EDUCATION WEEK

COMMENTARY

The Unmet Need for Interdisciplinary Education

Monolithic learning doesn't prepare students for our complex world By Alden S. Blodget

March 7, 2017

Imagine this: You are in this big building with lots of rooms and different signs on each door. You come to a room with a sign saying "hammers," you enter, and this young, enthusiastic guy shows you pictures of lots of different hammers and talks about what they can do, though you never get to hold one. A bell rings, and you go down the hall to a room for "screwdrivers," and there is a very nice, middle-aged woman who tells you all about the wonders of screwdrivers ("Much better than hammers," she whispers), though, again, you never get to use one. And so the day goes; you wander from room to room—to "saws" and "tape measures" and "rasps," separate tools that you rarely get to use and whose relationships to the others are never mentioned, no word about how they might work together to accomplish anything. And then, one day, you find yourself outside in the woods needing to build a house.

Well, I don't think I need to beat you to death with this analogy to school. Where else but in school are the skills and knowledge we need to solve problems in the real world divvied up, claimed, and jealously guarded in separate little departments? Despite decades of talk about interdisciplinary courses, despite the focus on STEM and STEAM, it remains monumentally difficult to get these departments to work together—even those with the most obvious relationships, such as math and science, English and foreign languages, or the arts and any other department. I still recall the great irony of graduate school: While working on an MFA in theater in the school of communications and theater, I was not allowed to take any courses in the communications wing.

This monolithic ("specialized") learning has consequences: It $^{-G}$

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affects how we think and how we approach problems. Writing, for example, belongs to the English department. When I used to teach theater and asked my students to write analyses of characters or scripts, they became outraged when I focused on the writing itself. "This isn't an English class," they shouted, as though the writing and their analysis could be separated when the goal is communication.

At some point, most history or science teachers have heard that whining question, "Does grammar count?"

Teachers also readily reinforce the notion that writing is an English thing. Even in schools that flirt with some form of writing-across-the-curriculum, teachers tend to expect English teachers to accept primary responsibility for teaching writing and are quite comfortable saying, "I can't teach writing. I'm a math "Students need to experience borderless education as the teacher." While they are occasionally willing to ask their students to write, they are unwilling to work with them to improve their writing—even though writing helps improve understanding of the concepts they write about, and understanding the concepts improves the writing.

norm—every year they are in school."

The scary results of the general failure of schools to teach students that problems don't come in tidy boxes marked "English" or "science" or "history" are also evident in adult blunders of immense consequence—like, for example, our decisions about the Iraq War. Here was a problem that demanded analysis from several vantage points: history (both the history of that country and the history of guerrilla warfare), sociology (the relationships between Shiites and Sunnis), mathematics (how many troops do we need to accomplish what missions?), science (analysis of the potential for aluminum tubes to be used in the making weapons of mass destruction), psychology (likely behavior following decades of dictatorship), foreign language (anyone here speak Arabic or understand the culture?), and literature and the arts (what do Iraqi artists tell us about the people?). What we got instead was a lot of Wild West rhetoric about good guys and bad guys—not even an insightful moral analysis from the philosophy department.

The point is that the problems that confront us as adults tend to demand skills, knowledge, perspectives, and solutions that cross over these artificial academic departmental borders. Teamwork is important, as are the psychology and perspectives of the individuals on a team. To ensure effective teamwork, educators must help young people develop an ability to move easily among domains. Research has certainly shown us that transference of skills from one domain to another must be learned, not assumed. The best way to learn skills in different contexts is to use them while wrestling with a meaningful real-world challenge or pursuing a deep, genuine interest or question.



As the problems we face become increasingly complex and interrelated, not to mention deadly, the need to eliminate borders becomes more urgent. Providing occasional interdisciplinary experiences is not enough. Students need to experience borderless education as the norm—every year they are in school. Educators need to imagine new ways to structure borderless schools and to model borderless learning.

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Vol. 36, Issue 24, Page 19

Published in Print: March 8, 2017, as Teachers Without Borders