Philosophical Inquiry

PROMOTING THINKING IN TERTIARY EDUCATION

Sarah Redshaw

Universities are experiencing difficulties with the learning and motivations of students. This has resulted in high failure rates in some faculties and institutions, and concern amongst lecturers about the standard of knowledge being reproduced in students. Students seem unwilling to think things through, question or understand adequately.[1] Many lecturers have experienced students asking "just tell me what to write" or "tell me what to say and I'll say it." Students seem to expect to be able to learn most of what they need by rote or to lack the skills or the motivation to learn in other ways.

There could be many reasons for this, such as the fear amongst students that they will not have a chance of getting a job or a good job so that they just want to get a qualification without too much fuss an get out and get a job. The problem with this is that things just don't work like that. Understanding cannot be adequately achieved without some questioning, thinking things through, looking into them more deeply. It may also be that school has not given them sufficient opportunity to know how to question, inquire and think through ideas.

Thinking well, the substance of understanding, has traditionally been associated with the discipline of logic, but logic, particularly formal logic, often appears too removed from everyday matters to be of much use. It seems too cumbersome to apply to arguments and understanding in any workable way. Logic might be a very useful tool to have but few are going to have the time or the inclination to pick through a piece of text and determine it's logical structure in terms of syllogisms and the varieties of falsification and so on. These are not the sorts of things that would really help students' understanding in a way that appeals to them.

Many aspects of argument are implicit in scientific method, however, what students do not appear to know, is how to examine and think through the method of scientific inquiry from a meta level of questioning. They do not appear to have the level of self-consciousness, the understanding of their own reasoning processes, required to bring about understanding and questioning on this level. This is the level at which understanding of scientific method and the use of logic and flexibility in applying these is possible. While I can only speculate as to the causes of the problem of student malaise I am able to suggest ways in which it can be approached, based on the method of philosophical inquiry from Philosophy for Children.

The method of philosophical inquiry is at once more flexible and more approachable to most students than logic as such, and covers a greater range of thinking, negotiation and communications skills. It involves students in externalising their thoughts, benefiting from the thoughts of other students and examining both, in a way that accesses and exposes faulty reasoning as well as a whole pattern of thinking that students may have become limited by. It is perhaps important to emphasise here that philosophical inquiry refers to a method rather than content. Using philosophical inquiry in this sense does not involve teaching the history of philosophy or ideas as such, but engaging with the significant ideas within and relevant to a discipline in an inquiring and open way.

Using philosophical inquiry requires particular attention to teaching method in order to create an appropriate, safe environment in which students feel free to explore ideas, question and think through ideas. Traditional styles of teaching at universities do not necessarily offer these opportunities. They often employ textual material that is closed and authoritative in a definitive way. Students are faced with a whole discipline of established knowledge, full of apparently obvious self explanation into which they are unable to situate themselves. They can only attempt to accept it. At the same time, simple acceptance fails to produce adequate understanding.

University teaching is intended above all to inform. It draws on a vast store of research and development of a knowledge base. Science now appears so definitive in its authority that students find little to question from their perspective. And yet what we want most, in line with the goal of higher education, is to produce autonomous, thinking students. How can knowledge be presented in such a way as to bring about a greater level of inquiry in the minds of most students? How can we bring them to understanding rather than just merely an ability to repeat what they have been told?

INDIVIDUAL AWARENESS

At the end of his extensive study of Australian tertiary students John Biggs asks; "How *do students come to know about their own learning processes? How can they use that knowledge so that they may learn more effectively?* Those are the questions with which future researchers should be concerned ... so that ... both classroom and lecturer will become more enriching environments for students."[2]

Effective learning strategies are strongly linked to good reasoning and both require an awareness of self and how one functions as an individual in relation to the context of learning. We each have different emphases and styles - some are more interested in the workings of things than of ideas while others are entranced by ideas and not at all interested in pulling things apart. There are many ways in which approaches to learning can be stylised and there are many different approaches. the point is, however, that it is important for the student to know as much as they can about how they learn. It is also important that educators present learnings in as many different ways as possible so that they are able to cater to more of the differences in student approaches to learning.

ENTERING INTO A DISCOURSE

Besides self-awareness in this sense there is also the individual need to be positioned, to have a role, a place in the broader context. Students' failure to understand and even to repeat what they have been given to learn is above all a failure to find meaning and to know their own relation to what they are learning. In order to become professionals, students have to enter into a discourse which precedes them and goes beyond them. The discourse includes not only the theoretical body of the discipline but also the practices and means of communication within that discipline.

Many disciplines require symbolic/mathematical means of communication but these must be translatable into a less formal discourse which requires a good understanding of the meaning of the symbolic communication. Any symbolic communication is a representation, a coded classification system which presupposes an understanding on the part of the sender and the receiver. The sender condenses the communication into coded form and the receiver decodes, translating it into the larger framework of meaning which it presupposes.

The discourse includes the coded communication system but also the broader meanings embedded within it. Students appear to be caught up in attempting to come to terms with the coded symbolic language without broadening their understanding in relation to the discourse as a whole within which the coded symbolic form has meaning. While students cannot learn everything contained within the broader discourse they need to know how to explore it, come to terms with different aspects of it, to know what to treat historically, what to treat as "rule of thumb," working knowledge that has been thoroughly researched and that which is based on successful practice and so on. They need access to the big picture as well as an idea of how the details - specific formulas, methods and so on - fit into it.

They require a flexible means of negotiating their way around a discourse and an awareness of its different aspects. In order to do this they need skills such as working from the specific problem in coded form to the set of relations that problem is concerned with, the broader context of meaning within which to seek to address a variety of needs and contextual limitations and they need a method whereby this can be achieved.

THE CONTEXT OF TOOLS OF THINKING AND LEARNING

Some of the tools of thinking that will help students in this process are identifying assumptions, establishing criteria, recognising concepts, definitions and their parameters, determining how and when to alter those parameters and most important, an understanding of how they are defining concepts, seeing criteria and what assumptions they are applying to new knowledge. Many university students are unable to say what a concept is, let alone how to identify and assess the importance of a concept and its role in a particular context of knowledge. This sort of understanding is more reliant on meta-knowing, knowing on the level of self-consciousness by teasing out the underlying framework of how knowledge is put together similar to the way in which grammar is used to understand how language functions. We do not appreciate how important such meta-level comprehension is to understanding in the hard sciences.

Our attempts to understand involve bringing what we already know and applying it to new knowledge. What we know comes from a variety of sources-hearsay and opinion from people we know, the media, and at times from teachers, as well as mathematical and scientific knowledge which we have in a rudimentary form from schooling. Students in tertiary education need to know how to tell the difference between belief and what is known with more certainty and how to see and place more certain knowledge within a realistic picture or framework.

Knowledge is often changing and at the same time scientific knowledge is regarded on an intellectual level as absolute truth. The line between belief and absolute truth then appears as an extreme and obvious one but is rarely so strait forward. While students may know intellectually that beliefs are different from truths they are often unable to distinguish when they are applying a belief from when they are applying an established "truth" and to see the fine line between the two.

Students need experience in dealing with these distinctions without being forced to have their deepest beliefs criticised. They need to see for themselves what is effective and what is not in certain sorts of contexts and this comes from being given the opportunity, being placed in a context where ideas can be discussed, challenged and thought through without the student themselves being threatened or attacked for the beliefs they hold.

UNDERSTANDING THROUGH DIALOGUE

Students need access to those who know more than they do, the opportunity to discuss ideas with others who they know are knowledgeable, however, they need also to try out ideas that those more knowledgeable have already established the irrelevance of and surpassed. It may seem that this would require allowing students to make all sorts of mistakes and waste time reinventing the wheel but this is not the case. There is a simple way in which this can be made available to students in any discipline.

Discussion classes where students feel safe to raise apparently "stupid" ideas in a way that lecturers could facilitate the process of dealing with these sorts of questions, inquiries and ideas would be extremely beneficial and actually save time for students and lecturers. Rather than taking the approach of merely setting students straight, correcting them and explaining to them, an emphasis on the exploration of ideas would benefit higher education greatly. These sorts of processes tend to be available to Arts students to a far greater extent than they are to science, commerce, engineering, architecture and students in other hard disciplines. but they are no less important in these disciplines and these are the disciplines experiencing the biggest problems with students.

John Biggs' study revealed that there is a greater evidence of deeper learning processes in students in Arts than in the sciences. This would appear to be connected to the greater opportunities in arts subjects for students to think more deeply and discuss ideas with others. Discussion, especially well facilitated discussion, allows an idea, topic or issue to be looked at from a number of different angles, situated in relation to and distinguished from other relevant, issues or ideas allowing understanding in much greater depth. While Arts tutorials could also be improved, the importance of holding tutorials which allow and facilitate thinking is paramount in the sciences.

THE VALUE OF QUESTIONING

Questioning has a number of significant roles to play. Firstly, it engages us with that which we are questioning, bringing us into relation to it. As soon we start to raise a question about something we have begun to take ourselves deeper into it. We are no longer simply functioning on the level of implicit thinking where we read something and then think "okay, got that," when all we often have is a vague glug. It is when we try to repeat what we have read and to make sense of it by looking at it from different angles that we really make use of the time we spent reading. To make sense of something we often as questions.

Secondly, questioning helps to give direction to our thinking. We are looking for something in particular once we have asked a question, we have broken down the task of understanding into manageable units and we make our thinking capacities work for us by giving them something specific to look for. In this way we can usefully employ our highly refined perceptual and recognition skills to time saving advantage.

Thirdly, questioning allows the gaps in knowledge to appear. We can then see what we know and what we don't know, what we had assumed and is holding us up. This is the individual dimension of knowledge gaps but there is also benefit in students seeing that a discourse does not have all the answers. A discourse, which is a knowledge base or body of knowledge built up over many years, decades, even centuries, is never closed. It never possesses all the final answers and ultimate truth and it should be seen in terms of its limits, the questions it does not answer or answer adequately should also be open for discussion.

Seeing a discourse in this way also helps students to find a relation to it and experience its efficacy as well as attempt to understand its "truths." Science requires adventurous thinking as well as knowledge of how things have been understood and done up until now.

UNDERSTANDING PERCEPTION AND MEMORY

Most of us go around with the idea that what we perceive is what is there. The value of having an awareness of the editing process involved in perception cannot be under-estimated. It is by now well known that perceptions do not present the truth or all that can be said about a situation. My perceptions are different from yours depending on what is important to me and to you. While we share aspects of a situation this may not be apparent unless the differences are recognised and drawn out, otherwise we end up with two apparently opposed interpretations.

Knowledge of perception as an editing process rather than accurate representation is often intellectually accepted but how to deal with the implications of what it actually means for our relations with others and our understanding requires more than this. An adequate understanding of the implications of this involves confronting different perceptions and seeing how to relate them in a context where differences can be brought out and played with.

Teaching about **perception is also relevant I believe,** for today's students so that they have an understanding on a number of levels-intellectual, research and interpersonal levels. This will also draw out the significance of how we conceptualise in ordering perception and making sense of things which provide the framework for our fabric of understanding.

A further benefit of considering perception is that perception issues often relate to and bring out the character and adequacy of memory strategies We all know the importance of memory in learning and it seems trite to even mention memory strategies in the context of reasoning but what makes us remember things, and how we individually structure our memory bank is relevant in that it also affects what we notice and how we structure our thinking.

One of the most important factors influencing memory is meaning. When an idea means something to us we are more likely to remember it. And if we have considered it from a variety of angles then we have a better sense of what that idea is about and the brain has more things to connect it to. Connection is fundamental to the way in which the brain orders information thus influencing the efficiency of memory and understanding.

The points I have outlined here are intended to assert the relevance of philosophical inquiry as a teaching method in today's universities. I believe such an approach to learning could be valuably combined with other innovations in teaching which can actually increase not only the efficiency of learning but also the speed at

which students can acquire new knowledge. As education costs increase solutions need to be found which can produce better understanding as well as a smaller time frame within which it can be generated.

The biggest cost to education is the waste involved in students not knowing and using their own learning capacities so that they rely less on the word of their lecturers and disciplines. A greater level of confidence in the students' abilities will go a long way.[3]

NOTES

1. John Biggs carried out a study of Australian Universities for the Australian Council of Educational Research based on a framework he developed which looks at student's learning and motivation in terms of deep and surface structure. He found that science students in particular, tend to rely more on surface than deep approaches and that there is a need for the development of metacognitive skills which would "deepen their approaches to learning, which in turn would increase the structural complexity of their learning, and the amount of satisfaction derived from it." Research Monograph Student Approaches to Learning and Studying ACER, Melbourne, 1987 (page 127).
2. Biggs, ibid., p. 129.
3. I am continuing to test the value of the Study Process Questionnaire as an indication of students' level of learning as well as using it as a tool for formally assessing the value of philosophical inquiry in deepening student's learning, in my teaching at the Centre for Liberal and General Studies at the University of New South Wales.

Address correspondence to:

Sarah Redshaw
Centre for Liberal and General Studies
University of New South Wales
Sydney, N.S.W. 2052
Australia

Back to Table of Contents