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Finding Place in Higher Education: An Epistemological Analysis

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Biography Shelagh Crooks is a Professor of Philosophy and Education at Saint Mary's University in Halifax, Nova Scotia. Her primary areas of research are philosophy of education, epistemology, and argumentation theory, and she has published extensively in the area of education for critical thinking. She is the recipient of numerous teaching and educational leadership awards, and in 2013, she became a 3M National Teaching Fellow.

Finding Place in Higher Education: An Epistemological Analysis

Abstract

Though the topic of student transition into the culture and practices of higher education has been the subject of considerable investigation by scholars, the transition literature has been largely silent on the epistemological challenges that new students face in the context of the university classroom. The purpose of this paper is to look at student transition from this unique perspective. The paper reviews recent empirical research in the area of “personal epistemology,” which establishes the facts regarding what students actually believe about knowledge and knowing as they enter university. The paper also provides an analysis of the epistemological beliefs of university teachers, and the influence that these beliefs have on the teachers’ educational practice. A key issue discussed here is the conflict between students’ conception of knowledge (as certain and possessed by authorities) and their teachers’ conception of knowledge (as something constructed through a process of evidential inquiry). Finally, the impact of this epistemological conflict on students’ ability to make sense out of, and find their place in, the new and different learning environment of the university is considered.

Bien que le sujet de la transition des étudiants dans la culture et la pratique de l’enseignement supérieur ait fait l’objet de nombreuses analyses de la part de chercheurs universitaires, la documentation sur la transition est en grande partie muette sur les défis épistémologiques auxquels les nouveaux étudiants font face dans le contexte de la salle de classe universitaire. L’objectif de cet article est d’examiner la transition des étudiants à partir de cette perspective unique. Dans cet article, nous examinons la recherche empirique récente effectuée dans le domaine de « l’épistémologie personnelle », qui établit les faits en ce qui concerne ce que les étudiants pensent réellement concernant la connaissance et l’utilisation de la connaissance alors qu’ils font leur entrée à l’université. L’article présente également une analyse des croyances épistémologiques des professeurs d’université ainsi que l’influence que ces croyances ont sur la pratique éducationnelle de ces professeurs. Une question clé discutée dans cet article est le conflit entre la conception qu’ont les étudiants de la connaissance (quelque chose de certain que les autorités possèdent) et la conception de la connaissance qu’ont leurs professeurs (quelque chose qui se construit grâce à un processus d’enquête probante). Pour finir, l’article examine également l’impact de ce conflit épistémologique sur l’aptitude des étudiants à donner du sens et à trouver leur place dans leur nouvel environnement d’apprentissage si différent qu’est l’université.

Keywords

finding place, personal epistemology, educational practice, epistemological absolutism, epistemological relativism, epistemological evaluativism.

Making a successful transition into the culture and practices of higher education is often problematic for students. Indeed, the statistics on student attrition after first-year are truly remarkable; in Canada, almost one quarter (24.2%) (Finnie & Qiu, 2008) of incoming students leave post-secondary institutions without completing their studies. Why is this so?

In the extensive literature on student attrition, the most commonly cited explanatory model is that of Vincent Tinto (1987). Tinto argues that whether students persist in university or drop out is strongly influenced by their degree of integration into two spheres – the formal, academic sphere and the informal, social sphere of extracurricular activity and student life. In Tinto's model, "academic integration" is operationally understood as a student's being a part of, or identifying with the academic environment. It is measured by a number of factors including whether the student enjoys what she is studying and feels that it is the right "fit" for her interests and aptitudes, whether she feels that she is "successful" in terms of receiving satisfactory marks on assessments, and whether she is reasonably comfortable with her experience in the classroom and feels that she is part of the class and is recognized by her peers as such. Similarly, "social integration" includes factors such as whether the student feels there is a match between activities outside of class and her own preferred ways of socializing, whether she finds a suitable peer group, and whether her interactions with faculty and support staff are generally positive and helpful. In short, according to Tinto, a student who finds her place in the university and has a sense of belonging is likely to persist; a student who feels disconnected is likely to drop out.

In this article, I propose to take a closer look at integration as it occurs in the academic sphere. I will take the metaphors of "finding place" and "belonging" seriously and ask: What does it really mean for students to find their place academically? I will argue that finding place is at least as much about understanding what goes on in the classroom – including and especially the "educational practice" of the teacher – as it is about understanding the substantive content being delivered. It is in educational practice that the educator conveys not what is known (the facts and theories under discussion), but how it is known, and what counts as justification for knowledge. This is to say that educational practice is 'enacted' or 'exhibited' rather than deliberately set out. Given this, it represents a challenge to the students' full integration into the classroom.

In addition, I will contend that the epistemology implicit in the practice of higher education frequently clashes with students' own epistemological beliefs and assumptions, and so requires the students to rethink what knowledge is and how it is constructed and validated. This need to engage in complex epistemological thinking further complicates the integration process for students, causing in some instances, a failure to integrate or "find place."

The approach of this article is analytic and exploratory, rather than empirical. I draw upon an existing body of research in developmental psychology which establishes a framework for the development students typically exhibit as they enter university and proceed through it to the completion of their degree. My purpose here is to provide a detailed analysis of the educational ramifications of these research findings. To this end, I focus on providing a description of the interaction between the students' epistemologies and that of their teachers, as these interactions play out in the context of first-year classrooms. I explore two questions: In general, how do these epistemological interactions proceed? and Are the interactions likely to be successful in terms of facilitating students' understanding and intellectual development? Based on the above analysis, I argue to the conclusion that it is important that teachers across the disciplines engage their students in explicit discussions of epistemology, and that they seek to

clarify their own beliefs about the nature of knowledge and the complex process of coming to know.

Educational Practice

By “educational practice” I mean the sum of the activities, strategies, interactions, and interventions in a classroom that have an impact on what students learn and how they learn. Practice is the medium through which the subject-matter content is carried, and, thus, shapes and controls the ways in which students experience that content. For instance, in a first-year physics classroom where the teacher teaches by direct instruction or “telling” a powerful message about the content and how it is to be understood is sent to the students. The message is that there is no issue about whether the content represents knowledge – it is quite simply a matter of established fact. And since facts are the sort of things that can be “told,” there is no need for discussion or debate in the classroom. Instead, instructional time is spent with the teacher writing physics formulas on the board or doing physics math in front of the students, during which she editorializes, “These are really very standard formulas and problems, you just need to practice them a number of times on your own and you’ll get the hang of it.” Or, she says, “These are the things you will need to know for the exam.” In this classroom, knowledge is implicitly treated as if it were a thing or commodity, which can be simply transferred more or less directly to the students. Accordingly, students are likely to come to understand the content as “the truth,” and they are likely to view their relationship to the content as one of simple acceptance. Their job will be to make sure that they capture the truth told to them by taking accurate notes. They will also need to retain this truth, by committing it to memory for future use on the exam.

Though I do not take the practice in this hypothetical classroom to be desirable or, even, especially representative of what goes on in higher education, it serves to highlight what is surely the central feature of educational practices generally – they tend to operate below the surface of the content discourse of the classroom. The message of practice is performed or displayed, rather than stated. Note that the physics teacher never actually says, “This is the truth. I have it. I am giving it to you now, and you must accept it without question,” but it is precisely this message that is strongly implied by her educational practice of telling. Furthermore, the students do not understand that this message about the nature of knowledge and knowing is just as much a part of what they are experiencing in the class as the actual lecture. They believe, quite reasonably from their perspective as “the students,” that their focus is and ought to be on what is explicitly set out for them to learn rather than what is *not* said or whether the instructor displays certain epistemological attitudes to the content she is delivering. Nonetheless, practice is powerfully operative behind the scenes.

Obviously, not all teachers in higher education rely on educational practice alone to communicate their view of epistemology to their students. Psychologist, Barbara Hofer (2001), for one, makes discussion of the idea of knowledge and the process of coming to know part of the curriculum in her class. How many other teachers follow suit is a matter for conjecture as the research literature is silent on the question of what instructors actually do in the classroom in regard to addressing issues of epistemology. In any case, the present article is directed to faculty who do not make epistemology an explicit topic for discussion in their classes.

Personal Epistemology

Of course the students do not come to their classes as epistemological *tabula rasa*. Like their teacher, they will have developed a more or less loosely organized set of beliefs and assumptions regarding the nature of knowledge and knowing – a personal epistemology – which comes into play whenever the students are making judgments of truth or falsity, assessing the credibility of a source, or learning something new. Thus, the students’ personal epistemologies will be activated in the classroom not just in relation to the curriculum under discussion, but also, and significantly, in relation to the epistemology of the teacher as it is revealed to them in the classroom practice. The interaction between these two epistemologies – the teacher’s and the students’ – is the unspoken, deep discourse of the classroom. It occurs on a “behind the scenes” basis; the students do not enter into an epistemological discussion in class, and the teachers’ practice, *as practice*, is revealed, rather than articulated.

Before we discuss the details of the interaction between the two epistemologies we will need to develop a more precise understanding of “personal epistemology” (PE) as a technical term in the literature. We will also need to consider the specific content of the personal epistemologies of university students, with particular focus on the students’ first year of higher education. Let us turn now to this discussion.

In general terms, PE describes the beliefs and assumptions that individuals hold about the nature of knowledge and the knowing process. PE is also used as an umbrella term to refer to a particular research area in cognitive, educational, and developmental psychology (see Hofer & Pintrich, 1997). Researchers in these areas seek to specify the content of the PEs held by individuals at particular life junctures, such as students moving through a degree program at university. In the original research in this area, William Perry (1970) conducted a longitudinal study of male undergraduates at Harvard who were beginning their first-year of university in liberal arts. Perry found that the students changed their understanding of knowledge and their relationship as learners to it, as they progressed through their degree program. Indeed, he observed that the students passed through a more or less predictable sequence of stages of intellectual and epistemological growth, moving from a particularly naive “absolutist” epistemology, in which knowledge is taken to be completely objective, and knowing is a simply a matter of getting the “facts” from an expert, to a considerably more sophisticated view of knowing as deeply contextual and dependent on evidential analysis and judgment, known as “evaluativism.” In between these two epistemological extremes, Perry observed that the students often went through an intermediate stage of “relativism” in which they came to recognize and reckon with the existence of diversity of belief, and to conceive of knowing as a subjective, indeed, idiosyncratic process, which is impervious to critique or evaluation from alternative viewpoints.

As an area of research, PE is to be distinguished from epistemology as it is conceived and conducted in the discipline of philosophy. Though it is true that both areas are concerned with the idea of knowledge, they approach this idea from very different places and perspectives. Philosophical epistemology is an *a priori*, normative discipline concerned, in the first instance, to analyze the concept of knowledge, and by this analysis, to delineate the necessary and sufficient conditions for a belief to count as knowledge. It is also concerned with the issue of justification of knowledge, asking and proposing answers to the question, “What makes a belief properly justified?” In short, philosophers do not purport to have any particular insight into what individuals actually believe about what knowledge is or how it is acquired. By contrast, inquiry

into PE in psychology is all about this. It is a descriptive research project focused on discovering the content of individuals' beliefs about knowledge. It asks the question: "What do people actually take knowledge and knowing to be?"

Personal Epistemology and "Finding Place" in the Classroom

In the context of the first-year classroom, we can predict that the PEs of the majority of the students will be absolutist in nature. Perry's (1970) research with male undergraduates at Harvard University found that virtually all of the students in his study began university with an absolutist epistemology. Though Perry's research has been criticised for using a highly select and non-representative sample of study subjects (i.e., males with high socio-economic status), his findings regarding student epistemology have been confirmed in a more recent study conducted by Marcia Baxter-Magolda (1992) of 101 randomly selected first-year students. Baxter-Magolda found that almost all of the students in her study were epistemological absolutists. She wrote, "Upon entrance to college, most participants were absorbed with finding out what the authorities thought – a way of knowing I call absolutist" (1992, p. xvii). These findings are broadly supported by the work of other researchers including King and Kitchener (1994), Kuhn (1991), and Hofer (2004).

Absolutist students have a binary conception of knowledge: beliefs about any given event or state-of-affairs are either true or false, and can be established with certainty as one or the other by received authorities. In early education, teachers are such authorities; later, in higher education, it is faculty members and discipline specialists. In these students' eyes, the goal of higher education is to "receive" the truth from the authority figure and "give it back." This is the simple formula for knowing. One student in Baxter-Magolda's (2004) study described absolute knowing in the following terms:

The factual information is cut and dry. It is either right or wrong. If you know the information, you can do well. It is easy because you just read or listen to a lecture about ideas. Then you present it back to the teacher. (p. 27)

A second student emphasized the passivity inherent in absolutist epistemology:

I like to listen—just sit and take notes from an overhead. The material is right there and if you have a problem you can ask him [the professor] and he can explain it to you. You hear it, you see it, and then you write it down. (p. 28)

Clearly, this student took knowing to be a form of parroting of information. She did not seek to understand the reasons why her professor would claim to know certain things, why these things count as the truth; she simply took it to be so. The professor, as an expert, must know. Such a view is the hallmark of absolutist knowing. Similarly, a student in a study conducted by Kaartinen-Koutaniemi and Lindbloom-Ylänne (2012) indicated an unwavering belief in academic authorities:

I appreciate the knowledge of well-known authorities, such as academic researchers and professors, over the other sources of information. I think academic knowledge is some

kind of objective, I mean, the references are listed and the writer has used the academic terms and language. (p. 4)

Other first-year students – the outliers – who were not epistemological absolutists, tended to exhibit “relativist” epistemological beliefs (Kuhn, 1991). Relativism stands in stark contrast to absolutism. As relativists, these students deny the possibility of certainty. Indeed, even the so-called “experts” do not know. One participant in Kuhn’s study who was closely questioned about her view of expertise exemplified this:

[W]ho says that experts are right? I mean, “expert” you really think, “Oh that’s got to be right,” but that’s not true...the people classified as quote “experts” they’re just everyday people the way we are. So it’s like picking somebody out of the streets and labeling him an expert, if you know what I mean. I wouldn’t trust an expert. (p. 179)

This deep skepticism of expertise goes hand-in-hand with the view that all beliefs are more or less equivalent in terms of truth-value. No one belief is the right one, and, thus, everyone is “entitled” to their own opinion. A participant expressed this explicitly in his answer to an interviewer’s question about whether it is possible to demonstrate that a particular person’s belief is false:

(Would anyone be able to prove that this person is wrong?) I don’t think you can prove anybody wrong really, because everybody has a point of view and everybody has a right to their point of view. (Kuhn, 1991, p. 183)

A second student answered similar questions:

(Would you be able to prove this person wrong?) No. *(Why?)* Because you can’t prove an opinion to be wrong, I don’t think. *(Why not?)* Because an opinion is something somebody holds for themselves. You can’t change their opinion or alter it. (Kuhn, 1991, p. 182)

Arguably these two groups of students – the absolutists and the relativists – are miles apart in terms what they believe about the nature of knowledge and knowing. The vast majority of the class – the absolutists – believed that knowledge is certain and objective, and that knowing is about receiving the truth transmitted to them by the experts, that is, their professors. The second and much smaller group of students – the relativists – subscribed to a radical subjectivism. Knowledge is personal to the individual, a matter of opinion upon which no one else should be allowed to infringe. There is no such thing as expertise as such; all beliefs are equally legitimate.

Yet, closer examination reveals that these two groups of students share important epistemological commonalities. To begin, neither group has any conception of knowing as a process; absolutists are given knowledge, while relativists simply “have” it as a matter of individual right. Neither group conceives of knowledge as being the product of evidential inquiry or as involving an assessment of the relative merits of competing perspectives. Indeed, it is striking that the concepts of evidence, argumentation, and justification never arise in either group’s epistemologies. Most importantly, neither group can see any point in engaging with other minds in exploratory discourse, or argumentation. The epistemological absolutists believe

that knowledge is certain and that experts have it, and so there is nothing for them to do but receive the knowledge experts have to give. For them, any form of discussion and argumentation is superfluous. Similarly, the epistemological relativists believe that everyone is entitled to believe what they will, and so there is no need or place for the weighing of evidence or the consideration of alternative viewpoints. All viewpoints are essentially equal.

Now let us consider how such students, with their closed epistemologies, interact and find their place in the first-year classroom. This time, the class we will consider is an introduction to economics class, and the teacher exhibits an educational practice very different from that of the hypothetical physics teacher discussed earlier. The conversation in class is open and, from the students' point of view, meandering. It centres on issues of controversy. Long-standing theories come under critical scrutiny and are found wanting. The teacher is not a "giver of knowledge" about economics. Indeed, he seems uncertain about what he really knows. He qualifies his claims with words like "possibly," "likely," "maybe," and "it could be." Sometimes he just says, "I don't know the answer to this." He tells the class that there are any number of ways to think about a particular problem, but adds that he is not sure that any one will be decisive. He contends that explanations in economics are at best probabilistic – the most likely explanations are those best supported by the available evidence. He seems to be intent on making things unnecessarily complicated – just when the class starts to converge on a plausible explanation for an economic phenomenon, he insists that there are additional variables that they need to consider. He questions the students about what *they* think, and asks them, "Why do you think this?" "What are your reasons?" "What would someone with a different view have to say?" and so on, as if he believes that what students think is worth hearing. And so, there is no end to discussion.

The students in the absolutist epistemological camp are likely to be very confused. They are unprepared for this and, thus, are not in a position to react to all this (unnecessary) discussion. They may think, "Why doesn't the professor write something on the board, and "When is he going to tell us what we need to know?" The "final straw" for these students would be when their teacher starts to criticize what is said in the textbook, which is something they regard as an unimpeachable source of knowledge. "It's a pretty good book," he says, "but you can't always trust it." So now the students have nothing they can count on to get their knowledge. Some might well think to themselves something like the following: "I thought I came to university to hear the real truth from the real experts, but he [the teacher] won't tell me anything. If this keeps up I don't know what I'll do to prepare for the exam. I'm worried, I don't know how to succeed here."

The students in the relativist epistemological camp are also likely to be confused. They may think to themselves, "Why should I listen to all this discussion, no one really knows why this happened," and "The other students don't really know anymore than I do, so why is he asking them their opinion? It's useless and boring." Similarly, they may think, "The professor seems to be leaning toward this position, but my opinion is just the opposite I'll just stick to my opinion. It's as good as anyone's."

The teacher is exhibiting an educational practice born of his own set of epistemological beliefs, which have developed through the course of his life, but most particularly through his experience as a scholar in his discipline. In the classification of epistemologies set out by the PE researchers, he is an "evaluativist" (see Kuhn, 1991). This is regarded as the third and most sophisticated level of epistemological belief in the PE hierarchy. For him, knowledge is never just something given or transmitted from one mind to another, nor is it a matter of individual

opinion or preference. On the contrary, it is hard-won, and with some exceptions (such as when knowledge claims are true by definition, or are about states of affairs that are plainly observable), it is at best probabilistic – an inference from the available evidence to the best explanation. The economics teacher, unlike his students, actually *values* intellectual engagement and inquiry because he understands that the investment entailed in these things provides the soundest (though not an infallible) basis for choosing between competing claims. So, for him, discussion and argumentation must be the lifeblood of the classroom. The very best he can do for his students is get them to enter the fray of the discussion and move them by his questions to higher levels of reflection and engagement with the evidence. This is how inquiry in higher education is done.

But here is the problem. By virtue of their epistemological beliefs, the students are quite simply closed to discussion, critique, debate, or evaluation of positions in the university classroom. It is not just that they are not motivated to engage in inquiry and discourse, as instructors frequently complain, or that they are shy or lazy. These students are actually *at a loss to understand* why such engagement would ever be warranted, or why anyone would value it. The economist's classroom, and all the others like it, is foreign space for them; the students do not know how to learn here.

It is not entirely clear what proportion of teachers in higher education actually exhibit evaluative educational practice in the first-year classroom. Empirical research on this population is considerably less abundant than the research focusing on students. However, there is reason to believe that there will be a significant number of first-year classrooms in the university quite like the economics classroom. We know from the research reported in the PE literature that individuals come to develop more sophisticated and nuanced epistemological beliefs as they progress through higher education (see Baxter-Magolda, 2004; Beers, 1988; Kuhn, 1991; King & Kitchener, 1994; Schommer, 1998). For instance, in Perry's (1970) longitudinal study of Harvard undergraduates, most of the students who started university with an absolutist epistemology moved to a relativist epistemology, and eventually, to an evaluativist epistemology by their final year. Given this, it is predictable that the higher the level of education achieved by the individual, the more likely it is that he or she will have moved toward an evaluative epistemology.

This pattern of epistemological development is corroborated by the results of Kuhn's (1991) study of doctoral students in philosophy. Kuhn found the graduate students, unlike most of the undergraduates she studied, were solidly in the evaluative camp. She wrote,

Throughout the preceding chapters we have noted the respects in which subjects' responses fail to reflect an appreciation of the complexity of the phenomena being addressed. In the philosophers' responses not only did we find this appreciation but also a recognition that the questions themselves do not do full justice to this complexity. Underlying the philosophers' responses to the interview questions is a sophisticated evaluative epistemology in which the possibility of acquiring some knowledge despite a necessary and continuing uncertainty is recognized. (p. 259)

Once again, this is evidence which supports the prediction that many university faculty, as highly educated individuals very like the philosophers described above, will have made the shift to an evaluative epistemology, and so are likely to exhibit the very kind of questioning, discursive practices that are in question here.

This is precisely what Susan Beers (1988) found when she interviewed Arts and Science faculty at a Liberal Arts institution on the topic of their educational goals. According to Beers, the faculty professed to be most interested in getting their students to think beyond the course content, to questions concerning the general nature of knowledge and the various assumptions underlying the theory and practice of higher education. Beers wrote:

Few were interested in transmitting their content per se... It seemed that these teachers were primarily concerned with helping them [the students] develop particular attitudes and thinking styles. .. When these teachers were discussing their educational goals they were referring to a set of epistemological assumptions – a sense of what knowledge consists of, and procedures that one uses to obtain and assess knowledge – that constitute the implicit structure of the educational enterprise. (p. 871)

Though Beers did not use the language of evaluativism in her commentary, it is clear that the faculty members she is describing were, or at least intended to be, operating in their classes in such a way as to convey messages about knowledge and the complexity of the processes involved in coming to know. To the extent that this was the case, these teachers would be exhibiting an evaluative practice similar to that of the economics teacher. Indeed, some might even be offering epistemological commentary in addition to immersing the class in evaluative practice. Unfortunately, Beers did not speak to anything beyond faculty intentions in her study.

This is not to say that all faculty are engaged in evaluative practice in the classroom. The physics teacher described earlier who exhibits a very top-down educational practice, though fictional in the context of this paper, does exist in the university, and not just in disciplines like physics. It may be that some teachers operate with a kind of dual epistemology: one for themselves, in their capacity as researchers (an epistemology which recognizes the complex and conflicted nature of knowledge production), and another, more simplified one, for their educational practice. In such a case, the teachers would be completely separating what they think of as real academic inquiry – as practised by discipline specialists and reported in scholarly journals – from teaching. Also, it may be that some faculty may not particularly want to think through the implications of their epistemological beliefs, as researchers, such that these beliefs actually inform their educational practice. After all teaching in a top-down absolutist manner has significant advantages – for the teacher. Absolutist teaching is straightforward and seamless; the teacher simply needs to go into the classroom and perform what she knows very well, with little or no interruption via student questions. There is a considerable measure of control and certainty in this. By contrast, evaluative teaching involves taking risks. In such a class the teacher is not the authority who delivers knowledge to the students, but the facilitator of an intellectual dialogue which develops naturally and spontaneously, and moves often in unpredictable directions, depending on how the students react, what questions they ask, what answers they give, and so on.

Epistemology in the Classroom

I have described a complex and dynamic process of interaction between students' PEs and the educational practices of their teachers. Unless the teachers see the importance of explicitly discussing their epistemological beliefs with their students, and it must be acknowledged that some portion of teachers in higher education do see this and act accordingly,

the interaction between the two epistemologies will occur below the surface of the classroom discourse. The teachers will not discuss or explain the epistemological beliefs that inform their practice, and the students are not in a position to really understand that their own implicit beliefs about the nature of knowledge and knowing guide how they react to this practice. This is a situation which is bound to cause confusion and disorientation in the students – just the kind of thing that represents a significant impediment to students’ finding their place in the first-year classroom.

In itself, confusion is not a bad thing. It is an important, and some might argue, necessary preliminary to deep learning (see Festinger, 1957). Confusion is an affective state which is uncomfortable and personally troubling, and as such, it has the power to prompt a student to stop, think, engage in diagnosis of his/her learning problem, and make a strategic adaptation. Thus, we might speculate that a student who is so prompted might reflect in the following way in the context of a classroom practice that seems alien from the perspective of his absolutist epistemology:

What is happening here and why don’t I get it? I notice that the teacher becomes really frustrated when people ask her which theory is the right one. Why would this be? Could it be that she means to indicate that there isn’t one right answer? Wow! I thought that teachers always had the right answers. How can I make sense of this? Maybe she is telling me that she wants *me* to exercise my own judgment – to get *me* to think about this for myself. And maybe that’s why she is always asking people in class what they think. Could this explain why she says she doesn’t want us to memorize stuff? Maybe I should just try thinking about these theories and see what happens. . . Do I actually have *any* reason to think that one theory is better than the others? Well I guess I can think of *one* thing...

Clearly this student is well on his way to piercing the veil of educational practice. Although he does not demonstrate an understanding of the problem in epistemological terms, he has taken a very important step forward in re-thinking his absolutist epistemological assumptions. In this case, he is testing (what is for him) a completely new learning strategy. His strategy amounts to adopting a modestly critical stance in relation to the issues being discussed in class, and in so doing he is taking a first step in thinking for himself. If he takes the next step of actually volunteering an answer to one of the teacher’s questions, he may find that there is reason to believe that his explanatory hypothesis in regard to his teacher’s behavior just might be fairly close to the mark. With any luck, the teacher will acknowledge his tentative move forward and will have the good sense to show interest in his answer. She may to ask him to say more about why he thinks as he does, and if she does this, she will be laying the groundwork for further and more thoughtful responses from him.

This, I suppose, is something like what we might expect to happen when a student starts to take up the epistemological challenge presented to him in a classroom with an “evaluative” teacher exhibiting evaluative practice. We know that many students do in fact “get it”; these are the students who survive first-year and come to be confident and thriving participants in the university classroom. They have broken the secret code of the teacher’s practice, and they now know that waiting for the correct answers to be dictated to them, or sticking to their own opinion as a matter of right, is not what learning in higher education is about. Over time, and with some

judicious support and timely in-class intervention from their teachers and classmates, they will adapt to this new epistemological reality.

It is important to recognize, however, that whether or not first-year students “get it” is very much a hit- and- miss affair. After all, in the case where the teacher does not explicitly address matters of epistemology in the classroom and communicates his/her epistemological commitments via practice only, the students have to *infer* that their teacher has certain beliefs about knowledge and learning from behavioral cues alone. This is because, as I have argued above, the teacher will not be making her epistemological beliefs explicit. Indeed, it is highly likely that she will not discussing “knowledge” in so many words, at all. Not only this, but the students will have to infer a hypothesis about the teacher’s epistemology which from a standing-start – that is, from their previous educational experience in secondary school and their perspectives as epistemological absolutists and relativists – makes no sense. Minimally, they need to infer something like: “My teacher seems to believe that knowing is about asking questions, rather than getting answers.” A further complicating feature is that there are other, considerably more obvious and more attractive inferences that could be made here. For instance, a student might infer something along the lines of the following: “Perhaps I don’t understand what is going on in this class because the teacher is not very good. My friend took this class last year, and hated it. He told me the teacher doesn’t know what she is doing. That’s must be why she is all over the map.”

I would argue that “hit-and-miss” is not good enough. We should not, and more to the point, we need not rely on students’ inferential discernment of the underlying message in their teachers’ educational practice to get them where they need to be in order to become effective learners in the first-year classroom. As I have argued above, educational practice of the evaluative kind is a significant cause of confusion and disquiet in first-year students. Some students are able to make sense of practice and move forward, but many are not able to do this. If we want to reach more of these students, as we surely do, we need to connect the course curriculum to evaluative practice. This is to say that we need to make the concept of knowledge and the process of knowing explicit topics for discussion and inquiry in the classroom.

Barbara Hofer (2001) gives us a glimpse of what bringing epistemology into the classroom could look like. In her course on Educational Psychology, Hofer opens a space in the classroom for epistemological discussion and dialogue about knowledge and knowing. At various points during the term, she asks her students to consider “not only what we know [about educational psychology], but *how* we know what we know” (2001, p. 376). In asking this question, Hofer causes her students to hear and consider the differing epistemological voices of the classroom, voices espousing epistemological absolutism, relativism, and even evaluativism as suggested by Hofer herself. This accomplishes several things: it brings differences in beliefs about knowing out into the open; it makes the students self-aware of their own beliefs about knowing by contrast to the other beliefs they hear; and above all, it causes them to consider the possibility that knowing may not be as simple as they had previously believed. In short, Hofer opens up a new way of thinking about knowing – as a *process* – as something undertaken by the would-be knower, which may or may not achieve the desired outcome of knowledge, and certainly not the outcome of “certain” knowledge.

I would argue that in bringing the word “knowledge” explicitly into the classroom, Hofer has not turned her class in psychology into a class in epistemology. She is simply adding a level of reflection to the study of psychology. She is asking her students to consider their own and others’ thinking about the subject through the critical lens of epistemology: Having discussed a

certain psychological theory she may ask her students, “*How* do we know, that this theory provides the best account of the phenomena under discussion?” Nor is this an idle or arbitrary add-on to the psychology curriculum in Hofer’s class. The extra layer of epistemological reflection adds depth to the learning experience, and it helps students make sense out of the teachers’ evaluative practice. In particular, it provides important scaffolding for understanding that the teacher asks more questions than she answers because she has very few answers to give, and that this is because what she or any other psychologist claims to know about topics such as “the relationship between motivation and success” or “identity negotiation in adolescence,” is contested and evolving. Such discussion provides just enough structure for the students begin to begin their own epistemological reflection.

Among her peers, Barbara Hofer (2001, 2004) is quite radical in making the suggestion that epistemology should become part of the course curriculum. For the most part, researchers in PE simply recommend modifications of educational practice to help students make the shift toward a more evaluative epistemology. For instance, King and Kitchener (2004) suggest that students should be required to engage with problems which are “ill-structured” in the sense that they cannot be defined with a high degree of clarity or solved with certainty. In working with such problems, the researchers argue, students will come face-to-face with uncertainty in knowledge, and over time make the judgment that perfect solutions to complex problems do not exist. Similarly, Baxter-Magolda (1999) contends that teachers can demonstrate the on-going nature of knowledge creation by adopting the role of the fellow-inquirer in class. In such a role, the teacher will be demonstrating to the students that she is not an absolute authority on questions in the discipline, and that she can learn new things along with the students, and even perhaps from them. And Deanna Kuhn (1991) has argued that the teacher should create a dialogical environment in the classroom, where students are required to engage in the “dense practice” of argumentative discourse with one another. According to Kuhn, in the give-and-take of argumentative exchange, students will come to recognize the reality of alternative positions, and they learn that beliefs and opinions are only valuable to the extent that they are supported by evidence.

These are examples of what I would describe as “good evaluative practice,” which is to say that they display features of an evaluative epistemology. Taken together, they display that what counts as knowledge is questionable, that the teacher is not an absolute authority on all matters regarding the course content, and that evidence is required in order to justify a belief, and so on. Though they represent valuable pedagogical strategies, they stop short of making epistemology a topic of discussion in class, which is, I argue, essential to facilitating the students’ integration into the academic sphere of the university

It must be granted that engaging students in epistemological discussion and inquiry takes time away from the regular course curriculum. In consequence, the teacher must eliminate some of the material she might otherwise wish to ‘cover’ relevant to her discipline. This is simply a consequence of adding new course objectives and content to a course – something has to go. Is this reason enough to reject the educational approach I am recommending? I suspect that for many university teachers, it could well be. Some might argue along the following lines:

The purpose of first-year courses is to introduce students to a particular area of intellectual inquiry, a discipline. This requires that we get first-year students to the point where they understand some of the fundamental concepts of the discipline, and something about the methodology of inquiry. This is an ambitious project, not only

because many of the students are under-prepared to do the intellectual work they need to do, but also because the material is genuinely challenging. Adding other, arguably more complex issues to be considered in the context of such classes will likely compromise the amount of disciplinary learning that actually occurs. Not only this, but we need time on task so that at the end of term students have an informed basis for judging whether this discipline is something they want to pursue further as a matter of interest or as a major.

Certainly, it is hard to gainsay this reasoning. First-year teaching is enormously challenging, and there is a lot of disciplinary material to be covered if students are to be adequately prepared to move forward in the university. But it is important to remember that many students do not move forward. They leave university during or just after first-year. If we accept that a major cause of this is that students have difficulty understanding what is going on in the classroom (because educational practice is profoundly mysterious to them), then we have an overriding obligation to provide extra scaffolding for their learning. I have argued that making knowledge and knowing topics for discussion in the classroom is the “extra scaffolding” that is likely to accomplish this.

It is also important to recognize that preparing students to move forward in university involves more than delivering disciplinary content. Higher education has a wider responsibility of cultivating higher order cognitive abilities in students (such as the ability to engage in systematic and sustained intellectual inquiry, to think critically, and to be creative in the development of hypotheses); as well as certain “cognitive” dispositions (such the disposition to be reflective, to seek and evaluate reasons, and to value inquiry) and so on. These abilities and dispositions are founded upon an “evaluative” understanding of knowledge – as something constructed, as the outcome of a process of critical inquiry into alternative positions, and as something which is evaluated based on what is most reasonable or probable according to the current evidence. In bringing epistemology into the classroom discussion, teachers of first-year students make important contributions to this wider project of higher education.

Conclusion

As teachers in higher education we need take our students’ epistemological beliefs seriously into account in our judgments about how to proceed in the classroom. This is true as a general rule, but it is particularly true in the case of the first-year classroom, given that students’ epistemologies can make a huge difference in terms of their ability to interpret and evaluate what occurs there. For these students, the stakes are high. If they fail to read their teachers’ educational practice correctly, as having epistemological significance, and as connecting to, but also challenging their own epistemologies, the students will not begin the process of epistemological reflection that is required if they are to become effective and successful learners in higher education.

Teachers also need to take their own epistemological beliefs seriously into account. They need to be self-consciously aware of these beliefs, and they need to be clear about how they inform their educational practice, and how they interact with beliefs of the students. Above all, teachers need to recognize that epistemology matters, even if it is not strictly or traditionally part of the curriculum in courses such as economics and physics. It matters because it is present in the classroom, whether teachers intend it to be so or not, and ignoring it as a serious topic for discussion and debate does not make it go away.

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