The eLearning Coach Podcast #24

ELC 024: eLearning Development Tools with Joe Ganci

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Hello learning people, and welcome to episode 24. I know a lot of listeners are really interested in technology, so in this session I speak with Joe Ganci about eLearning development tools. We speak about the different strengths of the three most popular tools, about applications that work in the Cloud, about designing for mobile, and a lot more. Here's the interview.

Connie: Hello, Joe Ganci.

Joe: Hello, Connie.

Connie: Welcome to the podcast.

Joe: Thank you. It's a pleasure to be here.

Connie: Joe, how did you become known as someone who knows a lot about tools related to eLearning and mobile learning?

Joe: In 1983 when I was in college I was pursuing my Bachelors at the time in Computer Science, which I eventually got, and I was also a big fan of teaching. I loved teaching and I loved writing. And it just so happened that on campus there was the opportunity for someone like me to create some e-Learning—at the time it was called CBT. I happened to also be fluent in Italian, and I love languages overall so I speak a few others too. They were interested in having me create an Italian course, you might say, on this computer. To me this was novel, and so I said sure, because they were paying me, [chuckles], and in the end I just fell in love with the whole idea of using computers to help teach people anything. So when I got my degree I went to work with Ford Aerospace and after that from one organization to the next until I started my own company. And I have never looked back, I just love this field and it's has been 32 years but I still am absolutely crazy about what I do.

Connie: That is a great story. I don't think I've heard that story yet about how someone fell into it. Excellent. We might have some newbies in the audience who aren't familiar with authoring tools yet, even though probably most listeners know. Can you give us your definition of an authoring tool?

Joe: Sure. I think the terms is a little odd anyway, because people hear authoring tool and if they don't know any better they might think of it as something you use to write books with, that sort of thing. Back in 1960s when the National Science Foundation funded the first, call it an eLearning tool, although at the time it was known as that, and it was called Plato, and that became quite a popular tool in the old days. So eLearning tools have been around a lot longer than most people know.

And then following that when microcomputers came out in 1980s that started a whole new swing of new authoring tools. Authoring tools are applications that you typically run on a computer, though now you can also run many of them in the Cloud, meaning that you don't have to install those applications in your computer but you are accessing them through your web browser.They allow you to create lessons for people to take, lesson that hopefully are interactive and engaging, that have good amounts of media in them to help the learner to learn as quickly as possible whatever the topic is that they're trying to learn.

Now, having said that, authoring tools are not necessarily very similar to programing languages. Programming languages tend to be more free-form, more generalized, and they really require a lot of left-brain activity, a lot of logical thinking, a lot of coding types of talents in applications like C, or C++, or JavaScript, whatever the tool might be. So that is a bit different, because authoring tools allow you to do the a lot of the same kinds of things you can do with those programming languages, but in a much, much simpler way. The simpler the tool the less you can do with it. So when we talk about authoring tools, we're talking about a wide range of different kinds of tools that allow you to create learning primarily, learning applications, lessons. And, by the way, the last part about that I should say is that they also tend to communicate well with what are called early management systems which allow the two together to keep track of the student's progress through a lesson and be able to give that student remediation if necessary.

Connie: That was a great definition, Joe. Sometimes I've been calling them Multimedia Development Tools, which sounds more modern but it's a mouthful to say.

Joe: Well, also I tend to disagree, I don't think it's any more accurate because it sounds like something used to create audio or video where there is not necessarily interactivity. There has got to be a better term, but none of us of have come up with it yet. So I tend to call it an eLearning development tool.

Connie: That's a good one.

Joe: Yeah, I think that comes closest to the actual meaning. But the interesting thing is when I was graduating one of my last classes took in college, I was a senior back in the 80s, and one of my professors in our class said to us, "You guys are all going to be out of work in about five or six years, because there's this new thing coming along called an Authoring Tool that will allow people to program computers in a very simple way." Well, he was wrong. Authoring tools do not replace programming languages obviously, because they're still around. They don't tend to do all of the things that programming languages can do, but at the same time they allow instructional designers and in some cases subject matter experts and people who are definitely not programmers to learn enough to do what they need to do for their learners.

Connie: Do you have any idea how many eLearning development tools there are?

Joe: Last count, about one billion. [laughter] Actually I don't think anyone really knows. I tried, and so have others, to come up with a comprehensive list. There are some that are very popular and everyone knows about, Articulate Studio, Adobe Presenter, iSpring, these are PowerPoint add-in types of tools that help you to take PowerPoint and add to those PowerPoint's elements that allow them to become closer to actual learning experiences. Then you have the installed tools outside of PowerPoint, and so you've got popular ones like Adobe Captivate, Articulate Storyline, Trivantis Lectora, and several others.

And now you have many of the Cloud based ones too. And so overall people know about maybe twelve or fifteen tools if they've been in the field a little bit. But the truth is there are actually hundreds of eLearning tools because I many cases you'll find that organizations that do a lot of learning internally, like large corporations and such, they tend sometimes to create their own authoring tool internally rather than use one that's off the shelf.

And when you ask them why, they say it's because they can't find one that satisfies their needs so they're going to build one from scratch for themselves. In the end it's almost always going to be much more limited, but maybe more specific to their need, but still it ends up not being necessarily the best solution. So how many are there? Nobody really knows. But I would say if you really wanted to count all of those, we're talking about several hundred. Some of these tools have been around for years, other tools come and go quickly, no one really knows.

Connie: It's really amazing. I was going to guess 200. I agree with you as far as internal tools. I've seen several proprietary authoring tools and they never could match what's done commercially, never. Let's get back to what I think of as the most popular authoring tools. There is Articulate Storyline, Adobe Captivate, and Trivantis Lectora. I know that there are differences between the three, can you talk about the strength of each one?

Joe: Sure. I use all three along with others as well for my clients because some of my clients absolutely love Captivate, others love Storyline a bit more and they've been using it for a while and they bring me in because they need search capability, they can't handle all the work they have, and they want to continue to use the same tool they've been using so they can maintain it after the fact. Sure, okay, great.

So I find something I like about all these tools, and I also find things that I don't like about the tools. No one tool does it best for everything, because if that were the case there would be only two being sold, nobody would any other tool. The truth is that eLearning is a very, very varied field. What I do for my hospital types of clients is usually very different than what I do for my law firms or for hospitality type of industry. You tend to have to focus on what is going to be the best means to help my learners learn the material that they have to learn. And it's not usually something based on knowledge, they're not just learning facts and figures, they're learning processes, they're learning procedures, they're learning a new way to accommodate guests in the hotel that work in, or a new surgical procedure, or anything that requires step-by-step approach where they really are having to perform to prove that they have learnt something rather than just memorizing something through an A, B, C, D, multiple choice type of quiz.

Having said that, that's why different tools exist, because some tools do some things much better than others. So you take Captivate, for instance, it started out as RoboDemo way in back in the early 2000s time period, and it was primarily known as a software simulation tool, and a really good one at that. But over time it has become extremely flexible so that the whole software simulation part of it is really just one minor piece in the whole puzzle. So you have that, you have Lectora, and you have Storyline.

Storyline when you first look at it looks a lot like Captivate in some ways but it's quite different under the hood as well. And Lectora looks quite different from both of those. So when you're looking at the three how are they different and how are the same, in many cases if you have not necessarily very specific types of needs, you will find that all three can handle the job just fine. But when push comes to shove and you have some specific need you may find that Captivate or Storyline or Lectora or some other tool will serve you better, will allow you to work faster and with fewer problems.

Having said that, Captivate and Storyline, which are the two that are most similar to each other visually and probably the most often compared nowadays, and they certainly have the biggest market share between them, they tend to differ in that Storyline is elegant and it is also simpler, but the reason for that in many cases as far as the simplicity of it is that it doesn't have necessarily all the features and power of Captivate. Captivate could do a lot more than Storyline can do, but that's only going to be necessary in those situations where you need to do more.

Let me address this for just a moment, and hopefully I'm not boring anybody here. But the fact is that when you're creating an instructional design approach for learners, you tend to have to come up with the best solution. You have to know who your learners are, you have to know what you are trying to teach them, and you have to know the best possible approach to teaching them that topic. So you start to think about what is it that I should do, should I have them drag a scalpel across the screen to place it on the artery at the right place, or should I have them show the correct response to a guest complaint in a hotel. And in so doing you start to look at basically the kinds of interaction you need, the kinds of media you need, the kinds of progress you have to track. And that helps you then to say the tool that I really should use is this one, because this one has the features in need, it does drag and drop, for instance, or it does this, or it does that, whereas the other ones don't, or maybe the other ones don't do it as easily.

Having said that, in many cases what happens is that people don't do that, they have been using one tool for quite a while and they're quite expert in it and they want to continue to use that tool, they don't really think about using any other tool because as far as they're concerned that one tool has been serving them very well.

So what do they do? They say, okay, with this particular lesson I need to do drag and drop, and I need to do it in this particular way. Well, my tool doesn't allow me to do it in that particular way, it only allows me to do drag and drop this way. Well, what if I do it that way, is that going to shortchange the learner at that point, is the learner still going to be able to learn just as well? If the answer is yes, no problem. If the answer is no and we definitely need to do it this other way, then you really need to look at another tool. But what most people do is they don't really think it through, they just pull back on their design, and in the end the learner is not really learning very well.

 And that's such a common, common problem in our industry where people tend to think of their authoring tool as they might their religion or their political party. Nothing will dissuade them from thinking that they are wrong and that that tool that they use is their

tool of choice and should always be. It's okay. So Lectora, Captivate, Storyline, every one of these tools has big fans. I tend to be agnostic when it comes to tools, I tend to favor the tool that will best serve my need or a particular eLearning approach I'm trying to take.

Connie: As far as the strength of each one, you're saying—I've used two of these out of three—Storyline is elegant and easier to learn to use. You think that Captivate has more power but it is more difficult to learn to use. But what about Lectora, what are its strengths?

Joe: Lectora is a great tool, I really like it, in fact I was speaking at the Lectora conference earlier this months as I did last year too. Lectora is a tool that's quite different. It has been around for quite a while but it certainly has changed over time to become more and more elegant. It uses a tree view, so you basically have the ability to focus on one object within one age within one chapter, for instance, etc. And the nice thing about each of those levels, the object, the page, the chapter, is that you can set things the way you want at any level. For instance, in both Lectora and Storyline you can make any object interactive. In Captivate not so much, and in that way it's not quite as powerful, but you can certainly accomplish the same kinds of things in Captivate and in a different way.

In Lectora, let's say I put something up on the screen and I want someone to be able to roll over it or to click it or so on, I could simply right click on that and say add this option to it or add that in from the menus above. When I do that, it doesn't limit me though, I don't have to just do one thing, I can do multiple things there. And that's where it's a little more difficult if you've got in Storyline, not so much in Captivate, but certainly in Storyline it's a little more difficult to do multiple things when someone clicks on something, for instance. Because what Lectora does, and Captivate for that matter too, it allows you to set up a series of actions to accomplish whenever a trigger occurs.

I like Lectora's interface very much. There are a few things that I do miss, because it doesn't have a timeline, unlike Storyline and Captivate. What Lectora does is when you're timing things on the screen, which sometimes you never have to do and other times you have a to do a lot, you're using more of that PowerPoint approach where you're saying I want you to animate this after a certain number of seconds and to take this long to do it and so on. So if you're comfortable with the way you time animations in PowerPoint, you will certainly find it beautifully done in Lectora as well. But if they're used timing things on a timeline, which in my view is easier to do because you can see all the objects on the timeline together, then you would probably prefer Articulate Storyline.

Connie: The tools that we're talking and traditionally all the eLearning development or authoring tools or desktop applications, but now I know there are quite a few that exist in the cloud. Can you explain how that works? Can you take lessons or perform a support of interactions that are made in the cloud, and can you integrate them with other courses or can you put them into learning management system?

Joe: Almost every authoring tool whether it's in PowerPoint, whether it's installed in your system outside PowerPoint, or whether it's in a cloud will work with an LMS, because an authoring tool that doesn't just doesn't last in the marketplace. So there are no authoring tools that I know of that are popular that don't talk to an LMS. Those that are homegrown, those that are built inside organizations, that's a different story. But, yes, they almost all as a given will work with SCORM 1.2, 2004, and in many cases Tin Can as well, and even in some case the older AICC. Those are the four primary communication paths between Learning Management Systems and authoring tools, and most them will cover at least the more popular of those as well.

The whole idea behind online tools, cloud-based tools, is that you're logging in through a browser and then you're working directly in the browser to build your lessons rather than launching an application on your computer or in PowerPoint. So there are always going to be advantages and disadvantage to that. And it's not just authoring tools that let you do that now. When we log in to create a lesson in the cloud, the nice thing about that is that if I'm at home, for instance, and I start working on something and then I log out and get on the plane and go across the country, I don't have to worry about backing up my files onto my laptop or anything, because I go across the country and I log in in my hotel room or wherever I happen to be and then there is my lesson waiting for me to continue working on it. So the fact that it's online means the lesson is always ready wherever you happen to be in the world. If your computer breaks down, no big deal, you're not losing anything because you can hop on to any other computer, get online and continue working with no problem.

There used to be a fear that the online world is going to go down sometimes as our computers sometimes go down too. That's kind of rare nowadays, there is so much redundancy we see built into these things, and servers have become so much stronger now that the only thing we have to fear is a robot takeover one day. [laughter]

Connie: And I do worry about that. But let me ask you something about the cloud tools, do you have some that you tried, seen, recommend, or ones that look promising? I just want to say to everyone I'll have links to all of these tools in the show notes.

Joe: Very good. Sure, there are several that I really like and that I'm starting to use. I am writing a review right now on the latest one that I have sort of fallen in love with, it's called BranchTrack. BranchTrack is a tool that is not truly a full-fledged authoring tool, it doesn't replace Captivate, Storyline or Lectora, instead it works with them by allowing you to create soft skills, type scenarios, pace based scenarios very quickly and easily, and then be able to incorporate the results into another authoring tool. So that's great.

Then there's a few others. DomiKNOW Claro, it's a very powerful tool that has sparked an interest in me though I haven't started using it extensively. I have used this sometime in the past and I really liked it.

Then there is Skilitics Interact, which is out of New Zealand. Skilitics Interact is a very interesting and different tool, very elegant looking, that allows you to create scenarios that are very deep, in other words the scenarios can track things in a way that I've never seen that level of tracking before, and you can do more with them than you typically can as well. So that's another one that's very promising.

Another very interesting and powerful tool is Zebra Zapps from Allen Interactions. This is a tool that I've been playing with and working with now for the last three or four years. It's really powerful. It allows you to create interactions unlike any other that you've been able to create before, because you can have every object interact with other objects. So, for instance, if I wanted to have the learner move a lever on the screen to see what changes in the flow of a pipe, that's so much easier to do in Zebra Zapps than in other tools that I've typically used, but that in the past would have been possible only directly in Flash for instance, or nowadays in an HTML5 animation tool like Edge Animate. But Zebra Zapps is a tool that is really taking the whole idea of being able to program eLearning computers—and I say programming in this case because it really gets deeper than most authoring tools do—but to do it in a way that doesn't require any scripting. It does still require a mindset that's a little bit different than most, but it's something you can learn pretty quickly too.

And then there are several others that I've been investigating that I think are pretty good ones too. One of the links that I'll make sure that you have there is a link to my tool reviews which I have been reviewing every month for the last four or five years, and you will see among them several cloud-based ones that you can investigate as well.

Connie: Yeah, that would be great. Do you mean in Learning Solutions magazine?

Joe: Yeah, if you go to my author page on there you will see dozens of different articles there that I've written on tool reviews, so among them you will see many of the cloud-based ones.

Connie: That would be great. I think that's how I first heard about you, it was from reading some of your articles in there. Let's move on to responsive and mobile. Can you explain why responsive design is so important now?

Joe: Well, simply put, responsive design is all about mobile, it's all about being able to access your lesson on a desktop, on a tablet, or on a smartphone. Now, does that you mean you have to access it on smartphone? No, no, no. It only means that you should be able to access it on any of those devices. You might stick with the desktop, you might do desktop and tablet, you may never use your smartphone because you don't like staring at a small screen for very long.

The responsive design, responsive learning is all about creating a lesson once and then having it played beautifully on every device and customized to each of those devices so that what you're seeing on the smartphone is not exactly the same as you will on a desktop, because it's meant to take advantage of some of the features of the smartphone but also going to limit the screen output so that it fits correctly within the smaller dimensions. So with responsive design the idea is create it once, deliver it to many different devices. And the simple reason for that is because nowadays people want to be able to use their tablets and their smartphones to access information, including learning.

How many of us look at YouTube videos on our cellphones, for instance? People learn from those too. But aside from those that are strictly entertainment, there are a lot of instructional videos up there that sometimes obviously you want to view on a phone and to look at an instructional video on YouTube, it's not a big deal. So it's all about the new world that we're living in, which is mobile, mobile, mobile.

Connie: Short of knowing how to use HTML5, which include CSS and JavaScript, do you have anything to suggest any tools that you could possibly bypass doing it directly in a scripting language if someone doesn't know it and doesn't want to learn it?

Joe: Yeah, of course. The truth is that if you are working in HTML5, CSS, and JavaScript, you are in essence being a programmer again, that's especially doing the Java Script and CSS stuff. So the authoring tool vendors had to and have actually changed their outputs so that they can also go to HTML5, though almost all the tools now, the newer ones anyway, will allow for output to both Flash and HTML5. But, having said that, the HTML5 output is going to be desktop. In other words, if you're looking at it on a smartphone, it's going to be a miniaturized version of the desktop, and that's not responsive design, that's strictly HTML5. So HTML5 and responsive design are not interchangeable, but responsive design does rest on the shoulder of HTML5.

So which tools allow for true responsive design? The most popular one is Captivate. Captivate 8 allows you to create three different views of your learning, for tablet, for mobile, and for desktop. It's a really powerful and very nice package there, unbelievably so in my view. When it first came out I could not believe how much thought they had put into making it so that you could really use it very effectively.

There are a few others that I've been looking at that are really cool as well. One of them is GoMo, which I assume stands for 'go mobile'. It has a more limited but still very responsive design to their authoring tool so that you can create once and then deliver to several others. Now, there are rumors that other tools are trying to come out with responsive as well and that there might be some that I don't even know about yet. But those are the two that I know about, and Captivate is certainly the most popular responsive design even now.

Other than that, yeah, you could still have HTML5 and if you design it really carefully it may still look good on mobile, but what responsive design does is that you create very specific, beautifully rendered on desktop, on mobile, and on tablet without any sacrifices.

Connie: Have you tried Adapt, the open source authoring tool by Kineo?

Joe: I have not. No, that came on to my radar not too long ago, and so definitely I'm going to look at that one as soon as possible as well.

Connie: Before we wrap up, while we're talking about mobile, what kind of design guidelines would you suggest for people who are really trying to do mobile learning even if they don't want it on the desktop. Perhaps it's a mobile sales force or people who are out in the field and they're trying to develop mobile learning.

Joe: First of all let's start with the fact that it's rare that someone is creating just mobile learning, meaning learning that you would just access on a mobile device without also being able to access it on desktop. So what we're talking about there is being able to deliver it to all three views. But, having said that, definitely with the mobile you've got some restrictions and some advantages there. We're so used to using, for instance, our mouse on a desktop, we forget that we don't have a mouse on a tablet or on a smartphone.

So whereas on a desktop, for instance, you can take your cursor and move it over something and get a tooltip or get a popup of some kind without clicking just by rolling over something, you can't really do that on a mobile device, because there's no mouse and your finger doesn't work that way. As soon as you touch the screen, it's like a click with the mouse. So that means all those nifty rollovers that we tend to use a lot to allow learners to explore simply can't be done in mobile and we have to design in such a way that we avoid those altogether even if we're going to desktop, especially where we're going to create once and deliver to many.

Secondly, there are advantages, of course, to mobile that we take for granted when we're using it for any other purpose besides learning. But if learning applications allow for it—and some of them do and some of them don't—you can automatically use in many cases the gestures that are available on those devices. Geo location is a good one where you can then know where a person happens to be in the world and even customize a learning to that person depending on where they are. That's an example that may not have universal application but in some cases it really will help the leaning to be more specific to the learner's needs.

Also, there's all sorts of things that we do with our mobile devices, such as tilting them left and right to navigate, or swiping left and right, or double tapping, and that sort of thing, that we just don't tend to do on laptops or desktops. Again, if the authoring tool allows for them, you can customize those to make them work the way you want. So a double tap will open up the table of contents, swiping left and right would change pages, though I would caution that that really only works for very linear courses which I tend to find boring and non-engaging, so I tend not to build those kind.

So there are certainly design considerations that have to be considered, especially when we're looking at the lesser real estate that you have on a mobile phone, and you have to design so that you are planning what would a desktop include, what would a tablet include, what would a cellphone include. Tablets and desktops, not a big deal, they tend to have similar resolution, it's really the cellphone where you have to think hard about how to do a learning design. When I create a lesson that I will also be able

to sell, that's where I spend some of my time making sure that the text is readable, the buttons are big enough so that our big old flat fingers can touch them, that sort of thing as well.

Connie: Those are great tips. Thanks a lot. Just to wrap things up, I was wondering what do you see in the future of authoring tool development?

Joe: First of all I see more and more of these tools gravitating to the cloud, because most of us are so mobile nowadays that we don't want to be tied down to just one computer somewhere where we have installed the application we need. So in the short term we're going to see that happening more and more. In the long-term I think you'll find that almost all authoring tools are going to be in the cloud.

As far as learning is concerned, there is an interesting question, because the way we learn has changed over time. We no longer are sitting and learning only in classrooms or one-on-one with mentors. You sit in a classroom and you learn in a classroom, but what happens when you sit in the classroom? You are listening to a professor or a teacher, you're raising your hand to ask questions, you listen to other people's responses and questions as well, you take notes, and you typically are going to get a quiz or a test at some point along the way. In essence, it is a very linear course that's taken, and it's a group approach, and it's also one where we get to ask ad hoc questions.

With eLearning it's just the opposite. It's self-paced, you're not having to wait for other people, you can go at your own pace, and that means you can slow down or speed up as you wish. You can even take your lesson in pieces, spend ten minutes in the classroom and then leave and come back five days later, you can do that too. But you don't have necessarily the ability right now to ask ad hoc questions, you don't have the ability to hear other people's questions and answers, and so on. I think what we're seeing very soon, because it's already happening now, is the melding of the best of both. We're going to be seeing the ability to not just present a new eLearning course but the ability to crowd source questions and answers, to be able to tap into the crowd to further your knowledge, and so on.

In fact, what used to be called cheating is now being called collaboration. [chuckles] The two are not synonymous obviously, but what used to be like you would never ask your peer the answer to a question now becomes a point of discussion, so that those that will typically fall behind don't necessarily have to anymore. And those that are much more advanced have the opportunity to share what they know, and most people tend to be nice enough to want to share. So what's happening is that the learning itself is changing

to where we will be able to ask ad hoc questions more easily while we're in an eLearning course. We will be able to have the ability to tap into a larger set of resources as well. And because more and more things are in the cloud we are going to be able to have access to all sorts of ancillary information, extensions, we can tap into YouTube or Google Maps or anything we want nowadays that would have been tremendously difficult even two or three years, and even now it's not that easy to do in most cases. So the way we learn is not going to get quite to the point where it's the Matrix where you just strap something on and two seconds later you can fly a helicopter, it's going to be more of that ability to learn in a whole way rather than a part way. That's what I see.

Connie: It's really an exciting time to be in the field to combine your standard types of learning with social learning. It's a great combination. Well, Joe, I want to thank you so much for giving us so much of your time and knowledge. It was great.

Joe: My pleasure, really. Connie, I think you do great work for the industry, I love what you teach and what you write, and so it's my honor to work with you in any way possible. Thank you.

Connie: Thanks a lot. As a tech geek, I really enjoyed this conversation. I also liked that you mentioned that people can get so attached to their tools it becomes like a political party. Really, what we should be doing if we have the budget is using the tool that will provide the best experience for the learner.

You can get links to the tools mentioned in this episode in the show notes at theelearningcoach.com/podcasts/24. And if you're a regular listener, please leave a show review on iTunes. Thanks for listening, and I'll talk to you next time. Take care.