Students as Bricoleurs: Eliciting Creativity in a Cluttered World

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THE THEORETICAL BACKDROP

What is creativity and how is it related to learning? This question is central to educators who value creativity, because it helps us consider the pedagogical purpose of eliciting it in our students.

Claude Lévi-Strauss authored some of the earliest work on the relationship between creativity and culture. He discussed the difference that he perceived between enlightened and "primitive" thinking (1962). Within his schema, enlightened creativity is a scientific process that involves completely original work and abstract interpretation. In contrast, primitive creativity involves the development of new things out of found objects. The tinkerer, or bricoleur, improvises with the materials at hand and this concrete approach is inherently limited because it takes place within the confines of the pre-existing world.

Preferential treatment of "original" work is also embedded in the culture of higher education. For example, research-based publications carry more weight for tenure than reviews of the literature. Some professors decry the use of master syllabi and designated competencies, which they claim will limit creativity. Yet Brian Massumi admonishes us to not "think of the creativity of expression as if it brought something into being from nothing. There is no tabula rasa of expression. It always takes place in a cluttered world" (Massumi 2002, p.29, as quoted in Pigrum, 2009, p. 1).

In the landmark book *How People Learn*, the authors state:

> It is especially important to understand the kinds of learning experiences that lead to transfer, defined as the ability to extend what has been learned in one context to new contexts … Educators hope that students will transfer learning from one problem to another within a course, from one year in

school to another, between school and home, and from school to workplace (2000, p.51).

Recent research on the science of learning also identifies the activation of prior knowledge as central to the formation of new understanding (Ambrose et al, 2010, p. 10). Tapping into the interior "cluttered world" of prior knowledge is a precondition for learning because learners cannot leverage or question experiences that they haven't surfaced.

Learning how to access and make meaning of external clutter is also critical to learning. According to George Siemens

> Personal knowledge is comprised of a network, which feeds into organizations and institutions, which in turn feed back into the network, and then continue to provide learning to [the] individual. This cycle of knowledge development (personal to network to organization) allows learners to remain current in their field through the connections they have formed (2004).

The ability to "transfer," or make connections across domains, is an indicator that learning has taken place. Far transfer, the ability to draw upon a set of skills and concepts in a completely different context, is one of the characteristics of expertise (Bransford et al, 2000, p. 31).

With the exponential growth of web-based resources, Siemens proclaims Connectivism as a "Learning Theory for a Digital Age," yet the process he describes bears many similarities to the concept of bricolage that Lévi-Strauss articulated more than 50 years ago. Messy piles of material do not overwhelm bricoleurs because they can perceive opportunities in situations where others might only see broken or disparate parts. As opposed to "primitive," the capacity to tinker is a critical competency in the present-day digitally saturated and global landscape.

This case study presents the story of a course that embraces clutter, that helps students become bricoleurs who know how to search, evaluate, curate and stitch together learning experiences for themselves and for others. It positions the process of curation as creative and transformational bricolage.

This case study is also about the fluid relationship that develops between student and teachers when bricolage becomes the primary mode of learning. The first goal for the educator in this case was to help students learn skills and concepts that are central to successful tinkering. But all tinkerers need test subjects who are willing to try out their creations, and over time the educator

became a pilot user of the resources created by her students. That portion of our story will be told through a dialogue between one of the students and her instructor.

NOTE: The authors have created a companion website for this case study that includes links to course materials and work samples. It is located at https://northeastern.digication.com/open_learning

THE COURSE AND ITS CONTEXT

EDU 6332 Open Learning is an elective within the Master of Education in eLearning and Instructional Design program at Northeastern University. The program is fully online and aims to prepare its graduates to "shape the future of any learning-driven organization [and] respond innovatively to the opportunities and challenges that are revolutionizing all sectors of education."

The Master's curriculum was developed with a strong commitment to connected learning. Each course includes one or more "signature assignments"—authentic work that maps to program-level outcomes and competencies that

faculty envision for their students. Students work within a personal ePortfolio throughout the program. They are expected to use their ePortfolios as a space to collect signature assignments, reflect upon their growth in relationship to competencies, and make connections across coursework. The ePortfolio reflection is a significant component of the final grade for each course (2013).

In the video "Success in a MOOC," Dave Cormier lists five steps to success: Orient, Declare, Network, Cluster, and Focus (2010). The modules in Open Learning were structured according to this sequence. In his essay on Open Pedagogy, David Wiley makes the distinction between disposable and renewable assignments, stating

> The defining characteristic of a disposable assignment is the tacit understanding that as soon as the faculty member returns the graded assignment to the student, the student will promptly throw it away … The value that [renewable assignments] add to the world increases exponentially because they are all openly licensed. In addition to being viewed and used by countless people, they will also be extended, revised, and improved by future students and others (2015).

While it is ironic that the course takes place within the confines of Blackboard, all of the major assignments were designed to be open and renewable.

One of the challenges of connected learning is helping novices develop the ability to find and evaluate sources, to distinguish between wheat and chaff. According to Bansford et al, experts "notice features and meaningful patterns of information that are not noticed by novices" (2000, p. 31). Experts have developed an ability to spot the deep structure of a source, which makes it easier for them to determine if a substance is germane to their interests and needs, while novices tend to focus on surface elements. Novice learners can quickly become overwhelmed by the lack of explicit direction because the cognitive load is too great (Brennan, 2013; Mayer and Moreno, 2003). As beginners, they don't know how to begin because they haven't developed the requisite skills to make meaning of the clutter. But self-directed learning is central to the philosophy of connected pedagogy and so instructors who want to ground their courses in this approach need to also take on the responsibility for helping learners develop self-efficacy.

Bricoleurs have the ability to perceive opportunities for connecting seemingly disparate elements in new ways in order to solve problems. In other words, they need to learn how to tinker before they can be truly creative. They also need to identify a purpose or problem that they want to solve. The Open

Learning assignments were carefully sequenced with students' developmental needs in mind:

> **Phase 1.** A Multimodal Timeline assignment designed to equip students with the background knowledge and skills related to open learning. A COOL Collection assignment (Crowd-sourced Open Online Learning) in which students identified and evaluated open learning resources relevant to their interests.

> **Phase 2.** A Mini-MOOC assignment in which students developed a two-week online learning experience about one of their interests. The assignment guidelines mandated that the MOOC contain at least three high quality open online resources and at least two pieces of work authored by the student.

> **Phase 3.** A Mini-MOOC pilot in which they role played running their MOOC, with peers and the instructor serving as students, followed by a round of revision on the MOOC.
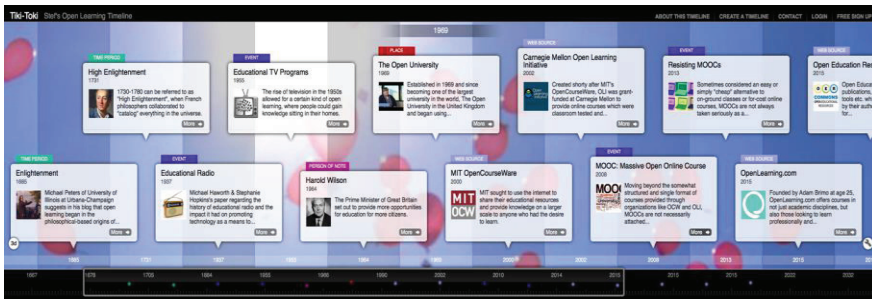
THE MULTIMODAL TIMELINE

The goal of this assignment was to help students broaden their understanding of Open Learning as a concept and deepen their knowledge about the many ways that this idea has been enacted over time. Most people perceive open learning to be a new idea, limited to the xMOOCs developed by organizations such as EdX. A second, yet equally important goal was to help students consider the relevance and positionality of Internet sources related to the topic.

In the second week of the course students used David Wiley's excellent MOOC on Openness in Education as the reading (2013). They divided up into groups, and each group was expected to view one of Wiley's course modules and report on the big ideas in a threaded discussion.

Then they were given a list of search terms and asked to identify, log, and evaluate 18 online sources. In the book *Situated Learning: Legitimate Peripheral Participation*, Lave and Wenger describe an apprenticeship process in which beginners are given defined, simplified tasks so that they have an opportunity to contribute to the community even before they develop the capacity to work independently (1991). What are the opportunities for legitimate participation in a context in which almost all participants are novices, with the exception of the instructor? The pre-identified list of search terms helped bridge the gap between

students' prior knowledge so that they could have a successful first experience in sifting through the clutter. It also helped establish the importance of keyword selection in search queries. The difference between the number of sources logged and the number of timeline nodes required them to weigh the relevance and quality of their resources.

In the third week they each created a multi-modal Open Learning timeline that included at least 15 nodes. Students created their timelines with the online tool Tiki-Toki. Tool features included the ability to create categories of nodes, embed images and video, and annotate entries. Martin and Schwartz have identified four cognitive mechanisms of creativity that are fostered in the process of authoring a visualization: reinterpretation (letting go of old assumptions), abstraction (the omission of details that, as a result, improves the odds of discovering higher-order relations), combination (combining previously uncombined mental representations), and borrowing (drawing on other forms of visual representation) (2014). While their work focuses on the creation of graphic visualizations, these four processes are also present in the timeline assignment.

Live timeline at http://www.tiki-toki.com/timeline/entry/481948/Stefs-Open-Learning-Timeline

Each student's multi-modal timeline emphasized the aspect of Open Learning that was most relevant to that individual, which allowed them to connect the new subject matter with their prior knowledge and expand their thinking in the process. For example, one person with a background in early childhood education placed Montessori on her timeline, while another person with a technical background included Richard Stallman's GNU project and his founding of the Free Software Foundation. When they compared timelines, it helped them see the many tributaries of influence that converge in the Open Learning movement. Because the assignment took place in the earliest weeks of the course, the assignment also

conveyed the value that the instructor placed on individuality and creativity, making thinking visible, and co-constructed understanding.

THE COOL COLLECTION

The goal of this assignment was to increase student proficiency with resource evaluation and curation. The first few weeks of the course were heavily scaffolded to support students in their development. In the COOL Collection assignment, the instructor began to fade those supports, transferring more responsibility to the learner.

The students were asked to identify a topic in which they would like to teach a course. They also had an opportunity to view courses created by previous students, which helped them see the rich diversity of topics (from dog training to financial aid advising) and reassure them that the assignment would be possible. They were then expected to identify at least five resources relevant to their topic and evaluate them using a Google doc form that was based on the TEMOA rubric for assessing the quality of Open Education Resources (2011). The class had access to the results spreadsheet so that they could discuss results and benefit from each other's work.

Mini-MOOC

The goal of this assignment was to help students learn how to curate, combine, repurpose, and augment Open Education Resources to create something new, to become bricoleurs, and to complete the cycle of Open Learning by giving something back to the world. The culminating signature assignment for the Open Learning course was the development of a two-week Mini-MOOC on a topic of the student's choosing. They were required to make their MOOCs open and accessible to the general public, and to assign Creative Commons licensing to their work.

Creativity is a capability that needs to be cultivated, and each form of creativity involves fundamental skills and techniques. The painter learns how to mix color and the qualities of different paint media. The printer learns how to prepare a plate, use different tools to gouge out a pattern, and even prepare chemicals to etch the metal. The COOL Collection assignment was designed to equip students with essential resource identification and evaluation skills, and to help them begin to identify promising resources related to their interests. Wiggins and McTighe refer to this approach as "backward design," in which course authors first identify desired outcomes and then design the learning sequence to help students develop the competencies and knowledge they will need to attain those outcomes (2003).

Open Education Resources are ingredients but they are not the same thing as a "course" that includes a vision for student learning, course narrative, and carefully designed sequence of experiences that foster a community of inquiry, engage learners in their development, and yield evidence of learning (COI, n.d.). The MOOC assignment also called upon students to imagine how their topic could be taught to a heterogeneous group of learners, and that thought exercise helped them grapple with challenges that are fundamental to education such as engagement and motivation.

The students used a MOOC planner to outline and receive feedback on their ideas. This helped guide their backward design process of identifying outcomes and designing a learning sequence that would help students develop the competencies to attain and demonstrate those outcomes. The planner also supported the content curation process, in which they finalized decisions about the open education resources that they would use and identified the original content that they would need to develop for their MOOC to be a success.

Students had the option of developing their MOOC in a Digication template (project portfolio), or to use a learning management system set to be publicly available. This created a pathway for both the people who wanted to experiment with technology and the less technically proficient or adventurous people who preferred to focus solely on course content.

In the last third of the course the tables were turned. Each student ran her or his MOOC, classmates each selected a MOOC to take, and the instructor role-played being a student in all of the courses. This made it possible for students to experience the role of online instructor, which included fielding questions for clarification, facilitating discussions, and seeing the work produced by those who took the course. They had one week to revise their MOOC before submitting the link for evaluation, and all made major improvements to the collateral materials, assignment directions, and user interface.

REFLECTIONS AND STUDENT-INSTRUCTOR DIALOG

How did students and the instructor experience the Open Learning course? In this section we tackle that phenomenological question through a dialogue between one of the Open Learning students and her instructor.

Amy Cozart-Lundin was a student in Open Learning during the spring term of 2015. Gail Matthews-DeNatale, the professor who designed the course, was the instructor. Gail and Amy met online for an interview in August 2015. First Gail interviewed Amy, and then Amy interviewed Gail.

The following quotes are taken from interview verbatim transcripts. Unedited versions of the transcripts and the interview questions are located in the companion website for this article. That site also includes a reflective journal entry written by Amy.

Amy's MOOC was on the topic of Visual Merchandizing. In an interview with Gail, Amy provided the following description of this work:

> Amy: I was a merchandiser for a long time. I chose that because I was well-versed in it. It's outside of academia, but it's something that applies to everywhere you go. In stores, you see those pretty displays. But how are they made? Why are they made that way? The title of it was *Visual Merchandising and the Psychology of Consumer Behavior*.
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> The first week was more about the 'why' of the reasons for how to merchandise, how the brain looks at things, what elicits spending, what elicits impulse buying. There is a lot of psychology and reasoning behind why something looks the way it does. I had the students study eye patterns, how your eyes move onto a display and how color stories go together and how that can be important. With the use of props, are they overdone? Are they applicable, an enhancement to the display, instead of taking away from it and being too cluttered?

Then the second week was more about structure and the how-to. The signature assignment was for everybody to make their own displays. I did the same format kind of with our final assignment in Open Learning. I said, 'Make it your own.' I didn't give a lot of parameters. I think it was a little daunting to some people at first, because some of the feedback I got was, 'I didn't know exactly how to make it look or how to do it.' But then I said, 'It doesn't have to be a window at Bergdorf's. It just needs to be something that is eye-catching and important to you. Use your own creative license.' So the things that they came up with were awesome — really, really cool."

Amy was also enrolled in a course on social media during the spring term. The majority of the Mini-MOOC she created was staged in Blackboard Coursesites, but she decided to draw upon what she was learning in the social media class to use Pinterest as a space for the sharing and discussion of student work.

In the first week she asked her students to find pictures of store windows that they liked and that they thought demonstrated the cognitive concepts discussed in the week's readings. They pinned these images to a Pinterest board, along with an explanation, and then commented on each other's pins. In the second week each person was asked to create several configurations of a merchandise display with a set of found objects, take pictures of the displays, and pin them to the board with an explanation of the course principles that informed their design decisions. The students viewed the displays and again commented on each other's work.

Note that both of these assignments align with the bricolage approach to creativity, creating something new with the materials at hand, and Amy perceived her assignments to be in the "same format" of assignments in the Open Learning course. This indicates that the form of creativity that is modeled by the instructor influences the student's creative decision-making and pathway.

Amy was both thrilled and challenged by the experience of running her course. During the first week some of Amy's students, including the professor, had difficulty understanding the assignment directions. The way that the course was staged in Coursesites also made some of the materials difficult to find, and her students also recommended that she embed instead of link to outside media. However, Amy experienced these challenges as part of the creative process.

> Amy: There's a lot to it, I found out, because I had to be there to be responsive to discussions or posts and to be responsive to adding comments, giving clarification, grading, and things like that.
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> But I loved it. I loved every minute of it. I think it was hard to do. Your job is still hard. I didn't find it overwhelming or, "Oh, I don't know how to do this. How do I give good feedback?" Because I've already been given good feedback by students and by instructors, to know that's how you do it. That's how you encourage. That's how you help people grow or learn better what you're trying to teach them.

The most exciting aspect of Amy's teaching experience was to discover the many different ways that her students responded to her creative assignments. The assignments were grounded in the course readings, but also open-ended enough to allow for different interpretations.

> Amy: The things that they came up with were awesome, really, really cool. My professor was my student as well, which was intimidating, to say the least, to teach my teacher. She came up with a graduation display because her daughter had just graduated. So that was something that was important to her, that she could put her personal touch on to it. She did a couple different structures of it to get opinions about it, and everybody shared their opinions like, "Oh, I like it in this. I like the little displays in this little grouping, as a circle, as opposed to scattered." Other people said, 'Well, I like the scattered look.' So everybody has their own opinion on how something can look. I liked that they each gave their input. Merchandising is such a subjective career.

The MOOC pilot phase of Open Learning required participants to play multiple roles. They were instructors for the MOOCs that they created, while simultaneously serving as students in their peer's courses, and also debriefing and providing peer feedback in their role as Open Learning students. The Open Learning instructor played two roles, as student and course instructor. During Gail's interview she observed

> Gail: I had also taken on this separate self, a second self. For the assignment to work, I needed to stay in character as a student and experience the vulnerability of being a student. So there is the vulnerability of really not being able to find the Pinterest board the first week and going hat-in-hand to the help board to ask a clarifying question. It was a risk, because maybe I hadn't read the directions carefully. Maybe when you pointed it out, it was going to all make sense. I was lucky in that there was a piece missing in your assignment, and that was okay, which happens with any assignments.

One of the classmates developed a MOOC on Financial Aid Advising for graduating students. She developed a simulation in which MOOC students selected one of two fictitious advisees, viewed mock videos of the character explaining his goals and family circumstance, and accessed spreadsheets with information on the debt incurred by the student. The culminating assignment was to calculate the cost of several loan repayment strategies, compare that data with the student's obligations and prospective income, and make recommendations for loan repayment. According to Amy

> Amy: One of my classmates did her MOOC on the financial aid system, which included a lot of math problems that we had to work out. That was daunting for me because that's not my strength, because there is a right and wrong answer.
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> So it was interesting to take her course. She has a very different personality than I do. I think I was able to learn from her, as my classmate. I also think she was able to step outside of her comfort zone and do the creative thing. So that's how we learned from each other.

Gail also experienced this challenge when Amy interviewed her about her experience

Gail: When I was in Jillian's course about financial aid I all of a sudden felt like I was hanging out all over the place. I had to submit math work. I'm doing these calculations. I'm running these numbers and I'm just about to post and then I realized I've made a major error. I've made a major mistake. So I go back and I run them again and then I've got myself all turned around and I'm thinking, 'I'm going to be hanging out all over the place in front of my students, making maybe major mathematical errors. How am I going to feel about that?' So there was a huge vulnerability. My peers, my students who were now my peers when I stepped into that role, and my student who was now my teacher were going to be looking at that with an evaluative lens.

Note that Amy experienced the financial aid MOOC as valuable, even though it took her outside her comfort zone, because Open Learning course experiences leading up to the pilot emphasized the importance of co-learning. Co-learning supports intellectual risk-taking.

During the interview Gail asked Amy to describe other aspects of the Open Learning course design that contributed to her perceived success. Many themes emerged, but the most prominent were the importance of embracing vulnerability to gain competence, guided creativity, multiple opportunities to share and represent ideas, public and authentic work, iterative design, and honest and substantive feedback.

Embracing Vulnerability to Gain Competence

At the outset of the course, Amy reported feeling unsure of her capabilities. However, the assignments scaffolded her skills development. She also gained insight into open learning concepts that would help her make the assignments more manageable, such as the notions of combining and adapting pre-existing resources.

> Amy: I really didn't know what to expect. You can get only so much from the course description, but it did say what the final project was, that you're going to be making a full course, and it will be public online. I was kind of thinking, 'I can't do that. That's too much.' So I thought, 'Well, when I get in the class, I'll have step-by-step instruction how to do it. So I'll be fine.' Then when that wasn't there, it was, 'Oh, no. I'm going to have to ask a bunch of questions and look kind of ridiculous because I don't know what's going on.'
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> But as the course went on, I got a better picture of what Open Learning really was, and that these are the open educational resources, and you get to use those in your MOOC, as opposed to, 'Pick this textbook and write out the lessons and write all these things.' You can have these resources and supplements to help you teach the course. So when I got a SlideShare, some YouTubes and different articles, it just helped give the meatiness to the course. So what I wrote was just supplemental to it, as opposed to writing a whole course.
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> So I became a lot less overwhelmed when I learned about that part. Because I didn't have as much instruction about the project and how to do it, it was better, not only because of the creativity, but because I think I needed that to prove my research skills and to prove that I really can do this and figure it out for myself, because the working world is not going to give you a rubric.

Guided Creativity

The elicitation of creativity is a lot like Jazz. The pre-determined chord progression and agreed upon sequence of measures makes it possible for musicians to engage in wild improvisation. Learning designs that elicit creativity are also a lot like Jazz. If there is not enough structure the learners can flounder,

but too much structure discourages the learners from taking the risk of making the assignment their own.

Gail: How did the course's design elicit creativity in you?

Amy: [In] courses before it said, 'Follow this rubric. Write this paper, this many words, this many pages.' I did it. It's cool. I tried to make it as creative as possible ... But in this course it was, 'Make it look nice. Make it fun.' You know? It was such a different opportunity and a welcome opportunity to be able to jump in and put my own stamp on something that made it my own thing ...

I'd call it a guided creativity. It wasn't, 'These are the five learning resources that you're supposed to put in your MOOC and put them in a certain order.' ... It was just so much more than that. There are parameters that you gave to not only give structure, but they were broad enough that I had free reign, especially because we could pick our own topic. It wasn't like, 'Pick from these five topics and make it yours, not mine.'

Multiple Opportunities to Share and Represent Ideas

Amy noted that the Timeline assignment helped establish the expectation that each person would have an opportunity to communicate their individual understanding in a unique manner, and that also included how they presented their work.

Amy: I think it was perfect to start with the timeline assignment. I've never done anything like that before. It was new. It was fun. Even though we all worked on the same topic, the history of open learning, everybody came up with different resources. I don't think anybody had any two articles or things like that alike. Everybody's looked different, our own background and colors, but the content and the ideas were also different.

So there were more resources out there than you could ever put on a timeline without it being crammed. I came up with like 20 or 30 [possible nodes], and I selected the 15 that I thought fit the best. The great part of it was that nobody else in the class matched anybody else's ... My timeline background included the Creative Commons logo. Other

people included videos. They focused on concepts that were important and influential to them. It grows the education in all of us to share our own perspective.

That's what I love about learning in a class where everybody brings their own different perspective to the same idea. So I think the structure of that was great because it set the tone for [the rest of the class], that you're going to be able to put your own stamp on what you do in this course.

Public and Authentic Work

Another theme was the impact that making their work public and the authenticity of assignments had on the quality of feedback, and on how she perceived the importance of the feedback she received.

Amy: In all the classes prior to this [my peers didn't want] to offend anybody by saying, 'You have a very blatant spelling error.' They'd rather be polite and say, 'Great job. Looks awesome,' then go do their own thing and make sure that their thing is right.

This time there was a lot more at stake. When you submit a paper the professor is the only one who's going to check it. If post it in an online discussion you might get a little bit of peer feedback, but it stays in Blackboard. I think the MOOC feedback was important to all of us to make sure that we were not going to trip over ourselves in front of the world.

Honest and Substantive Feedback

The quote from Amy above references the importance of feedback, but it's important to note that the feedback took many forms. During the pilot phase the students and instructor took on several personas, and each identity allowed them to take a different stance in relation to the feedback process.

Gail: When I became student in your course and I could see that there was a Pinterest assignment, I think it's really cool, but I'm not sure which of the two secret boards I should be getting into. And so when I'm giving you feedback about that and role-playing as a student I'm not filling out a feedback form and sending it to you. I'm going onto the help board and saying, 'Dear Professor Cozart-Lundin, I'm so excited to be in this class.

I'm a little confused about the Pinterest assignment. Could you please help me clarify?' Well, that is constructive feedback. That is feedback that improves the class, but it's so different because it's somebody who's in the learner role. You had the chance to really see what happens when people actually try to use your work. And so, you had a third round of feedback that wasn't just in the abstract. It was really grounded in, 'Oh, I really need to fix this.'

So I've really come to believe that doing effective learning, really the last third of the course should always be involved in some form of application, seeing the reality of it and opportunities for improving it that are based on that, not just on some abstract 'I'm correcting your typos' thing, although we do want you to correct your typos. It doesn't help when it's your final grade, and in the comments you're being told that there's a typo.

Iterative Design

In the book *Art and Fear*, David Bayles and Ted Orland note "The seed for your next artwork lies embedded in the imperfections in your current piece … It is precisely this interaction between the ideal and the real that locks your art into the real world, and gives meaning to both" (1993). Teaching that elicits creativity supports iterative cycles of feedback that alternate between idealistic dreaming, experiencing the reality of the work, and critique for the purpose of improvement. The more opportunities to "fail," the better. This has tremendous implications for course design.

Gail: It was a relief to me that I had the gift of time to experience [the MOOCs], to give that user experience feedback. And it was also a relief to me to know that the final thing could be a celebration. The grading was really the culmination and the celebration, as opposed to the first time there was an evaluation, and so it was okay to say, 'Great job.'

There'd been all these cycles of formative leading up to it. And I think that that's the preferable way to structure it. But that means you need to really rethink your course design and build in those cycles. A lot of people think they don't have the time to do that, but if you want students to do original work, you really have to have those iterations.

EPILOG TO THE EXPERIENCE

In fall 2015 Amy took her Capstone course. The Capstone's two signature assignments included the authoring of a showcase portfolio and a multimodal online "problem of practice" case, in which students document a piece of professional work and use the program's concepts as a lens for analysis.

Amy decided to do her case study on the MOOC that she created for Open Learning. She noted that the majority of students in MOOCs are male, and she wondered if her choice of tool (Pinterest) and assignment design was gendered and therefore slanted toward females. She also wondered if those decisions should be revisited, and if so how. The production of authentic work in the Open Learning course made it possible for her to tackle the challenge of "scholarship of teaching and learning" in her Capstone experience, taking a research-based approach to the analysis and evaluation of her own work (Bass, 1999). Like a true bricoleur, she drew upon the readings from every course in the program to select only the most relevant works and integrate them into her analysis.

In the 1980s Lee Shulman proposed a framework for pedagogical content knowledge that is essential to effective teaching (1986). Koehler and Mishra later adapted this model to include technology, giving it the acronym TPACK (Mishra & Koehler 2006, Koehler & Mishra 2008). Amy came to the eLearning Design program with prior knowledge about visual merchandizing (content) the Social Media course helped her gain proficiency with Pinterest (technology) and the Open Learning course provided guidance in online course design (pedagogy). All of these proficiencies are exhibited in Amy's showcase portfolio, and by leveraging the learning experiences from four courses in order to produce original work she exhibits all the characteristics of a connected learner.

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