Episode 95: Rob Branch

# KL: Katie Linder

# RB: Rob Branch

# KL: You’re listening to “Research in Action”: episode ninety-five.

# [intro music]

# Segment 1:

# KL: Welcome to “Research in Action,” a weekly podcast where you can hear about topics and issues related to research in higher education from experts across a range of disciplines. I’m your host, Dr. Katie Linder, director of research at Oregon State University Ecampus. Along with every episode, we post show notes with links to resources mentioned in the episode, full transcript, and an instructor guide for incorporating the episode into your courses. Check out the shows website at ecampus.oregonstate.edu/podcast to find all of these resources.

On this episode, I'm joined by Dr. Rob Branch, a professor and department head in the department of Career and Information Studies at the University of Georgia. Rob earned a Bachelor of Science degree from Elizabeth City State University in North Carolina and Master of Arts degree from Ball State University in Muncie, Indiana. Rob taught technology education Secondary School in Botswana as a Peace Corps volunteer and later joined to University of Botswana as a lecturer. He completed his doctor of Education degree at Virginia Tech, and then joined the faculty at Syracuse University rising to a tenured associate professor. He worked as a Fulbright lecturer and researcher at the University of Kwazulu-Natal in South Africa conducting research on the complexities of intentional learning spaces. Rob is an editor of *The Educational Media and Technology Yearbook* and author of *The Survey of Instructional Development Models and Instructional Design: The ADDIE Approach*. His published research focuses on diagraming complex, conceptual relationships, and other complicated flow processes.

Thanks so much for joining me on the show today, Rob.

**RB:** It's my pleasure to be here.

**KL:** So I'm really interested in this part of your work that focuses on diagramming complex relationships because it has kind of these visual components to it, which I find really intriguing. I wondering if you could offer to some examples of this in your work, and then we'll dig into it a little bit more.

**RB:** Sure. The very first example about visual literacy and diagrams and flow process for my work as an instructional designer. And really trying to understand the different procedures associated with in structural design and then discovering that most instructional designers use some type of model. That's a diagram, and that's a flow diagram for the most part. And it was really interesting though. So, why mention visual literacy? And indeed some examples from my work include looking at different kinds of elements and the kinds of flows that you want to express will depend on the elements that you put together and their relationship to each other. But allow me to back up just for a second. I started this because as instructional designer, I was presented with flow diagrams of the instructional design process that were boxes with straight lines and arrows seemingly moving in one direction, when in actuality, the instructional design process is iterative, complex circular, etc. So I wanted to figure out how I can better express the process of instructional design that I was practicing as an instructional designer. So that's why I wanted to be a better instructional designer, and then I got into the bigger picture about diagrams in fact my dissertation started because I believed the saying, “a picture is worth a thousand words.” Well in reality that's a Chinese proverb, but it's actually a picture is worth ten thousand words, and I actually tried to figure out how I can express complex societies that were usually presented in text in illustration and pictures. So way back, then I started out trying to figure out how to look at the equivalent forms of information: text and diagrams. Back to today, after having looked at different ways to present flow processes, I can say that when I do curriculum design, when I do instructional design, even project management kinds of jobs and tasks. The way in which you use certain elements and their juxtaposition, make all the difference in the way you conduct something, but even more importantly to me they make a difference in the way people who are trying to learn this particular skill, how they see project management development, curriculum development, or in my case, instructional design.

**KL:** So the way you describe this brings me to my next question, cause one of the things I was wondering about your work is to what degree are you looking at diagrams that already exist and kind of relationships that have already been diagram? Versus creating your own diagrams to try to explain certain phenomena or relationships or processes? And it sounds like you're doing a little bit of both.

**RB:** Very perceptive. Yes! In fact, it's probably combinations what I do is I look at existing diagrams and, the most, most of the research that I do in this area. Takes a look at the shapes of the diagrams so that those boxes are rectangles with straight lines those are rectilinear. And then I, instead, I would look at what about diagram that present ovals and curved lines and arrows. We should research that conducted a study last year actually added a third category called nested where I had both curvilinear and rectilinear contained in a single diagram. But let me talk about the rectilinear and the curvilinear. So imagine looking at existing diagrams, but taking the words out whether rectilinear or curvilinear, and then asking people, “What do you see? How do you receive that diagram?” And that is one main research question that I've asked literally for the past 15 years to find out what people see in here's what I've discovered working with student peers and other colleagues: I discovered, straight lines, boxes is perceived as hard, inflexible straight-line ,not many options. The perception of curling your diagrams goes oval shaped those curved lines those arrows. Those are received as flexible complex even complicated, I said “good!”, because instructional design is flexible, complicated, complex, iterative, and so forth. Rarely are instructional design processes and even other engineering processes, rarely are they linear lockstep and inflexible. So I look at existing diagrams, but I imagine just their shapes, even in terms of visual literacy. There are the shapes have different meaning. Ovals mean complete whole round ovals tend to mean holistic. Whereas boxes or rectangles literally with those 90 degree angles mean fixed, unyielding. So if you imagine creating diagrams using certain types of elements, when you put those elements together, they will actually convey particular type of meeting—or at least be interpreted as such by whoever perceives the diagram. So now I'm looking at existing diagram to figuring out how will I create diagrams to really reflect the complexity and the intricacies and the flexibility of flow processes, in this case such as instructional design. And what I come up with you really want something, that's curvilinear and using visual elements that connote opportunities for change, formative evaluation, and diagrams that convey meaning that says depending on the situation this diagram or this process can adapt.

**KL**: This this makes a lot of sense to me. And one of the things that it makes me wonder about is it seems like processes and diagrams are used in so many different settings in organizations in and structures. So I'm wondering, who are the key audiences for your work? Are you really pinpointing instructional designers because it seems like the work you're doing has a lot of like really broad applicability to other areas. So are there certain kind of audiences that you're really focusing in on or is there really a more broad applicability of that you have a lot of people coming to your work with different questions and ideas?

**RB:** I would say that I probably am focusing on two audiences, but I would hope that there are many more audiences that would benefit. The two, specifically, is the audience of instructional designers, which is interesting because I wrote a book about in structural design models, and what we're finding there is the instructional design model needs to be commensurate, correspond correlate to the situation. But then, what I'm finding is that people who are interested in visual literacy in general, who believed that there can be a language of images and graphics in elements and no to text, but only graphics. I get a lot of inquiries from folks who are studying visual literacy where literally there is a grammar of visuals that they're trying to create. Then beyond that, I would say oh practically anyone who's trying to show some kind of step-by-step process. I can imagine elementary school teachers trying to express a procedure you don't just a couple of bubbles with a couple of lines attached would make a big difference. Then you know just trying to show some kids, but he was a square, and then the next thing is a square. For example, if you think about flowcharting and you think about computer programming those are appropriate for computer programs, but not for maybe children young children. Which essentially says, any system must be as complex as the entity is trying to address. So if we think about who would audience could be interested in this type of work, almost anyone who's interested in looking at how you visually illustrate sequences. So if I live in a small town with 2,500 people, and Main Street 3 blocks long, then my traffic control system can be of one size. If I live in a booming Metropolis with more than 3 million people, I'll need a traffic control system, but it would need to be much more complex. The law represent variety says. Whatever system you have needs to be able to match, or otherwise correlate to the potential issues that would be in that entity. So when looking at diagramming complex relationship some people have begun to say, “oh, okay,” so my high level 3 boxes and a couple of arrows will be okay maybe for a concept meeting, but if I get into the nitty-gritty of the system. I'm going to have to have a real thorough and complex set of processes.

**KL**: Well Rob as someone who likes process this is really interesting. Thank you for going into detail. We're going to take a brief break when we come back. We're going to hear a little bit more from Rob about being a Fulbright scholar back in a moment.

[Music plays]

# Segment 2:

**KL:** Rob, one of the things that really interested me about your bio is that you are a Fulbright scholar, and this is something that we haven't really talked about on the show before so I thought it would be really interesting to share a little bit with listeners. For people who may not be familiar with the Fulbright program, can you just share briefly about what it is?

**RB**: Yes, I'd be glad to. The Fulbright; it's actually a scholar exchange program, but it's a scholar exchange program on [*indiscernible*] levels on a variety of jobs. There’s research, there's teaching, there's working alongside other scholars, or people who are in different business and industry in other countries. The Fulbright scholarship program is one of the things that I'm very proud to say I was a part of. It came about when I was on the faculty of Syracuse University. There was a scholar who came from a University in South Africa, and he was completing his master's degree and we befriended each other that little partnering together with some scholarship and some different kinds of presentations at conferences. He became interested in my curriculum development activities. And he returned back to his home University in South Africa and contacted me and said “Hey Rob, I'm putting together a master's degree program for our University in Educational Technology” and it just so happens that the Fulbright scholar program, they look for these kinds of projects and, based on the Fulbright scholar programs criteria, they accepted this proposal for me to go to South Africa and work with this other scholar. We created a master's degree in Educational Technology. So that's what I meant by the way, that's one aspect of the Fulbright scholar Exchange there are many aspects. Mine was a 10-month program, and I even went with my family. My children went to school there while we were there since it was it for a year. And that's a definite commitment, but in that year we created the program actually leading up to be coming there. We created it and by the time I arrived we were able to offer the first courses. And by the time I left we were one semester away from graduating the first South African Nationals to get a master's degree in that particular subject. Now the Fulbright, paid for me and has stipend for part of my family, but it was important enough to my wife, and I that are three children come along. So we checked in and it was one of the best experiences for the family. But for me, it's one of the few things I can point to and say of all the things I've done look at my vitae and say yeah, but there's something tangible where people in the country now are able to have expertise and have a degree in that area, rather than relying on expatriates, people from outside the country. Now let me say this for those of you who are thinking about Fulbright today. By the way that was 20, 22, 23 years ago. The good news today, is that Fulbright expanded. The type of options that are available. They even have programs that are as brief as four weeks, and to be eligible you want to have established some kind of agenda either teaching or research, but you need to have established some kind of agenda and terminal degree is usually expected, but it's an opportunity to go and learn from others another country. They have Fulbright programs for international people to come to the States, but the one that most of us might be interested in, are the Fulbright programs where you can go there for couple of weeks, couple or months or up to a year. By the way, I discovered and found out a couple of weeks ago maybe a month or so ago, that they actually have a new program where you can even visit more than one country. You have to put together a proposal, you have to put together a rationale. And what's really, really, really helpful most of the time is to have a letter of invitation from someone at another University or governmental agency. The whole application process is done in conjunction with the host countries international office. Fulbright scholar is usually something if I may say so is held in relatively high esteem because there is an expectation that you will go make a contribution. I tend to learn more than I got out of the deal. And then write up something, share it in the forms to come forward. And for me, my Fulbright experience, it was 1996 and 1995 so about 20/21/22 years ago. So from my experience I have benefited. I benefited immediately, I benefited and I've been benefiting ever since. In fact, I established relationships with that University and then other universities and keep in mind for me this was right around the time of independence in South Africa. It was the year after Mandela was released from prison. A couple years after the year after he was elected to president, and the work that you will do, in any country, Europe Asia, whatever country you go to Fulbright makes it possible for you to study and exchange knowledge and skills. I'm still benefiting from the relationships so much so I'll be traveling Cape Town South Africa to be part of a conference on e-learning because of the relationship established over the years through my Fulbright scholarship.

**KL:** That is incredible. We will definitely link to the Fulbright program in the show notes so people can take a look. I know they have some information right on the front page of that kind of describes the programming and gives detailed information about how to apply. But I am wondering Rob if you can talk a little bit about the world is getting smaller and smaller, and international collaborations are really you know, as you're saying, really key to the work that we're doing. I am wondering if you can talk a little bit more about you know the experience you had building those relationships. And you've alluded to the fact that their ongoing you know you've been able to kind of expand those relationships in different ways. For people really don't have maybe super-strong International connections right now. I think the Fulbright scholarship is is one way into that. Are there other ways that you've also made International connections for the work that you do?

**RB**: Yes. Let me start by encouraging everyone to consider an international assignment. Fulbright or something. I hope, I hope our, my listening colleagues understand what I'm about to say, student or faculty, And that is: Be careful about believing everything you hear about other countries. America's great. Other places are really, really good too. And most Exchange program at least the ones I'm aware all the ones. All the ones I'm aware of they provide safe environments when you go someplace. It will be that knowledge that's constructed between the two of you, or the two groups that's going to be important, so I just wanted to say you know about that be careful about what you see on the news be careful about what you hear from your friends, and if someone tells you about a country, they've not been there. You know, talk to people who've been there and even then be able to go for yourself. Now that I've gotten that out the way. I just want to say it for me, I have always had a predisposition to want to go and visit overseas. So it actually started with me. My first overseas trip was as a Peace Corps volunteer to Botswana. And in 1980, I went to teach at Boxee Secondary School. And as a Peace Corps volunteer, you are assigned a job. In fact one of the most rigorous review processes that I've had, in my including all my jobs, almost promotion and tenure, we're still less than the Peace Corp scrutinization. They ask for eight references and I got them, they contacted all 8. I mentioned this because I'm going to quickly let you know Peace Court is a genuine Bonafide job. The toughest job. You'll ever love that is something that is one of the truest advertising. I loved my experience because it had ups and downs and everything else with it, but during that time I realized there are other places in the world that have Bonafide societies, imagine that. Why was there taught high school in while I was teaching High School I ended up supervising student teachers. These student teachers were studying from the University, so I finished my Peace Corps. I stayed on for a couple of years, and then I went and worked at University so I have established some high school level connections. Now I was establishing some University connections, and I return to the States because I wanted to get my doctorate. After I got my doctorate, and then went to Syracuse, and that's when I discovered boy I'd like to try this again and that let me to the Fulbright. Now there are other organizations like People to People and I can't think of all of them right now, but what I would say is, if you seek out these opportunities, when students or colleagues from other countries come to your institution, have a conversation with them about other kinds of partnerships. I know the University of Georgia, we have programs at the University that will even sponsor at least the preliminary trip, or a site visit trip or week to 10 days to see what it would be like to partner and collaborate with Scholars or students at other institutions abroad.

**KL**: Well this is so interesting. Thank you so much for sharing your experience. We're going to take another brief break before we hear from Rob a little bit about his current research project will be back in just a moment.

[Music plays]

# Segment 3:

**KL:** Rob I know that some of your more recent research is focused on the importance of replication studies in the social sciences and I would love to hear more about this. What led you to focus on this area?

**RB:** Yes replication studies. I believe the social sciences would benefit from having multiple studies that would reaffirm some of the initial studies to the problems with finding out that when we do these one-off studies that at best if the research methodology is sound, and if the research questions are appropriate, and if all of the recommendations and implications make sense, then it's only a data point of one. And what happens is that it's either accepted and used beyond what it was intended to, or begins to fall down because we didn't cover all the bases. Or if it's a study that found no statistically significant difference, then it's rejected, and it doesn't go any further. It's a study where you did some interviews, but you interviewed a group of people in such a small subset that it is really challenging and almost improbable that you could extend it to any other community of people or ideas. What I'm trying to say is that the social sciences we do a lot one off studies, and we, actually my experience has been, that we actually frown a study that just replicates another one or at the very least. We have we in the proper story it in the academy there is pressure to be creative innovative new so repeating a study seems to be out of vogue. In other Sciences you must replicate them if you're doing something at where you're trying to say, “hey” geology or biosciences replication is it sent in the social sciences I think it's also essential. One of the challenges is that, and we have a lot of people who do the dissertation studies, and they're asked to do studies that are also unique. If someone says what can I do a replication study? It becomes an issue sometimes because people will feel like, “well I need to know that you can do your own or you need to be able to do it from from A to Z” so to speak. Maybe so, but for Scholars who have the terminal degree and have a research agenda, I advocate replication studies. Now, let me hasten to add that replication may not mean 100%. In fact, replicating a study 100% is close to impossible. I'll give you an example. My own dissertation started out as a replication study. I was looking at text in equivalent forms of information and diagrams using stimuli such as study questions patterned after another established scholar and the university. By the time that I adjusted the question for my context I did use the exact diagram that the person used, but I got a different text because it was a different subject. The study probably was about 30% the same, and I was just calling it a replication study. But now I can build on it, maybe I could take different aspects as I went forward and that's what I've done. And last year I work was to PhD students, and we replicated a study from 1997 and interestingly enough, we tried to do the exact same measures, but different participants. But we did was where last time it was on paper this time it was online the treatments were online so that alone changed it. So if you think about replication studies we need some kind of framework for looking at replication studies if we're going to go down this road called a Bonafide research agenda, and that's beginning to happen. The editors of a couple of journals *Educational Technology Research and Development*, *Tech Trends*, and there's one other journal that have committed to allowing and taking close to looks taking a close look at replication studies, but more importantly they come together once a year at the National Technology Leadership Summit in Washington DC, and they are currently working on a framework for replication studies. That will do at least two things one it will be able to assess the rubric they will be able to assess the degree to which this could be your something could be called a replication study and secondly this framework would be a way to say, okay. We've looked at these variables. Let's say you have a matrix you know rows and columns and you've got a total of 30 cells. Maybe once that he looks at certain group of cells, maybe 10% of those another one looks like an overlap of other cell at any rate. Recently I've devoted substantial part of my research time to conducting replication studies and working with the scholars who are editors of journals at looking at fabricating some type of replication studies matrix and trying to publish that for those were interested in giving it some credence.

**KL**: I think that this is such an important topic to discuss because I think you're absolutely right that researchers are kind of rewarded for doing things that are new and innovative, and we're not always rewarded for doing these kind of replication studies. And I remember a while back in the last few years, there was an article that I think it might have one of the psychology of the articles that they had sounds like in a particular journal information, but also completely different results. I think this is one of those areas where sometimes we do the research and we get the results and then we move on as if those results are definitive, and that's really not what research and science is all about we need to be kind of doing this replication to see do we come up with different results in different context, and you know what does that mean for the larger field.

**RB**: I concur with you 100%. In fact, my goal now at this point in my career is to make it such that or to be part of a movement that says, “hey, you replicated a study and found you found something different doing it; let's try it again.”

**KL**: Yeah, we don't do that enough for sure and I think it is an area like you mentioned with your dissertation again our graduate students. We really encourage something innovative. You know we don't necessarily say do a replication study, but that could be an interesting space for graduate students to be apprenticed into research design and research methodology if they were doing more replication studies. I am wondering if there are certain fields where this is more common, and maybe I'm just not aware of it. So I encourage our listeners to reach out if you are in a field where this is very common, or if you're in a field that really prioritizes or rewards replication studies. I would love to hear about it.

**RB**: You know what Katie? Thanks for making that call to our listeners indeed. I too would welcome any nation that you'd want to share regarding replication studies in the social sciences.

**KL**: Great, well we depend on our listeners for so many things, and this is just one of them, we will make sure and include Rob's contact information in the show notes. If you have additional information you want to share with him he can include in his research, but this is a fascinating topic, Rob. I am glad we could end it on this. Thank you so much for taking the time to come on the show and share about your research.

**RB**: My pleasure, it's been a real treat for me to do this, and if you think it's appropriate, I'll be glad to come back anytime.

**KL**: Awesome. Well thanks so much, Rob.

Thanks also to our listeners for joining us on this week’s episode of research in action. I'm Katie Linda and will be back next week with another episode.

# Show notes with links to resources mentioned in the episode, a full transcript, and an instructor’s guide for incorporating the episode into your courses, can be found at the show’s website at [ecampus.oregonstate.edu/podcast](http://www.ecampus.oregonstate.edu/podcast).

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# Bonus Clip #1:

**KL:** In this bonus clip for Episode 95 of the Research in Action podcast, Dr. Rob Branch shares the definition of the role of an instructional designer. Take a listen.

Rob it occurs to me that some of our listeners might not be super familiar with what an instructional designer is and we have been talking about it quite a bit. Can you describe the role of an instructional designer?

**RB**: Certainly. An instructional designer is a person who assists someone else in generating teaching and learning materials. Instructional design typically facilitates active, multi-functional, inspirational, situated approaches to intentional learning. Emphasis on intentional learning, because learning occurs all the time. There are many ways people learn put together teaching materials, which out instructional design, but instructional design says the materials that you are going to use will be student centered, and the outcomes produced by the students, either the knowledge of the students or skills, we will measurable. So the presumption is that intentional learning involves multiple, concurrent interactions among people, places, and things, but they are situated within some context. Instructional designers are preparing teaching-learning materials for those different contexts. Good instructional design will start from the end and work backwards. And the end should be, “what would you like to see from the students? What would you like them to perform? What would you like for them to demonstrate? What would you like to be able to measure in authentic and contextualized terms?” In order to say that “Yeah, they understand a particular concept, theory or an idea”. So instructional design starts at the end works backwards, it’s student centered, and in terms of expressing, most instructional design practice, you begin with some type of learning objective. But that objective should be expressed in terms in what the learner will do or know, or at least at the end of the instruction, an instructor will be able to observe or a teacher. It’s a collaborative process, but the instructional designer really focuses on processes that help students learn in a systematic systems-based way.

**KL**: Thanks so much for sharing that Rob!

**RB**: You’re welcome

**KL**: You just heard a bonus clip from episode 95 of the Research in Action podcast with Dr. Rob Branch sharing a definition of the role of an instructional designer.

Thanks for listening.

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