Jane Bozarth: [00:00:00] Any time I have used the phrase "evidence-based" in a report title, it gets an overwhelming number of downloads.

Celisa Steele: [00:00:11] I'm Celisa Steele.

Jeff Cobb: [00:00:13] I'm Jeff Cobb, and this is the Leading Learning Podcast.

Jeff Cobb: [00:00:21] Learning businesses should base their design choices on evidence-based practices. But keeping up with the latest research takes time and energy that many learning business professionals simply don't have. Luckily, people like Jane Bozarth exist to help bridge the gap between academic research and the implications for the design and delivery of learning experiences. Jane Bozarth has spent many years as a trainer, a facilitator, and an e-learning designer, and she currently serves as the director of research at the Learning Guild, where she puts out monthly reports. In this episode, number 378, Jane talks with Celisa about, among other things, learning styles and other myths, evidence-based alternatives to popular misconceptions, the growth mindset and whether learning businesses can help alter learners' perceptions, and what artificial intelligence does well and where it falls short. Celisa and Jane spoke in August 2023.

Celisa Steele: [00:01:26] Would you tell listeners a bit about the work that the Learning Guild does and then more about your role there?

Jane Bozarth: [00:01:33] The Learning Guild, it's a media company. I can't really pretend it's other things, but we offer a number of publications, including an ever-evolving magazine— probably not the word they want me to use anymore, but that's still how I think of it—called *Learning Solutions*. It is free. It's at learningguild.com, constantly updated content from both in-house editors and people in the field who contribute to whatever's going on currently in

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learning and development, learning and design, educational technologies, thinking in L&D, that kind of thing. I offer a research report every month. I often author those but not always. Sometimes we have guest authors. For instance, recently, we had Hadiya Nuriddin do a piece for us on storytelling, using storytelling and narrative as a learning strategy.

Jane Bozarth: [00:02:19] We have Megan Torrance—who is currently running the xAPI Cohort, which we bought and took over a few months ago, but she's staying with it with us—who does regular reporting for us. Sometimes it's me doing a lit review. Sometimes we do a member survey on something like an LMS or "How are you using video?" Sometimes it's just a poll or brief interviews with people in the field. One of our more recent pieces, for instance, was "How do you build an L&D dream team?" How do you get new positions? Do you need a graphic artist? Do you need four more designers? That kind of thing.

Jane Bozarth: [00:02:56] But the Guild, other than that, other than the publications department, we also offer some e-books. And every year—for no reason I could remember anymore—I do a holiday gift guide for people in L&D with crowdsourced ideas for what microphone they're using, what software they like best, how do they set up a video studio, that sort of thing. Beyond that, the Guild, though, does host events with expos attached to them. We do DevLearn every fall in Las Vegas, which is a little more technical. That tends to attract more developers and people really working in the weeds with some of the existing software. We do Learning Solutions in Orlando in the spring, which is adding on to the expo this year also some HR technology. We do a number of online conference events and special one-offs during the year called Online Conferences (OLCs). So we offer a whole lot of opportunities to learn to our members. Membership is free. There are levels of membership, but the basic membership is free, and that will get you access to all of our publications, including mine, and I believe it includes some discounts to some of the events.

Celisa Steele: [00:04:00] Well, I am a Learning Guild member, and I certainly recommend to listeners, if they are not, to at least go check out that free level there because there is a lot of content, just as we heard in your overview there in terms of what the Learning Guild is providing. So, Jane, you are a return guest to the Leading Learning Podcast. You were last on in 2019, so it's been a little while. And since then your organization has rebranded. So I would love to have you tell us a little bit about why the eLearning Guild became the Learning Guild, and then, to the extent that it has changed anything, what changed in terms of what you do or what you offer as an organization?

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Jane Bozarth: [00:04:40] I think I'm going to get this right. I believe the Guild was founded 23 years ago, and, when it started, it was the eLearning Guild, and e-learning was kind of a new thing. E-learning was what we were calling it to distinguish it from other things. "E" meant mostly computer. And I think the view of it then was a human sitting in front of a screen doing a tutorial, sitting there clicking along. People wanted to know how to do graphics. People wanted to know how to load stuff to the Web. But, honestly, since 2019, I think it just became either redundant, unnecessary, or not quite accurate anymore to call it e-learning. Just about everything we do has some sort of digital something that goes along with it, and now we've done so much more with things like virtual classroom training and hybrid training. I think the "e" just didn't seem to make much sense, and they shifted to learning. And it's interesting that you brought that up because I came early on from a classroom background, classroom training, because we didn't have the "e" yet back then. I am so old I remember overhead projectors. That's how old I am. I remember transparencies. Not for long. But I do remember them.

Celisa Steele: [00:05:48] No, it does seem like the "e" in front of "learning," in some ways, has become somewhat unnecessary because almost every type of learning does seem to involve some kind of technology. Now, I know that earlier in 2023, you wrote a report for the Learning Guild titled "Research Review: Evidence-Based Practices for 2023," and I know that one of the things you looked at was growth mindset. And the subtitle for that section is "Theory Right, Effect Small." So would you share with listeners what you found out about growth mindset?

Jane Bozarth: [00:06:24] I will, but let me preface it by saying once in a while I like to do a literature review of some current or recent pieces that have some sort of weight or have some sort of importance. There's a lot, and many people in L&D—those who work in teaching—just don't have time to sift through tons of academic stuff. It's hard to read, and some people are intimidated by that. So I looked for pieces that have something new to say or expand something that we understand. It's not just a random, "Here's some stuff." There's a particular professor out of the University of Virginia named Daniel Willingham, and he's a lovely guy, and he's on Facebook. He posts up all the time, and he interprets data. He interprets the research all the time.

Jane Bozarth: [00:07:06] But this piece, because there's so much interest in growth mindset, I was especially interested in seeing what he had to say. I will tell you that I encapsulated in about four paragraphs a 20-page academic study. And you made me read it yesterday. But, pretty much, there is evidence to say that, yes, people with a growth mindset learn more, perform better. It is a tiny piece, though, of an overall understanding of motivation. I don't need to tell people in this business that, when you're looking at improving worker performance, for

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instance, learner performance, there are 100 things that happen between a training session and what goes on back at the job.

Jane Bozarth: [00:07:49] There's a supervisor who doesn't support it, who says, "We don't do things that way." There are peers who are rolling their eyes that you want to do something better or differently. There are resources you were told to use—a certain kind of marker, and there ain't no markers. There are a lot of things that can get between this perceived mindset and the reality of using it. So that's the first issue—that it is small. The other thing that's, I guess, bigger than that is having a growth mindset, and starting off on that foot is different from trying to help somebody develop it when they aren't there already. Those are different things. And that second piece is the bigger challenge. I find this interesting. I've always been interested in what people believe about learning. And, in this case, with growth mindset, what the authors are discussing is that, if you believe that it's fixed, that your intelligence is fixed, that you are only so good at these things, that you won't really ever get better, that's how you're going to always respond to it. That's how you're going to take new learning.

Jane Bozarth: [00:08:55] That's how you're going to respond to setbacks. Where, if you believe you can learn, and you can get better and that you can learn from mistakes, and that it's all a learning opportunity, that is the growth mindset, and it's harder to help people understand that. Some of the experimental undertakings around that, I think, are fascinating. For instance, there was a case where schoolchildren were divided up into three groups and given the same test, and they all did well. Okay, everybody did fine on this test. And one group was said, "You're so smart. Look what you did! Look, what a great job! Look how this turned out. You must be really, really bright." Same test, same outcomes. The second group was told, "You tried really hard. You tried so hard, look how well you did on this test."

Jane Bozarth: [00:09:38] The third group was given no feedback at all, just here's your score. The kids who were told, "You're so smart," after that, did not choose harder things to do because they wanted to keep on doing really well where the kids who were told, "You tried; you did really well because you tried," would take on other things, and that extrapolated to— other studies or maybe in the same study; I'm sorry I don't remember; I didn't commit it to memory—but the outcome was that the kids who saw this learning as growing were signing up for higher-level math courses. So the challenge for us is taking what we do know about the theory being right, and how can we make that effect bigger?

Celisa Steele: [00:10:18] No, it's interesting. When we came across Dweck's work and thinking about this idea of there is this fixed mindset versus growth mindset, and you can do things to

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foster that growth mindset in learners, there's a lot of potential there for a learning business to give feedback in that way that focuses on effort rather than achievement or focuses on the process rather than any sort of accomplishment on the learner side. But I guess, based on what you understand from that research, is it perhaps not worth the effort to provide that level of "Let's try to put people in a growth mindset" because it's really hard to do?

Jane Bozarth: [00:10:58] Well, that's a good question, and that takes me to something else. I don't want to get myself in trouble, but here I go. Here, I'm going to get myself in trouble. I think in L&D we do sometimes look for the easy answer, and this is a harder answer. The article does, by the way, include a number of suggestions for ways that we might guide learners toward a different kind of mindset, ways we can help change it. He can have all the growth mindset; it's not necessarily going to change some things because the environment is huge, peers are huge, coworkers are huge, your supervisors. I don't think it's not worth it. When I was reading yesterday, again, I believe they were saying that having people, adults, read up and write about growth mindset helps them rethink that.

Jane Bozarth: [00:11:43] But I just would invite anybody who thinks this is nonsense or is scoffing at it—I finished a doctorate. I finished graduate statistics. I still celebrate that day. I never believed I was very good at math, and the joke was, when I got to college, it was fine because, I don't know, I was over it. I don't go out of my way to seek out problems with a square root sign. I don't go out of my way to put myself in that other stuff I might want to learn, but, if you believe you can't or you're not good at it, it is hard. It's hard for us to try to do it to other people, and I think it's hard with yourself. It's a big shift you have to make on your own. Whether it's worth pursuing, I would think so, but, when you're dealing with a big workforce and a whole lot of people trying to guide them that way, I don't know.

Celisa Steele: [00:12:29] Well, like you said, it's all part of a very big, sticky, thorny issue, and there probably aren't easy answers. So things to consider, though.

Jane Bozarth: [00:12:38] Yes. Well, I think it got to be buzzworthy. And, anytime that happens, they dismiss things that might be worth paying more attention to, or people start to, again, roll their eyes that "Oh, this is just woo-woo psych stuff" when the research says it's a good thing. We just don't know how big we can make it.

Jeff Cobb: [00:12:59] At Tagoras, we're experts in the global business of lifelong learning, and we use our expertise to help clients better understand their markets, connect with new customers, make the right investment decisions, and grow their learning businesses. We achieve

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these goals through expert market assessment, strategy formulation, and platform selection services. If you're looking for a partner to help your learning business achieve greater reach, revenue, and impact, learn more at tagoras.com/services.

Celisa Steele: [00:13:30] Now, I know that another 2023 Learning Guild report that you authored is titled "Popular Myths and Misconceptions," and one of the things that you address is the concept of learning styles. I believe and I hope that, by this point, podcast listeners know that it's more valuable to teach in ways that are appropriate to the content rather than try to tailor to individual learning styles. Hopefully, learning styles have been debunked. But there is evidence for dual-coding theory. So would you tell listeners about dual-coding theory and then talk about how that factors into design and development of learning products?

Jane Bozarth: [00:14:09] Can we talk about learning styles first?

Celisa Steele: [00:14:10] Sure.

Jane Bozarth: [00:14:12] I do think in L&D it is largely debunked. I think you're right. I will tell you I don't have children. We don't have children. I didn't have schoolchildren when I first started researching learning styles. This is one of the things I really enjoy about my job—I'm always surprised. I try to be open–minded, and I'm always excited when I find a surprise. I had no idea the way the concept of learning styles has permeated K-12 education. Schools, on their Web site, say, (parents want to hear that) their instruction is tailored to their child. Schools want to say, "We're giving individual attention to your child," and that's how they say it. Teachers, who are very busy people, are offered professional development. That's what they do on their one professional development day a year is take a quiz on learning styles.

Jane Bozarth: [00:14:56] And so we have a whole generation at a time coming out of school, going into the workplace, thinking this is a real thing, and then we have to start debunking all over again. So I do think it's gotten better in our business. I will say—and I know we're going to talk about it later—I like ChatGPT. But, let me say, ChatGPT is not doing us any favors in regards to learning styles because, if you type anything, any kind of prompt into ChatGPT about learning or what are basics of learning, what are theories, it's spitting back what's all over the Web. And it is always spitting back something about learning styles. So ChatGPT is promulgating this idea again. And so, about learning styles, I don't deny that people have preferences.

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Jane Bozarth: [00:15:39] I don't think any of the literature is saying that I don't like pictures, or you don't like music, or something like that. But we haven't shown that it has any effect on learning outcomes. The context and the subject matter delivered in a way that makes sense for that and the performance outcome is the way you accommodate learners. It is not just showing Jane pictures. But dual coding says that we take in information via two channels. We take them in via hearing and via visuals—I think that's where some of the learning-style stuff gets routed—and that, in order to fully retain and access an idea or a concept, we need both those channels to make sense of things.

Jane Bozarth: [00:16:22] For instance, if I say the word *dog*, you know the word *dog*, but I bet you see a dog. A lot of this was started up in the '70s. It has continued. Now, I would say my reliance on this idea goes back to Rich Mayer and his work with multimedia learning because—he didn't call it dual coding—but he talks about things like (and he's done the research on it) the most effective way to present, say, an animation, is to offer it with narration rather than text. So you hear it, and you see it. Most of the time that's better, anyway, if you have the narration. But narration is not just reading words on a screen; it's meant to also go with an image that you can code together.

Celisa Steele: [00:17:04] I believe, in my reading of your reading of the other research, is part of it is that when we make use of both visuals and auditory input, that also can help a little bit with the cognitive load issue. There are these two paths in, and so it allows us to get back to effectiveness, more effectively convey the information.

Jane Bozarth: [00:17:29] Right. There's a fellow named Josh Cuevas at the University of North Georgia who does a lot of literature reviews of current stuff with learning styles. And, particularly, very little of it is experimental, which he calls out. People will say that they did a study or did research. They really didn't. They're just doing somebody else's lit review. But Josh presented that, and it's the reason I included it. He presents that as an alternative to this concept of learning style. That's not really very legitimate, but let me show you what is. The fact that we don't like it or that we've debunked it doesn't mean that HR has. I think one of the biggest challenges I ever had in my life—they were nice people—but I worked in, under, or around HR for most of my career. They believe that learning looks like school.

Jane Bozarth: [00:18:16] You sit in a chair, and somebody tells you things, and you take notes, and then you've learned. And, when we are trying to explain, "That's not really all there is to it," or "We have other approaches," or "Let me show you how else we might do it," then they also have come out of this school system with learning styles in their heads. And we have to try

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to counter that without arguing with our bosses, without getting ourselves in trouble, without telling people, "That's just stupid. We know that this has been debunked." So I think this is an interesting way to present it. I know you have to have these conversations. Let's talk about something that is more evidence-based, that will satisfy their sweet tooth for "We need pictures, and we need words." I think it's useful, especially in that way, just for those of us that have to get through our conversations with stakeholders.

Celisa Steele: [00:19:01] Related to what you're saying, part of some of the enduring appeal of the myth of learning styles is just the fact that they do give learners some control. And I think we do know that there is benefit to learner agency, to giving adults choices. I'm thinking about Malcolm Knowles and the importance of autonomy when he's talking about adult learners and things like that. And it may be what you've already shared, but do you have any other advice for how to balance using evidence-based practices when determining instructional styles and methods but still allowing for some learner autonomy, some learner choice as well?

Jane Bozarth: [00:19:45] I do. I want you to hold that thought because I need to go back to the earlier part. Parents believe that their child didn't learn because they weren't taught in the right way. "Well, my child is visual, and that teacher just talks. Therefore, it's not little Scotty's fault." So it does provide excuses, and we see that with lots of the instrument-based things that we do in this business. But, back to the thing about learner choice. One of the most interesting things, I think, that's come out of the learning styles literature in years was a 2018 (I think) piece by Husmann and O'Loughlin, who talked about putting the nail in the learning styles coffin. I think this is really interesting. Other people are less excited by it than I am. But, generally, when we talk about learning styles, somebody somewhere takes a quiz, somebody fills out an instrument, and they decide that they're this type—I'm visual; I'm auditory; I'm kinesthetic. Or they come in just saying, "I know I'm visual. I can't hear." Or "I don't like audiobooks because I'm something." Generally, we start from there, and then there is an intervention provided by a teacher or a manager. "Okay, well, here's this in this format. Here's this in that format. Now do a quiz."

Jane Bozarth: [00:20:52] So there's an intervention offered. O'Loughlin and Husmann did something that I don't think anybody else has done. They asked students—I think they were college students—what their preferred style was. They may have taken a quiz, and they all agreed, "Yes, I'm auditory. Yes, I'm visual." And then, left to their own devices to choose things they wanted to use as study guides, they didn't choose the things they said they preferred. So we could talk all day about whether people even understand what learning is or how they do it. But it was like when you're told you've got to learn chemistry, you didn't go pick the audio

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book. When you're told you're going to build a deck on your house, you didn't just read a text. Inherently, they knew that. They knew to choose the things that supported how they would learn something. I just thought it was really interesting that we say they have agency. We say we're giving that to them. But then, when we do give it to them, they go in another direction. Your question was about how we can balance…?

Celisa Steele: [00:21:46] Yes. Thinking about how to balance, okay, we know what works based on evidence, based on studies, so, when we're trying to determine instructional methods, let's use those evidence-based practices. How do we balance that with this idea of where can we allow for some learner choice, some learner autonomy?

Jane Bozarth: [00:22:05] I think there's a lot of room for that. I think, particularly if we're talking about "I believe in learning styles" versus "I want to use dual coding," there's not that much difference. Instead of having dancing cats to accommodate the visual learners, we're going to have a more meaningful animation with some narration. And I do think that we can take what we know about evidence-based practice and still have good practice, not boring practice and not dull practice. But I do think we're going to have to give up what I have always thought of as more decorative elements. I know lots of classroom trainers they love those icebreakers that don't really break ice, and they love "Let's do it. Let's go around the room and do a game" that has really not much to do with anything. I don't know that it's that difficult. I will tell you, I think this is interesting, when—and I don't use it sparingly—but any time I have used the phrase "evidence-based" in a report title, it gets an overwhelming number of downloads that spike. I go back to I think that the people working in the business really need something in hand.

Jane Bozarth: [00:23:10] I've had them tell me this: "I need something in hand when I go to management and say, 'This is why we're not going to make something mandatory,' or 'This is why we're not going to just have Bill sing about compliance.'" They have something in hand. But I don't know that it's mutually exclusive to say something can be evidence-based and still not give the learner agency. Again, I know I'm getting ahead of ourselves, but I already complained about AI and ChatGPT. But the other side of that is that AI tools can generate alternative approaches for learners so that they do have a choice of how they want to access material, where, generally, a busy instructional designer isn't going to do that. They've got time to do one thing. It's probably going to be a course. They don't have time to generate it in six different formats or four different ways, but AI can. So I think that also, when we start talking about upside/downsides of new technologies, that's a really good example. It can create adaptive experiences that probably the average ID doesn't get paid to do.

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Celisa Steele: [00:24:20] As we're talking here, I think folks can hear how much of your work does focus on evidence-based practices. And it seems like a no-brainer to do things in proven ways. But it also seems like we still run up against these situations where things are being done in ways that are maybe a little dubious. And so I'm just curious to know what you see as the major hurdles to broader adoption of evidence-based approaches to designing, developing, and delivering learning experiences?

Jane Bozarth: [00:24:51] I will just say again, I worked for HR for a number of years—or under or around or near or close to HR—and I know many of my colleagues do as well, still. And there is enormous pressure from stakeholders to just crank things out in a one-size-fits-all. Just read them the policy; get them to take the quiz. It can be very hard to have the conversations where we can help them understand that just completing a quiz doesn't mean performance will change. I will say it's a dirty little secret that your listeners will know, but sometimes HR doesn't care about that. They just want to know that somebody signed the policy, and, if they violate it, well, too bad, but we trained them. I think that many of the people I interact with and I've engaged with over the years will tell you that a lot of what they do is at the direction of someone else and that they spend a lot of their time trying to talk people off some ledge. I remember one time I was in a meeting, and somebody in the room had figured out how to insert a running clock into the corner of a PowerPoint slide, and they thought that was the coolest thing anybody had ever done in the history of ever, and couldn't we do that in all of our classroom sessions?

Jane Bozarth: [00:25:59] Do you know what people do if you have a running clock up in the corner of your slide? Do you know what they look at?

Celisa Steele: [00:26:02] The clock.

Jane Bozarth: [00:26:05] And so, again, you're in a chair trying to explain to smart people, educated people that what they think they know about learning isn't quite right. And sometimes you win those things; sometimes you give up. I think that one of the deficits in our training for instructional designers and folks in those kinds of roles is that they don't really teach negotiation or assertiveness skills in those programs, and I think we could use that. I think that's part of it. And I will also say some of it is that we like entertaining stuff. We want to be the funny presenter. We want to be the one who creates the interesting e-learning, even if people aren't learning as much as they should. I do think sometimes we have to set our egos aside.

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Celisa Steele: [00:26:43] Well, I think another reason that occurred to me that may be a hurdle to getting evidence-based practices adopted is something that you raise in one of the reports, which is just the trustworthiness of the research, that there can be a little bit of a question of— and I think you just mentioned, while we've been talking, that Cuevas has said people will say that there's a study, but it's really not an experiment, or there really wasn't a study done to back up whatever the claim is.

Jane Bozarth: [00:27:12] I think sometimes people just dismiss it because their own anecdotal information tells them otherwise. I know, in many conversations about learning styles, "Well, my daughter is a case of this," and what they don't know is that the teacher tried 17 other approaches before she showed the daughter a picture. Or somebody has explained it, and—you know as well as I do—you can explain something six ways, and somebody can come in and say it a seventh way, and, suddenly, the light bulb goes off. Was it the repetition that did it? Was it the explaining? So I think people are quick to dismiss things that go against their gut. You're up against people who think they know. They came out of school believing in learning styles. If you're a school teacher, for instance, there's an overwhelming amount of "research" being thrown at you that says this is valid. And we're saying not any of it is, even though it feels right. It feels intuitive. And that is a challenge too. It feels like people probably have preferences, which they do, but it doesn't really make any difference with the outcome.

Celisa Steele: [00:28:10] All right, so we've talked or touched on artificial intelligence a little bit, but let's turn to it a little more directly. And I know this is a big, broad question, but I'm going to ask it anyway and let you go where you will. But what do you see as the implications of artificial intelligence for learning?

Jane Bozarth: [00:28:27] Most of my understanding and my need to use artificial intelligence anymore have to do with content creation and content creation tools. So I know about other things; my own experience is a little bit limited there. But it's a wonderful tool for saving you time when you're generating content, when you're creating content, which is true of anybody in learning design, in marketing, in management, probably. It's a great time-saver. I use it often to organize my thoughts or do a preliminary scan of literature just to see what kind of themes are out there, what bucket stuff seems to be falling into. I have a caution to warn about that, though.

Jane Bozarth: [00:29:06] But, as far as we talk about learning, I already mentioned the fact that, you, as a designer, for instance, if you're creating a course, some sort of experience, the AI can take over. It's like having a coworker who can create alternative versions of the same material. It

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can offer a video-based version, a text-based version, something that people can choose from. Going back to your question about learner agency, they can look at two or three different ways. If one way isn't working, they can switch to something else. It helps with our understanding that learning is not just a single intervention. There are a lot of ways this could go. This tool can help you go that way. It can create adaptive testing, where the questions that you get are based on how you answered the questions before, or it'll repeat a question in another way if you missed it the first go-round.

Jane Bozarth: [00:29:57] You can get adaptive content. You can get predictive analytics like, "We have seen Jane's past with this content, and we are worried that she might be at risk. Let's get her some more stuff." It can do adaptive, intelligent tutoring like, "She has struggled with this every year when we've offered it, so let's see if we can get her some additional online help before we make her test again." It can write test questions, which humans are terrible at. We are awful at it, even though we know how. A good chatbot, and I know that there are bad ones, but I have seen good ones.

Jane Bozarth: [00:30:29] If you've ever wondered how Amazon could recommend a product and get it just right, now, I will say that requires an enormous amount of data, but a recommendation engine and an LMS could make for really interesting things. "If you like this course, try this course," or "If you found this difficult, here's something else," or "If you're interested in a job in this area, here are some of the prerequisites that you would have to do, an orientation." I think that there's a lot of potential for AI. I worry that we have oversimplified and demonized it, sometimes with good cause, but the things I see people worrying about are not the things that I think are worth worrying about. You know they're just freaking out the students are going to cheat. I'm like, well, they had Google before January, but….

Celisa Steele: [00:31:11] So that's where you're seeing a role for AI—you named a number of areas. You mentioned in passing, I think, something about caution. So where are you a little more wary, or where do you see reason to be less than enthusiastic about AI?

Jane Bozarth: [00:31:26] My first things I wanted to do when I took the job with the Guild, the research job, I wanted to visit some of the myths because I thought I knew things, but I'd never really done a dive. Nobody had published a deeper dive meant for the masses that wasn't an academic-y journal article. And so the first one was learning styles—10,000 words on learning styles—another one on personality-type instruments, and another one on this idea of generations. And we decided some years had gone by. It's been five years. Things do change. People will call you out and say, "Well, Jane, you did say that, but that was 2018."

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Jane Bozarth: [00:31:58] So I went back and did a revisit. Had there been anything new? Josh Cuevas came up in that conversation. Is there anything new? Has something changed? No. Pretty much no. But what happened was I knew that there would be a mountain of stuff for me to look at, and I just thought I'd see what ChatGPT said. So I typed in—I think the prompt was "Generate an essay describing recent research in learning styles with citation," and it did a great job organizing the buckets that would come into learning styles, why they're popular, why they're not, what the new research said. It was very helpful just seeing what I was going to be dealing with when I started reading this. And all of the citations were fake; they didn't exist.

Jane Bozarth: [00:32:40] I couldn't find them. One of them I did find, but the citation cited the fourth author on an academic paper, which I thought was just real weird. I don't know if everybody out there is just making up articles. I don't know because ChatGPT is not writing them. They're scraping what exists. So I was a little concerned. And it turned out I could use very little of it because everything it told me, then I still had to go back and double check it all because the citations weren't right. I think, if you're trying to get it to write about your new widget and how it'll make your bike run faster, maybe that's fine. But I would be cautious. And, especially, I would be less worried that kids are going to cheat with it, than that the kids are just citing all kinds of stuff that they're not checking. You better go back and see if it's real. I have friends in the ID business who have some warnings about it. I think there is a little fear that it's going to take over some jobs. I am of the opinion, if your job means you look up a bunch of stuff and make bulleted, text-based slides and put a next button on it, maybe we ought to have a robot do that, that maybe you need to step up your game.

Celisa Steele: [00:33:54] So when you think about the future of learning and where we're headed with learning, what comes to mind? Are there particular trends or developments that you're keeping your eye on?

Jane Bozarth: [00:34:05] I think e-learning, as a big word, is developing a better reputation. I think that the age of Zoom has…. It's really funny. When we shifted, we had tried for 15 years to get people to use these technologies for training, and all of us argued and fought and presented and cajoled and rationalized. And, all of a sudden, everybody's just doing it on Wednesday. They didn't all do it well. That's always going to be a challenge for us. But I do think that we have overcome a big hurdle of technology fear. I think people are much more open to it. I think that they are interested in new and different experiences. I hope that we have started helping them see learning is a broader thing than a single moment in time, that it's a journey in many cases. I love what's going on with experience design. There are some who

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argue that it's not really a thing, but okay. But I think the idea that the learner is on a longer path than just 30 minutes in front of a screen is catching on. I'm a little frustrated at what's going on with AR and VR. I will tell you this, I think that VR is getting the lion's share of attention, that it's very sexy. It's also not cheap yet. The headsets, we aren't past the headsets yet, and they're not cheap. I think that AR is grossly overlooked. I think there's so much potential that we're missing. I worry about it. I think AR is great. It's not hard to create. It solves a lot of problems. I'm not sure it's going to get much uptake. I'm afraid it's getting left behind in a lot of arenas.

Jane Bozarth: [00:35:34] I think AI is going to change everything in ways we don't know yet. Like I said, it's going to create adaptive experiences, adaptive alternatives to the way that learning has always been fed to us or organizations have been told to feed it. I think it's an exciting time. What's interesting is, apart from AI, I was in a meeting not long ago, this is the first time I remember in a long time there wasn't some hot, new, burning thing on the horizon that was going to change everything. For years, it's always been this thing, and then there's this next thing, and then we go through the hype cycle, and now it's something else. I see some of it with AI, but I don't think we're quite there yet. I think it'll be another few years before that happens with it. So it's an interesting time, and I don't know if COVID had something to do with that. We did a lot of research during that period, and a lot of companies said COVID gave them a chance to catch up, that everybody felt they were lagging in some regard, but having three years of not having to try to keep up, do that, helped them catch up with what was happening. Maybe that's where we are right now.

Celisa Steele: [00:36:36] So we always like to ask guests on the podcast about their own lifelong learning habits, given our focus here. I would love to hear from you about any specific habits, practices, or sources that you use to continue to grow professionally and personally.

Jane Bozarth: [00:36:54] Well, the good news is my job requires that. I have to do a lot of reading. What I have found is it makes me pay more attention to what other people are writing. For a long time, my friends, all of us, were all writing about the same six things. We still are. So it's finding new people to follow. I found Daniel Willingham in a video series he was doing with another Daniel called The Daniels on Research, talking about learning. I find anybody who dissects and analyzes research to make it more accessible to all of us is very valuable. Philippa Hardman is talking a good deal about ChatGPT and AI, as is Josh Cavalier, who's writing really great examples of how to do particular things, how to write prompts.

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Jane Bozarth: [00:37:35] Accessibility has always been interesting to me. My first 10 years with the state, I was a training person, but I worked in a hospital for developmentally disabled adults, so we were dealing with people with mobility challenges, people who were blind, people who were deaf, people who were deaf-blind. I was interested even then about how to make things accessible, and I learned a lot about it, and I was very pleased when that became a hot topic. Susi Miller is British. It's spelled S-U-S-I. She's a wonderful resource on accessibility. Her book is fabulous. Julie Dirksen is one of the smartest people I know. She writes about designing for how people learn, and she remembers everything she's ever read, ever. She's amazing. So those kinds of things help keep me informed professionally.

Jeff Cobb: [00:38:24] Jane Bozarth is the director of research at the Learning Guild. In the show notes for this episode at leadinglearning.com/episode378, you'll find a link to the Learning Guild Web site, where you can learn more about the publications it offers and the events it holds.

Celisa Steele: [00:38:39] Jeff and I would be grateful if you would rate the Leading Learning Podcast on Apple Podcasts or wherever you listen, especially if you find the show valuable, because ratings help us show up when people search for content on leading a learning business.

Jeff Cobb: [00:38:53] And please spread the word about Leading Learning, whether in a one-on-one conversation with a colleague, a personal e-mail, or on social media. In the show notes at leadinglearning.com/episode378, you'll find links to connect with us on X (formally Twitter), LinkedIn, and Facebook.

Celisa Steele: [00:39:10] Thanks for listening, and see you next time on the Leading Learning Podcast.

[music for this episode by DanoSongs, www.danosongs.com]

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