

Faculty Perceptions of Relevance in Teaching and Learning

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In this study, we analyzed a selection of extensive inquiries into teaching and learning made by faculty who were participating in a year-long, substantial faculty development program by examining the questions they raised, their rationale, their methods, and their outcomes. Specifically, we explored how these faculty members understand relevance, mapping that understanding to their goals as teachers and the kind of reflective judgment they seek to elicit in their students. As we suggest in this paper, how faculty think about relevance—in terms of why they believe their course matters, as well as what they think their students should learn, how they should develop, and the kind of reflective judgment-making they expect to see in their students—may have significant implications for how these faculty think about teaching and, consequently, how they teach.

The notion of relevance has for many years been debated in higher education circles. Does a course or subject need to be “relevant,” and if so, what does such relevance entail? Certainly, early colleges—Oxford, Cambridge, Bologna, Harvard, Yale—understood relevance as having immediate application: college graduates, as a result of their education, were expected to be able to strike out on their own in specific professions as clergymen, lawyers, and physicians (Thelin, 2004). At the same time, there were long-standing assumptions about what it meant to be an educated person in society: colleges were increasingly expected to provide the “discipline and furniture of the mind”—that is, students needed to be able to think logically and critically about complex and novel issues and then apply that logic to everyday concerns (Yale Report, 1828). Thus, non-professional and traditionally non-applied fields such as classics, philosophy, Latin, and mathematics were considered relevant in a way that was both abstract and concrete (Thelin, 2004). Over time, as higher education has experienced tremendous changes in demographics and funding sources, and also witnessed great paradigmatic shifts in college curricula and massive tuition hikes, the notion of relevance seems to have been seized upon by some (e.g., job-seeking students and their parents; policymakers) and rejected by others, especially those faculty members concerned that making a course relevant is somehow akin to destroying the ivory in the tower.

However, relevance matters. What exactly relevance means in higher education settings, however, is unclear. In this study, we analyzed a selection of extensive inquiries into teaching and learning made by faculty who were participating in a year-long, substantial faculty development program by examining the questions they raised, their rationale, their methods, and their outcomes. As we examined these inquiries, the concept of relevance was inescapable, which is to say, relevance found us. We felt compelled to explore how these faculty members perceive relevance, which varied tremendously, mapping that understanding to

their goals as teachers and introducing a student development perspective to the study, the kind of reflective judgment they sought to elicit in their students. As we suggest in this paper, how faculty think about relevance—in terms of why they believe their course matters, as well as what they think their students should learn, how their students should develop, and the kind of reflective judgment-making they expect to see in their students—may have significant implications for how these faculty think about teaching and, consequently, how they teach.

Relevance and Learning

Educational researchers have for many years noted the importance of relevance in motivation and learning frameworks. Perceived relevance of a task, for example, may help individuals value a task more (Wigfield, 1994), which, when coupled with a sense of choice and control over their actions and environment, may in turn result in enhanced performance, persistence, creativity, and increased self-esteem (Ryan & Deci, 2000). Similarly, Pintrich and Zuscho (2007), in their examination of college students’ motivational beliefs and self-regulation within specific classroom contexts, have suggested that if learners “believe that the task is relevant or important for their future goals or generally useful for them . . . then they are more likely to be engaged in the task as well as to choose to engage in the task in the future” (p. 754).

Researchers, however, still seek to identify the nuances of relevance in a student learning context, often focusing on the course in terms of content or the relevance of a course within the curriculum. Kember, Ho, and Hong (2008) sought to “characterize teaching and learning environments capable of motivating or demotivating student learning” (p. 252) by looking specifically at the relevance of what is taught. At the one end, abstract theory was found to take away from, or demotivate, student learning because of a perceived lack of relevance. On the other hand, such teaching

strategies as giving students the ability to apply theory to practice, establishing the relevance of topics, and identifying relevance to local issues and everyday applications served to motivate students. Similarly, other scholars have found that relevance can be established by real-life examples, case studies drawn from current issues, local examples, and again, by relating theory to practice (Kember & McNaught, 2007; Youseef, 2010). Additionally, proponents of more active learning (e.g., problem-based learning, service learning, experiential learning, internships) usually adhere to the notion of relevance at the core of learning (Hmelo-Silver, 2004). Yet, significantly, relevance in these contexts often focuses on content knowledge, course materials, and subjects, and it underemphasizes a student's conceptual world view or holistic development through the vital post-adolescent, pre-adulthood college years.

Conceptions of Teaching and Learning

As we will suggest in this paper, how teachers understand relevance may inform how they conceive of and approach teaching. Researchers have found that faculty conceptions of teaching typically fall into several broad orientations. For example, Kember (1997) identified five general conceptions of teaching in higher education that fall under two broad orientations: teacher-centered/content-oriented and student-centered/learning-oriented. These conceptions range from teachers who view teaching as essentially imparting information, to those who conceive of teaching as facilitating conceptual change in their students. Similarly, Prosser and Trigwell (1999) describe six faculty conceptions of teaching, which move from teaching as a transmission of concepts, to teaching as helping students acquire the concepts of a course, to teaching as facilitating conceptual change. Building on these categories, Calkins and Light (2008) identified these same orientations as teacher-focused, student-focused, and learning-focused. Here, student-focused refers to the middle acquisition stage in which faculty view teaching as helping students acquire the tools to help them learn for themselves. It should be noted, too, that descriptions of facilitating conceptual change map onto descriptions of facilitating transformative learning, as articulated by Mezirow and others (Taylor, 2007). Moreover, as we will explore in this paper, faculty members' conceptions of teaching also reflect the level of reflective judgment they expect to see in their students.

Reflective Judgment in College Students

The ability of college students to make reasonable reflective judgments is crucial to their development as

life-long learners and productive, thoughtful, ethical citizens. Being able to understand the subtleties of complex issues and problems and form sound, contextually-based judgments about those issues is essential in everyday adult life. The *National Survey of Student Engagement* (NSSE) and, in particular, the "Benchmarks for Effective Educational Practice" derived from NSSE, note that college coursework should emphasize "making judgments about the value of information, arguments, and methods" (National Survey of Student Engagement, 2009). These benchmarks complement Chickering and Reisser's (1993) well-respected model of psychosocial development, which states that when they reach the highest "vector," college students will have developed a sense of integrity and a more humanized and personalized value system.

King and Kitchener's Reflective Judgment Model (RJM), rooted in the work of Dewey, Piaget, Kohlberg, and Perry, among others, is a cognitive development stage model defined by seven sets of epistemological assumptions, with particular emphasis given to the development of high-level thinking skills among college students (King & Kitchener, 1994). Each set of assumptions in the RJM is characterized by increasingly sound forms of justification in dealing with vexing or ill-structured problems. Compared to the more black-and-white *well*-structured problems (e.g., "solving for x in an algebraic equation") (p. 11), *ill*-structured problems operate in intellectual gray areas and do not have complete, certain, agreed-upon solutions.

The seven stages of the RJM fit into three broader groupings: pre-reflective thinking (stages 1-3), quasi-reflective thinking (4-5), and reflective thinking (6-7). In pre-reflective thinking, reflective judgment is not in fact engaged because the individual does not perceive the problem to be ill-structured. To the pre-reflective thinker, the problem contains a single right answer and no contextual justification is required; if that person does not have the answer, authorities (e.g., teachers) are presumed to have the answer. In the more developed quasi-reflective thinking, knowledge is viewed as uncertain, and a single right answer no longer exists; however, in these stages, knowledge claims are seen as subjective and virtually any answer might be considered "right." The idea that, based on sophisticated use of a range of supporting evidence, certain conclusions can be considered more reasonable than others—the hallmark of the highest grouping, reflective thinking—does not exist for quasi-reflective thinkers. In addition, reflective thinkers, significantly, possess a willingness to reconsider previously held views based on the availability of new data and frameworks (as opposed to making new data "fit into" an existing viewpoint).

As we will describe more fully later in this paper, the level of reflective judgment that faculty expect of their students maps onto both faculty's conception of teaching *and* their perception of what makes their courses relevant to students.

Faculty Development Program Description

The year-long faculty development program discussed here is comprised of pre-tenure, early-career faculty who draw from a broad range of disciplines run by our university's Teaching and Learning Center (TLC). Initiated in 1999, the program is designed to provide participants with the expertise and knowledge to critically assess and solve problems in their courses in order to foster deep student learning (Entwistle, 2005). The program seeks to rethink the teacher-focused paradigm (i.e., teacher transmits knowledge and expertise to passive students) in favor of a learner-focused paradigm (i.e., learners construct knowledge for themselves) (Prosser & Trigwell, 1999; Kember, 1997; Calkins & Light, 2008; Light, Cox, & Calkins, 2009).

Participants

Over the program's 10-year history, 112 tenure-track faculty members have successfully completed the program. For this study, we focused on the critical accounts (see "Description of Critical Accounts") written by the three most recent cohorts (2006-2009). Of the 40 program participants in those years, we used the critical accounts of 30 faculty members. (See the "Limitations" section for further description of these exclusions). Nine faculty members came from humanities and social sciences, eleven from engineering and science, six from medicine, and four from theatre and communications.

Program Requirements

Throughout the academic year (September-June), participants in the program are required to attend a series of linked events, which include four dinners with featured faculty speakers and conversations about teaching and learning, a two-day overnight retreat in the fall, and a one-day retreat in the spring. The retreats include structured workshops, interactive presentations, and individual and group work. In addition, participants work in peer groups, sharing what they have learned from the scholarship of teaching and learning (SOTL). Participants also identify a senior colleague in their department to serve as their mentor for the year. (A mentor is not required to be an "expert" in teaching and learning, but he or she should care about his or

her colleague's professional development as a teacher.) Participants are strongly encouraged to observe their mentor's teaching and, in return, be observed by their mentor and a member of the TLC's consulting staff. Most participants also will have a focus group conducted by a member of the staff to acquire information about their students' learning.

Description of Critical Accounts

In addition to developing or revising a course or curriculum, or revising a key assessment strategy, participants must write a critical account detailing their year-long critical inquiry and reflection on their teaching. As facilitators, we adhere to the idea that "authentic practice" is at the heart of SOTL—that is, not only can teachers find the process of critical inquiry into their teaching fulfilling, but also that this inquiry can help build "vital bridges" between themselves and their students and, thus, enhance the student learning experience (Kreber, 2007, p. 3).

Buttressed by relevant literature and pedagogical theory, the critical accounts include a description of the teaching project, its learning outcomes, teaching methods, assessments, and evaluation. Participants are provided with a template that includes key questions the program facilitators would like them to address in their accounts, but participants may write the account as they like. This study's first author oversees the program and, in doing so, provides guidance and also makes light edits to the critical accounts. These accounts range from 5 to 30 pages, averaging 12. Each account includes selected appendices, which might include a course syllabus and specific assignments, activities, and assessments used in the course.

Methods

Initial Exploration of Critical Account Themes

Before we began the research we describe here, we first did a cursory exploration of the approximately 100 critical accounts in our database. One of us, the first author, has worked with the program for six years, directing it for the last three. The second author, a graduate student at the time, had worked with the program for five months while serving as an intern at the TLC. Each critical account has been previously cross-indexed by three or four keywords (which, for the most part, were generated by the participants). This gave us some sense of scope and direction for the kinds of questions our participants were seeking to address in their critical accounts. We found that our faculty described widely divergent contexts and problems (e.g., teaching diverse learners, engaging students in large

introductory classes, and facilitating peer-led project groups) and employed all types of teaching methods and activities (e.g., interactive lecture, pre-post knowledge assessments, and debate and role play) to address the teaching question or problem.

In this initial exploration, we began to see the same critical issue playing out across these diverse teaching and learning contexts. As a result, we started to question the degree to which faculty sought to help learners transcend their identity as students, as well as the degree to which they may have sought to dislodge students' notions of what teaching means and who has the authority to teach. These questions likely were informed by the first author's experience with faculty development and as an instructor of college-level history, as well as by the second author's graduate studies in student development theory and experience as a student affairs professional. This orientation served as a starting point as we identified our emerging themes.

Finding Emerging Themes

We began by independently reading through the most recent cohort's critical accounts to generate themes and ideas as they emerged from the data (Glesne, 1999). In comparing our initial notes, we found that we were struck by how faculty understood and valued the concept of "relevance" as they analyzed their courses. This was particularly notable because this concept is not explicitly dealt with or focused on through materials or program activities, suggesting relevance indeed is an issue of concern among faculty members. Additionally, we did not, as authors, bring to this study a specific definition of relevance or a framework for how different faculty members might perceive relevance. As we honed in on this initial question—How do faculty understand relevance in their teaching?—we began to refine our analysis, exploring how faculty understand relevance in terms of building capacity in their students.

Keeping our emerging theme in mind, we then independently read through the critical accounts from three consecutive years of the program, focusing on each participant's rationale, descriptions of the project, and final reflections. Throughout this process, we collaborated to create a conceptual framework to capture how faculty members understand relevance as a construct as it pertained to their teaching context and their perceptions of their students' learning. We regularly compared our interpretations, in an iterative process, reviewing a given critical account in its entirety when we differed in our analysis and refining how each critical account fit into our emerging conceptual

framework. Table 1 reflects this conceptual framework and is described more fully in our findings.

Limitations

We ultimately excluded 10 critical accounts from our study, primarily because these faculty members were engaged in a different type of educational research that did not focus on designing a course or innovation. As such, we could not discern any attitudes concerning relevance. Of those excluded from the study, six were medical faculty, two were from engineering and science, and one was from theatre and communications.

We should also note that the findings described here are the product of faculty members' self-reported data as detailed in their critical accounts. Additionally, for many of the faculty members, the project described in the critical account represented an outline for future teaching and assessment; thus, their conclusions oftentimes are of a purely speculative nature.

Findings

From our analysis of 30 critical accounts, we found that our faculty participants perceived relevance—that is, why their classes and what they teach matter—in four qualitatively different ways, which we classified as hierarchically related perceptions, distinguished by increasing complexity in their beliefs (see Table 1). We also looked at three additional dimensions which seem to be shaped—even informed by—how faculty perceive relevance: their teaching goals (what they hope to accomplish as teachers), their understanding of what it means to build capacity in their students (what they hope to help their students do), and the level of reflective judgment they expect to see in their students.

Perceptions of Relevance

Faculty holding Perception (A) understand relevance primarily in terms of *content*, and they tend to hold more teacher-focused conceptions of teaching. Here, students need to learn the course material because the teacher views the content as important information. While the faculty member may believe abstractly that such information is important for educated people to possess, relevance is expressed at the course level; that is, there is little expectation that students will use the knowledge in other contexts—in or outside of the academy—in a meaningful way. Faculty holding Perception (B),

Table 1
Faculty Perceptions of Relevance

Perception	A	B	C	D
Understanding of relevance <i>Why my class, or what I teach matters</i>	<i>Content Acquisition</i> Recognizes that students need to acquire teacher's content knowledge because the teacher knows it is valuable information; course-bound	<i>Tools Acquisition</i> Understands that students need to learn key concepts and/or skills for practical or professional purposes; discipline-bound	<i>Conceptual Change</i> Recognizes that students need to develop the ethic of a professional (professional or creative thinking); transcends disciplinary boundaries	<i>Personal Change</i> Recognizes that students need to evaluate and make decisions, and to value/internalize professional ideas and concepts; transcends academic or professional boundaries
Teaching goals <i>What I hope to accomplish as a teacher</i>	To improve content in order to capture student interest, or to make class more fun or interesting	To help students acquire useful tools to be able to learn on their own	To promote conceptual understanding among students so they can create or innovate on their own	To create conditions that encourage students to critically examine their values, beliefs, and world views
Building capacity in students <i>What I hope to help my students do</i>	For students to learn course content in order to pass exam or complete course requirements	For students to grapple with / solve scripted or real-world problems; to use skills of a professional to appreciate that there is not one fixed idea or perspective	For students to learn to get at the nature of an ill-structured problem, following a full, rich process of critical and reflective inquiry; for students to create or innovate	For students to evaluate questions and problems holistically; develop in a way that asks them to reflect on what it means to be a productive citizen and part of society
Level of reflective judgment <i>What I expect to see in my students</i>	<i>Pre-reflective</i> Knowledge is mostly absolute and concrete; not abstract	<i>Quasi-reflective</i> Knowledge is uncertain, subjective, and contextual	<i>Reflective</i> Knowledge is not absolute, but reasonable judgments can be made with evidence	

meanwhile, understand relevance as students acquiring key *tools*, *concepts*, and *skills* for practical purposes that transcend the immediate teaching context. Faculty with this conception tend to be more acquisition-focused. While they may see relevance as being able to directly apply course content and skills in a specific professional context, these professors primarily want students to be able to relate what they have learned in the course context to novel contexts and be able to solve real-world problems. By comparison, faculty holding Perception (C) seem to believe that students need to develop a professional ethic and be able to create and innovate as professionals do, and in a way that transcends disciplinary boundaries. These faculty, like those holding Perception (D), tend to be more

learner-focused. Faculty holding Perception (D), however, view relevance as students being able to successfully evaluate and make decisions given ill-structured questions, as well as to value and internalize professional ideas and concepts. In this perception, students develop not only along intellectual lines, but also along moral and ethical lines. The following examples illustrate each perception—and the variation from one perception to another—in detail.

Perception A: Teaching What Needs to be Covered

Faculty holding the first perception understand relevance as having a local, classroom focus, and tend

to be more teacher-focused in their approach to teaching. In this view, a course becomes relevant by its ability to engage students in the course material so as to ensure course success. Course materials are relevant because they convey to students “what they need to know” for papers, quizzes, and exams, and they represent the instructor’s concept of what an educated person should know. Mastery of the teacher’s knowledge is the focus and chief determinant of student success. This particular faculty view of relevance would seem to encourage—even reward—King and Kitchener’s pre-reflective thinking, in which authority figures are presumed to have (and often supply) the answers, which students can then regurgitate on command. King and Kitchener (1994) explain, “People who assume that knowledge is authority based also assume (consistently so) that an authority can provide a solution for the problem” (p. 9). Students are not expected to be contextual decision-makers, but rather consumers of teacher knowledge. Faculty holding this view seek to build capacity in their students *to succeed in that course* and thus focus their teaching on improved course content and presentation; there is little emphasis among these faculty on encouraging any wider application of the course, such as through skills-building or promoting consideration of new perspectives.

For example, one program participant created a plan to revise a large introductory history course, focusing on her lectures. In doing so, much of her project proposal pulled from simple tricks of the teaching trade: “Think about time in chunks of ten to fifteen minutes”; “Do not read from lecture notes”; “Ask questions during lecture.” As part of her project, this professor explored literature on lecturing and, within the context of the survey course, how best to present materials. “It is difficult to determine,” she wrote, “whether the course should focus on introducing students to methods used by historians or to the ‘story’ of United States history, or to some combination of the two.” However, unlike some of the other program participants when faced with such a dilemma—and despite advice she noted from the literature—this professor rejected the notion that instilling a professional orientation in her students was a useful, worthwhile, and relevant course objective. As she noted in her critical account:

The first problem is that we are not teaching undergraduates to be historians. Discovering and discussing a “signature pedagogy” for history and helping history Ph.D. students learn it makes a great deal of sense to me. But I am not quite convinced that teaching the disciplinary norms of history to undergraduates is useful.

The relevance of this course hinged, then, on content concerns and, specifically, the successful presentation

of “the ‘story’ of United States history,” (i.e., “teaching what needs to be covered”). This professor positioned the aims of the course squarely within the walls of the classroom and, in particular, in her lectures. In the process, she set expectations conspicuously low for her students in making the decision not to treat her undergraduates as budding historians and intellectuals but rather as knowledge-sponges. Connecting students to the course, consequently, became a matter of livening up the presentation of materials rather than helping students fashion a new, more sophisticated intellectual perspective or acquire new tools to be used in this course and beyond.

The critical account of a physics professor teaching a graduate-level course likewise provides an interesting profile of Perception (A). The problem identified by this faculty member concerned teaching an interdisciplinary physics course to a group of students with varying academic backgrounds and interests, and his project focused almost exclusively on ways to keep this diversity of learners interested and satisfied. (This focus is reflected in the professor’s repeated references to performing well in student ratings.) Rather than attempting to build up his students’ problem-solving skills, this professor conceived of his course’s relevance as a response to the recent focus of the National Research Council (NRC) on interdisciplinarity in physics. As a result, the course is seen as relevant because the NRC says it is (and, therefore, the professor says it is). The development of broadly applicable skills or conceptual frameworks that might help students better manage their own learning or foster their development as college students does not fit well into this authority-dependent learning paradigm, and certainly the creation here of a teacher-focused learning environment, as described by Calkins and Light (2008), is not surprising given this low-level perception of relevance.

Perception B: Helping Students Acquire Professional Tools, Skills, and Concepts

While those faculty holding Perception (A) view relevance as a matter of fact—that course materials are relevant because students need to master them in order to succeed in the course and become “educated citizens”—those holding Perception (B) view relevance as hinging on the ability to effect some sort of useful change in students’ classroom approach and thereby build up their capacity to learn and, subsequently, better manage their own learning. These faculty express the notion that students need to learn key concepts, skills, and tools for practical and professional purposes that might transcend the class. This perspective maps onto a student-focused view of teaching, which suggests that teaching is the process of facilitating acquisition—that

is, as helping students acquire the tools they need to do well in the class and in future learning (Prosser & Trigwell, 1999; Calkins & Light, 2008). Professors holding this perspective seem to want students to be able to grapple with, and even solve, both scripted and real-world problems, recognize that knowledge is not fixed, and understand that questions often are not simple yes-or-no propositions demanding one “right” way of thinking.

Unlike the history professor holding Perception (A), who argued that undergraduates are poor candidates for indoctrination into the “disciplinary norms of history,” a second professor of history, facing a similarly large introductory course with a diversity of learners, argued otherwise. In doing so, he sought to “engage students in the very ‘practice’ of *history*,” and he employed what he referred to as the “‘history-as-verb’ approach,” which “seeks to help students interrogate history, developing thinking skills that allow them to question received wisdom of historians, to question national narratives.” He elaborated on this approach, writing:

It is an attempt to make history both relevant and accessible, to empower students by exposing them to the ‘craft’ of history inquiry and writing. This approach stands in opposition to approaches that stress the acquisition of textbook knowledge centered upon the names, dates, people and places most prominent in critical historical developments.

This faculty member maintained that introducing students to some professional practices of the historian could, in his words, make the course “both relevant and accessible,” even among those students not planning to become professional historians—undoubtedly the majority of the class. Students could find the course relevant by its ability to provide them with not only a body of knowledge, but also a useful set of intellectual skills. There is an attempt by this professor to get students to probe content, question evidence, and understand some of the core underlying processes of the field; however, interestingly, while these are skills with obvious application outside this course, that does not seem to be the message conveyed by this professor. Rather, these are regarded primarily as class-specific skills, suggesting this professor resides on the low end of Perception (B).

Another example of a faculty member holding Perception (B) is a professor of civil and environmental engineering who redesigned a course in order to better align it with the traits of “Generation Y” students, for whom relevance, he says, is “crucial.” In his critical account, this professor notes that relevance “is somewhat brushed

over in core courses because instructors feel it is ‘obvious’ that the course has relevance given the student’s major.” Here, however, the professor hoped to make his course relevant beyond the perfunctory matter of it being a major requirement. As an antidote to this approach, this professor proposed to move toward an inquiry-based method of teaching, as opposed to using the traditional deductive approach of first “submerging the students in definitions.” He explains, “Instead of beginning with general principles and eventually getting to applications, instruction begins with specifics—a set of observations or experimental data to interpret, a case study to analyze, or a complex real-world problem to solve.”

This professor links relevance to the key, fundamental ability to work through a “real-world problem” using professional academic skills. Students are asked to do more than consume the teacher’s knowledge as in Perception (A). Additionally, as compared to the other Perception (B) faculty member described, this professor sought to instill in his students a set of problem-solving skills designed to have application *throughout* the civil and environmental engineering curriculum, not just in his course. This perception more closely resembles the quasi-reflective thinking of King and Kitchener in that, by forcing students to grapple with real-world problems, they must begin to confront the intellectual gray areas in which problems so often operate. Still, the learning environment that arises here does not challenge students to develop the creative, innovative qualities of the professional academic, as seen in the next perception.

Perception C: Helping Students Develop a Professional Ethic

Faculty holding Perception (C) want to build capacity in their students to create or become innovative in their field—in essence, to develop a professional ethic that transcends simply grappling with real-world problems. Taking a learner-focused approach, these faculty members wish to get beyond the confines of the course, creating learning environments that allow students not just an opportunity to access real-world problems, as in the previous perception, but also to create and think for themselves and not fall into the trap of derivative thinking. The focus here is getting students to improve or expand a field in a way that transcends specific disciplines.

For example, a computer engineering professor sought to promote student creativity in a class that focused on understanding the underlying structures and fundamental principles of large-scale distributed computer networks. He wanted his students to be able

to use problem-solving methods associated with the field, which is similar to those holding Perception (B), but he also wanted to make sure they explicitly understood how the tools and problem-solving process worked. As he indicates:

. . . [C]arefully explaining the [specific program] approach to problem solving, i.e. making students explicitly aware of the method, has a powerful effect on students . . . Being aware of the entire process and particularly understanding that one should *move* through the [specific program] cycle is important for “debugging” the problem-solving process.

Moreover, this engineering professor wanted his students to analyze and critically reflect upon cutting-edge research in the field, again distinguishing him from those holding Perception (B), so that they will “synthesize their knowledge by predicting sustainable Internet architectures of the future.” As he explains:

One of the key guidelines I give to students is to remove the existing assumptions hindering the development of the Internet. Indeed, one of the main issues in solving problems is that people are making *implicit* assumptions about the nature of a problem that are limiting their ability to find solutions. I advise students to go even beyond removing implications, and remove one or more *realistic* (yet not fundamental) assumptions in order to open new and currently unanticipated problems. Indeed, changing assumptions can have powerful effects on the conclusions.

Clearly, he is aware that facilitating an environment where students will learn how to be innovative, critical, and reflective thinkers is essential to helping build student capacity and creating a meaningful and relevant academic experience.

Similarly, a linguistics professor designed his entire course around questions. As he explains, “My goal is to present problems and pose questions that will help students learn to think like researchers that work on topics concerning language evolution.” Elaborating further, he adds:

I will provide multiple opportunities for the students to conduct research of their own on aspects of linguistic behavior . . . As part of that inquiry, I am confident that students will uncover novel connections between findings in disciplines such as ethology and linguistics, as well as identify new sources of data.

This instructor wants to do more than have students address real-world, ill-structured problems; he wants them to create and innovate and, in some respects, assume the role of teacher. Getting them involved in research early on as undergraduates, he says, is key: “My hope is that the class will serve as a point of entry for our undergraduate students to get involved in research in linguistics and topics concerning language evolution beyond the confines of the course.”

In both cases, relevance is linked to the expectation that students be able to make connections among ideas and draw on their own experience and expertise so that they can learn how to make new contributions to the field, not unlike faculty members.

Perception D: Helping Students Value and Internalize Professional Ideas and Concepts by Probing their Role in Society

For those holding the most complex perception, relevance is understood as helping students value and internalize professional ideas and concepts by evaluating and making sophisticated reflective judgments about knowledge. While they also want their students to be critical and creative thinkers, as those holding Perception (C), these faculty members want students to develop and commit to their own values as citizens in a global society. This philosophy is about creating a learning environment that encourages students to engage in active reflection on their beliefs and values and that allows for student change and development in a larger, more holistic way that transcends the boundaries of a course, a discipline, or even a field.

For example, a chemical engineer insists it is essential students in his courses become ethical, even moral, decision-makers and citizens. In addition to asking ongoing ethical questions through a variety of course projects and readings, which drew on ill-structured, real-world problems, he also surveyed his students about their backgrounds and opinions regarding chemical engineering, which served several important goals. He explains: “This survey gave students a chance to think concretely about how their chosen major engages with society, and how they in turn will wish to engage with society as a professional.” Engaging with society is a crucial part of being an engineer, and that engagement, according to this professor, demands that students begin to think through their future ethical, professional, and social obligations to the public. The survey acts as a catalyst for students to probe their attitudes and feelings about the field and to raise larger questions in class discussion. The professor views this as important, explaining:

Engineering students do not necessarily feel socially engaged in their job or preparation, perhaps because of the newness of an emphasis in civic engagement within the engineering curriculum. Discussing the survey with the class shows the students that their peers think about social responsibility, such that they do not feel like a lone outsider in the field.

While this professor admittedly did expect that most of his students would become engineers, others holding this perception, significantly, not expect their students to follow their same career path.

A professor of African literature, meanwhile, wants his students to do more than probe their misconceptions about the field—he wants them to take control of their value judgments. As he suggests:

I had also wrongly assumed that I need to police Western students against committing the cardinal sins in reading African literatures—Larsony and Eurocentricism—and to protect the students from accusations of implicit racism in their later careers. It turned out that once these terms were defined and explained clearly, the students would criticize an implicit racism in their own work and the work of their colleagues.

He does not just want his students to think differently about African literature, nor does he simply want students to confront their own misconceptions, although these goals are certainly part of what he hopes to accomplish. Ultimately, he wants students to always think about the judgments they make, the language they use, and the ideas and language they are exposed to, and to subsequently question and evaluate—with evidence—where ideas come from. While King and Kitchener (1994) focus on intellectual judgments rather than moral and ethical judgments, for this professor, sound *intellectual* judgment is not unto itself sufficient. Indeed, consideration of the whole person (i.e., the intellectual, moral, and ethical dimensions) is vital to this professor's course objectives. In doing so, he challenges students to critically consider their world view through the study and discussion of course materials, creating a learning environment well-suited to this more holistic student development.

Participants' Perceptions of Relevance by Discipline and Level of Teaching

As Table 2 indicates, we classified half the participants as holding either Perception (A) (n=3) or Perception (B) (n=12), and half holding Perception (C) (n=10) or Perception (D) (n=5). Faculty in humanities and social sciences (traditionally less applied fields)

represented all four perceptions, as did faculty in engineering, science, and medicine (traditionally more applied fields). As Table 3 indicates, faculty who taught undergraduate courses were represented in all four categories (n=18); faculty who taught graduate courses represented three perceptions (B, C, D) (n=6); and faculty who taught medical courses represented two perceptions (B and C) (n=6).

Conclusions

In this study, we explored the variation in how faculty perceive relevance and what this means in terms of how they teach, how they attempt to build capacity in their students, and, finally, how they perceive the level of reflective judgment they expect of their students. Cultivating this form of cognitive development among college students is, in particular, a key and emerging goal of higher education. Consequently, we were encouraged that all but three faculty members held a view of relevance that transcended immediate course content and recitation of teacher knowledge, moving into more substantial intellectual and even ethical and moral student development concerns. We also found it notable that no particular field or discipline, nor the level at which the faculty focused on in their critical accounts, dominated a particular perception.

Additionally, we were heartened that so many of the faculty viewed relevance as finding ways to help students learn to create or innovate on their own. Faculty who adopted this approach, whether in fine arts, engineering, or social sciences and the humanities, championed the idea that students themselves should be the creators and producers of their own knowledge and make strong reflective judgments about their academic, professional, and ethical responsibilities. For a professor of microbiology, students are not “science-workers,” but rather future visionaries who will move the field forward; for a historian, students must interrogate their own deeply held beliefs and never stop questioning the nature of knowledge. To promote relevance means getting beyond covering materials for the next exam, or even preparing students for the next course in their curricula or field of study. Indeed, that is insufficient. Relevance can be a higher-stakes game, helping prepare college students to think critically, reflectively, and creatively, as well as to become ethical individuals capable of forming sound, evidence-based judgments in college and beyond.

As such, our study suggests several implications, both in terms of getting faculty to reflect critically on how they understand relevance (and challenge the stigma often associated with the term in some faculty circles) and exposing them to a more complex notion of relevance—which, we hope, they would come to adopt—that raises their students' levels of reflective judgment.

Table 2
Participants' Perceptions of Relevance by Discipline (n=30)

Discipline	Categories of Perceptions				
	A	B	C	D	Total
Humanities and Social Sciences	2	3	1	3	9
Science and Engineering	1	5	4	1	11
Medicine	-	3	3	-	6
Theatre and Communications	-	2	1	1	4
Total	3	12	10	5	30

Table 3
Perceptions of Relevance by Level of Teaching (n=30)

Level of Teaching	Categories of Perceptions				
	A	B	C	D	Total
Undergraduate	3	6	6	3	18
Graduate	-	3	1	2	6
Medical School	-	3	3	-	6
Total	3	12	10	5	30

Yet putting this into practice is not easy. While this study suggests considerable, if somewhat private, concern among faculty members regarding the relevance of their teaching, we (faculty/staff developers and administrators) must find ways to help faculty confront their notions of relevance more openly, through workshops, roundtables, and other activities where faculty can find space and time for critical reflection. We can do more, certainly, to help faculty think about the level of reflective judgment they can hope to stimulate amongst their students. Such methods may include helping students examine underlying social, ethical, and political constructs in course material; creating opportunities for students to probe multiple perspectives on a given topic; and, more generally, helping students reflect critically on their own judgments, values, and decisions. By rethinking relevance, faculty will be rethinking what it means to teach—and ultimately, what it means to learn.

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