

Developing Critical Thinking: Student Perspectives
LILAC 10 Discussion Paper
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SUMMARY/ABSTRACT – This discussion paper relates to the interim findings of a research project into the teaching and learning of critical thinking and problem solving skills among undergraduate law students. A discussion forum relating to how these skills are taught and learned based on this research will take place at LILAC 10.

Keywords – critical thinking – student perspectives – problem solving - reasoning

1. INTRODUCTION

The aim of this research project at Lincoln Law School is to analyse the critical thinking and problem-solving needs of undergraduate law students and to identify mechanisms for teaching and learning these skills. Specific aims of the research are to:

1. Increase the employability of undergraduate students¹ by developing and increasing their ability to apply knowledge and the law to complex real-world situations;
2. Address the needs of vulnerable and failing students by identifying the core skills needed in critical thinking and legal problem solving skills; and
3. Develop a model for students that will provide them with practical skills in applying knowledge and the law to complex situations and so far as is possible to develop and test their practical skills in critical thinking and problem solving.

Discussions with staff and students have identified that there is quite possibly a gap between the skills that staff believe students are being taught and developing, and the student perspective on how (and whether) they are developing critical thinking and analytical skills. Preliminary analysis of previous research into critical thinking suggests that this perception gap may be common and that there may be a need to pay particular attention to how students develop critical thinking, and the processes involved in doing so, separate from the subject specific skills developed through 'traditional' teaching. The research thus sets out to investigate the following questions:

- What is critical thinking and how is it taught or developed in UK Law Schools?
- How do students develop their critical thinking and analytical skills?
- What are the views of staff on how critical thinking skills should be taught and developed?
- How do students think they should be taught these skills and what assistance or materials do they need to develop them?

This discussion paper outlines the interim results of the research and forms the basis of the discussion forum to be held at LILAC 10. The discussion forum is part of the research process and hopefully will provide an opportunity to (confidentially) discuss the experience of staff and students at other institutions and ideas for developing the teaching of critical thinking to law undergraduates.

1.1. Research Methodology

The methodology for the research includes a combination of questionnaires, student focus groups and documentary analysis of previous research on critical thinking, together with discussions with critical thinking professionals and analysis of critical thinking teaching mechanisms. A review of research literature identified the main issues to be explored in the student research stages these include:

¹ The research focuses on students at Lincoln law School and the particular facilities available to them, but will consider the general experience of undergraduate law students.

- **Does existing teaching provide students with critical thinking skills?** While educators may believe that they are teaching critical thinking and analytical skills in complex subjects like law and criminology, in reality this is often not the case. Teaching may provide students with the skills in providing answers to particular and subject-specific questions but this is not the same as teaching critical thinking or analytical skills (Paul 1993).
- **What are the views of students on the teaching of critical thinking and problem solving skills?** The research seeks to identify what are/were students' expectations of developing critical thinking and problem solving skills, what problems do students have in developing these skills, and why.
- **What are students' preferences for teaching Critical Thinking/Problem Solving Skills at Level 3?** The research seeks to discover how students would like to be taught critical thinking skills and the reasons for their preferences. In particular, the research will examine if there are particular case issues or practical examples that students would like to explore in their learning and if there are specific teaching mechanisms that students wish to see employed, e.g. additional lectures or seminars, specific case workshops or the use of electronic teaching and Virtual Learning Environments (VLEs). The reasons for any student preferences and the underlying issues that determine these preferences will also be explored with students.
- **What are the required criteria for teaching critical thinking/problem solving skills?** The research will seek to consider and develop models for teaching critical thinking skills, in part using student views on the required criteria. For example, do students require formal written assessment or discussion of alternative scenarios and incorrect answers? Do students want any teaching of critical thinking to be an 'examinable' element that forms part of their final grade?

The above issues are being explored through questionnaires, focus groups and follow-up work with students. An analysis of previous and current research on alternative evaluation strategies for student and the use of case examples and problem solving simulation exercises are also being conducted as part of this research. The research will also consider areas for future research and make some recommendations for how the research and further development of critical thinking teaching in law could be taken forward.

2. RESEARCH PROGRESS

The research is currently ongoing, discussions with students and two focus groups were conducted in June and July 2009. The preliminary documentary stage of the research has also been carried out including a review of issues in teaching critical thinking skills and a review of past research in the field.

2.1. Critical Thinking Research

The following preliminary resources have been considered as part of the research:

- The Delphi Report on Critical Thinking (1990) which defined critical thinking as the "purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is

based.”

- US research on developing critical teaching mechanisms for teachers in California - Paul, R.W., Elder, L. and Bartell, T. (1997) *California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Policy Recommendations* California Commission on Teacher Credentialing, Sacramento California, Dillon Beach, CA: Foundation for Critical Thinking;
- The OCR AS/A Level syllabus on critical thinking. The course is intended to provide students with a balanced coherent study of critical thinking principles and teaches these skills as a dedicated subject rather than an add-on to a specific academic subject. OCR suggests that “Critical Thinking can be defined as a form of reflective reasoning which analyses and evaluates information and arguments by applying a range of intellectual skills in order to reach clear, logical and coherent judgements within a given context.” A detailed review of the assessment materials is being undertaken to identify core elements in critical thinking assessments; and
- *Critical Thinking: An Exploration of Theory and Practice* (2007) by Jennifer Moon published by Routledge, *Asking the Right Questions: A Guide to Critical Thinking* (9th Edition, 2009) by Neil Browne & Stewart Keeley published by Prentice Hall, *Demystifying Legal Reasoning* (2008) by Alexander and Sherwin published by Cambridge University Press.

In addition, discussions with critical thinking practitioners and staff involved in developing critical thinking skills in students form part of the ongoing research project.

2.2. The Experience of Other Law Schools

The experience of staff and students at other Law Schools is considered as part of this research. The LILAC 10 discussion forum provides for an opportunity to discuss the experience of other Law Schools concerning:

- How critical thinking is taught or developed in UK Law Schools?
- How students develop their critical thinking and analytical skills?
- The views of staff on how critical thinking skills should be taught and developed.

In addition, the research will consider some evidence of how alternative teaching techniques contribute to the development of critical thinking. A preliminary review of the literature on teaching law using simulated environments has been undertaken. In particular the Simulated Professional Learning Environment (SIMPLE), the subject of a pilot approach on teaching law using simulations developed and used by: University of Strathclyde, University of Stirling School of Law, University of the West of England Bristol Law School, University of Warwick School of Law, and the University of Glamorgan Law School.²

A more detailed review of the possibilities for using simulated environments as a tool for developing critical thinking skills will be carried out during the next stage of the research. The research also considers the use of the Law Clinic which runs at the University of Lincoln as a tool for developing critical thinking skills; students commented on this initiative during the focus groups (see below).

² For further details see <http://www.ukcle.ac.uk/research/projects/tle.html#cases>

3. PRELIMINARY RESULTS

Discussions with students, the questionnaires received so far and the two completed focus groups have resulted in useful student opinions concerning how critical thinking and analytical thinking skills should be taught. In particular, useful data has been obtained on the problems students perceive in developing their analytical thinking and problem solving skills and the type of work that students would like to see included in any critical thinking teaching and assessment. While it should be noted that these are interim results only and the next stage of student questionnaires, workshops and focus group responses might yield different results, the data obtained so far is useful in identifying issues to be explored further in the research and to be considered in the final report.

3.1. Perspectives from Previous Research

Previous research into critical thinking has concluded that generic teaching strategies generally do not teach critical thinking skills³. While teachers in certain subjects may feel that they are teaching critical or analytical thinking skills, in reality what is happening is that the student is often being trained to either disregard their previously held natural way of making judgements or is being trained to understand a correct or standard way of thinking inherent in the discipline. Paul argues that instead:

“If we want our students to become good reasoners, we must become concerned to help them begin to notice the inferences they are making, the assumptions they are basing those inferences on, and the point of view about the world they are taking – hence the systems in which they are thinking. To help our students do this, we need to give them clear examples of simple cases, and lots and lots of practice analyzing and reconstructing them.”

(Paul 1993)

The basis of Paul's theory is that all human thinking is inferential in nature. As a result, what teachers may consider to be poor reasoning on the part of undergraduate law students may, in fact, simply be an inability to apply the student's underlying inference model to a legal problem. Paul further argues that where students have learned the appropriate facts it may be possible for them to correctly answer exam questions and appear to be students with good reasoning skills. However, the student asserting the correct information with confidence is often mistaken for a student with good reasoning skills.

Paul's theory provides an explanation for why some students who have passed their first and second year degree programs then appear to 'fail' at the third year. There has not been a drop off in the student's reasoning skills; instead they lacked these skills to begin with but have reached a point at the third year where they are required to provide reasoned answers to more complex scenarios and are unable to do so.

This assessment is endorsed by Paul, Elder and Bartell (1997) who when reviewing the teaching of critical thinking skills in American Universities concluded that:

“The central problem is that most faculty have not carefully thought through any concept of critical thinking, have no sense of intellectual standards they can put into words, and are, therefore, by any reasonable interpretation, in no position to foster critical thinking in their own students or to help them to foster it in their future

³ See for example Bowers (2006) *Instructional Support for the Teaching of Critical Thinking: Looking Beyond the Red Brick Walls*, Insight: A Journal of Scholarly Teaching, Volume 1, 2006

students- except to inculcate into their students the same vague views that they have.”

While this bleak assessment of the 1997 position in California may not be directly applicable to the position in the UK today, it does indicate that:

- Some teaching that may be intended to develop analytical skills may not actually do so;
- Students may learn how to provide ‘correct’ answers while not learning appropriate reasoning/analytical skills;
- Teaching of critical thinking requires a dedicated effort; and
- Formal assessment of students’ reasoning and problem solving processes is required in teaching analytical skills in addition to assessment of the quality of answers against perceived correct answers

Further analysis of previous critical thinking research forms part of this research project and the LILAC 10 discussion forum may also explore these issues. The issues identified by previous research were partially discussed with students in the Focus Groups.

3.2. Teaching Critical thinking – preliminary evidence from student views

Students were asked questions on; their expectations of learning critical thinking and problem solving skills, their experience of teaching and learning of these skills and also whether they considered particular mechanisms (e.g. lectures, seminars or workshops) to be particularly effective in helping them to develop analytical thinking. The responses revealed that:

- Students do not believe that they are currently being taught critical thinking or are developing analytical skills via ‘standard’ law teaching;
- Students question the value of lectures in developing analytical thinking skills and consider that well-run interactive seminars or workshops are a better mechanism for teaching analytical skills.⁴ Members of both focus groups suggested that the value of workshops and seminars could be increased by using longer sessions that provided for a more student centred analytical experience rather than teacher led instruction;
- Students expressed the view that teaching ‘style’ has a considerable impact on whether/how they develop any analytical skills. Both focus groups considered that seminars that deal explicitly with exam/problem type questions and the reasoning employed in developing answers were of the most use. Workshops that discussed practical problem solving issues and ‘real world’ cases were also welcomed; and
- Both focus groups considered that seminars and workshops should provide for an analysis of wrong answers so that students understand why an answer is wrong and there is a focus on the process and reasoning involved. The focus groups acknowledged that this may require staff to be tougher on students to encourage them to present ideas for discussion and be willing to learn through making mistakes. The focus groups also recognised that this may require increased student participation.

While the intent of the focus groups was to discuss specific critical thinking issues, students

⁴ Workshops were introduced at the University of Lincoln Law School in the academic year 2008/09

showed a willingness and enthusiasm for discussing other issues relating to the teaching of problem solving skills. Discussions in the focus groups revealed that student attendance at seminars, lectures and workshops could be linked to the perceived value of each mechanism by students and this raises an issue for discussion at LILAC 10.

3.3. Developing Critical Thinking – preliminary evidence

The preliminary evidence from the student stages of the research indicates a surprising enthusiasm for additional teaching on critical thinking. Students confirm in their responses that they consider that existing provision does not teach critical thinking and that there is a need for an additional teaching resource. However, there is diversity of opinion on how this should be done and not all students consider that this need be a dedicated single module but should be integrated with other teaching mechanisms although there were different views on how this could be done. Students showed considerable enthusiasm for practical case based teaching and the use of simulated learning that replicates the real world and prepares them for work. In particular the evidence of the preliminary stages of the research is that students consider that:

- The teaching of critical thinking should be a specific separate module possibly supported by dedicated seminars on how to do research, conduct analysis and justify reasoning. But there should be specific case examples for different subjects or that combine different subjects rather than there being a single generic case example;
- Critical thinking should be the subject of formally assessed practical work. Students are keen on initiatives like Law Clinics but consider that there should be formal assessment and an opportunity to reflect on reasoning and problem solving skills or techniques in addition to content. Practical case examples that so far as possible replicate realistic legal problems and analysis and which are formally assessed to count towards a student's final grade are favoured by students;
- There should be a hierarchy of teaching critical thinking skills so that original guidance is given to first and second years and advanced teaching and analysis is available for third years;
- There should be greater assessment of student reasoning in seminars and specific teaching geared at an understanding of how to develop answers. Workshops should be developed to complement the teaching of critical thinking so that there is a coordinated approach and greater emphasis on analytical techniques;
- Lecturers teaching critical thinking should be willing to explore wrong or ambiguous answers in addition to correct answers so that students gain adequate training in reasoning techniques and analysis of any errors in their reasoning. An emphasis on practical, complex and real world scenarios rather than theoretical or purely academic examples would be welcomed.

These issues will be explored further in the next stages of the research and will be the subject of discussions with critical thinking practitioners and participants in the discussion forum at LILAC 10.

4. SUMMARY

Research into the teaching and learning needs of new students together with the views put forward by students in the focus groups and questionnaire responses indicates that

contemporary students have different needs to previous generations and think, learn and process information in different ways (see for example Prensky 2001).⁵ As a result, new mechanisms for teaching may be required to develop their analytical skills. The evidence is that the use of simulated learning environments could be an effective teaching and learning tool to develop and assess students' critical thinking skills.

There is a potential 'perception' gap between educators' belief that they are already teaching critical thinking and analytical skills, the evidence of previous research that critical thinking skills require dedicated teaching and the view of students that these skills are not currently being taught. Students also expressed the view that seminars/workshops currently provide the best means of developing critical thinking skills, but their effectiveness varies among lecturers.

While there is general agreement among students that critical thinking requires some form of dedicated teaching which emphasises the development of analytical thinking techniques and formally assesses these, diverse opinions exist on how this should be done. Students generally consider that practical case examples should be used in teaching but some students feel that case examples should be available that cover the whole of the law curriculum, some feel that it should be developed at different levels culminating in advanced skills at level three, and some feel that practical case teaching should be complemented by other teaching provision. Where students do agree is that any teaching must be formally assessed and should, ideally, count towards the student's grade so that evidence is provided of this practical element and achievement.

While it should be noted that these are only interim results, the preliminary analysis of previous research in the field and specific teaching modules on critical thinking suggest that the teaching of these skills requires a dedicated effort that is not catered for by 'standard' law teaching. Possible mechanisms for dedicated teaching of critical thinking skills will be developed in the next stage of the research. Recommendations for further research will also be made at the conclusion of the project.

5. REFERENCES AND FURTHER READING

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⁵ Prensky argues that because today's students represent the first generation to have grown up surrounded by and using computers, videogames, digital music players, video cams, cell phones and other digital media they have a different thinking and learning style and different brain structures to previous generations. Specifically he states that "today's average college grads have spent less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV)." Modern students may, therefore, have considerable difficulty with text based learning and the volume of reading required in subjects like law.

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