BUILDING A CULTURE OF LEARNING IN THE 21ST CENTURY: Confronting Some Assumptions Preventing Us from Realizing the Promise of the Learning Paradigm

AIS/AGLS Joint National Conference Keynote Address, October 7, 2005

by

Randy Bass
Georgetown University

Abstract: In the past 20 years some educators have given greater attention to a broadened conception of learning that highlights processes and a diversity of learning modalities. But higher education has yet to broadly embrace the potential for developing a real culture of learning. As interactive technologies and experimental research provoke us to re-examine our teaching practices, this essay challenges educators to confront their own assumptions about expertise and the ways we apply and align those principles of expert learning to the design of undergraduate education.

Today, the one point that I want to stress is this: Our notions of learning are expanding and changing much faster than our ability to understand their implications for the work we do. That is, over the past 20 years, we have opened ourselves up to a broader conception of learning where we are paying much more attention to diversity of learning modalities and the processes of learning—all part of shifting to what has been called the “learning paradigm.” Although we all know this broadening by many names (active learning, engaged learning, and so on), and sense how it has made an impact
on the academy, I believe that we have not fully confronted the implications of this transformation, especially in the ways that our assumptions about knowledge and learning sometimes get in the way of the very kinds of learning we most want to promote.

This idea was crystallized for me a year or so ago, when a faculty participant in a project I was leading exclaimed in the middle of a workshop session in which we were rather intensively examining a piece of multimedia student work: “Oh, my God, we are teaching so much more than we can recognize.” In part, of course, we have always taught so much more than we can recognize. But in many ways we didn’t care; or if we cared, we simply took it on faith that there was inevitably a surplus of value resulting from the teaching-learning exchange; that was part of the mystical charm of education. We focused on the cognitive, assessable piece that fell within the traditional purview of the classroom, and the rest became part of the ineffable matter of liberal education.

But something has changed. Now, so much of that learning is more visible than before, whether through increased emphasis on process, or through the use of new interactive technologies that capture the intermediate processes of learning, or due to growing attention to the nature of learning itself and the growing body of experimental research on “how people learn.” Whatever the multiple sources, this increased visibility is not only exposing formerly invisible forms of learning, but also shedding light on the tensions that inhere between a broadened notion of learning and still relatively traditional higher education structures and biases about teaching and the acquisition of knowledge. So, that is really what I want to talk about today: the need to confront some of our assumptions about teaching and learning that are preventing us from more fully realizing the potential of this broadened paradigm of learning.

I want to approach this topic—which is much larger than my limited time here allows—through two cases, one from the sciences (biology) and one from the humanities (cultural history). This first case study has to do with science. In the Department of Biology at Georgetown University, all seniors complete a thesis project, undergraduate students create lessons plans for teaching biology curricula to middle school students, they create elaborate case studies of the impact of the curricula on the middle school students’ learning, and they develop fully elaborated written theses about the biology frameworks for their curricula, along with extensive reflection on their own learning both inside and beyond biology (Elmendorf, 2006).

This kind of learning, teaching as learning, is a highly integrative activity. The process of lesson plan development requires students to rediscover and relearn topics; teaching requires the distillation of topics into core concepts; it requires the development of flexibility and adaptability in one’s application of knowledge. All of these acts serve to deepen disciplinary knowledge while at the same time broadening out to interdisciplinary connects. At the same time, teaching as learning serves to connect cognition to affect to metacognition in what appear to be very powerful ways (Elmendorf, 2006). This full range of learning and thinking skills belongs to the category we might call “expertise.”

There are many interesting things to say about this thesis option, but today I invoke it for some of the faculty responses that it has elicited. Largely, the faculty in the Department of Biology at Georgetown University has been supportive of it, voted it in permanently, and applauds the work that students are producing. What’s interesting are some of the assumptions about undergraduate learning that are revealed in some reactions to the kinds of learning taking place within this option. For example, after the first year in which theses were completed, one faculty member (someone highly supportive of the program in a number of ways) commented: “I think that these theses are terrific; but we still fundamentally disagree about whether these students are learning any science.” For him, “learning science” means generating new knowledge and acquiring new content. An activity that engages students in revisiting their learning and developing better, deeper understanding of biology content (and larger scientific processes) is valuable but not the same as “learning science.”

Here’s a second faculty comment, also similarly revealing. This comment is a response to a passage from one senior’s thesis. In his thesis, he discusses
what he learned about a topic he thought he already knew, by being put in the position of teacher (as opposed to student). The senior says:

As I was primarily responsible for developing a unit on blood typing, the majority of my biological learning came from this topic. It was only after I started researching the history of blood typing that I realized that the concept was not as clear-cut as I had imagined. This revelation was shocking on two levels. First, I had not anticipated the depth behind the alleged simplicity of blood typing as it had been presented to me for eight years. Second, I faced a similar challenge as to how I would present this discovery to my students.

There you have an excellent example of teaching as learning. By being put in the role of the teacher, he was required to confront the “thinness” of his knowledge on the topic, even though he had previously assumed he’d satisfactorily learned about the topic in other course contexts. About this very passage, a faculty member in the department remarked, “He claims he learned about the biology of blood typing, and speaks about discovering the information, but it is really just Figure 13.4 in the genetics textbook. He took that course with me and earned an ‘A’ in it. He had already learned that material.” I quote her response (as I do the one above) not as an easy foil to an argument about expanded learning, but because this example, as the previous one, represents deeply held assumptions that underlie the way we all implicitly imagine the work we do. Her response to his “having already learned that material” is in some ways what informs our design of undergraduate curricula: If you have been exposed to something, you have learned it.

In both of these faculty statements we see what Heidi Elmendorf and I refer to as the “bias of expertise.” By this we mean that the design of the undergraduate curriculum is based on a set of biases about expertise (including the privileging of new knowledge and an overemphasis on producing expert products) that belies the broad range of what we know about expert learning and expert thinking in general. Twenty years of research has taught us much about expertise. Expert knowledge is organized and embedded in schema that are developed not merely through the acquisition of content but through extensive use and retrieval of knowledge in authentic settings. Experts are flexible and adaptable in their thinking and their approach to new situations. And experts continuously engage in what Bereiter and Scardamalia call “reinvestment” of their learning, where, through learning and doing, experts are continuously setting challenges for themselves and working at the edge of their knowledge.

At the research level, we have a very broad understanding of what expertise is, but I would argue that the way that we apply expertise in the undergraduate curriculum is extremely narrow, much narrower than the range of learning that all of our new pedagogies have unleashed. If we hope to build a culture of learning, we need a more expansive application of expertise; and we need to recognize that an expansive notion of expertise is in tension, if not in conflict, with some of our deeply held assumptions about the undergraduate curriculum and pedagogical design.

What might it look like to schematize the spiral model of expertise as a version of undergraduate development? I first started thinking about this several months ago when I was asked to give the closing keynote at the AAC&U’s 2005 Pedagogies of Engagement Conference. “Pedagogies of Engagement” is a term that has acquired some currency during the past decade or so, and a term that means different things to different people. Most baldly, the pedagogies of engagement are any pedagogies that are not designed to bore you to death. I think that’s probably the big umbrella. The idea of “engagement” implies of course other dimensions, such as connecting learning to one’s values, to the community, to social justice, etc. In thinking about this, I began to imagine engagement as the middle term in a triad of three terms: discovery, engagement, and commitment.

The following graphic offers just one representation of this broadened spectrum of learning I’ve been discussing:
So, three key terms: *Discovery, Engagement, and Commitment*. In one sense we could see these three terms as blocking out the shape or trajectory of an undergraduate career: You start in discovery (entry into the world of ideas). You move toward engagement (awareness of how ideas get put into action in the world). You hope people graduate at some stage of commitment (inhabiting the values of their knowledge). On the other hand, one might see this full spectrum—discovery, engagement, commitment—as the full spectrum of *expertise*. Everyone who is an expert operates within this whole spectrum, all the time, in iterative ways. Yet, we don’t necessarily teach, nor do we design undergraduate education in ways that address the full spectrum. Nevertheless, experts inhabit this spectrum.

So let’s go back to the teaching thesis for a minute. Think about what the theses are doing across the spectrum. I think it’s possible to find a way to map the movement of many of the things that matter most to us: the shift from the acquisition of knowledge to the creative use of knowledge, the shift from the transfer of problems to the transfer of whole settings, the movement from extrinsic motivation to intrinsic motivation. One might imagine then that while movement along the spectrum is iterative for all experts, there is a developmental shift for which we should be trying to design an undergraduate education. Below is a fuller conceptualization of this shift, as co-created with Professor Elmendorf:

This conceptualization of development along the spectrum is really borne out through the biology teaching theses (and teaching as learning in general). When we first asked the students at the start of their involvement in the teaching thesis, why did you choose the teaching thesis, they were all extremely honest. They said, “I was fleeing the laboratory thesis. I didn’t want to do a laboratory thesis. That just wasn’t my thing.” But, ironically, the more they worked with these lesson plans, and the more they grappled with the big ideas in biology they were trying to teach, the more they realized that the most important concept to teach was the scientific process:

An emphasis on process doesn’t preclude content but provides a different and more intentional framework for retrieving it. Often this deepening of knowledge results through acts of *distillation* and *translation*. For example, as another student tells of a classroom exchange: “One day one of the students at the middle school asked one of the students if bacteria communicate with each other, and, if they don’t have brains, how do they talk?” The student said in her thesis: “We both knew the college-level version of that answer is that chemical messengers are responsible, but we realized that we did not understand their operation well enough to break it down into sixth-grade terms.” When all you are doing is learning, it is easy to learn something superficially. These students realize that learning a concept well enough for getting the correct answers on a college exam is one thing; being able to explain it to a sixth grader is much more complicated.

This deepening is not purely cognitive either, but entails a movement from engagement to commitment around learning in general:

When I heard about this option [the teaching thesis], I instantly knew that I needed to participate in it because it was a way for me to gain a well-rounded education by applying all that I know. So while it was different from what every other biology student does to finish up
their college career, I knew that it would force me to be creative and actually require me to know what I have learned.

So, by way of concluding this discussion, let me come back to the statement, “I think these theses are terrific, but I still disagree that these students are learning any science.” If we are to build a culture of learning in the 21st century, then we will need to examine our own biases about expertise and learning especially as they are embodied in the undergraduate curriculum. With new ways of learning—and new understandings of learning—we have an opportunity not to privilege “discovery” as the ultimate place where students move forward, but as a place to which students continuously return, iteratively, through all the cognitive and affective dimensions of engagement and commitment. Yet if we don’t recognize and value that, we can’t design for it.

My second case comes from a project called The Visible Knowledge Project that I have directed for the last five years. The VKP project involved 70 faculty from 21 different campuses allegedly studying the impact of technology on learning in the humanities. It has ended up being a project which examines the impact of teaching on learning and where in that schema technology plays a role. One of the faculty investigators is Cecilia O’Leary, at California State/Monterey Bay, a cultural historian. Her project is called “Becoming Citizen Historians.” Her project explores what it might mean to educate students to become what she calls “citizen historians.”

The signature pedagogy of this course and of several others in the project involves what are called digital stories, assignments where students spend a whole semester putting together five-minute movies that are largely PowerPoints that turn into QuickTime movies incorporating lots of research into a very carefully written script, audio, video, etc. Some of them are done as personal connections to history, but in this class, they are more about historical events or issues. I want to play you one called Chocolate Innocence: The Story of Four Little Girls.

It is by Charea Batiste who was then a sophomore and graduated in 2004. For Charea, this was the first history course she ever took, the first technology project she ever worked on, and she herself is the first person in her family to go to college.

Her digital history tells the story of the four girls killed in the famous Birmingham church bombing of 1963.
The movie begins by setting the context of the civil rights movement in general, setting the stage and mood with spiritual music, vintage photographs, and Charea’s own strong narrating voice talking about the struggles of African Americans. About one third of the way through the story, she shifts to the bombing itself, and the four girls. The final third focuses on the aftermath and failure to bring all the bombers to trial. The story closes with the prosecution of Bobby Frank Cherry, the bomber who eluded the law until his granddaughter turned him in a few years ago. The final tableau of the digital story focuses on an episode of the Oprah Winfrey Show in which the surviving sister of one of the victims and Teresa Stacey, the bomber’s granddaughter, meet and embrace. With the final image of clasped hands, the digital history closes with these words: “After 39 years, finally, justice was served for the four little girls, as the white hand of the bomber’s granddaughter and the black hand of the victim’s sister joined in unity.”

This digital story always elicits a wide and interesting range of responses. Just about everyone finds the student’s work immensely engaging, and many think it moving. Quite often, audiences have applauded after seeing it (even though the creator is clearly not there). I often see a person or two wiping away a tear.

But the moving quality of the piece is actually an interesting point. For example, I was showing the film at a talk I was giving at a university last year sometime, and afterward a history faculty member came up to me and said, “Personally, I really appreciate all that you’re saying, but the examples that you showed us were so emotional. I just think if you’d used less emotive examples, you’d have a lot more faculty interested in what you’re talking about.” Now, having run a project called the Visible Knowledge Project for five years, I now consider myself an expert on visibility and invisibility. This is one thing I’ve learned. When the invisible becomes visible, it is almost always disruptive. It hadn’t really fully occurred to me until he said that, what an incredibly disruptive moment this is around new learning.

I’d always thought of that digital story as a real touchstone for the whole VKP project, especially around the subject of multimedia authoring. Is there complexity here? Where would you locate the complexity? If you’d just read Charea’s script (see appendix), although literate and engaging, it wouldn’t feel complex in the same way a critical paper might. Is there visual complexity? Is there an argument that is some combination of the verbal and the visual and the aural? What role is the music playing? Her colors? Her choice of images? In short, her project has always embodied for me the essential questions of what the Visible Knowledge Project was trying to unearth.

But when this faculty member made this comment, I had an entirely different thought; I thought, “My God, we are in way over our heads in this form of higher education that we have unleashed—whether a combination of new technologies or a whole band of new pedagogies—and we have unleashed a range of ideas that we have no idea what to do with.” It is not (as with the biology comments above) that I don’t understand why he said what he said. What’s telling is how much the emotional content of her multimedia piece (which has many other dimensions) drove it off of his mental map of what college learning should be.

Recently, when I was also showing this video clip at my own project meeting, one of my collaborators, who had seen it a couple times before, said: “I was watching the digital story which I had seen before, and I wrote in my notes ‘digital book report.’ I mean there isn’t anything there that you wouldn’t have learned from a couple of hours in the Civil Rights Museum in Birmingham.” I want to be clear; this is someone who is a colleague and collaborator. He wasn’t being skeptical; he was just engaging me, so I took it very seriously. His point was not that it was overly emotional, but that its form was not that of critical argument.

But this is where the student product only tells part of the story. In an interview that Charea did with the instructor at the end of the course, she describes how she had never heard of the Birmingham church bombing until this project. And in fact, in describing her rationale for certain choices, she says explicitly that she wanted to make a digital history for others who, similarly, had never heard of the story. This makes my colleague’s comment that the work is “Nothing you wouldn’t learn from a couple hours in the Civil Rights Museum in Birmingham” interesting and apt. In fact, her purposes were in some ways very much the same as those of a team of museum curators whose exhibits are meant to introduce, teach, even move emotionally. She says: “I wanted to tell the story for someone who didn’t know anything about the church bombing.” And so she made a lot of choices, the kinds of choices that the people (the experts) who put together a museum exhibit, like, say, the one at the Civil Rights Museum in Birmingham, would have made.

Where does that piece of student work fit along the spectrum of discovery, engagement and commitment? How does the affective relate to the cognitive? How does her sense of creativity relate to knowledge? Let me introduce one final piece of evidence—a video clip of Charea’s interview with the instructor after the course was completed. In this fascinating and illuminating interview, she talks about many things, including how much
research she did and how hard it was to decide how to tell the story, and then that she had decided that the story she wanted to tell was one that had to end with the moment on the *Oprah Winfrey Show*. The passage I want to share is of her talking about her use of images and to some extent, emotion:

Because I was never involved in the civil rights movement, as I said, it was a long time ago for me, and I feel that I can’t in my own words describe what happened. I was never there. I didn’t experience any of those things so my words are just from an outside point of view, but the pictures are firsthand. These are people who actually went through the pain, the torture, and their stories are told in these still images. My voice was used, I guess, to give life to those pictures, but the pictures themselves told the story, and my voice—I remember listening—I would get very angry telling a story, and I think that’s what added to the images in the story because the anger in my voice, although still in tune with the digital story without being irate, was enough to make the images real relevant. You could feel the anger that was produced from those acts of violence.

Unlike the history professor who implies that Charea’s novice use of emotion mitigates her ability to actually do history, she is saying instead, in essence, “My historical research led me to see the role that emotion played in these historical events, and I cannot retell this story without telling the story of emotions.” And the emotions in her voice, she says, give life to the primary sources she has found through her historical research. Her position as novice (or amateur) historian is very interestingly constructed. On the one hand, she reveals her own significant sense of agency and ownership in building a narrative retelling of the event and an acute sense of the power of her choices. On the other hand, she betrays a somewhat novice sense of powerlessness to claim authority about the past and a rather naïve faith in the transparent mediating qualities of primary sources—such as photographs—to give us an authentic sense of historical truth. As a consequence of this mix, the line between the affective and the cognitive is completely blurred, not because she is confused or merely naïve. Rather, her developing sense of herself as a maker of history is characterized by merging emotion with a sense of historical fidelity. She, like many students engaged in digital histories, comes to understand the discipline of history as something as much grounded in passion and emotion as it is in documentary evidence and in the search for historical truth. Her novice historian status is revealed in a variety of ways, not the least of which is her lack of concern for filtering that emotion out of her historical product—because *for her* that would detract from what it means to make the historic present for her viewers.

That is what I meant in my silent response to that history professor that we, in higher education, are in ways over our heads. This kind of multimedia authorship—similar to biology teaching theses—is putting students in new positions as constructors of knowledge and advancing important forms of learning that we, as faculty, highly value; yet it may be doing that in ways and forms that are not always recognizable, visible, or initially satisfying. Indeed, Charea’s digital story and reflections may also show us that the full range of her learning is not necessarily evident in her summative product alone. That is, the digital story itself does not tell the whole story of her choices and of the thinking behind those choices. Evidence of her learning is in the constellation of the traces of her processes as well as in her visible product. The more generalizable lesson, I believe, is that cultivating a culture of learning in higher education may depend both on recognizing the broadened spectrum of learning and the increasingly complicated task of seeing the evidence of learning across a range of artifacts that reveal this more complicated range of expert-like processes.

The last point I want to make is that these questions about learning and figuring out how we can reconfigure the design of undergraduate learning around this expanded definition of expertise are incredibly complex. If we are to build a culture of learning within the context of higher education, then we must establish the practices that enable faculty and other educators to build knowledge about expanded learning. And, moreover, if we are to build a knowledge about learning—through something like the scholarship of teaching and learning—then we have to figure out ways to create a culture of learning among educators as well, and in ways that are highly collaborative. One of the great gifts of the Visible Knowledge Project was to be able to put together networks of people looking at shared questions, developing common instruments, and examining each other’s evidence of student learning. The key difference is in the kinds of questions we can ask about learning when we are not simply struggling with our own teaching but also working with others on problems of learning. When all of the people started the Visible Knowledge Project, what they were asking individually about their teaching innovations—digital stories, for example—were such questions as: Is this working? Can I do this better? Can I keep doing this without it killing me? How do I grade these things? When we start asking questions in groups, then we could ask bigger questions about learning
that transcend individual classrooms: what kinds of competencies were involved here? What elements of expertise in and across the disciplines were involved? What kinds of literacies are being developed? What would it be like if someone made five of these over a career instead of one? What impact would that have on a course of study or a lifetime of learning? You cannot address those kinds of questions alone. If we are to redesign undergraduate learning to build a culture of learning, then that culture of learning begins with our own knowledge about teaching practice. In building up our own culture of learning, a key place to begin is to confront our own assumptions about expertise and the ways we apply and align those principles of expert learning with the design of undergraduate education. It is critical to our recognizing a broader definition of learning and to making this moment as generatively disruptive as possible.

**Biographical Note:** Randy Bass is Assistant Provost for Teaching and Learning Initiatives and Executive Director of Georgetown University’s Center for New Designs in Learning and Scholarship. He is also Director of the Visible Knowledge Project (VKP), a five-year scholarship of teaching project involving over 70 faculty and 21 institutions nationally, with a focus on the impact of technology on learning in the humanities. He also directs the American Studies Crossroads Project, an international project connecting technology and education, and, in conjunction with the project, is supervising editor of *Engines Of Inquiry: A Practical Guide For Using Technology to Teach American Studies* and executive producer of the companion video *Engines of Inquiry: A Video Tour of Learning and Technology in American Cultural Studies*. Professor Bass, Associate Professor of English at Georgetown, a Pew Scholar and Carnegie Fellow, and a consultant to the American Memory Fellows Program of the National Digital Library of the Library of Congress, is also the author of *Border Texts: Cultural Readings for Contemporary Writers*, along with numerous articles, digital essays, presentations, workshops, collaborations, and hypertext exhibitions in the arenas of teaching and learning and American Studies.

**References**


I have a dream that my grandchildren will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.”

These are the words spoken by Dr. Martin Luther King Jr. less than a month before the bombing deaths of four teen-age girls in 1963. The United States and the South in particular was still experiencing the deep racial tension between blacks and whites in the ’50s and ’60s. On May 17, 1954, the U.S. Supreme Court declared integration of blacks and whites in schools, which caused even more violence as whites lashed out at African-Americans in anger. Lynchings, cross burnings, and other acts of violence toward African-Americans continued to occur as blacks tried to fight for their human rights as well as their lives.

On Aug. 28, 1963, some 250,000 black and white supporters of civil rights legislation marched on Washington, D.C. Still many crimes were happening in Birmingham, including bombings, which started in the 1950s, for which the city was named “Bombingham.” But the one bombing that rocked the nation was the deaths of four black girls. On Sept. 15, 1963, four young girls in the basement of the Sixteenth Street Baptist Church, Denise McNair, 11, Carole Robertson, Cindy Wesley and Addie Mae Collins, all 14, were preparing to attend the service in the main hall, but they were not prepared for what happened next. At 9:22 a.m., the 19 sticks of dynamite that had been placed at the stairwell of the church exploded. Church rafters collapsed, and windows were shattered. Screaming, shouts and such utter despair were heard as 400 members who were inside the church rushed out in panic and terror. Tragically, there were four girls who never made it out of the church. Their bodies were found mangled, deformed and destroyed. Their parents weren’t even able to identify their daughters’ faces because they were burned beyond recognition. Ironically, the message for that Sunday was “The Love That Forgives.”

Despite the church bombing, the racial violence had not stopped. Malcolm X and Martin Luther King Jr. were both assassinated while fighting for justice that blacks never received during their lifetimes.

Soon after the church bombing, J. Edgar Hoover, director of the FBI, closed the investigation with no explanation. In 1977, Robert Chambliss, one of the four accused of participating in the bombing, was convicted. Another suspect, Herman Cash, died in 1994 without even being charged. On July 10, 1997, the FBI reopened the investigation, and on May 1, 2001, Thomas Blanton, a former KKK member, was tried and sentenced to life in prison. Finally, on May 26, 2002, Bobby Frank Cherry was sentenced to life in prison as well.

Teresa Stacey, the granddaughter of Bobby Frank Cherry, had turned her grandfather into the FBI after hearing him brag about blowing up black people. After watching the news, Teresa was invited on the Oprah Winfrey Show to tell her story. Jane Collins, the sister of Addie Mae Collins, was also in the audience, unknown to Teresa, to thank her for turning in her grandfather. Tears came to my eyes as Jane came up to the stage and embraced Teresa in such gratefulness. Jane said to Teresa, “I thank you so much for being so courageous and taking a stand because other people can understand they can do the same thing.”

After 39 years, finally justice was served for the four little girls as the white hand of the bomber’s granddaughter and the black hand of the victim’s sister joined in unity.