



Creativity in Online Learning and Teacher Education: An Interview with Leanna Archambault

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Creativity is a type of learning process where the teacher and pupil are located in the same individual.

- Arthur Koestler

We need to do a better job in teacher education of helping teachers adapt, remix, modify, and combine resources in novel ways; to really design a learning experience for their students.

- Leanna Archambault

Introduction

Our interviewee for this special issue is a scholar who is well known for her work in the field of online learning, Dr. Leanna Archambault. Dr. Archambault is an Associate Professor in Learning Design and Technology at *Arizona State University's Mary Lou Fulton Teachers College*. She is the author of multiple articles and coordinator of the Learning Design and Technologies program at ASU. She also serves as co-editor for the open access *Journal of Online Learning Research*, a K-12 focused journal that publishes research in online learning settings. She is an award winning scholar and a former middle school teacher — and in the context of the past year, when the shift to online learning was rapid and ground-shaking for many people, she has been an important voice in speaking to the value of creativity in online and blended approaches to learning.

Dr. Archambault's interest in technology began at a young age when she was drawn to the problem solving and experimenting that was needed to use technology in the 80s. As

she shared, “I love the idea of tinkering...fixing something, and then seeing if it works, and then if it didn't work, going back and fixing it again.” The iterative process of tinkering, fixing, and re-fixing engrossed her. She remembers writing computer programs for her Atari 800 computer, including one that “would figure out how old you would be in the year 2000 by entering your birth year. So, instead of just doing the math myself I was using Basic to write a program to figure it out.” Her inquisitive nature and passion for technology that began as a child has carried her throughout her career as a teacher and scholar. She has always loved “trying things that haven't been done before and seeing what works.” She embraces the role of first mover and jumps right in when asked to try something new. This openness and willingness to try things is often widely cited as key to creativity and creative approaches (Tyagi et al., 2017), and characterizes much of her own approach to teaching and technology.

Dr. Archambault comes from a family of teachers and remembers always wanting to be a teacher. It was during her first teaching assignment that her love of technology and teaching started to come together as she began to use technology with her students, which in the beginning consisted of having one computer for her entire class. One of the reasons she loved teaching was, “the creativity and ability to try new approaches.”

In the early years of online learning, Dr. Archambault had the opportunity to teach an online course as a graduate student at the *University of Nevada, Las Vegas*. She was asked to help design and teach one of the first online technology and education courses there, and remembers it as being quite demanding. As she shared:

It was a challenge...even though I had the technology skills, I had the background. It was about trying to figure out, what is distance education? It involved the instructional design component before there were instructional designers. It was figuring out - how am I going to design these activities? How am I going to organize this? How do I cultivate relationships at a distance?

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Dr. Archambault's work on the course led to her dissertation topic as she reflected on the challenges she faced and realized that other people were being asked to teach online that did not have the background in teaching and learning that she did. She remembers being at a panel discussion at a conference knowing the exact moment that she found her dissertation topic. The panelists were describing their inability to find qualified online teachers, and it struck her that this would be an important and interesting topic. Her career since then has led to multiple partnerships and opportunities as she has been a part of the rise in online learning.

Transdisciplinarity

Dr. Archambault has spent her career researching online learning, focusing on how to best prepare teachers to teach in online environments. As she began to be well known in the field, she was asked to serve on a team at *Arizona State University* that was designing a hybrid learning experience on sustainability. The experience was unique in that it was a purposeful effort on ASU's part to break down traditional silos of content domains. As she shared, "we had sustainability scientists, graphic artists, videographers, instructional designers, and I was the educator. It was this interdisciplinary group coming together...figuring it out."

Transdisciplinary thinking has played a central role in our own previous work. Inspired by the work of Drs. Michelle and Robert Root-Bernstein (1999), we have described seven transdisciplinary creative thinking skills that reach within and across disciplines to support creative thinking in education. The seven skills include perceiving, patterning, abstracting, embodied thinking, empathy, modeling, and play (see Henriksen, 2017 for a compendium of this line of research). The work of Dr. Archambault's team is a prime example of the creativity that can arise from the transdisciplinary action of both cutting across the disciplines and bringing them together. The team used digital storytelling, hands-on activities, and real world stories and situations, among other strategies to engage teachers in a hybrid learning experience that was unique and ground-breaking in many ways. As Dr. Archambault reflected on the experience during our interview, she shared, "It made me realize that I took a lot of that educational background for granted and that not all fields understand what it is that we have to share about the teaching and learning process." She knew then that teachers and teacher educators had a wealth of knowledge to share with professionals in other domains.

Creativity in Online Learning and Teacher Education

Dr. Archambault believes that creativity plays an essential role in online learning and teacher preparation. Creativity can help the education profession move collectively toward

experiences that are meaningful and impactful, and move the field forward continually by engaging with the new and avoiding stagnation. She spoke about the importance of stories and storytelling as a key area in which the creative process is needed, "I think good teachers are ones who use stories in captivating ways. It's really who teachers are. They're creative individuals who can help students create their own meaning through connecting facts and figures in a novel, engaging way." Dr. Archambault shared that it is also important for teachers to engage students in creative storytelling processes:

I've always taught using a more project-based approach, getting students involved on the creative side. It's using constructivism to be able to apply the creative process to bring together all these different aspects of learning and taking all this disparate data getting to this synthesis. So, we need to ask, how can students create projects to build their own understanding? And to show what they have learned? I think that it's two pronged, it's the creative part of the teacher but it's also involving students in that process as well.

This emphasis on project based learning as being a gateway to creativity for students emphasizes another critical idea, that of design. Design (design processes and design-erly ways of being and doing) can be powerful guiding structures for fostering creativity in students (Beghetto, 2010; Craft, 2006). This is important not just for students but for teachers as well, something we delve into in greater detail below.

Teachers as Creative Designers: Teacherpreneurs

An important area that Dr. Archambault continues to emphasize in her teaching and research is preparing teachers to be instructional designers. She believes that it is important for teacher educators and education preparation programs to recognize the necessity of seeing teachers as professionals who will be required to make instructional design decisions and for preparing them to do so. This is consistent with current frameworks that see teaching *as* design since it goes beyond seeing teaching as the transfer of information from one person to another but rather as the design of experiences that allow students to engage and learn. Like other design professionals, teachers have to work in creative, learner-centered, evidence-based ways to improve what they do. According to this approach, teachers are designers of student experiences, of assessments and technologies, and of instruction (Henriksen

& Richardson, 2017; Paniagua & Istance, 2018). As Dr. Archambault shared:

Instructional design is an increasing area that we need to see our teachers in. Teaching is not just ‘here’s a package curriculum that you’re going to use in your classroom.’ Teachers can design novel learning activities, and can bring together different sources, and can create projects for students. We need to do a better job in teacher education of helping teachers adapt, remix, modify, and combine resources in novel ways; to really design a learning experience for their students. Right now, we wait until teachers go out into the field and then some might be more interested in instructional design, and they come back and do a master’s degree.

Dr. Archambault advocates for an approach to teacher education that puts teachers in the central role of learning designer and professional. A key component of that is helping teachers see themselves as learning designers and giving them the tools to be those designers, which is something the field needs to do better (Norton & Hathaway, 2015). As teachers have become designers Dr. Archambault has seen that it adds a sense of professionalism and agency. She has seen many teachers create lessons and activities and then offer them in online educational marketplace spaces. As she said,

As a result, it’s self-elevating. They have expertise that is worthwhile and that is a value to fellow educators. I don’t think our teachers see themselves as learning designers and I think we have a lot of work to kind of push them more in that direction.

Dr. Archambault shared that many of these teacher designers and creators, or teacherpreneurs, start small businesses and are able to employ other teachers in their endeavors. Teacherpreneurs, according to Edutopia, are,

classroom experts who teach students regularly, but also have time, space, and reward to incubate and execute their own ideas -- just like entrepreneurs... [They] maintain their ‘teacher cred’ with their peers because they are regularly engaged with students. They maintain their firsthand experience with *all* aspects of *teaching* while also being afforded the opportunity to lead beyond their own classroom. (Wolpert-Gawron, 2015).

Shelton and Archambault (2019) describe online teacherpreneurs as “current and former preschool to 12th grade (P-12) teachers who market their original classroom materials and ideas online” (p. 398). There are a range of ways in which teacherpreneurs incubate and monetize their ideas. One site that has received quite a bit of attention is TeacherPayTeachers.com—a website where teachers sell or freely

offer classroom resources they have created for other teachers to use. As Dr. Archambault noted, teachers who participate in these types of sites are pushing the boundaries of what types of materials are used as well as who has access to certain educational resources. Teachers are no longer limited to the materials their school or district provides. They are no longer limited by school or district budgets and contracts. This is very exciting to Dr. Archambault, as she shared:

We’ve looked at this as a way that, instead of everything having to go through a publisher, where there are certain voices...with this we can raise different, diverse voices. And we can get resources that are created by teachers, in local contexts and are helpful, rather than having to go through just the approved textbooks.

We have spoken about this phenomenon before (see Henriksen & Hoelting, 2016) asserting that technology has changed the landscape for who is known and recognized for creative work, as well as who the gatekeepers are that validate the work and allow its entrance into the public. In his system’s view of creativity, Csikzentmihalyi (1997) describes how creative work emerges through an interactive system that includes culture, the person creating the product, and the gatekeepers. The gatekeepers are the experts who recognize and validate or invalidate the creative product. An example of how this gatekeeping of creative work has changed is the rise of famous youtubers who have bypassed traditional gatekeepers (producers) in the music industry and found success. The traditional gatekeepers for education curricular resources have been publishing companies.

There are things that teachers need to be aware of and wary about when evaluating educational resources from large scale publishers like bias and material that might not be culturally relevant to diverse students (Goldstein, 2020; Sleeter & Grant, 2011). Dr. Archambault cautioned that the same problems may arise with teacher created resources, but that the opportunity to broaden the field is worth it and that all teachers must approach their curricular materials with a critical eye, no matter the source. She explained:

There’s still the gatekeeper but it’s a different one...it opens up the gate. What we have to do a better job of is helping our teachers be more critical... because if you look at the ratings it’s similar to Amazon where everything is four stars even if there are problematic elements. This notion of having more materials out there and not having expert gatekeeping determining quality is important and it’s also getting the platform to police quality better. Those are still confounding issues that we’ve found that need to be addressed.

While teachers need to continue to be critical evaluators of all the resources they use, the fact that they can go online and find resources that have been created by classroom

teachers who know exactly what the job is like and can create proven materials, has been an extraordinary support for many teachers. As we expect students to become increasingly savvy about digital literacy skills for the future, there is also a critical space related to teachers' digital literacy and awareness of working with digital resources, particularly when we ask teachers to creatively step into the new. Together with her colleagues, Dr. Catharyn Shelton and Dr. Lauren McArthur Harris, Archambault has worked to provide helpful evaluation tools to assist current and future teachers in becoming more critical consumers of the materials they find online, through their *Responsible Teacher-Buyer's Guide* (<https://bit.ly/TeacherBuyersGuide>) and *Curating and Creating with Care: History/Social Studies* resources (<https://bit.ly/CuratingCreatingWithCare>).

Teacher Creativity during the Pandemic

When the pandemic began and learners around the world transitioned to online learning in a matter of weeks, Dr. Archambault's field of expertise was thrown into the spotlight. Dr. Archambault clarified that there is a difference between online learning that is planned and purposeful, and the immediate shift that teachers and students had to do to emergency remote learning. Milman (2020) termed this quick shift as pandemic pedagogy. There wasn't time to do the intentional planning and preparation that online learning requires, but teacher pedagogy shifted greatly, as Dr. Archambault shared,

We saw tremendous creativity with teachers who had to turn on a dime, had little to no preparation and were able to keep their students engaged in the concepts as best they could, under the circumstances which were difficult for so many. And there were things that we didn't think were possible - schools found devices, there was free internet service provided to those who needed it, there were meals provided. It was amazing how many barriers were dropped and we all came together to figure out how to make this happen. You saw the whole education community come together.

Dr. Archambault believes that there will be some positive lasting impacts from the shifts to emergency remote teaching that educators had to make. She has seen learning become significantly more personalized with educators re-thinking their use of deadlines and using tools that can help meet students where they are at. There has been more widespread use of tools that support mastery learning, where students are assessed and taught the content that they are ready to learn. As she explained:

Math is a domain, for example, that is very linear. So I, as a teacher, don't have to have everybody lockstep progressing together. I can have different kids working at different paces and they can take different paths and we're all working toward learning outcomes. So, I think the amount of technology may vary, but I think those approaches of being able to personalize, to have more of a mastery orientation are steps in the right direction.

Dr. Archambault believes that tools like these, that tailor learning to individual student needs, paired with an effective educator make for a powerful learning environment for students. She can envision a future when a teacher has access to a user-friendly data dashboard that brings multiple data points together, and the teacher can make meaning of it, "and then understand how their instruction needs to be adapted, based on that data."

Recommendations for the Future

Dr. Archambault believes that one of the most important things that educational scholars can do for the future is to nurture the instructional design skills of teachers by making it a part of teacher education programs. She also believes that scholars need to model creating, publishing, and sharing resources outside traditional academic venues, i.e., peer-reviewed journals. She has made an effort to do this with her own work, publishing not only in scholarly journals but also in practitioner journals like *Phi Delta Kappan* and sharing resources directly with educators — seeking to impact practice. She has published in non-traditional spaces and appreciates the opportunity to engage in different creative processes and write for different audiences. For example, through their publishing experience with the online magazine *Slate*, Archambault and colleagues were able to extend their collaborative work far beyond the traditional academic audience (Shelton et al., 2020). Archambault encourages fellow scholars to seize opportunities to share their work freely, which she has done with open resources on online and blended learning, including *K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration* available at <https://edtechbooks.org/k12blended> (Graham et al., 2018). As she shared, "I try to be strategic about not just being able to check the boxes that I need to, for the academy, but then, how to get my work out to a broader audience, to really be able to share my creativity and most importantly, help teachers."

Conclusion

Dr. Archambault's expertise in online learning has proved invaluable over the past year and a half as educators around the world have had to navigate the sudden move to technology based learning. Her hope is that educators will continue to think about the things that brought added value to learning through this experience and carry them forward. For teacher education, a primary hope is that, "we cultivate creativity among our pre-service teachers." And for all those involved in education she hopes this is a time for questioning the behaviors and experiences that we have always taken for granted. We need to ask questions like: Why is teacher prep the way it is? Why does school have to be this way? In thinking about the recent history of schooling in the United States, she described the impact that No Child Left Behind has had on her undergraduate students:

Coming out of the era of No Child Left Behind, where we tested so much — I see this in undergrads, where it's like, 'what's the answer?' They are very test-driven and don't necessarily think outside the box. But, now we have some questions that maybe we couldn't have asked before.

The sudden shifts in pedagogy have created an opportunity to stop and rethink what we do. There are simple questions that we can ask ourselves at an individual level, for example, 'Why can't I extend a deadline for a student?' Or we might re-consider how we can alter our approaches or structures. But there are also questions that need to be asked at a broader systems level. Dr. Archambault believes that the future of education will require teams of passionate individuals working and creating together, as can be seen in the current Next Education Workforce initiative at ASU's Mary Lou Fulton Teachers College (Mary Lou Fulton Teachers College, n.d.). The main goal of the initiative is to shift from a one-teacher model to that of teams of educators working together to meet the diverse and unique needs of learners. This is a fundamental shift in how we think about classrooms and the roles that educators play. As Dr. Archambault said, it is important that we not take the systems currently in place as being a given, but rather ask, "Why does it have to be this way? A lot of our assumptions (about education) are based just on history. But there is nothing magical about that. That's just the way we have always done things." It is asking these fundamental questions and seeking creative solutions to them that can lead to the intentional design of new educational modes and paradigms.

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