The eLearning Coach Podcast #76

Getting Started with Data-Driven Learning Design

A Conversation with Lori Niles-Hofmann

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Connie: Hi, Lori, and welcome to The eLearning Coach podcast.

Lori: Wonderful to be here, Connie. Thank you so much for having me.

Connie: I read your informative e-book on data-driven learning design, and I'm looking forward to exploring the topic with you. How do you describe data-driven learning design?

Lori: So, for me, data-driven learning design, it's a terrible metaphor that has not aged well during COVID, but it's about doing a diagnosis rather than an autopsy. A lot of our data analytics that we had in L&D tended to be more postmortem after we delivered something. We were looking for impact, we were looking for return on investment. I'm looking at more, what are some things that can give us some clues as to what will be an effective way to design, and what's going to really have an impact on the business? And it's also a cyclical process. It's not just a once-and-done. It's something that you constantly go back to and tweak and learn from.

Connie: Can you talk a little bit more about how this differs from the way people typically think of learning analytics?

Lori: I think it's also, too, looking at things that are more closely aligned to the business that maybe we didn't look at before. We tend to sit more in the learning management system or the LXP or the learning record store, whatever it is that we're using, or some combination thereof. This is also looking at data outside of that, and so it's more of a holistic view.

Connie: In your book, you talk about digital body language, which is a pretty descriptive term. Can you explain what digital body language is and what are the benefits of understanding a person's DBL, as we in the know say?

Lori: Excellent. Well, I can't claim credit for the term digital body language. I love it. But I worked for Steve Woods, who was the creator of that term, and he wrote a book called Digital Body Language. And this was something that came out in marketing probably I'm going to say around 2009, 2010. And what digital body language is from a marketing perspective, I'll start there, it was understanding what cues people gave online to indicate that they were interested in your product or maybe curious about learning more, or in a potential position to buy. So, it might be how many times they went to your website. This is very early days when there weren't a lot of metrics. But it would be when they maybe clicked on a white paper or they download certain things or they exchanged emails. All those things sort of pull together a picture as to whether their digital body language ... If you think about in dating body language, are they interested in you or are they backing away from you? Are they ignoring your emails, things like that. So that's digital body language when it comes to marketing.

With L&D, what we're looking at is some similar traits, but we're also seeing whether people are ... I don't want to say interested in a topic, but whether they're curious, amenable to it, whether they are coming back to it, whether they are pushing it, pushing it away, they're ignoring it, but also to some of the other cues. For example, are they consuming more video rather than just text online? And be very careful. I'm not talking about learning styles; I'm not talking about learning styles. Some of those things could just have to do with bandwidth and pure practicalities. But it's the idea of, when in their day are they going to learn? When do they have an ability? It's the idea of when can you get people to engage with you as opposed to being a very annoying parent at a teen party telling everybody what to do?

Connie: I remember that parent. In the world of compliance training where people are required to take a certain number of courses, I was wondering whether digital body language could be accurate, informational. But I can see from what you're saying that even though people may need to take something, the time of day, whether they do it in one sitting or in multiple sittings, there is still a lot of information even though people are forced to do it. Would you say that's a correct understanding of the type of information that would be helpful?

Lori: I would absolutely, absolutely agree. And also, too, what I would be looking at with compliance topics is I would say, "Okay, you have the mandatory training that you have to do because the regulatory bodies tell you." I would also be looking at throughout the year, because usually it's an annual or a biannual cycle, I would be looking at, are people going on the internet to search for terms related to compliance? If you have, I don't know, Slack or Yammer or any of those sorts of tools, do the hashtags #antimoneylaundering or #knowyourcustomer, any of those things, are those coming up? Those also, too, are indicators of digital body language when it comes to compliance-related content. And it can tell you a lot. It can tell you maybe there's things that you're missing or things that weren't well comprehended or there's been an incident. Those all fall under that umbrella. It's not just about that once-and-done piece of content.

Although to your point, I love time of day, day of week. The number of times I used to get, "Oh, this needs to be done by the 15th," and I'm thinking, "Why?" And the 15th, is that a good time? I'm thinking of banking. Is that not the day where people get all their paychecks deposited? It's the busiest time, now you're going to force this on them? We can do so much better.

Connie: Yes, I agree. Those are really good points. So with all of this great information, why do you think L&D is slow to adopt data-driven design?

Lori: I think it's because or I know it's because we put a lot of immense pressure on L&D. They're squeezed for so much. I mean, I think back to the days when I was a lowly instructional designer, that's all I did. I didn't need to know a rapid authoring tool. I didn't need to know data analytics. I didn't even need to know how to performance consult. I was purely here. I didn't even write my learning objectives. They were given to me, and I wrote on that. But think of now what the expectation is of a learning experience designer and all the things that they need to do. It purely comes down to a capacity issue, is one of the big ones. And I feel for a lot of people in L&D. It's just simply not possible.

The other thing, too, is I think it's very difficult to get some of these metrics. L&D needs to rely on IT or other powers that be to get them, and it may not be in their interest to provide it. They've got all their own mandates. Why would they give this to the L&D department? I would also say too, thirdly, is that we've made it difficult to get a lot of these analytics ourselves. I mean, I love XAPI, I love what it can do, but we can make it really hard to then have a learning record store and what to do with that data. And I think sometimes that makes it very, very challenging. It's not been easy to do. Well, we've made it maybe easy to understand learning analytics, but how to mesh those with analytics outside of the learning ecosystem, we've made that very difficult.

Connie: So I would like to differentiate between the type of data that we can get from a learning management system, XAPI record store, and then talk about the type of data mining that you can do outside. So what's your typical data that you can get out of an LMS?

Lori: So your LMS ... and I mean, even the term LMS or I call it a learning platform, because people will say, "I'm a learning experience platform, not an LMS." And they're all shades of the same, similar thing. So I'm not going to go on that, be really pedantic about the definition. But generally speaking, off of an LMS in its pure sense, you're going to get SCARM data, and SCARM data is going to be things like completions, dates completed, test scores, assignments, things like that, attendance, because it usually will be able to accommodate classroom-based learning. So it's the calendar, it's all of that sort of stuff. If you're lucky, it may have some sort of sentiments that people could rate a certain thing. There may be some social analytics if they have that embedded in it, so you can get some of that data. But that's typically what you're going to get out of it.

Connie: Okay. So now outside of the learning platform, what kind of data is more or less typical for people who are doing this kind of work? What kind can they get? I mean, I guess it's endless, but maybe you can just give us a focus.

Lori: Right, so it's endless. I mean, with XAPI, really, it's whatever you tag it to, whatever you want to be tracking and track where people have read an article. Whether they've viewed a video, whether they've commented someplace, all that can be brought in. And without going too much in detail, you can go to xapi.com. Megan Torrance is a great resource as well. She's got lots of information if you want to know more about XAPI. This could be an entire podcast on it, so I won't go too far down that rabbit hole. There's a lot that you can do with it.

Other pieces of data, though, that you can get outside of that learning ecosystem that I like to look at, intranet, so what a company is using internally. If they're using Slack, there's a ton of data. If you're using

Microsoft Teams, there's a whole lot of data that is generated there that can tell you about what's happening within your organization. If you have a CRM, so Salesforce for example, it's a mine of data that's telling you how sales are happening and how customer relations are happening. That could be extremely valuable to an L&D department to really understand what's happening there and whether their learning is either having impact or what they actually can influence.

So these are all sorts of things. And when I talk about the intranet, I'm looking for, as I mentioned, search terms, time of day, day of week. If I'm using Microsoft, I may be looking at what teams are siloed from each other, who are not communicating. What time are people actually online and using email? How are they communicating? Are they on Slack, are they on Yammer? What's the place? All that sort of stuff is what I'm looking for. And then anything to do with business data, so anything from the project management office or project management software, like a Workfront or a Lattice, any of those. Again, lots of data that you can get from those.

Connie: While you're talking about this, I was thinking in terms of a listener. I wonder if they would be concerned about privacy. I'm guessing that the data that you're getting doesn't have identifiers, correct?

Lori: Okay, good point. You mentioned Canadians, so I say privacy, so I'll say privacy. So yes, you need to be very, very mindful of that. When you get information, say from IT or whatnot, it'll already be sanitized for you in the sense that any identifiers have been eliminated and any outliers, meaning if there's ... so say for example you have one person operating in Finland, they're probably going to be eliminated because it'd be so obvious that whatever they're doing is connected to that person. So any of that sort data's been anonymized and it's been sanitized.

However, when you're using data from your LMS, your LSP, any of those, it can get a little bit trickier. And I don't think we're always necessarily mindful of that. And an LMS administrator can see everything. So we need to be very careful about those reports. And I actually get very, very concerned about some of that, where they print out who's done compliance training. Well, where did that report go? Who gets to see that? Because in certain countries too, for example, Germany is one, where that information can't be shared. So we need to be very mindful of that. We also need to think about where that data is stored. You can pull a report. Whose laptop does that sit on? Does it sit in the cloud? Who has access to it? All of these things come combined. So we need to be extremely mindful of that. And yeah, I do get uncomfortable when I see some practices.

Connie: Thank you. Those were some really good points about privacy.

Lori: No, no, no. You caught it.

Connie: So you've developed an impressive three-phase data-driven learning design process. Can you briefly describe each phase?

Lori: Sure. So the first one is discover insights. This used to be kind of like a needs assessment, and I'm like, "It's more than that." It's looking for evidence of need. It's looking for all of those things that are indicating that there is a problem or learning intervention required. But also, too, what type and what metrics are we actually going to influence? It's looking at all of those things, diagnosing the digital body language and then determining the best way to respond to that. So it's not about just going right away to my learning objectives and writing my course and going for that and saying, "This is what they need." It's saying, "Okay, I'm going to do something small. I'm going to respond to what their digital body language is with a piece of learning, and then monitor, see what the results of that are." And then it becomes a cyclical process in that.

So it's very iterative. I don't like saying agile, but it's more about, rather than designing an entire curriculum, start with one piece and see what happens with that, and then you can continue on. But we're looking to see are you able to, A, get engagement? And engagement is a funny word because people will take engagement and say, "Oh, well, that's not learning." You're right, it's not. But it's getting people into the shop. And to me, if they don't go in the store, they don't go to the digital store, they're not buying. So we have to have some of that. And then it's also looking at, are you getting them to buy? Are you seeing business results with that? So it's that three-phase process that you're running through.

Connie: So just to tease this out a little more, you've got discovery, responding, and then monitoring. Can you talk a little bit more about the monitoring phase?

Lori: Monitoring comes in, in that you're responding, but then you also monitor, you want to see what are the impacts of that, not just from the completions, but what are the impacts to business?

Connie: I love the idea of this cycle, the idea to starting small, which is always recommended, but very few organizations seem to do it. It just makes sense. And I also like that you pointed out that so many of the processes that organizations use were created, were developed before digital. I mean, that's important. That's really important.

Lori: Well, exactly, because in digital, I mean, we had one shot. It was a moonshot, right? You got them into the classroom. That wasn't going to replicated again, or it was going to cost a lot of money to fly people in, or whatever it was. That's it. You got to go for it. With digital, I mean, you can take stuff down, upload, change, all of that. And it's possible, and you can see in real time how that impacts things.

Connie: And even when we're doing in-person or virtual training, we can always do short pilot programs to see their impact. So in your experience during that discover insights phase, what kind of things have you discovered about an audience that surprised you, or their behaviors or their characteristics?

Lori: Oh yeah, I mean, there've been a lot. One of the very interesting ones, I won't name the company, but at the start of COVID, immediately, the L&D department converted everything to video. And had they done discovery of insights, they would've found out that when they did that, they actually throttled the network, because they weren't ready to do all that. This is basic. And some people say, "Is that really a learning thing?" It actually is, to be honest. This is something you're going to invest a lot of time, this is something you need to look at from the beginning.

I think also, too, sometimes in discovery of insights I really dislike when people talk about generations and they go, "Well, millennials learn this way." When you look at some of the data, no, they don't, right? There are ways that people are connecting. There are ways that people are accessing content that you didn't even think about. I think also too, some of the biggest insights that I've discovered is a lot of times people are communicating outside of work things, meaning they're using WhatsApp, they've developed their own Slack groups, they develop their own LinkedIn groups. So it's very interesting when you start to go around that.

And then you have to start to think about, "Well, you can't insert yourself there, but how do you leverage some of that?" So there's a lot, but I think one of the biggest ones is I remember there was a period, probably still going on, but about four or five years ago where everything had to be an app, everything had to be an app. Well, only 2% of apps really succeed. So is that really the place you want to go? Do people want to even download an app onto their personal phone, especially if they're using it both for work and personal? So there's a lot of intricacies there.

Connie: Those would've been surprising insights. What's an example of something you learned where you went back or your client went back and needed to change a design?

Lori: Yeah, a really interesting one, it was actually for a learning music academy. And what they found is they had an app, and also too they had the in-person, the practice. But what they could do is they could look at all the learner data and see how their students did on exams and how they did on their assessments. And they could start to then reverse engineer what was successful about them. Now, they had to get rid of the Mozarts because that's completely different. But what we did is we started to look at, what were the general pathways to success? And then we went back, and we inserted ... when we saw that a student maybe wasn't hitting that mark, that's when we send out a nudge. That's where we send out a reminder to see if we can get them to then go to that sort of optimum path.

Now, you have to be very careful; optimum path, it doesn't work for everyone. But there are certain patterns that we were starting to see. Also, too, what was good repetition and then what repetition didn't even contribute to results, we were starting to see. Again, individuals are different, so this was sort of an aggregate. What I love doing was ... and this was a financial institution, and unfortunately the regulators wouldn't allow us to, is we were trying to reverse engineer hack our regulatory training to how much we could distill it down in order to get people what they needed and assess them out very quickly. I wish we could do that, and I think it's still the most effective thing to do, but that wasn't always possible.

However, if you really want to talk about data-driven learning design and that idea, look at adaptive learning. That really is a version of data-driven learning design and how that is operating. And it's doing it at scale and it's using AI to make that happen. I mean, I also love doing A/B testing where you launch a piece of learning to one group, this different type to a similar group, and then you see the results. And then you can go back and make some changes. It's great.

Connie: Nice, nice. What would you suggest that someone do just to get started, just to get their feet wet?

Lori: Absolutely. So, the first thing is you do talk to these department, but I always say, ask them what they already collect. Don't ask them for something different, because they do already. IT collects a ton of data. Ask for that and just say, "What can you tell me?" They'll know the search terms every day. "Can you send me that list?" That will be something that they don't even have to do any work for. It just going to be a basic report, because it's there for them. Ask them, if you're using SharePoint, for example, can you give them access to SharePoint admin? That's going to give you a lot of data in there, or Slack admin if that's happening there. But ask them for what they already collect rather than ... The mistake I see is they go with the list. This is not their job, and they don't have the capacity to do that.

Then what I would also be looking at too is there's stuff sometimes that you can even pull out yourself. I mean, if you are using Slack or Yammer or whatever, do a search term on a hashtag, right? It's going to tell you some things. They're going to come up. Not all of it is locked behind the administrator. So, you can start to play with some of that yourself. Another thing too is if you're using a learning platform, see if you can put Google Analytics or Hotjar on top of it. Easy thing to do and you're going to get a lot of data from that. You're going to find out how people are navigating through it. Where are they going? What are they doing? What are they searching for?

I find it interesting that a lot of learning platforms don't track search terms, which to me would be just such a basic one. I would strongly recommend start with four to five pieces of data. Don't go for 20 or 30. Just start with some simple things, and that gives you some signposts.

Connie: Okay. Off the top of your head, can you think of any common mistakes you see newbies make when they're trying to get insight, look for patterns from data?

Lori: For sure. So, we talked about privacy, that's a big one. They try and go down in the personalization cycle. Wait a minute. You can't do that. I think the second one is causation and correlation are two different things. I like to joke, "I'm a Canadian, we love maple syrup. Our average life expectancy is 87, therefore maple syrup prevents us from living to 90." Well, no, it doesn't. So, you need to look a little bit deeper on any of the data. So, data is giving you insights, but it may require more investigation. So don't take it as fact, right, especially when you're, you're looking at people analytics. People are not binary. It's not like black or white or zero, one. It doesn't work that way. You have to be very, very careful about making assumptions. You need to validate those. That said, some data is better than none, because we operated previously a lot on intuition. So, some data gives us some more information. And sometimes it's going to require testing to see whether our hypothesis is correct.

Connie: I'm glad you mentioned validating the data, because it is easy to see a pattern and to make an assumption from it that may not be correct.

Lori: Oh, exactly. Exactly. And especially too with HR data, you could be talking about anything. When we talk about, for example, attrition, well, how do you find the root cause of that, right? And you can make a lot of dangerous assumptions there that actually have nothing to do ... like L&D will get tasked with that. It's like, that may not even be an L&D problem.

Connie: Right, that's really true. You mentioned that marketers are often expert at analyzing user data. What can learning leaders and instructional designers learn from digital marketers? Because they are good at it.

Lori: Oh, they're amazing. I mean, there are even websites you can go to and put your marketing headline tagline for your email into and it will analyze billions of emails and how they've been open, and it will tell you the chances of that email being opened. It's incredible. I don't want to get to that point in learning. I think it's a little nefarious and I think it's manipulative because at the end of the day, think about it, marketers are trying to give you information to influence a behavior, which is to purchase or engage with a product. In L&D, we also have to get people to eat their vegetables, so it's a different thing. Marketing will always give you what you want in order to get you to perform an action. That's their game. We're doing something very different.

That said, the one big thing that we can learn from digital marketers is I would highly recommend looking at learning campaigns or campaigns in general, marketing automation campaigns. And if you go to HubSpot, if you go to Marketo, Eloqua, these are all marketing automation platforms. And they have free courses you can take. I would strongly urge anyone in L&D to look at some of those and look at how they build their funnels, look at how they do lead generation, look at how they do lead nurturing, because those can be applied to L&D, particularly when we talk about upskilling at scale. We need to look at an entire population of people and find who are the people we can upskill on a particular topic. So those same principles of lead nurturing, lead generation, all of that can be applied.

So, they're free. Go and have a look and see some of those. I would also highly recommend following Bianca Bowman. She does a lot of writing in this space, and Mike Taylor, they do a lot of speaking on this. Ashley Sinclair is another person, but there's a lot of information that you can get. And those people really put it through a learning lens.

Connie: I'll link to as much of that as I can in the show notes. Thank you so much for your time, Lori. I think this has opened up some eyes and perhaps some doors so people can get started.

Lori: Thank you so much, Connie. I really appreciate you having me here. It's been wonderful to talk with you.