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Liberal Education **BLOG**

Why We Need to Teach Students How to Think about Disciplines



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Over the last two decades, many educators have recognized that traditional content-based approaches to teaching academic subjects are insufficient to educate students for the twenty-first century.

Unlike high school, where students learn academic “subjects” characterized by narrowly defined content, colleges and universities are organized around broader academic disciplines and their knowledge-production activities. The disciplinary paradigms and assumptions of faculty shape not only what students learn but also the kinds of learning experiences that students have in the classroom. Disciplinary literacy—the ability to “think like” poets, biologists, historians, or sociologists—is central to students’ success within general education classes and their undergraduate majors.

Basic disciplinary literacy enables students to effectively employ knowledge and skills (e.g., reading, writing, and discussion) that often remain implicit in the disciplinary “worlds” of various general education classes. This literacy empowers students to make more informed choices about the relevance of academic majors to their interests. Once students choose a major, disciplinary literacy also helps them engage with that discipline in deep and substantial ways. Finally, disciplinary literacy supports the wider democratic aims of a college education. A basic understanding of the various intellectual projects of the disciplines allows citizens to participate more effectively in policy decisions and to critically interpret the meaning of new academic knowledge for their own lives.

For the last three years, our office at Colorado College has conducted a qualitative study of the disciplinary literacy of incoming first-year students. Our findings indicate that students enter college with significantly less understanding of the nature of academic disciplines than we assumed.

Incoming students enter the college with a basic, though reductive, understanding of the natural sciences. They view scientific practice mainly through the lens of “the scientific method,” but they also believe science is a direct reflection of “reality” rather than a process of creating new knowledge. One of our incoming students noted that “science is factually based and requires concrete thinking, rather than [dealing with] open-ended theories and unanswered questions.”

For the social sciences, our results were slightly more troubling. Incoming students view the social sciences as derivations of natural sciences but with less accurate findings. An incoming student noted that “social science is a field which studies people and societies through a lens of mathematics and science.” Incoming students appear to view the social sciences through their already faulty mental model of the natural sciences.

Students’ understanding of the humanities is even worse. Most of our incoming students have no conceptualization of the humanities as knowledge-producing enterprises at all. One student wrote that “humanistic knowledge is formed from creating your own ideas after receiving information and sharing it with peers and professors.” This student’s response echoed the beliefs of many other students, who view the humanities not as modes of inquiry but as types of classes that expect high levels of reading, writing, and dialogue.

What our data indicate is that students enter college with little to no heuristic for understanding the disciplines as communities of practice or as processes of meaning-making. As a result, placing students directly into general education courses that assume a basic understanding of the nature of academic knowledge production is highly problematic.

To address this concern, Colorado College redesigned the first-year curriculum as an intervention intended to reconstruct the way students relate to knowledge in the disciplines. Students are now required to take a two-course sequence designed to introduce them to the idea that every discipline constructs, organizes, and communicates knowledge differently. The first course, CC100, accomplishes this goal by examining how disciplines operate as cultures of practice. The second course, CC120, helps students to examine disciplinary writing practices.

The courses are inquiry- or problem-driven, using the scholarly practices of the instructors as case studies. In each course, students experience disciplinary problem-solving or writing and engage in critical dialogue and reflection about the processes, paradigms, and critical histories of the faculty member’s discipline. The courses foreground the constructed nature of knowledge in the disciplines by exposing it as contingent, contextualized, and oriented around specific values. We ask questions that connect disciplinary content (*what* we know) to social, personal, political, or economic values (*why* we know it); the methodological, technological, and cultural practices of its construction (*how* we came to know it); and the identities, positionalities, and contexts in which it exists and is deployed (*who* is authorized to know it).

To foster critical engagement across disciplines, these first-year courses are grouped into thematic clusters around a common topic, with three to five classes per cluster. Recent topics include “The Anthropocene,” “Past and Present in Critical Dialogue,” “Biopower,” and “Conceptions of the Good Life.” Students and faculty from different classes engage one another in a range of activities (e.g., debates, inquiry-based work, interviews, and participant-observation) related to their cluster’s theme. These experiences demonstrate the constructed nature of various disciplines and how each operates as a different kind of community of practice, as well as their affordances and limitations in the context of a specific problem or question.

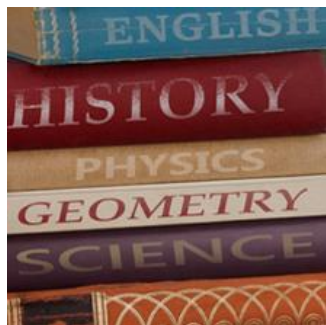
If colleges and universities teach the practices of a discipline without first involving students in critical discussions about the nature of disciplinarity, we inadvertently end up training students in content and skills instead of educating them about the contexts and processes in which those skills are situated. After teaching in the first-year program, one of our faculty members wrote, “If we aren’t placing students in conversation with the meta-dialogue about how we know what we know, if we aren’t teaching students to read for innate positionality and bias, if we aren’t empowering students to use their own critical skills to evaluate and blend diverse approaches to tackle complicated problems, then we aren’t doing our jobs.”

Aaron Stoller is assistant vice provost and director of academic programs, and Sam Stansel is coordinator of academic programs—both at Colorado College.

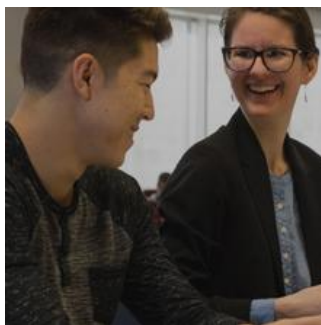
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