Are John Dewey's Ideas Alive and Well in Undergraduate Education? New Zealand Case Studies in Inquiry-Based Learning

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The isolation of thinking from confrontation with facts encourages that kind of observation which merely accumulates brute facts, which occupies itself laboriously with mere details, but never inquires into their meaning or consequences – a safe occupation, for it never contemplates any use to be made of the observed facts (Dewey, 1920).

For many undergraduates, Dewey’s description of “brute facts” and “mere details” instead of thinking is unfortunately accurate. The encouragement to think, inquire, and consider the “use to be made of observed facts” is often reserved for graduate students. Dewey’s charge to an undergraduate instructor, then, is to find an approach (in his vision, progressive or experiential) that combines thinking with facts. He characterized this challenge with a series of questions: “What is the place and meaning of subject matter and of organization within experience? How does subject matter function?” (Dewey, 1938).

Inquiry-based learning (IBL) is an approach for undergraduate education that appears to meet these suggestions by Dewey to integrate students’ interests and experiences with content knowledge. The IBL approach has been described as “a range of strategies used to promote learning through students’ active, and increasingly independent, investigation of questions, problems and issues, often for which there is no single answer” (Lee, 2004). Further, characteristics of IBL as: “it is student-directed, it encourages reflection on the teaching/learning process, it develops collaborative learning skills, it promotes active and deep learning” (Plowright and Walker, 2004), align with most descriptions of experiential education.

In order to identify, explore, and describe what an IBL approach looks like in undergraduate education, research was conducted during the first semester of 2007 at the University of Canterbury in Christchurch, New Zealand.

Methodology

Through a grant from the New Zealand Ministry of Education, three in-depth case studies of undergraduate classes in Communications Disorders (CMDS 381: Clinical Practice 3), Engineering (ENGR 101: Foundations of Engineering), and Sociology (SOCI 111: Exploring Society) have been developed. To do this, the Naturalistic Inquiry conceptual framework, data collection, and data processing strategies described by Lincoln and Guba (1985) was used.

This study was an opportunity to research IBL approaches within university classroom settings and followed Lincoln and Guba’s criteria to conduct research in a “natural setting.” The selection of the courses was based on preliminary conversations with faculty members and observations and was thus a “purposive sample.” Within this natural setting and purposive sample, data was obtained from: interviews with teachers, classroom observations, course-related documents, surveys of students, and student focus
groups. Data was analysed to provide insight into the relationship between participants’ experiences and characteristics of IBL and served as the basis for the findings in the form of case studies.

Findings: Snapshots of the Case Studies

The full case study for each course provides a thick description of their contexts to provide a nuanced understanding of students’ and teachers’ experiences in relation to characteristics of IBL in the literature, such as Lee’s (2004) and Plowright and Walker’s (2004).

CMDS 381: “learning to be independent and creative” (student)
The instructor described her intention of using a learning contract in this field placement course so students would “look at their ability to set their own goals as to what their interest level is and also what do they see as the gaps in their knowledge base.” While initially reluctant to fully embrace this invitation, students in the class introducing this concept appeared to eventually accept the idea and subsequently created the contracts with the instructor’s support. Their survey responses about actions in the course leaned more toward applying, evaluating, creating, and reflecting rather than memorising, explaining, and analysing.

ENGR 101: “useful for future engineering career” (student)
The instructor emphasised that the purpose of this introductory course was not on the specifics of the discipline but in “design as problem solving and trying to produce something that will do the job you want it to do. It’s really just helping students learn a more structured way of problem solving instead of trying to jump to a conclusion early on.” Students appeared to fully engage with their design tasks all the way through from introduction to presentations 6 weeks later. The most telling aspect was the students’ ability to confidently defend their projects through answering questions during their presentations to peers and instructors. Their survey responses about actions in the course leaned more toward applying, evaluating, creating, and reflecting rather than memorising, explaining, and analysing.

SOCI 111: “learning how to think critically about societies” (student)
The instructor viewed her course as learning how to ask questions beyond the discipline with, “the content is less relevant than the process. What is relevant is the relationship between asking sociological questions and finding out. So, how do you ask a good question in order to find something out and then how do you find something out?” It appeared that students fully engaged with this ambiguity of sociological questioning presented by the lecturers with statements such as, “thinking outside the square, not taking for granted stereotypes which society imposes.” Their survey responses about actions in the course leaned more toward applying, evaluating, creating, and reflecting rather than memorising, explaining, and analysing.
Discussion: Cross-Case Themes & Implications

While the disciplines, levels, and colleges of these three courses were different, the experiences of the students and instructors in them appeared to be more similar than not. Both students and instructors reported that their actions were congruent with Dewey’s admonition to go beyond just accumulating facts. In each course, the specifics of the discipline or content were almost downplayed with a broader emphasis on opportunities to struggle with open-ended questions in a collaborative atmosphere. Are these isolated cases in the undergraduate landscape that represent few and far between, Deweyian peaks?

Perhaps. However, subsequent interactions with students in the upper levels of two of these programmes – Engineering and Sociology - suggest otherwise. In those interactions, students appeared to be at the other end of the processes begun in the 100 level courses and were now identifying themselves as engineers and sociologists. Taken with the field placements and learning contracts that students in the 300 level course of Communications Disorders were doing during this study, undergraduate education in these programmes at this university appears to be effectively using IBL teaching approaches to achieve Dewey’s goal of better integrating school with society instead of setting it apart in an ivory tower.

Learning from these courses and their overarching programmes leads to a recognition that the main component they contain and foster may prove to be challenging in other undergraduate environments, and even within the same university of this study. Gone with these courses was an overt focus on discipline first, learning outcomes second. Instead, the instructors and programmes viewed their roles as facilitators for students to learn about becoming critical thinkers first, discipline specialists second. To do so, choice and real-world applicability in the classrooms appear to be critical factors in allowing students and instructors to delve into the murky waters of IBL. Indeed, Dewey would be delighted to see his philosophies in action through IBL as illustrated in these case studies from New Zealand.

References


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