

option of students to give major or minor weight to these dimensions in their personal curriculum. J. M. Morán (Counselor of the Spanish Social and Economic Counsel), also suggests the urgency to reformulate educational discourse, which is up to now seated in stable knowledge, in order to come closer to the kind of knowledge required for permanent learning. Finally, J. L. García Garrido (Professor of Comparative Education at the Spanish Open University) presents in a schematic way the different tendencies of current higher education systems which are derived from three different processes: democratic development, scientific development and the development of the State. To conclude, the author proposes six priorities for Spanish university policy. The book ends with a set of conclusions and recommendations which are elaborated on by F. Lanzaco, Manager of the Polytechnic University of Madrid.

This undoubtedly is a very rich volume which explores the current problems and trends of university policy from different angles. It includes both local and conceptualized papers, some limited to certain societies, others with a more global scope offering conceptual approaches. The Santillana cycle of conferences "Learning for the Future: University and Society" brought together speakers of world-wide prestige, whose different origins and varied environments of work give added value and a multi-disciplinary dimension to the book.



Hudspith, B., & Jenkins, H. (2001). *Teaching the Art of Inquiry*. Halifax, NS: Society for Teaching and Learning in Higher Education. Price: \$10.00 CAD.

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Hudspeth and Jenkins' *Teaching the Art of Inquiry* is the third in a series of monographs prepared by the Society for Teaching and Learning in Higher Education. The series is aimed primarily at college and university faculty and is focussed on issues associated with teaching and learning at the postsecondary level. This manual has been written as "guide-book" for teachers interested in encouraging critical thinking and

self-directed learning in their undergraduate courses. Nevertheless, the authors point out that it

is not a how-to manual of techniques. Rather, it is an attempt to distill from our experience an understanding of inquiry and offer suggestions about teaching inquiry that will contribute to a continuing discussion among university teachers about the place of inquiry in higher education as well as the aims and methods for teaching inquiry. (p. 10)

In higher education circles, there has for many years been an interest in developing approaches to learning and teaching that go beyond the idea that learning is little more than the uncritical reception, retention and regurgitation of ideas or information, and that teaching consists mainly in the transmission of such ideas or information by way of lectures. Hudspeth and Jenkins put forward a view of learning that casts the student in a more active role. On their view, inquiry is to be understood as a practice, or process, in particular, “a self-directed, question-driven search for understanding” (p. 9). Because this process is a complex activity involving a number of distinctive but interdependent phases, or steps, and because the successful conduct of inquiry requires, among other things, considerable discernment and judgment, rather than the mechanical following of a recipe, teaching has an indispensable role to play in enabling students to acquire the capabilities and skills required to engage in inquiry. In short, if, from the teacher’s point of view, the task is to devise ways to help students carry out self-directed, question driven searches for understanding, it seems plain that the challenge facing the teacher is a very complex one indeed. I shall return to this topic below.

The monograph is subdivided into eight sections: Introduction, An Example of Inquiry, Central Questions and the Process of Inquiry, Ideas for Teaching Inquiry, How and Where Inquiry Can be Used, Communicating the Findings of Inquiry, Assessment, and Common Difficulties.

In the introduction, Hudspeth and Jenkins begin by explaining what they mean by inquiry and how it differs from other methods of teaching and learning. While the traditional lecture method still plays a prominent part in contemporary postsecondary education, another approach to instruction that has grown in popularity in the past few

years is problem-based learning. Problem-based learning is, likewise, meant to provide a more active role for the student in deciding what is to be learned and by what means.

How, then, does problem-based learning differ from inquiry, as Hudspeth and Jenkins conceive of it? Problem-based learning has a number of features in common with inquiry. Nevertheless, the authors maintain that there are a number of differences between the two, the most important of which seems to be that in problem-based learning the instructor proposes the problem to be solved, whereas in inquiry it is part of the task of the student to come up with the question(s) to be investigated. What this suggests is that the two have quite different aims or purposes. The principal aim of problem based learning is "to motivate the learning of certain bodies of knowledge" (p. 10). By contrast, the aim of inquiry is "to develop the skills needed to bring research to bear on the understanding of a central question" (p. 10). Presumably there is no requirement that this central question have a direct connection to any particular body of knowledge. Hudspeth and Jenkins later go on to add that the central question guiding the inquiry must be one that is important to, or has personal significance for, the learner (p. 50). In the absence of genuine interest, the task of seeking answers to such questions can readily degenerate into mindless busy work or hoop-jumping.

On this account, the principal steps in inquiry involve students in: (a) exploring a subject or theme and choosing a focus for research, (b) formulating a central question for the research, (c) developing a plan of research based on critical questioning and an attempt to anticipate the findings and (d) bringing the research findings to bear on the central question (p. 10). In other words, there is a great deal more to inquiry than leaving the student to his or her own devices, or having them look up someone else's views on the Internet or in the library. Once we come to view inquiry in this way then, as instructors who make use of this approach in their courses, we will come more explicitly and fully to appreciate what we have understood all along, although perhaps implicitly; namely, that when we decide to teach the art of inquiry we are undertaking a complex and demanding task. Indeed, one of the great virtues of the account of inquiry put forward in this monograph is that,

unlike a good deal of the recent literature on this topic, it does not oversimplify and trivialize inquiry, or treat it as something ineffable or fundamentally mysterious.

In the second section the authors provide a detailed example intended to identify and further explain the main phases or steps involved in the practice of inquiry, as they conceptualize it. These steps, or phases, need not be treated as an invariable sequence. That is, from a later stage, for example, from the collecting of evidence, it may be helpful to return to an earlier stage, such as clarifying some of the terms used to frame the central question. And vice versa.

Central questions and the process of inquiry are the focus of the third section of the manual. The central question must encapsulate the aim of the research and provide the framework within which more specific questions will be pursued. In short, it is the rudder that gives direction to and is used to steer the whole enterprise. Hudspeth and Jenkins develop a scheme for classifying these questions based on what they refer to as “the object of the inquiry” (p. 18). Questions are distinguished according to whether they are attempts to understand a phenomenon, a presumed relationship, a controversy, a theory or concept, and a process (pp. 18–20). They go on to suggest that while “there are some things about successful research that apply across the board for all types of central questions...there are ways in which research plans have to be tailored to different types of central questions” (p. 18).

In the name of “contributing to the continuing discussion ...about the place of inquiry in higher education as well as the aims and methods for teaching inquiry,” I want to raise some questions about this system of classification. To begin with, I am not sure that I am clear about what counts as an “object of inquiry,” and how these objects differ from one another: In what sense may processes, on the one hand, and theories or concepts, on the other, both be treated as objects? And how do such objects differ from one another, for instance, a presumed relationship from a process, or a phenomenon from a process? Secondly, might not a given question be classifiable as belonging to more than one type according to this taxonomy? Suppose, for example, that a student wanted to look into the creation-evolution dispute, or the issue of whether the

private rather than the public sector is better equipped to provide services such as education or health care, might not a central question guiding such research be one that had as its object the understanding of a concept or a theory as well as of a phenomenon or a process? In short, some of the central questions guiding inquiry may be complex questions in the sense that they may be seen as comprised of questions of a number of distinguishable types.

Thirdly, I wonder if these distinctions hold across disciplinary boundaries. They would not hold, I suspect, if inquiry or research in the disciplines in question happened to be informed by differing ontologies or epistemologies. And this, in turn, raises interesting questions concerning the nature of inquiry in interdisciplinary research. As the authors point out, many of the inquiries that grow out of living in a complex world do not fall neatly within the boundaries of any given discipline but require the creative appropriation of a variety of intellectual resources (p. 8). In these instances, moreover, what counts as a worthwhile question and what counts as an answer may well depend, at least in part, on extra-disciplinary considerations. Consider, for example, the plight of parents faced with conflicting medical advice about what ought to be done in raising a Down Syndrome child, or of the kind of investigation needed to address the question of whether a nuclear reactor in a certain community is responsible for the increased incidence in cases of leukemia among children.

In the fourth section "Ideas for Teaching Inquiry," Hudspeth and Jenkins confess to being ambitious or even idealistic when they say that their interest in teaching inquiry involves helping undergraduate students to develop inquiry skills and a critical, questioning habit of mind, with a view ultimately to enabling them to become more accomplished at conducting in-depth inquiry (p. 24). As a form of self-directed learning, this in turn suggests that "students must at some point formulate their own questions, plan their own inquiry, do their own research and all of the other tasks necessary for the completion of an inquiry" (p. 25).

Under these circumstances, the role of instructor is no less important than in traditional lecture based activities but it takes a different form. What must the student learn, or come to understand, in order to explore a

subject and chose a focus for research, to formulate a central question to guide the research, to develop a plan for the research and critically assess it's merits, to anticipate findings, and so on? When what is to be learned is viewed in this way, it is clear that the roles of the teacher in fostering this learning are very varied indeed. According to Hudspeth and Jenkins, they would include, stimulating curiosity, encouraging the development of skills, as well as "acting as guides to resources, as coordinators, mediators, providers of feedback. even as provocateurs". (p.26) Equally varied are the activities students might engage in to achieve these ends. They range from reading to simulations to field trips to collaborative learning all of which might be used for exploring a theme. For the purposes of developing the requisite skills, a wide variety of workshops are suggested including those dealing with central questions, interviewing, critical assessment, and writing. Regardless of the activities employed, the challenge facing the teacher is aptly described as "a fine act of balancing the student's need for direction and help with their need to experience for themselves both the pleasure and the frustrations of working independently" (p. 26).

In working one's way through this manual it important to keep reminding oneself that the concern is teaching the art of inquiry to undergraduate students. Much of the experience and advice contained herein is equally relevant to graduate courses on research methodologies such as those offered in the social sciences.

Although, they indicate that their preference would be to initiate students into the practice of inquiry by means of an introductory course whose primary purpose was the learning of inquiry, the authors describe a number of alternatives to their preferred arrangement in section five, "How and Where Inquiry Can Be Used."

Part six addresses the culminating phase of the research which involves communicating the findings of the inquiry in both oral and in written form. The written report is seen as the primary vehicle for this purpose. The oral report is regarded as playing a supplementary role. Hudspeth and Jenkins recommend a paper in which the phases of the inquiry are made explicit, which reveal the steps the researcher actually went through — not a conventional argumentative paper which focuses

exclusively on what might be referred to as the content and logical structure of the inquiry — the thesis, its supporting evidence and conclusions.

It is often said that one of the most difficult aspects of an inquiry assignment, from the instructor's point of view, is the task of assessing or evaluating the work done. The topic of assessment is the focus of section seven. Hudspeth and Jenkins maintain that the evaluation of the development of inquiry skills and the product of the inquiry should be done in such a way as to provide detailed feedback and guidance. That is, on their view, evaluation should contribute very pointedly and directly to learning (p. 44). With this end in view, it is important to identify and make explicit the criteria to be employed in assessing both the constituent elements of the process of inquiry and its products. Here, once again, the authors' idealism reveals itself. They recommend "...the use of separate assessments for the different component tasks of inquiry and detailed constructive criticism of the complete draft" (p. 44). They go on to discuss a number of criteria of excellence related to both oral and written presentations, and to consider the role of peer evaluation in course of this kind.

The eighth and final section of the manual draws attention to the difficulties students commonly encounter in carrying out inquiries and communicating their findings. They are briefly discussed under the headings of difficulties in; formulating an appropriate central question, anticipating findings, critical assessment, and in writing the inquiry paper (pp. 48–50).

In my view this book makes an invaluable contribution to the literature on higher education. From beginning to end, the reader gets the impression that the authors have "been there and done that." What is particularly refreshing about the book is the authors sophisticated appreciation of the complexity of inquiry and the varied, and often challenging, tasks that confront the instructor interested in helping his or her students learn to conduct their own inquiries. The language is non-technical. Their discussion of the relevant topics seems well informed by the literature in a number of the relevant fields. That literature is drawn on wisely and unpretentiously. What shines through all phases of their discussion is their commitment to the education of undergraduates and not

to simply having them learn, or become proficient in, a certain body of knowledge. Hudspeth and Jenkins' ultimate target seems to be that of preparing students to carry out the kinds of inquiries that will enrich their experience and enhance the quality of their lives after their undergraduate years.

This book would be of interest to instructors interested in teaching inquiry, whether they are seasoned veterans, or those contemplating using this approach for the first time. Hudspeth and Jenkins' *Teaching the Art of Inquiry* has much to offer both groups of teachers.

