know and learnt it, word for word. Not much thinking. Just learn the sacred texts.” [Powell 1985, p133] [Emphasis added]

The passage above mirrored my experience studying law as an undergraduate on a surveying degree. Whilst I learned the sacred texts required to pass, these “texts” remained virtually meaningless to me and the experience represented a source of discomfort with learning and teaching in HE generally. Now that I am a lecturer in HE, I have subsequently discovered that I am not alone.

Dowdle et al. (2003) criticised teaching in universities and particularly the reliance on the traditional lecture. Others argued that “…University teaching should see the severest attenuation of the formal lecture if not its total abandonment” (Barnett, 1990). However, it is not only the “formal lecture” that has been criticised; Ramsden (2003) identified problems with small groups, problems with on-line learning, problems with textbooks and problems with practical and clinical work. Ramsden (2003, p156) concluded that:

“Any teaching method….is only as good as the person who interprets it. There are no sure-fire formulas in university teaching.”

Others have argued that lecturers are employed in universities primarily as researchers and that any interest shown in teaching is perceived as a “weakness”.


It is against this background that this paper is written. It considers the nature of construction law, explores the teaching of law subject to non-lawyers and applies an action research methodology to bring about improvement in the teaching. One approach suggested by the action research methodology is problem based learning(PBL). PBL was used to test an assumption that surveying and construction management undergraduate students’ negative attitudes to construction law might be changed by altering the method of teaching from a traditional approach to one based on PBL.

The paper considered whether exam and coursework scores showed significant change when PBL was used. In the case of the exam
scores the result was not significant but in the coursework the results were significant. A discussion of these results are offered to stimulate debate within the academic community on innovative approaches to the teaching of construction law.

2. WHAT IS CONSTRUCTION LAW?

“Construction Law” is not precisely defined. It is an interactive subject which includes management in addition to law (Uff (1999)). Surveyors and construction managers are expected to be aware of legal and management issues in the construction industry, yet many undergraduate students find law “intrinsically boring” though as Thomas (date) observed “this need not be so”. This caused me to reflect on my teaching of construction law to undergraduates. I wanted to research “the commitment to improvement of practice” (Kemmis, 1993, p185) in the context of teaching law to non-lawyers. I recognised that what I was trying to engage in was a type of research which would bring about change and improvement in my practice. As Cohen et al. (2000) observed:

“Action Research is a powerful tool for change and improvement at the local level...and its combination of action and research has contributed to its attraction to researchers, teachers and the academic and educational community alike....” [Emphasis as original] (Cohen, Manion & Morrison, 2000, p277)

I regarded the passage above as a useful starting point. Whilst undertaking this work I hoped to struggle in the space of HE for better teaching through “criticality” (Barnett 1997) which encourages students not only to learn about their world and themselves but to develop voices of their own and contribute to the world. For my part, this “requires that one be moved to do something”. (Burbules and Berk, 1999, p51).

3. ACTION RESEARCH

According to Masters (1995), several authors (Kemmis & McTaggart, 1988, Zuber – Skerritt, 1992, Holter & Schwartz-Barcott, 1993) state that the term “action research” (AR) was first used by Kurt Lewin, a social psychologist in 1947. However, McKernan (1981, p8, cited in Masters (1995)) maintains that AR’s roots can be traced back to the “Science in Education” movement in the late nineteenth century. Therefore, it can be argued that AR did not begin in the field of education, but was applied later to education and teaching (Lewin 1948, cited in Masters, 1995). The idea of AR in education was explored by Corey in “Action research to improve school practices” in 1953 in the United States. Corey’s work (cited in Masters, 1995) represented a systematic attempt to define the characteristics of this type of research in education. To Corey, action research was the process by
which practitioners (teachers, supervisors and administrators) cooperatively study their problems scientifically in order to guide, correct, and evaluate their decisions and actions to improve their practice. His contention was that practitioners would make better decisions and engage in more effective practices if they were able and willing to conduct research as a basis for these decisions and practices.

AR in the United Kingdom gained momentum and prominence through the influence of Stenhouse. Stenhouse advocated that “curriculum research and development ought to belong to the teacher” (Stenhouse, 1975 p. 142). Carr and Kemmis (1986) describe AR as being concerned with:

- the improvement of practice;
- the improvement of the understanding of practice;
- the improvement of the situation in which the practice takes place.

Schön (1983) argued that professional schools were relying too much on scientific knowledge and technical rationality and argued that teachers and others should pay more attention to “reflection-in action”. Adler (1993) extended Schon’s idea of a reflective practitioner, and emphasised that teachers researching their own teaching was important to their professional development. Bryk et al. (1993) argued that researching one’s teaching only makes sense when practice is seen in relation to others as a process of dialogue and encounter. I reflected on my experience of Construction Law as an undergraduate and felt that in order to improve my practice [of teaching Construction Law] I needed to have a “dialogue and encounter” with the students whom I taught. This involved an open and frank discussion with undergraduates as to why law might be important to surveyors and construction managers at at.

Altrichter et al. (1991, p3) contended that “There is not only one; there are many definitions of action research” Altrichter et al. (Op. Cit) proposed a working definition of AR, although, as they put it, “some definitional questions remained unresolved”. Hollingsworth et al. (1997, p312) argue that:

“Action Research has “multiple” meanings and uses…..What we need to look for is NOT whose version of action research is THE correct one, but rather, what it is that needs to be done, and how action research can further those aims” [Emphasis as original].

4. TEACHING LAW TO NON LAWYERS USING ACTION RESEARCH

Byles and Soetendorp (2002) acknowledged the vast range of programmes in which law is taught to non-lawyers and posed two questions:

1) How can students whose main discipline is not law be best supported in their learning of law?

AND
2) What approaches to teaching and learning are best suited to the students? (Byles & Soetendorp 2002, p144)

Byles and Soetendorp (2002) carried out what they called a "microstudy" at their own university, specifically the teaching of law to undergraduate Nursing, Business Administration and Accountancy students respectively in order to answer the two questions posed above. They concluded that there ought to be an emphasis on practical work. Byles and Soetendorp’s questions might legitimately be asked to those involved in teaching law to undergraduate construction management and surveying students in an effort to make law a “real” rather than “imitation” subject. Support for this line of reasoning can be taken from Jones & Scully (1998) who indicated that when studying law “…the ability to think critically is considered important” and they cited the Lord Chancellor’s Advisory Committee on Legal Education (ACLEC, 1995) as evidence to support their views.

Jones & Scully, and ACLEC observations relate to the teaching of law to undergraduate law students. The author proposed that these observations might equally apply to construction management and surveying students studying law. Hutchinson (2005) carried out a survey into the teaching of Construction Law in Universities in the UK. He found that in the teaching of Construction Law to undergraduate surveyors and construction managers that lectures and tutorials were used “overwhelmingly” in the teaching of Construction Law. He also found that examinations and coursework were mainly used in assessment of students in Construction Law. Hutchinson found in his survey that feedback from students was generally negative and that many regarded the study of law as “uninteresting” and “irrelevant” to modern surveying and construction management.

Following on from Hutchinson (Op. Cit.) the author decided to adopt an approach described by Johnstone (1996, p47) who said:

“…less is more… we should focus on the underlying principles and key concepts of our subject (rather than on too much surplus detail) and on the links between different principles and concepts in the subject and on the way in which the concepts in our subject relate to the concepts in other subjects”.

The AR methodology which involved action and research suggested a change from reliance on traditional methods and towards Problem-Based Learning (PBL). The ideas proposed by Laurillard (1993) encouraged the use of “problem solving tasks” because they require the application of knowledge and principles to new situations.

Stipanovich (1998) provided a possible insight into how the change might be effected in construction law by emphasizing the importance of what he called an “interdisciplinary discussion of
legal rules”. I interpreted this to mean that the study of Construction Law was not something to be studied in isolation but as a very important part of surveying and construction management education.

5. PROBLEM BASED LEARNING

Boud and Feletti (1997) argued that whilst there is no universally agreed set of practices that must be found in problem based courses, there are certain characteristics that occur. These characteristics are shown below:

<table>
<thead>
<tr>
<th>Boud &amp; Feletti’s Characteristics of Problem Based Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Using stimulus to help discuss an important problem, question or issue</td>
</tr>
<tr>
<td>• Presenting the problem as a simulation of professional practice or a ‘real life’ situation</td>
</tr>
<tr>
<td>• Appropriately guiding students’ critical thinking and providing limited resources to help them learn from defining and attempting to resolve the given problem</td>
</tr>
<tr>
<td>• Having students work co-operatively as a group, exploring information in and out of class, with access to a tutor (not necessarily a subject specialist) who knows the problem well and can facilitate the group’s learning process</td>
</tr>
<tr>
<td>• Getting students to identify their own learning needs and appropriate use of available resources</td>
</tr>
<tr>
<td>• Re-applying this new knowledge to the original problem and evaluating their learning processes.</td>
</tr>
</tbody>
</table>

[Adapted from Boud & Feletti (1997), p2]

I used Boud & Feletti’s ideas to design the PBL for the Construction Law Coursework.

6. PBL - ASSIGNMENT AND THIRD PARTY RIGHTS COURSEWORK

Traditionally a Construction Law assignment this takes the form of students writing an essay about a legal case involving a construction matter. Students write an essay which is marked by the lecturer. The essay is generally graded by considering the amount of work carried out, the citing of appropriate precedents and statutes and the students précis of the leading judgements. One of the most difficult areas of Construction Law for students to grasp is that of Assignment and Third Party Rights. I chose a
highly topical and controversial case as the basis for the coursework but decided not to demand the traditional essay but to try something different using PBL. I knew the case to be difficult because I had used the same case for the coursework two years earlier.

The case chosen for the coursework was of Alfred McAlpine Limited v Panatown Ltd. (2000) 4 All ER 97. Whilst it is outside the scope of this paper to discuss the case in detail, it involved assignment and third party rights in a building contract. The case arose following a decision made by an arbiter which was appealed against in the High Court, appealed again with the verdict reversed in the Court of Appeal, only to be overturned in the House of Lords by the barest majority (3-2). The students were expected to give a critical review of the difficulties involved in the case, and consider the various reasons the judges gave for their respective decisions and use the information to solve a similar (though not identical) legal problem.

To save "legwork" students were given internet web site addresses so they could read the transcripts of the case rather than have to find and acquire copies of the (paper) law reports. Students were also given a briefing on St Martin’s Property Corporation v Sir Robert McAlpine [1994] 1 A.C.85 and Darlington Borough Council v Wilshier Northern [1995] 1 WLR 68 which are cases concerning Assignment and Third Party Rights.

Yeo (2005, p541) described PBL as a “change from didactic teaching where the core knowledge discovery process lies almost entirely with the teacher” to a position where the lecturer acts as a guide or facilitator for students to discover core knowledge for themselves. Thus, the author did not give a lecture on legal aspects of assignment but invited students to consider why assignment might need to be restricted in the construction environment. In this way students devise their own questions to suit the legal context of the problem. The students are then stepping into the position of a judge and proposing solutions in complex construction cases.

The students were given approximately four weeks to complete their assignment. Student groups were asked attend discussion forums to summarise the legal arguments which arose in the case. There were also expected to summarise and make a formal presentation of the various issues given by the judges from the High Court, Court of Appeal and House of Lords. Finally and crucially the students were asked whether they thought the majority verdict was correct and the likely implications for surveyors and construction managers working in the construction industry. Students were expected to record discussions in the form of minutes of meetings, including any disagreements or conflicts and to keep a case diary with reflections and information about the case. Students were required to give their feedback on the coursework as this is standard procedure for all university coursework.

Most students recognised that a different approach was needed from the writing of the traditional law essay. Some student groups recorded
vociferous disagreements between group members. A few students came to me and voiced concerns that they felt they might be penalised (in terms of assignment marks) because they felt that the judgement of the dissenting minority in the case was “more powerful” than the majority decision in the House of Lords. Two students (from different groups) came to see me separately to inform me that they felt the House of Lords had “got it wrong” and that the decision in the Court of Appeal had been the correct verdict and that it should not have been over-ruled. I assured all that no marks would be lost through supporting the minority or dissenting view provided the reasons for such views were properly documented.

7. METHODOLOGY

I used both quantitative and qualitative methodologies. For the quantitative part I compared exam and coursework scores for the year group using PBL (called the PBL group) against a previous year groups’ scores where PBL had not been used (Non-PBL group). I was interested to find out to whether using PBL had made any difference to exam and coursework scores. Data was collected for exam and coursework for the PBL group and the Non – PBL group and an unrelated samples t test was used to analyse the scores using a confidence limit of 95% using SPSS for Windows statistical package.

For the qualitative part, I looked at the module feedback forms which all students in the university complete and compared whether there were any marked changes in attitude between the PBL group and the Non-PBL group. I paid particular attention to students’ written comments given on the back of the module feedback form.

As a starting point, the respective means were calculated for the PBL group and Non-PBL group as shown below:

<table>
<thead>
<tr>
<th></th>
<th>Non PBL Group</th>
<th>PBL Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursework</td>
<td>52.0526</td>
<td>56.4474</td>
</tr>
<tr>
<td>Exam</td>
<td>53.6944</td>
<td>53.1795</td>
</tr>
</tbody>
</table>

A comparison between the means for coursework for the PBL group and non-PBL group show little difference: A similar observation can be made when comparing the examination results. However, the comparison of these scores must be tempered in the light of circumstances. In the exam the mean scores were slightly higher for the Non-PBL group, however six students in the PBL group did not sit the examination due to either illness or dropping out of the course. Examination of the respective cohorts revealed that in the non-PBL group there were two mature students with advanced qualification and/or industry experience and two students who had studied law on previous courses. Within the PBL group there was a mature candidate and one student with prior experience of studying law.
Two t tests one for non-normalised students and one for normalised students were carried out.

<table>
<thead>
<tr>
<th>Normalised results for Construction law</th>
<th>Non PBL Group</th>
<th>PBL Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursework</td>
<td>50.5882</td>
<td>56.8056</td>
</tr>
<tr>
<td>Exam</td>
<td>51.6563</td>
<td>52.4054</td>
</tr>
</tbody>
</table>

The statistical test was framed in the following terms

Null Hypothesis – that the PBL materials made no difference to the students’ scores.
Alternative Hypothesis – that the PBL method made a difference to the students’ scores

The SPSS Analysis is given below:

T-Test for coursework

<table>
<thead>
<tr>
<th>Group Statistics</th>
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<tbody>
<tr>
<td>Group</td>
</tr>
<tr>
<td>Exam result</td>
</tr>
<tr>
<td>Non PBL</td>
</tr>
<tr>
<td>PBL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Samples Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene’s Test for Equality of Variance</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>Exam result Equal variance assumed</td>
</tr>
<tr>
<td>Equal variance not assumed</td>
</tr>
</tbody>
</table>

T-Test for coursework
Levene’s test is non-significant for both examinations and coursework because p > 0.05 (0.353 for exams and 0.326 for coursework respectively). It follows that the test statistics for Equal variances assumed should be read (Field 2000, p238). This gives a t statistic of 0.864 for exams and 0.116 for coursework respectively using a 2 tailed test. These values ought to be halved for a one tailed test to predict a hypothesis of PBL having a positive effect on examination and coursework results. A one tailed test would give values of 0.432 and 0.053 for examinations and coursework respectively. One tailed probability is still greater than 0.05 (albeit by a small margin in the case of coursework) so the conclusions to be drawn is that differences are due to chance and not caused by the introduction of PBL materials.

The tests were repeated for the normalised groups and gave the following results:

T-test for exam

<table>
<thead>
<tr>
<th>Group Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Exam result Non PBL</td>
</tr>
<tr>
<td>Exam result PBL</td>
</tr>
</tbody>
</table>

Levene's Test for Equality of Variances

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variance assumed</td>
<td>.978</td>
<td>.326</td>
</tr>
<tr>
<td>Equal variance not assumed</td>
<td>.978</td>
<td>.326</td>
</tr>
</tbody>
</table>

The tests were repeated for the normalised groups and gave the following results:
For the “normalised” student groups, in the case of the exam the results are not significant \( p > 0.05 \) for the one tailed test. In the case of the coursework, the one tailed test gives a significance of 0.016 which is significant at the 95% confidence level.

8. DISCUSSION

Although the results of the respective t tests are interesting, they are not conclusive. It can be argued that the results for the exam are not surprising given that it is not permitted by the university rules to give an identical exam paper to students and so one would expect this result. The coursework result is interesting in that it is statistically significant \((p< 0.05)\), however further work comparing other groups needs to be carried out.
before one can make generalisations. In this small scale study, the PBL approach appears to have made an impact, which is encouraging.

In the author’s opinion, a more influential finding than the t test scores are the results of an attitudinal survey in which students give feedback on each module. The students were given feedback forms asking for their opinion on the construction law module. An extract from the module feedback form is shown below.

**Student Feedback**

A qualitative methodology was used by examination of student module feedback forms. In the university students complete module feedback forms for all modules studied on their course at the end of the module. One of the key questions on the module is the rating of the statement that “Overall this module was a good module” and students are invited to comment on a five point Likert scale. A comparison was made between the previous year group where construction law was taught in the traditional way using lectures and tutorials (Non- PBL Group), and the year group where PBL was used. The comparison is shown below.

<table>
<thead>
<tr>
<th></th>
<th>Non PBL Group</th>
<th>PBL Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>19%</td>
<td>30%</td>
</tr>
<tr>
<td>Agree</td>
<td>48%</td>
<td>58%</td>
</tr>
<tr>
<td>Neutral</td>
<td>18%</td>
<td>12%</td>
</tr>
<tr>
<td>Disagree</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>4%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The findings of the attitudinal survey show an increase in the “strongly agree” and “agree” categories by 11% and 10% respectively. This suggests a positive response to the use of PBL in the construction law module course.

**9. CONCLUSION**

Thomas (2000) said that “Law is not intrinsically boring but can be made so”. The use of PBL in the teaching of non-law and surveying students was an attempt to enhance the subject and transform it from an imitation, where materials are rote learned for regurgitation in exams and coursework, to a real subject which construction graduates will value and cherish. Whilst further work is needed before generalisations can be made, it is hoped that the findings in this paper will encourage colleagues in other universities and colleges to experiment with PBL and act as a stimulus for discussion and debate.
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