TOPcast Episode 102: Building vs. Buying

Tom: Hey TOPcast listeners! This is Tom. Before we begin today's episode, I just wanted to make a comment or two to put it into context, because it's a little bit different than what we typically do for our mid-month episode. This is an episode that Kelvin and I recorded, literally on March 6th, 2020, right before the pandemic hit and we all pivoted to remote work, remote instruction. At the time, we felt we had more important things to talk about than build versus buy decisions. So, this one went on the shelf and has been sitting there for a year and a half, or more. We thought maybe it's time to take it off the shelf, blow the dust off, and share it with all of you now that we've kind of spent a lot of time talking about the pandemic, and we're starting to come back and talk about more regular topics. Before this one got any dustier than it already is, we thought it might be worthwhile to just bring it back and share it with all of you. That's what this episode is. It's pulled back from the before times of March 2020. I think it's still relevant for today. I hope you agree. Take a listen. I hope you enjoy it. Until next time, I'm Tom.

Narrator: What will your future look like? The job you do today could be different than the jobs of tomorrow. Some see this as a challenge. At UCF, we see opportunity, a chance for you to grow your knowledge, and strengthen your skills from anywhere life might take you. With in-demand degree programs and resources for your success, UCF Online can help you prepare for the future and all the possibilities that come with it.

(musical transition)

Kelvin: From the University of Central Florida's Center for Distributed Learning, I'm Kelvin Thompson.

Tom: And I'm Tom Cavanagh.

Kelvin: And you're listening to TOPcast, the Teaching Online Podcast. Hey, Tom.

Tom: Hey, Kelvin.

Kelvin: How's it going?

Tom: It's going well. Thank you.

Kelvin: That's good. It's still lovely out, weather wise. I saw no accidents today, to splice together both of the chit chat themes. The weather and traffic.

Tom: Weather and traffic. Yes.

Kelvin: We could have a radio show. Weather, now the weather. Now, the traffic.

Tom: Yeah. Temps on the nines. Actually, we are recording this in spring, which is one of the lovelier times in Central Florida.

Kelvin:	It's about five minutes, but we like it.
Tom:	Yeah. I always say that this time of year is what makes up for the rest of the year for us. I would say August is our penance for February and March.
Kelvin:	It's very pleasant, lately. I've enjoyed it very much. It ebbs and flows a little bit. 20 degree change in high from one day to the next.
Tom:	I know! But, the low is, like, 65.
Kelvin:	That's not below zero.
Tom:	Yeah. No complaints.
Kelvin:	No, no.
Tom:	I heard the dulcet gurgles.
Kelvin:	Our house band.
Tom:	I can't even say it. We need to come up with some other name, I think. Some other way to describe that noise. I have said gentle burbles before.
Kelvin:	Gentle burbles. The sonorous pour.
Tom:	Sonorous pour. It's not as much onomatopoeia.
Kelvin:	It's reminiscent of cellar door. Is that Donnie Darko? Allegedly, the most perfect phrase in the English language, or the most pleasing, according, allegedly, to Tolkien or something: cellar door.
Tom:	I had not heard that.
Kelvin:	Sonorous pour.
Tom:	I will take your word for that.
Kelvin:	I'm probably misquoting somebody else.
Tom:	Okay, well, there is brown liquid in this lovely cup that you've brought from me.
Kelvin:	I think it's coffee.
Tom:	It's my lone Garden of the Gods mug. Thank you.
Kelvin:	You betcha.

Tom: It's a place we were chatting before we hit record, that we've both been. It's lovely. Any listeners in Colorado, we're jealous of your elevation.

Kelvin: That's right. And the Red Rocks.

Tom: The Red Rocks. Yeah.

Kelvin: It's very nice. I liked it there. They had a little simulation thing where you go through time at the little welcome center, and you can see, supposedly, the formation of the whole thing, over ecological past, or geological past, I guess. Ecological, too, maybe.

Tom: Both.

Kelvin: Something.

Tom: I'm sure there's a reason we're drinking this particular coffee, out of this particular mug here.

Kelvin: I just hadn't had coffee yet, today, and I thought I'd bring some and fuel the... No. Thematically, there's a reason. Selectively, thematically selected. Today's coffee, Tom, is the "High Country Blend" from Davis Roasters in Madison County, North Carolina. It was sent to us by TOPcast listener, Leah Chuchran-Davis, who is a colleague from the online services company, iDesign.

Tom: Know some folks there.

Kelvin: Whitney Kilgore, maybe some others. Leah and her family are also farmsteaders. They moved from the city to the country, and now grow their own organic foods on their family farm. Leah told me a bit of her family story a few months back over dinner at an EDUCAUSE event. I was intrigued by their whole story and that conversation. She offered to send us some coffee because they've also taken to roasting and selling coffee. Leah sent a note with the coffee saying that this "High Country Blend contains robusta and arabica from Brazil and Honduras." How's the coffee, and do you get a connection of some sort, however elusive and shadowy it might be?

Tom: The coffee's excellent. Thank you, Leah. The connection's not too shabby, I might add. I didn't even need to add any sweetener or lightener to your connection.

Kelvin: That's good. It's one thing to add to the coffee, it's another to add it—

Tom: It's my own issue with the coffee.

Kelvin: Let me see if I can flesh that out a little bit.

Tom: I get it, I think. Leah and her family are farmsteaders, homesteaders, growing their own food, roasting their own coffee. There's also, I guess, a connection with

iDesign. They're a company that you outsource different services to, for the edtech online learning community. Today, we are talking about the build versus buy decision/conundrum that many institutions must face.

Kelvin: Not just once, again and again.

Tom: Yes. Every decision, I think, is unique. It's not like, "We always build" or, "We always buy." Every institution must face every decision with a unique set of circumstances and a unique context.

Kelvin: I think that's wise. I know I have tilted through the years into a snobbery of, "We are build people." You don't build everything.

Tom: No.

Kelvin: You don't build everything, even if you do tilt that way. I think it's wiser to make the decision on a case-by-case basis.

Tom: Right. I remember many years ago—I hadn't been at UCF very long—and the woman who was responsible for our Techranger team—and we'll probably talk about the Techrangers. It's a large group of mostly hourly students, who are super talented and build things for us—

Kelvin: Junior developers, I call them.

Tom: Junior developers. Yeah. Trademark name, Techrangers.

Kelvin: That's right. That's right.

Tom: She came to me and made a really hard pitch to build our own learning management system. I appreciated her enthusiasm and her confidence, and I don't doubt that they could build something pretty awesome, but come on, that's just not where we should be applying our resources.

Kelvin: No offense to anybody who has done this, but I've thought about this before. Developing an LMS is like a black hole if there ever was one. It's a hole on the ground in which you pour money, probably.

Tom: That's the definition of a boat.

Kelvin: I know. I know. I think it's kind of the same way, because boy, that would be a lot. You look at the real robust open-source communities around LMSs, that's hard. Let alone us trying to do it.

Tom: In my mind, if there's already an economic base of full-time, large scale, publicly traded companies doing that thing, how are we going to do it any better than them? We can't devote the resources in capital that they have into building something like that.

Kelvin:	That's a good, "Maybe we buy that one."
Tom:	Right. For us, LMS is not something we are going to home grow.
Kelvin:	We've talked before, in these episodes about—maybe back in episode 40, we had Courtney Borton, who was at the time Marketing Director for UCF Online, in here talking about marketing and that whole online program management sphere, and the marketing piece of it. We could have outsourced, but instead you insourced that.
Tom:	Right. Right. The decision to go with an OPM or maybe even a firm like iDesign, or others like it, it is a build versus buy decision.
Kelvin:	Sure.
Tom:	Do you need to get to market fast? Do you have the internal capacity? These are all factors that you need to consider if you are going to go that route, or not go that route.
Kelvin:	Just a couple episodes ago, we had our colleague Kelvin Bentley on, and that conversation you had with him about the unbundling over time of OPM services and just what do you need? What don't you have?
Tom:	Right. Right. Moving from just a straight up aggregate rev share to a—
Kelvin:	Fee for service or something.
Tom:	Yeah, like you said, a disaggregated fee for service. It gives you a lot more flexibility, and you can just buy the piece that you need. Honestly, maybe we should not go too deep into the OPM question, because we have talked about that in the past. I know for us, here, the choice about software is one that we debate a lot because we've built a variety of different integrations that go into our learning management system. Typically—I won't say always—but typically, that's driven by the fact that we need something, and the marketplace doesn't have it. We've had to build it. Then, in many cases we've open-sourced it. I don't know, maybe we can put a few on the show notes of open-source tools that we've built that are available to people.
Kelvin:	Oh, sure. Yeah. Some we've mentioned in the past, and we've had that episode— gosh, sometimes I remember, sometimes I don't—the episode about the future of the LMS. We talked about the…I pitched instead of Legos, maybe the next generation digital learning environment, it's more like a Mr. Potato Head. You've got the LMS as core, then you plug in a bunch of stuff. Hence, we do that a lot. Other standalone tools, as well. We have really good developers. We're fortunate.
Tom:	We do. Maybe it's worth taking a step back and just recognizing that we work at a large research university. We have certainly not the resources of other large research universities.

Kelvin:	That's true.
Tom:	But more than the typical community college down the street.
Kelvin:	That's right.
Tom:	If you're a shop of one assistant director of online learning, and you've got a FTE of one and a half or something, and maybe a part-time student helping you, the build versus buy decision becomes very easy. You just don't have the resources to build.
Kelvin:	Neither.
Tom:	Right. Well, sometimes you can't buy. I get it. All of this is context specific. There are sometimes things that you can do yourselves, that you can also purchase. I think in every school, it's going to be a little bit different. I know from talking to colleagues at places like Michigan and Purdue and Berkeley, who have robust—Indiana—large scale development efforts, and we don't even approach what they do.
Kelvin:	No, that's true.
Tom:	I would say we have a pretty active development agenda. We've got a pretty good staff of people who do nothing but this.
Kelvin:	Just to comment on this, too, I think historically we hold ourselves really to something that has to work in practice, which means, here, pretty much works at scale. Not unique boutique, long tail, edge case, other buzz speak one-offs, but something that has to work for a lot of different instructors and classes and disciplines. That's no small thing either.
Tom:	That's part of the decision-making process for us to build something. A lot of times faculty will come to us with some problem or a challenge. "I need this thing for my class." Our developers and instructional designers get all excited and say, "Yeah. We can fix that problem." But it behooves us to take a step back and say, "Is it just Professor Jones's problem, or is this a problem that can be helpful to a variety, large scale number of faculty or students across the campus?" If the answer's more the latter, then we're more willing to invest in developing some of a solution for that. If it's just a one off, it becomes really hard to spend the time building something, and maybe a solution, a more practical solution, is to have the students license that if it's a publisher-ish thing.
Kelvin:	That's become... This is going to be a mixed metaphor. A hallmark of our DNA. What is that? A chromosome. What is that? It's something.
Tom:	It's a ribosome. I don't know.
Kelvin:	It's something. I give a lot of credit to our Center for Distributed Learning colleague, Dr. Francisca Yonekura, who has been guiding a lot of that developer

work. I remember the first—this is way back in the early 2000s—the first director programmer that we had, he was a full-time direct... That's how long ago this was. Director.

Tom: I remember. I wasn't even in higher ed when we were using director.

Kelvin: He was programming and director, and there were these one-offs, but we quickly got to this thing of, "Instead of making this one off, and that one off, how could we make this scale more?" We began to…Francisca guided that. Here's this project, what can we do that will take a little longer but build a tool that would allow you to change the variables here and there and there, and have something that could be used multiple times? That's something we have held on to a lot. I think it's been a real boon to us, in terms of keeping things strategic.

Tom: Yeah. There are a couple of tools that we have built here, that are now being used by others across the country.

Kelvin: That's true.

Tom: Some of them, I think, are quite impressive. I will admit this, that had I been here when they were kicked off, I may or may not have supported it.

Kelvin: Maybe it would be greenlit or maybe not.

Tom: Maybe, yeah. I'm glad, now, that they exist. One is our…We've got a system that allows you to build, replicate, and deliver learning objects. There are certainly commercial tools that do this, but what the team here has built is really impressive. I think it's definitely commercial quality.

Kelvin: Oh, yeah.

Tom: Now, we can deploy that at scale, without incurring licensing costs for everybody who wants to use it. It took a while, but I think that the dividends are there.

Kelvin: The system that is codenamed, and now real named, Obojobo. It's a palindrome.

Tom: It means nothing.

Kelvin: It means, yeah, it's a palindrome. They like that. That's open licensed.

Tom: It is.

Kelvin: We'll put a link in the show notes. You can go check it out.

Tom: That's not even our most widely adopted tool that we've built.

Kelvin: No, that's for sure. What was great about that—just a little sideline—that was, again, an exploratory development thing. Right about the time that we had an institutional initiative related to information fluency, and a colleague went to an

early meeting, and he came back and he said, "I went to this meeting, and they're talking about the ability to deploy some modules across the entire institution, and have different iterations of them, and easily modify them. Isn't that what those developers are building over there? Maybe you come to the next meeting and ask." I went and I said, "Would it help if it was authenticated?" "Yes." "You have data on knowing what students did and it has some kind of an assessment." "Yes, yes." "Okay. Yeah, we can do that." That project just suddenly pivoted the entire development of the platform in a different direction. It really became about institutional scaler module deployment. We used it for a number of institutional resources. Now, it's gone, yet another direction, again. It's intriguing. But you can do that when you're developing in house.

Tom: Right. You can pivot and redirect resources. Then, you also have to maintain. So, that team that built that has continued to... They have a roadmap for continual updates. They've migrated it because it used to all be Flash-based. Now, we've all moved away from Flash. It does require a bit of an ongoing investment to keep it current.

Kelvin: If you're going to have kids, you've got to feed them, clothe them.

Tom: Right. There's free beer and there's free puppies. One of them is a commitment.

Kelvin: Yes. That's true. That's true.

Tom: The one that probably is our most widely used is the accessibility checker that we built for Canvas, called UDOIT. Another one is more of an instructional game, app style game builder called Materia. Both of those have even wider adoption than the Obojobo learning object tool. Like I said, we'll include a list to some of those, and if you're interested, many of them are available on GetHub, or elsewhere.

Kelvin: For sure. I guess maybe just to comment on this. If you have already invested in talented people, it might be less expensive for those people to create a product, or a service, than to pay an external provider. Now, that's assuming that you can offload some duties, reprioritize, reshuffle the deck. You're leveraging your— watch this, Dr. MBA—leveraging your sunk cost of personnel.

Tom: Look at you.

Kelvin: I'm not even sure what that means. I thought it was maybe something from soldering. No, that's a heat sink. That's a whole different thing. That might be wise, but that's not always practical if everybody's plates are full and they're over committed. They *could* do this thing, but if they don't do the thing that they've already got, then there's big consequences. You can't do that. Then, buying maybe becomes more of an attractive.

Tom: It's the challenge we always run into when people approach me with grant opportunities.

Kelvin: Opportunities.

Tom:	I'm all for it. Especially, for those parts of the university here that we work with that live or die on grants. When they come to me and say, "We've got this great opportunity. It's X amount of dollars, and you would build all this cool, awesome online courseware for this whoever client." All I can think is, "Great. Who am I going to have to hire to fill in for all the work that these people that are now going to be paid by the grant are going to be doing?" It doesn't help me, because I'm too busy trying to manage this—and you—trying to manage this. We are trying to manage this group of people—
Kelvin:	That's true.
Tom:	—who are supporting faculty, and this would be extra. That's an opportunity cost.
Kelvin:	That's true.
Tom:	One of the ways we've addressed that, and we've hinted at this already, is through the use of some part-time and student employees. We do have this team called the Techrangers. They're pretty phenomenal. I'll give Barbara Truman credit, previous director here at the Center for Distributed Learning. It was really her brainchild to take advantage of the talent that's just resident here at a large major university that has a lot of really great faculty programs and reputation in computer science, digital media, engineering. As a result, we have a pretty awesome group of students to pick from. They're not just making copies.
Kelvin:	No.
Tom:	They come, and they work for us for a little while and we typically lose them to Google—
Kelvin:	Microsoft.
Tom:	Microsoft.
Kelvin:	Amazon.
Tom:	Facebook. Sometimes they go and they'll spend the summer interning at those places and then come back. Then, work for us for the rest of their academic career, and then graduate and then go work in these places. We've got a lot of talent that we're not paying Facebook prices for while they're here.
Kelvin:	No, that's true.
Tom:	Now, they're young and they need guidance.
Kelvin:	Guidance.
Tom:	That's been a little bit of a secret to our success.

Kelvin:	I agree. I think it was a real genius move on Barbara's part. Probably, like you, I've certainly talked to some of those part-timers who were leaving who've told me, "I enjoyed my degree program. I learned a lot, but it all became real working here." On the job, on the ground, really learned a lot. A little bit of the lore—I don't know if you know this story—back in the day, the plan was not to go that direction at all. There were some existing personnel at the university. Online learning? You have to make webpages. All right. There's a group over there. They have that skill. You'll hand off to them what you need and they'll make it. You'll be fine. Except that, they already had commitments and their turnaround time was not what you need when you're putting online courses together quickly. The metaphor of laying down track as the train's coming down it. It's not that responsive. So, Barbara said, "Let me hire some part timers." This is the era we refer to know as laptops and TV trays because there's no place. They're spilling out into the hallways. That became strategic. That was a real worthy investment. Of course, over time, we've seen that before, too. Sometimes you can't stand up a new full-time salary line, but you can put aside a little bit of contingent funding, non-recurring, to hire somebody, even if they're working 40 hours a week, non-benefited for a short period of time, as a proof of concept to get something done. Then, if you need it, you can say, "Look how well that worked. Now, we've got a case for hiring somebody full-time." That's worked again and again and again over the decades here.
Tom:	We've turned a lot of these developer positions into full-time lines, and still keep a cadre of these part-timers who are certainly awesome. In many cases, we have hired from that talent pool into the full-time lines.
Kelvin:	Not even just developers. It's been a while since I calculated this—years ago I looked—60% of our full-timers started out as part-timers, myself included. I was a part-time instructional designer.
Tom:	Really?
Kelvin:	Once upon a time.
Tom:	I think it would be lower than that, now.
Kelvin:	I think so, too.
Tom:	Than 60%.
Kelvin:	No, I think so, too. There was a time, where a lot of us that came from that world.
Tom:	Build versus buy. Grow your own.
Kelvin:	Grow your own. That's right.
Tom:	That's pretty cool. Okay. Let's see. I think that the idea of turning these people into full-time positions is one that you have to look long term at.

Kelvin:	Of course.
Tom:	While we've had some success with that, we also have turned it into more specialized teams. We do have the Techranger team, but they're multidisciplinary. They support the... Now, we have an LTI team that builds our integrations for our LMS. We've got the teams that build Obojobo, and Materia, the different apps. We've got a team that does more straight up web development, and helps with course design and development. We've got some folks that help us maintain a business development, or business analysis tool. It's disaggregated a little bit, but they all sit together. They get deployed where the greatest need is at the moment. It's a lot of flexibility.
Kelvin:	No, it's true. That same principle is held in other areas, as well. Whether it's instructional design, and we have centered... That was another strategic decision centered a lot on instructional design, and then supplemented out to other places, spinoff teams, technical support, when it was something that our developers did as well versus folks who specialize in technical support. All that eventual division of labor and specialization from a common core. I think that's a dynamic, as well. I know we've lapsed a little bit into the personnel side of things. That's maybe not classically what you think of as a build versus buy decision, but I think it still is.
Tom:	It is, because somebody's going to have to build it.
Kelvin:	That's right.
Tom:	If you don't buy it, somebody has to build it.
Kelvin:	That's right.
Tom:	Usually, it's somebody under your control, or maybe you invest in some outside company to build something. Like an app, for example. You can hire a company to build you an app, and it might be something custom. Again, this goes back to what we said at the top, which was everything is context dependent on whatever the circumstances are, at that particular time. I would say, maybe one final thing about this idea of personnel, if you're going to be outsourcing something, just make sure it's the right thing. For example, you can outsource instructional design services. I would just make sure that if you're going to do that, do that in the right way. If you are getting…As you get closer and closer to the core academic function of the institution, the more I might argue that that's something you should do yourself.
Kelvin:	Yeah. That's a good thought.
Tom:	The further away you get from that, then maybe you're more comfortable outsourcing. Accreditors would say the same thing. If you are... You can't outsource instruction.
Kelvin:	I was just thinking that. What would that look like, outsourcing?

Tom:	Now, you might say, "What do you think adjuncts are, Tom?"
Kelvin:	That's true.
Tom:	I get it. There are accreditation rules on how much—
Kelvin:	How much.
Tom:	Outsourcing, how many adjuncts you're allowed to hire as a percentage, and adequacy of instruction, all of that stuff. I would just think long and hard if you had to outsource IT versus instructional design, I might be personally more comfortable with IT or something like that.
Kelvin:	That makes sense. I guess, too, just to harken back for a split second, back to our colleagues who it's one person in an office. If institutional leadership wants more from online, whatever that is, like, "We need to do more," then money has to be spent one way or the other. Then, at that point, it's not "I don't have any," it's "if you want more then you're going to have to spend some money." The question then becomes, is that going to be hiring staff, or outsourcing services for a time, or a combination of both?
Tom:	Right. Right.
Kelvin:	It's keeping your eye on the prize there.
Tom:	Even an OPM, you could outsource to an OPM because you don't have the internal capacity to do what needs to be done, but you're giving up revenue, potentially, in a traditional agreement. In some cases, a significant amount of revenue, for that. There's your money.
Kelvin:	Yep. That's right. I guess our coffee's dwindling and our time is running out. Shall I try to land this plane?
Tom:	All right. Landing gear down, Kelvin.
Kelvin:	All right. I've always wanted to have that foam on the runway. This might be the day. Let's—
Tom:	I have not ever wanted that.
Kelvin:	The build versus buy decision can be an iterative decision point within our online learning operations. Choosing wisely when to invest in local personnel, when to rely on those personnel, and when to contract with third parties, can make all the difference in the strategic value of online education at our institutions and in general. Would you agree with that?
Tom:	Amen.
Kelvin:	All right.

Tom: Yes. I would agree with that.

Kelvin: Okay.

Tom: Thank you for the coffee. Thank you, Leah.

Kelvin: It was very tasty. Davis Roasters. This is a half plug. We haven't said this in a while. You know we always have links to the source of the coffee in our show notes.

Tom: I know that. Yes.

Kelvin: If you ever were curious about how to get some yourself, or what more information, they're always in the show notes at topcast.online.ucf.edu. You could find out about Davis Roasters and order some yourself if you want.

Tom: Yeah. Check them out. Support our sponsors.

Kelvin: That's right.

Tom: Even though, they're not actual sponsors.

Kelvin: They're sponsoring our coffee drinking.

Tom: That's right. We have some very generous listeners who share their coffee with us.

Kelvin: That's right. All right, Tom. I enjoyed the conversation and the coffee. I will say, until next time for TOPcast, I'm Kelvin.

Tom: And I'm Tom.

Kelvin: See ya.