

often be faced with problems which require the bringing together of their legal knowledge and skills in advising and solving these problems. It is these types of problems or situations that are the focus of learning in a PBL approach.

There are several methods of teaching law in higher education that utilise problems. In redesigning the introduction to the taxation law unit, a combination of the modified case based approach together with the ‘closed loop or reiterative problem based method’ was used, both of which are examples of PBL.

In the first approach, students are given a written problem, which does not contain all the information necessary to answer it. They are required to analyse the problem and make further enquiries to obtain relevant information. Students interact with the problem at two stages. The first stage is to determine the additional facts they require and the second is, once the additional information has been given, to ascertain the relevant legal knowledge and apply it to these facts.

The ‘closed loop or reiterative problem based method’ provides a structure for the students to review and evaluate the process by which they reached their conclusion. In this way the learning is reviewed and consolidated and the students are given the opportunity to build a problem solving technique that can be used in other situations.

Studies have shown that in courses which qualify graduates for professional practice, and which usually involve a large amount of problem-solving activity, students are learning a process, that of problem-solving, which will be an essential part of their career as professionals.

Commentators have realised that problem-solving and analysis skills are important because they put theory into practice. By requiring students to apply and synthesise difficult legal con-

cepts they will develop a better understanding of these concepts and realise how the law actually operates rather than viewing it in a vacuum.

The first tutorial for the semester involved a discussion of what is meant by the term ‘legal problem solving’. Each group was required to work through a simple everyday problem concentrating on the processes they undertook in attempting to recommend a solution, rather than worrying about the legal issues. The last part of the tutorial involved a discussion of the steps in legal problem solving, how they are similar to those already used in everyday life and how they could be used in solving a simple Taxation Law problem.

As the weeks progressed the tutorial problems became more complicated, whilst still requiring analysis of the legal issues dealt with in the previous weeks. The increasing complexity also meant that students were continuously challenged by the new issues, they were able to build on their previous learning and use this to scaffold their next stage of legal research and then analysis.

Students interact with the problem at two stages. The first stage is to determine what further research they are required to do. They were advised that every fact in the problem was relevant so that they would realise that these facts pointed to some legal issue. Once they had identified and done the further research they would have to apply it to the facts of the problem. This is the second stage.

To allow for reflection and the review of the students’ learning every fourth week a review tutorial with no set problem was programmed, allowing them to discuss areas they found confusing or difficult, share their approaches to the previous week’s tutorials or raise other issues they consider important. This integrates a ‘closed loop or reiterative problem-based approach’, which extends the problem-based method by providing a structure

for the students to review and evaluate the process by which they reached their conclusion.

It was important to assess the PBL approach as students will tend to ignore material or approaches which are not assessed or which they do not think will be assessed. In other words, it would be pointless to have as an objective the development of high level legal problem-solving skills without assessing this skill in some way. The importance of legal problem-solving skills and the development of these skills in the tutorials was also reinforced by the format of the final exam, which involved complicated legal problems covering issues from all areas of the subject.

Furthermore, a method of assessment was needed that matched the learning objective of enhancing synthesis of legal knowledge and the development of legal argument. The assessment scheme needed to be linked to the subject’s objectives because the assessment tasks demonstrate what the students have achieved.

Subsequent student feedback indicates that, although they find the approach demanding and time consuming, it is ultimately more rewarding in that they feel they have a better understanding of Taxation Law principles and are better prepared for the exam. This feedback is confirmed by an improvement in the overall results attained by students in the subject.

STUDENTS

Test suites: a tool for improving student articles

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Students who are writing law review notes or seminar papers often get tunnel vision: they focus on the one situation that prompted them to write the piece — usually a situation about which they feel deeply — and ignore

other scenarios to which their proposal might apply. This often leads them to make proposals that, on closer examination, prove to be unsound.

For instance, a student might be outraged by the government's refusal to fund abortions, and might therefore propose a new rule that 'if the government funds the non-exercise of a constitutional right, then the government must also fund the exercise of the right'; or the student might simply propose that 'if the government funds childbirth, it must fund abortions,' and give the more general claim as a justification. But the student might not think about the consequences of this general claim, which are that, when the government funds public school education, it must also fund private school education since that is also a constitutional right — or perhaps even that a government that funds anti-drug speech must also fund pro-drug speech.

The student's argument, at least at its initial level of generality, is thus likely wrong or at least incomplete even by the student's own lights. But the focus on the one core case keeps the student from seeing the error.

All of us have run into this in our students, and we have tried to help them by identifying the counter-examples that they need to consider — and by stressing to them that they should themselves identify such counter-examples. The author wants to suggest a more systematic approach for doing this, using a concept borrowed from computer programming: the test suite.

A test suite is a set of cases that programmers enter into their programs to see whether the results look right. If all the test cases yield the correct result, then the programmer can have some confidence that the program works. If one test yields the wrong result, then the programmer sees the need to fix the program — not throw it out but improve it. Such test suites are a fundamental part of sound software development.

What information can this testing provide? First, pointers to error: the student might find that the proposal reaches results that even he thinks are wrong. If so, the student might think that the proposal yielded the wrong result because it did not take into account countervailing concerns that may be present in some cases. If this is so, he could modify the proposed test, for instance by limiting its scope. Another possibility is that the insight which led the student to suggest the proposal is better explained by a different rule.

Second, evidence of vagueness: the student might find that the proposal is unacceptably vague. Third: surprise: the student might find that the proposal reaches a result that he at first thinks is wrong, but then realises is right. The student should keep this finding in mind and discuss it in the article; it may help him show the value of his claim, because it shows that the proposal yields counter-intuitive but sound results. Fourth, confirmation: the student might find that the proposal yields precisely the results that he thinks are proper. This should make the student more confident in the proposal's soundness, and it also provides some examples which can be used in the article to illustrate the proposal's soundness.

How can students identify good items for test suites? Students could start by identifying what needs to be tested. The test suite is supposed to test the proposed legal principle on which the claim is based. Sometime the claim itself is the principle. But sometimes the claim is just an application of the principle. Second, each test case should be made plausible. It should be the sort of situation that might happen in real life. It is good to base it on a real incident, whether drawn from a reported court decision or a newspaper article. The situation need not precisely follow the real incident, and may assume slightly different facts if necessary; the goal is to have the reader acknowledge that the case might happen the way it

is described, not that it necessarily has happened. Third, the test suite should include the famous cases in this field. This case should confirm for the student and the readers that the proposal is consistent with those cases.

Fourth, at least some of the cases should be challenging for the proposal. The student should identify cases where the proposal might lead to possibly unappealing results and include them in the test suite. Sceptical readers will think of these cases eventually. Identifying the hard cases early — and, if necessary, revising the proposal in accordance with them — is better than having to confront them later, when changing them will require much more work. Fifth, the test cases should differ from each other in relevant ways, since their purpose is to provide as broad a test for the claim as possible.

The test suite is the student's tool for proving to herself and to the reader that her claim is sound. It can also be a tool to prove the same to readers. After presenting the proposal, the article should show the reader how the proposal applies to a variety of examples drawn from the test suite. There are three advantages to this. First, this application will help make the proposal clearer and more concrete for readers. Second, it can help prove to the reader that the proposal reaches the right results. Third, applying the proposal to the test suite in writing can help the student make sure that the proposal does indeed reach the right results.

TEACHERS

Lived experiences of the law teacher E Mytton

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The biographical study of the lived experiences of six law teachers offers a new dimension to understanding the dynamics of law teaching. The overall purpose of the study is to reveal how these law teachers make sense of