

TrendSetters

Conversations with innovators in learning and technology

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Fred: Hi Julie! Thanks for participating in the TrendSetters Column! Could you describe how you got into the field of Instructional Design and highlight your involvement in it during that time?

Julie: Like almost everyone in instructional design, I had a very indirect path to the field. After college, I did a certificate course in teaching English as a foreign language, and later got a job as a corporate trainer. I liked creating course materials a lot more than repeatedly delivering training classes, and started to move in that direction. It was also the earliest days of web-based training, so I got really interested in that as well.

I started taking just a few multimedia and instructional design classes at the University of Minnesota (from the lovely Simon Hooper), and that really helped me decide that this was something I wanted to pursue. I went looking for a full-time master's program.

Around the same time, I got interested in what you could do with interface design as a way of supporting performance. I was working for a call center, where training was a headache because it took so long to learn the antiquated computer system. It turned out that in this case it was much more effective to fix the computer system than it was to fix the training. I worked on a project to create a better front-end system, which was far more helpful than increasing the training investment.

When I went to school for my MS degree, I picked Indiana University – Bloomington because they had a well-established instructional design

curriculum. They also had a good program in interface design and human-computer interaction. It turned out to be incredibly valuable – in addition to coursework, I wound up working with an R&D group there (with Marty Siegel) where I was a project manager for a \$400K client project that was rolled out in nine countries. It was an incredibly valuable experience for a graduate student.

After graduate school I worked for several years for Michael Allen at Allen Interactions, which was also an amazing experience. I learned a lot about elearning design, rapid prototyping, and instructional interactivity, and got to work on a myriad of projects. I was also an adjunct faculty member at the Minneapolis College of Art and Design, where I taught project management, instructional design and intro psychology.

I've been an independent consultant for the last few years, and wrote a book in 2011 called *Design For How People Learn*.

Fred: That is really interesting! It seems like you happened into a training role and then really dug in and expanded the experience. You mentioned starting in the earliest days of web based instruction; does that put you starting practice around the mid-to-late 90s?

Julie: I'm going to date myself, but we were trying to make stuff work

online as early as 1995. I remember getting all excited about an app called Futuresplash (Flash, before it was bought by Macromedia) because it meant I could create hotspot roll-overs for software training. I think I was doing Computer Based Training (CBT) stuff with Authorware in 1993-1994, maybe? I really am dating myself now...

Fred: Don't worry about dating yourself; it just lends to the credibility! What appeals to you about the field of Instructional Design?

Julie: I always say that I'm in instructional design because I'm happy as long as I'm learning something new, and it turns out that it doesn't really matter much what that new thing is.

When you do instructional design consulting, you are always learning about some new piece of subject matter. For example, I've gotten to learn about topics ranging from cross-cultural communication in health care, to speed-density fuel injection, to the chemical properties of laundry detergent, to the methods for fostering AIDS and HIV prevention. Everything is interesting when you are initially learning about it.

Fred: It is definitely a very flexible field. I think that because we are studying and thinking of Instructional Design as a process more than as a content area, it really demands using stable and sound principles in often chaotic and ever changing situations. So, could you describe your work in the field and talk about how you became involved in that area?

Julie: Aside from consulting work and teaching, my main accomplishment from the last few years is probably the book that I wrote in 2011 called, *Design For How People Learn*.

Many people come to formal or informal instructional design via the "Hey, you're a good customer service representative/web designer/human resource person, so we are going to have you train other customer ser-

vice representatives/web designers/human resource people."

Basically, there are a lot of people out there who come to teaching and learning via subject matter expertise, and then are set out adrift to figure how to teach something, or how to design a class for something. They are asked to "fake it until you make it."

This leads to a lot of cargo cult education (http://en.wikipedia.org/wiki/Cargo_cult_science) – if a novice doesn't know how to teach something, they'll likely make it look like the learning experiences they remember from the past, but the memorable elements are likely to be the superficial trappings of the experience. "Let's see, there was a class room, and a lecture, and some slides..."

Basically, a lot of bad classroom experiences stem from subject matter experts doing the best they can with very little background or help.

When I looked around, there were quite a few books that talked about how to train or teach, but not many that did a good job of communicating *why* you do something. This leads to horrific practices like the presentations of formalized learning objectives at the beginning of classes and elearning programs. These objectives are stated in specific and formal language for us as instructional designers, but subjecting learners to something that's been through the Bloom's Taxonomy grinder can be just plain mean.

If you know why you are doing something (in this case, letting the learner know what the goals are can help focus them and inform them of the performance standard), you can start looking for the best way to do that, rather than systematically following the rule that you display the learning objectives at the beginning of a course.

Fred: The phrase "Bloom's Taxonomy Grinder" is so vivid! There are certainly plenty of instances where

organizations and even designers follow scripts or produce things without actually thinking through what they are doing or putting themselves in the place of the user. I think that serves as evidence to the need for understanding good design principles if we are to be good practitioners. Is your book a sort of response to this; geared toward helping people better think through the processes of Instructional Design?

Julie: I was trying to create an accessible first book that anyone could read that would help them to start to construct both the *how* and the *why*. If somebody wants to know about graphic design, the first book you give them is the *Non-Designer's Design Book*, and if somebody wants to know about User Experience Design (UX), the first book you give them is *Don't Make Me Think. Design For How People Learn* was my attempt (successful or otherwise) to create something similar for learning design.

Fred: The book definitely seems to help serve the role of liaison to new field entrants by feeding them the basics in plain language. This can be a hard field to wrap your head around. Would you talk about two works by other people that you found very provocative or informative?

Julie: Hmm, I'm mostly reading outside of instructional design these days. The really interesting problems for me are when people know the right thing to do, but still aren't doing it, through lack of motivation or ability.

On the ability front, I think game design has a lot to offer instructional designers. Video game designers have far more specific practices than instructional designers about things like the development of automated skills over time, and scaffolded performance, and motivation. You can't progress in a video game unless you are adding skills at a pretty rapid rate, and game designers know far more about how to design for cycles of expertise than almost anyone

in instructional design. To be fair though, game designers also have the benefit of a self-selecting audiences, and the ability to discard anything that doesn't fit into their world. So, they also aren't facing the same set of challenges that instructional designers face, but I think there's a lot we can learn from what they do. Specifically, I like Jesse Schell's book on the Art of Game Design, Raph Koster's Theory of Fun, and pretty much anything by Sebastian Deterding. Sebastian Deterding is also, for my money, the hands-down smartest person out there on the controversial concept of Gamification.

On the motivation front, I'd say that the most influential material I've been reading is the behavioral economists, like Richard Thaler, Daniel Kahneman, and Dan Ariely.

I'm also really interested in the research about willpower and decision fatigue by people like Roy Baumeister and Baba Shiv.

Fred: Those are all really important areas to the field! The rise in gamification and game based learning is really interesting to see unfolding. I often wonder about how open licensing and collaborative development could play a more prominent role in that area as the development costs tend to be huge. Do you have any favorite examples of a good implementation of game design or gamification in education? I know there have been several schools and projects that have met with some success.

Julie: I'm wary of endorsing any gamification examples right now – it's really difficult to do well; and if it's done badly, it can have a negative effect on learner motivation. For game-based learning, I'm watching the Quest to Learn effort (<http://q2l.org>) with a lot of interest – they use game design as a learning activity, rather than just game-playing, which I think is great.

Fred: That sounds like a promising avenue for gamification. Would you name a few people who have had the

most important impact on your career?

Julie: Hmm, I think I already mentioned folks like Simon Hooper, Marty Siegel and Michael Allen. Tom Duffy and Andrew Dillon were probably some of the other really influential people from my graduate school education.

There are people who I refer to as my "professional crushes" like the aforementioned Sebastian Deterding, Stephen Anderson, Cathy Moore, Dan Lockton and Scott McCloud.

Probably the most overall influential person that I've encountered, though, is Kathy Sierra, who created the Head First series of technical books for O'Reilly, and wrote the blog Creating Passionate Users. Every time I think I've come up with a really original thought, or way to express something, I usually find it's something she was talking about years ago. Her Crash Course in Learning Theory is still one of the best pieces of instructional design guidance out there (http://headrush.typepad.com/creating_passionate_users/2006/01/crash_course_in.html). She's started blogging again recently (<http://seriouspony.com/blog/>), which is fantastic.

People like Kathy really influenced the way I think about design. Instructional design as a field suffers from being based largely on a process model (systematic steps to follow), rather than on design principles. I think this is a big limitation for the field.

Fred: I tend to see design as the fundamental basis of what we do, and I think of the process focus as enabling flexibility. Design crosses disciplinary lines and informs and engages learners and clients, but it is definitely the craft of the field and it is hard. That may be why it isn't always emphasized. I wonder how much of the debate over whether to license and where to define the borders of our field has to do with this same distinction.

Julie: I do understand what you are saying about the flexibility of a process focus. Largely I agree with that, but suspect the process needs updating as the complexity of the environment increases. Most software companies are recognizing that traditional project management and waterfall processes are too rigid for the complexity of the task, and are using things like agile development methodologies to account for that. We are also going to need to adapt our processes to be more agile and dynamic, and less rigid and massive. A friend of mine, Karl Fast (a professor of Information Architecture and Knowledge Management at Kent State) talks about a focus on "better" rather than "right". Better is fast and iterative, right is big and fixed. Nassim Taleb also talks about systems that are anti-fragile systems where disruption makes them stronger. Better is a resilient flexible model. I think traditional instructional design processes are going to be too rigid for the field going forward -- spending three weeks on a substantial and lengthy analysis phase of the tasks in an ERP system is useless when the system gets updated nineteen times in that same time period. So a focus on process works best when the process adapts to the environment -- we are still teaching and using processes that originated in the 1950s; but the world, and the pace of change in that world is radically different.

Fred: Ok, now I see where you are coming from.

Julie: Additionally, there are a lot of instructional designers out there who are doing good work, but they are often having to feel their way there. It will always be balance between art and science, but when skills are largely tacit, it's hard to communicate them to others, or add them to the collective knowledge of the field. Unfortunately, despite the name, there isn't actually much explicit design guidance in instructional design. I'm working on my own design taxonomies to provide a framework for my own practice.

Fred: What major trends do you see influencing the field right now and in the near future?

Julie: Well, we are going to see a major shift in the field because information delivery is going to be increasing devalued.

I was talking to friend of mine, Elliot Felix, who is brilliant about designing physical spaces. He was telling me that he works with a lot of libraries and museums, and that they are currently struggling to figure out their role. Basically, for most of their existence, libraries and museums were the containers of information. They held all the information and knowledge and people physically went there to access that information and knowledge.

Now that almost everybody is carrying all the knowledge in the world around in their pockets, museums and libraries are having to look at what they can offer to remain relevant. Is it experiences? Is it support with access? Or helping to develop communities?

Instructional designers are going to be facing the same questions. Basically, in the past, an instructional designer has been able to support a pretty decent career by collecting, sorting, and presenting information in some nice way. But, as content management strategies and systems slowly take over that role, instructional designers are really going to need to change what they do, and get much better at experience creation, skill development, performance support, and community development.

Fred: I agree that the role of Instructional Designers and even the entire field is changing. The digital age brought disruptive change to a lot of industries, and the successful people and organizations had to innovate and redefine themselves to remain relevant. I think the need for Instructional Design has definitely grown and I wonder if these changes may be forcing the field into being more relevant than ever.

Julie: Yes, I think that for people in corporate or workplace settings, “performance support” is actually a much better term than “instructional design,” though it’s not as fashionable right now. Part of that flexibility is knowing that it’s not just about building courses. I think most IDs know that, but I’m not sure they are always being brought to the table on bigger questions of process improvement, and they really should be.

Fred: What major research gaps or areas of need do you see in the field?

Julie: When I was in graduate school, I learned a lot about analysis, and a lot about evaluation, and a lot about process. When it came to design, the formal field of Instructional Design is a little bit like “and magic happens here!” I think we need to get a lot better at helping people take what they know about their audience and problems, and translate that into good design recommendations.

Fred: I definitely agree! We need to be much more explicit about what we do and how we do it.

Julie: The biggest issue I see, though, is the lack of feedback loop. While there is rightly a fair bit of skepticism about the 10K-hour rule (the idea that it takes 10,000 hours of deliberate practice to develop expert mastery), we do know that people need practice and feedback to get really good at something.

But people who create elearning and educational technology can potentially go years without meaningful feedback on their work. Unlike classroom teachers, who can see right away if a learning design is going badly, many elearning or online designers may never get to see people actually use what they’ve designed. In corporate environments, they may only get the tiny amount of information about what their users are doing that is supported by the implementation of the SCORM standard. It’s like trying to see what your audience is doing by peering through a drinking straw.

The lack of a good feedback loop is one of the fundamental things that is holding the field back, in my opinion. This is also true of the solutions we design for learners, too. If good, effective feedback is one of the best ways to improve performance, then how are accounting for that in our designs? One of the frames that I’ve been using lately to think about design is to consider “How would I view this particular challenge if I considered myself primarily a designer of feedback systems, rather than a designer of instruction?”

Fred: Feedback systems are critical to effective learning and success. This seems like one of those areas that often suffers from the clash between ideal Instructional Design and the constraints of real life.

Julie: I agree -- frequently we can’t do everything we’d like to do, but that’s why I’m advocating considering whether we should start with the feedback system as the first thing, and then a course as a nice add-on if we have time.

Fred: What advice do you have for IT researchers/practitioners who are just beginning in the field?

Julie: I’d advise practitioners to learn as much as they can about User Experience Design. I was grateful that the Instructional Systems Design department at IU actually did a really good job of incorporating a lot of what we now refer to as UX. I think that the UX folks are really pushing the whole area of analysis forward in good ways, generally have better process models (prototyping and iterative testings), and really emphasize understanding and involving end users. Good use of UX methods would go a long way towards closing the aforementioned broken feedback loop.

In addition to using UX processes, we should be looking to UX to better understand the spectrum of performance solutions, particularly on the adult/corporate side of things.

In his classic design book, *The Design of Everyday Things*, Donald Norman

has a chapter called Knowledge in the Head vs. Knowledge in the World. Basically he looks at ways we can take knowledge that people are forced to carry around in their heads and instead embed it in the world. For example, my microwave now knows how many seconds it takes to cook a bag of popcorn. I don't have to know or find the information anymore – I just press the popcorn button.

In the continuum of knowledge in the head to knowledge in the world, we somewhat arbitrarily decided that knowledge in the head (training, classes, reference resources) belonged to the training/learning people, and that knowledge in the world (better systems and processes) belonged to software designers, and process improvement people and user experience designers.

Wouldn't it be better if we were able to collaborate more across the continuum, and make more strategic decisions about how to best support people in doing what they need to do?

Fred: This is a great point. One of the biggest recent shifts has been more bottom up input due to users being granted a voice and the power to more easily choose.

Julie: Bottom up is really interesting, actually. User-generated content is just beginning to gain traction. Ben Betts's Curatr system is an interesting model, for example. In most cases, we aren't there yet, but we definitely need to be investing in that area. I actually think that some of the best work being done in user-created experiences is by museum designers like Nina Simon (author of the Participatory Museum).

The other piece of advice that I'd add for new practitioners is to start working on your PLN (Personal Learning Network). Social Media has created so many opportunities to interact with people who are interested in the same things you are, so there's no excuse. I like Twitter (my professional network after joining Twitter is unrecognizably different than my pre-Twitter network), but there are doz-

ens of different networks out there (LinkedIn groups, Facebook, etc) that you can use to interact.

Fred: PLNs are definitely becoming more and more relevant. Educators and practitioners really need to be involved in the discourse of the field, and developing, cultivating, and engaging a PLN is a primary way to do that. Is there anything else you would like to say or be asked?

Julie: I've soapboxed enough, so I'll just end with the fact that most of the instructional design folks I've worked have been smart, curious, creative people who are working really hard to make things better. Thanks for asking.

Fred: Thank you so much for participating! I really appreciate the insight and I think this will prove to be thought provoking for the readers! Thanks again!

Would you like to nominate someone to take part in TrendSetters? If so, please email Fred at TrendSettersColumn@gmail.com