

ELC O57: How to Plan and Design Microlearning

thelearningcoach.com/podcasts/57

Connie: Hello learning people. Welcome to episode 57 of the eLearning coach podcast. I took a summer break and it's great to be back. Okay, now I need you to sit down because I've got something pretty shocking to tell you. Ready? Microlearning is not about time. There might be more definitions and explanations of microlearning than in any other term in our industry right now, but thanks to the authors of Microlearning, Short and Sweet, Karl Kapp and Robyn Defelice, We now have some clarity about what microlearning means and how we can plan, design and implement it.

Karl Kapp, Ph.D. and yes, his name is pronounced "cop," is a professor at Bloomsburg University, a consultant and an expert in games for learning. Robyn Defelice, Ph.D. is the director of training at Revolve Solutions, and is a consultant at her company, Dishing Design. In this episode we discuss examples of successful microlearning. How it is supported by cognitive science. Use cases from microlearning, and much more. The show notes with resource links and a transcript you can download are at thelearningcoach.com/podcasts/57. Here's our conversation.

Robyn and Karl, welcome to the eLearning Coach Podcast.

Karl: Thanks. Great to be here.

Robyn: Thanks. Looking forward to this.

Connie: You have written a book about microlearning. What was your reason for writing the book?

Karl: I think we saw that there was a big need in the industry. Lots of people were talking about microlearning and there were lots of resources out there, but they weren't all in one place. So, we saw an opportunity to really help people get a good understanding of it, all in one place and get all the kind of research fundamentals, and content fundamentals, and elements about microlearning, and examples, and kind of threw them all together. Robyn, what are your thoughts?

Robyn: I agree with you along the same lines. I saw it as a need for clarity, not only for the industry, but those that would want to adopt it within their own organizations. And I just was having conversations last week with another group where they said, "You know, even within our own learning and development department, we can't agree on it. We can't agree on the definition." So, we can't even help our clients and our clients are less informed than we are. So, I thought that that kind of confirmed what Karl and I had been seeking to do. Just trying to get people to move beyond what it is, so that they could actually use it. And to help them move on so that they have that opportunity to actually see the benefit of it, as opposed to just going, "Well I think it's 10 minutes versus 20." "It's a video versus a mobile app." Let's get beyond that piece so that you can actually start to see how it fits to your learning infrastructure.

Connie: Yeah. Great. So, Robyn, how do you define microlearning?

Robyn: What I took away from everything I did on microlearning and were trying to find out about microlearning, before even Karl and I were talking about the book. The one thing that when we sat down, him and I, we kind of realized that the big hang up for people became about the definition of what it is. And then the definition of how long it should be. And so I think part of trying to define microlearning for everyone was to try to help them get away from that time restriction and stop focusing on that, so that they could see that there were many more possibilities for themselves to have microlearning infused into their learning infrastructures. So, that's part of the reason I think we defined microlearning the way we did. But Karl really is the one that came up with the definition. I saw it as an opportunity to focus on the time.

Karl: Yeah. I mean, one of the things that I like to do, I guess being an academic, is kind of break down a definition into its pieces; so that we can kind of understand all the elements that go into defining something. I think a lot of times in lots of industries, we talk about these terms, and we assume everybody knows what they mean and everybody assumes that everybody's on board with the term.

So, I think it makes a lot of sense to kind of break down the term into its little pieces and that's kind of what we did in the first chapter. We broke down the term microlearning and then we pointed out the fact that, you know, it's not time bound. We also pointed out the fact that it's not a new concept, it's been

around for a while. We pointed out the fact that it's part of, usually a larger effort and curriculum and those kinds of things. So, we tried to really kind of examine it from multiple facets, kind of like a diamond, and then explain the facets so that somebody could have like what our interpretation is. We even included a bunch of definitions from other folks who did a great job. Again, the book was kind of about bringing things together.

Connie: Hmm. Robyn, can you read us the definition that you used in the book?

Robyn: Absolutely. Karl and I described microlearning as an instructional unit that provides a short engagement in an activity intentionally designed to elicit a specific outcome from the participant. And that's a really loaded definition, as we point out in the book. In a good way, as Karl points out. Lots of folks had pieces of definitions that rang true. But I think one of the things I love is that we use participant, and not learner.

Connie: I thought it was a really good one and I couldn't help but wonder, how long did it take to come up with a definition? Because I felt like it would probably take me 10 hours or something.

Karl: It did take a while because, you know, we'd have something that we thought would work, and then Robyn would point out, "Well what about this?" And I'm like, "Ah, okay. Yeah we didn't think ..." And then we would write it. And then we said, "What about this?" Well we forgot about being intentional. Okay, so we need to think about that. And then, we did have a really robust conversation about, participant or is it learner, or who is it that's actually benefiting from that? And I think Robyn came up with the idea. It's a participant because maybe it's performance-based, and you only need it for that one moment in time, and you're never going to change a spark plug again or something like that. That's where the genesis of that came from.

Connie: Mm-hmm (affirmative). That makes sense.

Robyn: I think the term participant is helping to underscore the benefit and the idea of microlearning. It's to engage you to do. Not to sit back and be passive. I think that's the real key thing about it, is microlearning really isn't about being a passive learner. It is actively engaging within it.

Connie: That's great. That's a really good definition. I was so impressed. Can you provide one or two examples of successful microlearning efforts?

Karl: Sure, yeah. I'm involved with a project called, iLook Out through Penn State, and it's a project that we're actually helping childcare workers identify and define and report child abuse. And the really cool thing about it is, we had, you know, the typical training class. It was kind of a video-based training class, and then we've been sending them, we call it 'drip learning', but it's actually microlearning that we've been providing to these caseworkers. And the preliminary results are really, really positive. So, was a little bit interesting to me because you take something like identifying child abuse, which is really serious, and really has consequences for the child, and the community, and everyone involved. And you can see something like microlearning can actually have an impact on helping those people to identify what they need to. And then, it's a little as affective, because even though you're a mandated reporter, you have to have the confidence to actually report it and know that you're right.

And so, you don't even have to be right, but you just have to suspect it. But you have to have, you know, good reason to. And so, there's a lot of things that go into making a decision to report or to identify. And it's kind of exciting to see. There's a little app on the childcare providers' phone. And once a week we send them a message that's tied to specific learning objectives. And sometimes they play little games, sometimes they read an article, sometimes they see a little video, and it just helps them focus on what they need to do to keep the children safe.

Connie: That is amazing. So, there was a video course to start and then the rest are microlearning elements?

Karl: So, all childcare workers in different states have different requirements as mandated reporters. So, teachers for example, and childcare workers, are mandated by the state to report suspected child abuse. And so there's a three-hour video-based course to start it. And they have the same kind of course in Pennsylvania, a video course that does that. But what we've added through this grant and through our work with microlearning, is that microlearning reminder. And we know from the bed of research is that microlearning works because it helps remind, and send nudges, and things like that. And so here is in-the-field

example of, you take the course and then you get reminders every week to help you stay on track in terms of what you should be doing.

Connie: Right. That's going to help so much with retention. And Robyn, you had an example that you wanted to discuss.

Robyn: So, if you've never seen microlearning or experienced microlearning, what's a way everybody globally or universally can look at a great example of microlearning. In the book I refer to an app I use almost daily called Elevate and another version of what I think became more popular first, which was Luminosity. So, it's a brain game but it does similar things. It goes over the basics of math and English, and speaking and listening, and it works you through small little lessons every day. Not so much in the lesson sense, but it's practice. You can change how many topics you want to do, you can actually change it so that you only focus on like, let's say I'm reading and speaking, versus the math in it. It's really nice, because there's days where I'm in my head mentally calculating discounts in this app on a game, like which thing's cheaper, and ordering them.

And then in another moment it's making me edit a document, just like I would for the book. And it even has click recall of definition. I could go on and on. There's a variety of different games that it has in it, but it's probably the most accessible piece of microlearning I could tell anybody to go look out today, to get an idea of what a really good product looks like inside of a mobile app delivery. Because it even provides supporting, call it a tutor or studying. So, there is a speed reading piece in there where it's training you to actually exercise your eyes to skim and scan, so that you can read, and then the data it gives you back is ridiculous. Like I know that I read two and a half times faster than most people in my age group. I developed that skill over the last two years by using that app.

Connie: Those are both interesting examples. One that I thought was a nice example, but not as complex or involved is Google Primer. Are you familiar with that?

Karl: I am. Yeah, that's a great app. I really liked that Google Primer.

Connie: You do interact a bit, you answer questions, and you swipe. It doesn't sound nearly as engaging as Elevate, but it's a simple example anyway.

Karl: Mm-hmm (affirmative). And it's free, anybody can download that as well. Yeah, that's a good example. Another example that we talk about in the book, there's a tool called Presentr, it's present and then the lowercase "R". And that's kind of an interesting microlearning because, it's basically an app that helps you practice presenting. It actually measures your "Ums" and "Ahs" to interrupt words. It does your volume and it does your pacing. And you can record yourself, and then it has a little meters on it that tells you how you did, and then you can practice and give you feedback, so it's like having a coach in your pocket. It's this microlearning coach in your pocket, which is kind of interesting.

Connie: What a great idea. You've shared some great examples. Let's move on to cognitive science. Can you talk a little about how the concept of microlearning is supported by cognitive science?

Robyn: Well, the cognitive science pieces, it's like the space retrieval in the forgetting curve. It's supported in the sense that it's not ... I mean obviously this research wasn't done with microlearning in mind, but it surely does speak to a foundation or a premise of why microlearning and its concepts would or could be effective, or are, as Karl's example with Penn State. That, over time, we forget important aspects that might be of benefit or need at the moment. And so what you're doing with microlearning is helping to refresh that memory of that concept, that activity, that idea, and so forth. And then you pair that with something like space retrieval or space practice, where how often do you do it?

For example, I was using another app called Noom, which was for weight loss. But one of the things that became very boring and not as supportive to me was, repeating certain activities every day that they felt was an important reminder, but it was actually desensitizing me too. So, there's also, I would say a sweet spot to how often you want to have a person recall information. Obviously, recalling it at time of need is valuable, but when you can't determine when somebody is going to need anything, you have to think about how often practicing and retrieving will work. Part of that research also looked into: Does it build a stronger, I guess neuro-network? And Karl, you can correct me if I'm saying that wrong, but it's helping you to actually build a stronger memory muscle for recalling it when you actually do need it.

Karl: What we try to do in the book is point out research that supports the use of microlearning in different ways. No research is definitive, you know, certainly research supports certain things; and we find a lot of research to support the use of microlearning and good ... I always say good instructional designers, and good developers have known microlearning for years. I have a book from graduate school that talks about chunking content. Which is basically microlearning. So, it's not new, and some of the research is Ebbinghaus's forgetting curve is literally hundreds of years old, so people have known this for a while. It's just we haven't always had the best delivery mechanisms. And now that we have a computer in our pocket, we're able to have that learning anywhere.

Connie: Right. You know one thing that you were saying Robyn, with that repetition that can actually get you jaded so that you don't notice it anymore. I interviewed one of the coauthors of Making It Stick, who mentioned that there's that inter-leaving of doing all kinds of varied practice then to just keep doing the same thing over and over again.

Karl: Yeah. Inter-leaving is a pretty powerful tool in terms of actually learning to combine skills, and to keep the learner from getting bored. I think one of the things, you know that instructional design did, was a scientific approach to learning. And there's been a drive to being more and more scientific, you know, the objective, all that kind of stuff. And I think sometimes that drive left out the human aspect of it. You can be as scientific or as precise as you want, but if you can't get my attention, if you can't motivate me, you can't tell me why I need to know this, you're going to lose me no matter what. So, you know my work in gamification really is about bringing humanity back into learning, because we seem to have, in some cases, left that out.

Connie: Mm-hmm (affirmative). Yeah, a really good point. You've come up with six use cases in which microlearning can be effective. Can you talk about a few, or one or two, and then Karl can talk about a couple? I did find it really interesting and really helpful.

Robyn: Some of the use cases that I would say are more common, would be the most easily approached ones, such as practice based. Who couldn't use practice on something? As Karl pointed out in an earlier part of our conversation, practicing how you present. Or I was practicing some basic skills in math and English, that

type of thing. And so, I would say there's some that will be very well received. In the sense that people will identify and say, "That's something we could probably quickly add into the learning infrastructure that we have in place already." Or like post-instruction, where you know you've had a week's worth of onboarding, and now what do we do to help you post that training? Because we also recognize, just from our conversation about the forgetting curve, and space retrieval, how do we help to perpetuate the information you were just kind of mass distributed in that one week?

So, those are some of the ones that I see as being the more appealing ones to folks to grab onto quickly. I almost want to jokingly say that pensive and persuasive are the touchy feely ones, because there is an element, if we were continuing on from the cognitive sciences, there is a blend here of the effect of domain and not just from a motivation standpoint, because we really do tout the notion that this is about you performing. And so, therefore if you're performing and developing an outcome for performance, there is going to be an element of, one, motivating the person, not only to engage with maybe the microlearning you've created; but to reengage in the way that you need them to perform that job, or that specific task. And so where pensive and persuasive come in, I really do think that those are maybe the less obvious ones, but have a, I would think, in the long run a stronger impact on overall performance and behavioral outcomes.

Connie: So, can you explain what pensive and persuasive use cases are?

Robyn: I'd almost want to say your question was pensive, but it's not technically. But the pensive one I kind of like, because I'm a big fan of metacognition and reflection. And I think Connie, you might share that same love, if I happen to remember from our conversations of past. But pensive is really about an opportunity to have to help a person look at a circumstance that they've been in. A good example would be breaking down a problem. Let's say you're a new leader, or a new manager, and you had to do a presentation to higher level leadership, and you didn't get the buy in you wanted for something you're positioning to them. The pensive prompts could help you to reflect on what went well, what didn't go well, what ways could you have done it differently?

The persuasive piece is definitely sitting in that affective domain solidly in my mind. Granted, it will have a blend of cognitive, but what you're really looking at

is maybe dipping down into the point where something that's, "I have to do it." And maybe you're not doing it all the time, consistently. It's helping you to develop a value for what it is, and to move you into doing it as a behavior, as opposed to something you need to be reminded or prompted to do. You could think of, I would say a fun little microlearning infographic I've seen recently was in Asheville, North Carolina in an organic restaurant where you bussed your own table. When you went to the trash cans, in front of each of the trash cans, they were colored differently. And each trash can told you what it was for, and why. So, "Put your paper in here because it's going to help us recycle and it's composted. We can compost it."

"This is not something that's biodegradable. So, you need to put it over here." And then it gave you a little bit of statistics. I picked that all up in just that one minute of figuring out, and that was my first time doing it, but I figured it out quickly enough. But I actually learned a couple of things I didn't know about recycling, that I could actually recycle. So, I'm now persuaded to do that more often because I didn't realize how easy it was.

So, I think that's the fun part about persuasive microlearning. The pensive one I think is, and maybe Karl, you can talk a little bit to it as well. I see it as really something more to the self-directed person. Be great for coaching as well. Whether that's something an organization buys into to coach, for coaching for, let's say, leadership folk or for a program that helps folks become leaders in an organization. There's definitely more uses for pensive than that, but I find something a little more personal about the pensive piece than I do, maybe the persuasive piece. Even though persuasive really does get at the core of you, and getting you to change your values to adopt a new behavior, or pattern of habit.

Connie: Mm-hmm (affirmative).

Karl: Roger Schank wrote something called Engines for Education. And he talked about something that is kind of like pensive learning, where it's kind of this question-and-answer thing. And it really is to get you to think about, maybe it asks you a question, "Who's your favorite artist?" And then they might say, "Well how would that artist solve this problem?" Or, "What if you could solve this problem with no constraints, what would you do?" So, it really helps the learner kind of walk through a brainstorming session and think about how she should be

approaching the problem. It can be troubleshooting too, you know? Have you checked to see if the computer is plugged in? Have you checked to make sure that your volume is turned up? It's a little bit like the troubleshooting that Microsoft does sometimes when you can't get to your internet. That's a form of very quick microlearning.

Connie: You know, I've never had that ever work, but that's another topic.

Karl: Yeah, that's true. That's a whole other subject.

Connie: When would you recommend *not* using a microlearning approach?

Karl: Yeah. One of the things that I worry a little bit about microlearning, is that people tend to want to replace every kind of learning with microlearning. And I had this category of learning, I call 'deep learning'. And so, I give the example, I think I talk about in the book, where you know Sully Sullenberger did not land that plane on the Hudson through a series of microlearning messages, right? He had deep experience in simulators, deep experience with gliders, deep experience flying airplanes.

So, if you really need a deep level of knowledge, or expertise, or somebody who naturally can think through the problem or the issue, and has to do it quickly, microlearning is not the right tool for that. So, I think we need to, as learning professionals, really talk about the need for deep learning and deep understanding. And I know that the world's speeding up, and everybody doesn't want to spend, one minute away from productive time. But it actually turns out that the reflection time, and the ability to immerse yourself in a topic, is really going to pay off in the long run, really does pay off for the organizations and the individuals.

So, I think if you really need deep expertise, and deep knowledge, and almost reflective anticipation or reaction, then microlearning's not the right tool.

Connie: Mm-hmm (affirmative). And we do forget about that once in a while. That sometimes it can take years to learn something, and we can't just do it all with one quick eLearning course or one-

Karl: So, learning can't be Shazammed, right? I mean it really takes a lot of focus and knowledge. But a lot of people don't want to admit that, or don't want to believe it's true, or you know it's inconvenient for them, but we really do need people that have deep understandings in lots of different areas, to make our organizations successful.

Connie: So, what did you find are some of the best practices for designing microlearning? What would you recommend?

Robyn: I would say, on the surface as a baseline, the best practices for designing microlearning would be somewhat the same or similar to what you would do for any other piece of learning that you were designing. But there are some key characteristics that maybe make microlearning have its own flavor of considerations for design. Much like if we were talking about gamification. I mean, Karl could speak to that, or maybe some virtual reality - VR, AR. There's going to be some different things that you need to ensure are considered, more so over others. And one place that I've noticed that, when we go to do designing of microlearning, is we really need to think of the plan upfront. And we do discuss this a little bit in the book, because it's the implementation pathway that can kind of get tricky for folks. So, part of planning really does need to consider implementation, but also part of planning is, that your microlearning piece may not be standing by itself.

You might be doing 10 microlearning pieces. And so, how do those all fit together? What do they look like? As we were pointing out earlier in some examples, some people offer a microlearning solution. They're offering you multiple ways in which to engage with microlearning. Whether it's a podcast, an article you're reading, that type of thing. So, that's where all that planning is coming into play. It's not going, "Okay, my client needs a piece of eLearning, and they'd like five engagements." That's a different story. Microlearning has its own planning timeline that needs a little more love and attention than I would say a traditional web based or eLearning piece of a training that can be developed. I think another one kind of is overarching as well, is the conciseness. And not just conciseness because you need to write short and sweet messages, so to speak, but the overall learning product needs to be concise.

So, I was giving an example of the forest versus the trees, versus a branch on a tree, versus a cluster of leaves on a limb. And you know if we need to focus on, if microlearning was that, and we were focusing on those two or three leaves on a limb, we wouldn't make the entire microlearning designed around the forest or even a group of trees. Or maybe we might reference the tree that the limb is attached to, but we wouldn't put a lot of focus on it.

That might be the writing, but that might be the way you laid it out, from an aesthetics standpoint as well. There could be multiple reasons, or multiple facets, excuse me, to why you need to be concise. Because at the end of this microlearning piece, there's really only one outcome, or one to two outcomes, that you're trying to achieve. So, like a bulls-eye, everything that you do to design it needs to be targeted and focused on that at center point; so that's how it's perceived and received for the end user. So, those are the two things I kind of look at as practices, would be planning and conciseness. I'm sure there's more, and I'm sure Karl could probably name a few.

Connie: Karl, did you want to add something to that?

Karl: I think that's good. I mean, the one thing I'll say is, remember core instructional design principles. The basics. And we spend some time actually going through the affective domain, and the cognitive domain, and the psychomotor domain. And we talk about informal, and formal, and we talk about how all of these things kind of work together. So, I think Robyn's point that microlearning is not in a vacuum, is a really important one when you go about the design process.

Connie: It really is, because just like with reusable learning objects back in the day, it has to be tied to something larger, so that people have the prerequisite knowledge.

Karl: Well I strongly believe learning comes through making connections. And so, if you just present some content, but don't make a connection between other content, or how you have to apply it or whatever, then you're just getting information, and you're not learning.

Connie: Right.

Robyn: I love how Julie Dirksen describes that as 'shelves'. And the more you can take that piece of information and put it on different shelves in your memory for

retrieval, the more relevant it becomes to you. Some people travel and collect spoons in every state, you kind of get a sense of what they're doing; but if they collected a rock, a spoon, a shot glass, a poster, a velvet Elvis, you know what I mean? It doesn't have that conceptual hole you're looking for, unless you tie it all together and realize, "Oh, they were at Graceland."

Karl: Right. No thread. Yeah.

Connie: Yeah. That's a really good one. Robyn and Karl, it's time to wrap up. Thank you so much for your time and for giving us some insights into microlearning and helping us be able to use the book as a reference.

Karl: Yeah, thanks. Thanks for having us.

Robyn: Thank you.

Connie: You're welcome. I hope you found this conversation valuable. I think the key takeaway here, is that microlearning isn't just one course chopped up into little pieces. It will take design effort to determine what outcomes will best be served with microlearning, and how it should be part of a larger infrastructure. Again, the show notes with resource links and a transcript you can download are at thelearningcoach.com/podcasts/57.

Take care, and I will talk to you next time.