Episode 163: Kevin Roessger

# KL: Katie Linder

**KR:** Kevin Roessger

# KL: You’re listening to “Research in Action,” episode one hundred and sixty-three.

# [intro music]

# Segment 1:

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

**KL:** On this episode, I’m joined by Dr. Kevin Roessger, an assistant professor of adult and lifelong learning. He received his BS in Psychology, MS in administrative leadership, and Ph.D. in Adult and Continuing Education from the University of Wisconsin-Milwaukee. Dr. Roessger currently serves as co-editor of adult education’s flagship research journal, *Adult Education Quarterly*, as well as reviewer for the journals *Adult Learning* and *Journal of Continuing Higher Education*.

He has published numerous articles and book chapters in the fields most respected outlets and is currently overseeing a grant from the Department of Corrections that examines the effective correctional education programs on recidivism and post-release employment Dr. Roessger’s research interests include reflective learning strategies and developing reflective skills in adult learners.

Kevin, thanks so much for joining me on the show today.

**KR:** Wonderful to be here. Thanks for having me, Katie.

**KL:** So one of the things that really intrigued me about your work is you utilize a content analysis methodology, and this is something that we haven't done a ton of discussion of on the show, and I'm hoping you can explain a little bit about this methodology for folks who may be unfamiliar with it.

**KR:** Certainly. Well content analysis is sort of what the name implies; a way of analyzing textual content in terms of printed materials and books, journal articles, even websites. It's a way of sort of getting a sense of how people use language in particular areas.

**KL:** So when is kind of the best time to use something like content analysis? When would you choose this as a methodology?

**KR:** Well, I would choose it if you really want to empirically establish a claim about sort of a direction of a field or direction of a particular topic or subject. You know, often times, we have sort of an intuitive sense that people are talking about something more so than they did in the past, or people are talking about something or writing about something in a particular way or from a particular perspective, you know, as a researcher I always want to sort of go beyond these intuitive claims or intuitive thoughts. So content analysis is one way where we can actually empirically sort of validate our claims by looking at what does the text actually say beyond just whatever our intuitive sense of what the text actually says. So I can talk a little bit more about sort of how we would do that. I know that's kind of abstract.

Typically content analysis involves going through large amounts of text. So in my use of content analysis, I essentially focused on my field’s premier journals. So my field is adult education or adult learning. And we typically have three or four journals that most researchers in my field will look at it sort of the preeminent Journal or the ones that sort of guide research and practice in the field. So in previous studies I had talked about how a lot of the theoretical claims that were happening in sort of more of our research-centric journals that were geared more toward academics and practitioners, those theoretical claims weren't really transitioning to practice, and that they were sort of remaining sort of a way of talking or a focus of talking that was purely amongst academics and practitioners and policymakers weren't paying any attention to it.

So I had a sense that this was kind of going on, but I wanted to see is this really what's happening? So I looked at all the publications in our field’s three largest journals by the American Association of Adult and Continuing Education, and I also looked at policy documents from the U.S. in terms of adult and continuing education policy, vocational education policy for adults, and I looked in practitioner journals that were geared particularly toward or specifically toward practitioners.

And I wanted to see how do these different avenues talk about this idea of meaning-making, which is a really sort of in vogue idea in educational research, particularly in adult learning research that stems from the theory of constructivism, and that when we learn we sort of create our own meaning around content rather than sort of acquiring some sort of existing or inherent meaning that is there for us to sort of take.

So the adult ed theoretical journal, or sort of literature that's geared specifically toward academics, tends to be really heavy in this sort of jargon around meaning-making and constructing meaning and so on. But, you know, I just really haven't heard too many practitioners or policymakers talking about this or saying this of principle importance.

So I went through all of these different publication outlets since I believe 2005, so my sample is really anything published between 2005, and I think it went up to 2016. And what I wanted to do first was conduct what's called a manifest content analysis, and that's really a quantitative approach to content analysis that looks at the frequency of a particular language in terms of how often it's used. And I wanted to look at how that frequency is changed over time and how that frequency is different for academic publications, practitioner publications, and policymakers on policy making.

So I went through everything was published in principle journals, policymaking documents, etc., every article every web publication and searched all of these documents or articles for the presence of sort of T-terminology around this idea of meaning making. And I was able to sort of look at how different outlets have changed in terms of the frequency of using this language over time and what we typically saw was that in academic outlets there's a pretty consistent and sharp incline in the use of meaning making language from about 2005 forward. And that it starts around 2005 is actually not being very present in the majority of articles that are published in academic journals. And by the time we hit around 2015, it's actually present in I believe over 50% of every article that's published in academic journals.

**KL:** Wow.

**KR:** So you can sort of see the rise of this sort of jargon or idea that's coming from—and I don't use jargon as some negative term here—but it's really such a specific language of constructivist learning theory that you don't really see it in reference to other learning theory. So you're sort of seeing the growth of constructivist learning theory and academics talking about it, pretty dramatically, over the last, you know, 10 or 11 years.

If you look at practitioner journals that what you see there's a slight increase but they're not talking about it nearly at the level that academics are so you just don't hear practitioners talk about things like meaning-making or constructing meaning, or anything really having to deal to do with meaning and the interpretation of meaning and learning.

So there's a big gap between what practitioners are talking about or even what folks who are writing for practitioners are talking about then academics who are really talking about it and things in that sort of realm. If you look at the policy making documents for U.S. policy, you see no mention of meaning-making or anything around this idea of constructing meaning that's so prevalent and constructivism it’s simply not there.

So what we're seeing over time is there's this dramatic rise in terms of academics talking about this, it's not as barely transfer translating into what practitioners are talking about and it's not translating at all to what policymakers are talking about. So this would be an instance of a manifest content analysis where you're really just looking for the frequency of certain terminology in terms of how it's used in certain outlets. You would run statistical models on this to show whether or not that frequency is changing over time or whether or not that frequency is different across different outlets or for different audiences, which is what I did and in that study.

One limitation though of a manifest content analysis is it doesn't really get at sort of authors underlying meaning or how authors are interpreting the language. It simply looks at are they using it or not? So that sort of leads to the next form of content analysis that are often used by researchers and it was actually this approach was an approach I did in a follow-up to that initial study. And this is something called latent content analysis. This tends to be a much more qualitative approach to content analysis whereas manifest content analysis is a much more quantitative approach. Latent content analysis is actually you're going through the same textual sources, but you're really sort of applying a qualitative blend. So you're looking for themes, you’re looking for sort of emergent ideas that come out of how people are using particular language.

So you can do latent content analysis, analyses using deductive approaches. So if you have a particular theory, or if empirical research is really strong that suggests a certain a certain way of constructing codes that you're going to use to apply to the text. So you might have a theory that says people talk about or people are interested in meeting making language because of this or that or something else, and you would then use those reasons to construct codes so that you can go through the literature and actually categorize certain pieces of literature is falling into one or the other codes, but it's a very sort of straightforward qualitative analysis, but in that way or using a deductive approach where you're letting theory dictate what your codes are.

You can also approach latent content analysis inductively in sort of a more grounded theory approach where you're not approaching the taxed at all with any sort of preset coding strategies. You're reviewing all of the textual material and you're allowing the codes to sort of emerge from your analysis of the text.

I didn't do that in my piece that used latent content analysis. I actually went back to my original study which is manifest content analysis, and in that study my discussion of the results actually speculated on a set of sort of causes why we would have this disconnect between research and practice and research and policymaking.

So, I use those sort of conjectures as coded categories to then go through in my latent content analysis and look at the literature much more deeply for how the literature might be justifying or actually refuting some of my speculative reasons for why we had this gap.

**KL:** So it sounds like you can really use these methodologies to kind of go deeper, even if you're choosing different kinds of content analysis. Like you had kind of an initial phase and then you deepened it with a different kind of content analysis. Are there other kinds of methodologies that you think this pairs well with in terms of trying to really get at particular kinds of research questions?

**KR:** I do there's there's really sophisticated modeling that's done in content analysis now where there are specific software that has recently come out in the last couple of years just for content analysis. I haven't used any of the software yet—I wish I would have known about it when I was doing my initial manifest analysis—but some of the software will actually create pretty complex modeling that looks at the relationship between specific types of or keywords or themes that you're looking at and in other variables of interest, almost in sort of a predictive modeling approach to getting at you know, why are people using this language? Where do we see this language? Most often? What is this language most often paired with? What is the kind of subject area that this language is is focused on? What theoretical perspectives does it tend to come out of? You can get pretty pretty detailed and it now using some of the software.

**KL:** Okay, that sounds fascinating. I'm curious if you have some ideas for people who maybe are just getting started with content analysis as a method. Is there maybe a, for lack of a better phrasing, easier approach they could start with as they kind of go deeper and deeper? Because I'm sure the modeling is a little bit more sophisticated, but what are some things that people can do if they're just getting started and they're trying to explore it?

**KR:** So what I would do first is really look to your published examples first. You know, do a search on just content analysis and even if you're pulling up articles from other fields, read them closely see what kind of methodologies others are using, see the structure that they sort of lay out their explanation of their methods and their analysis of the text. Don't, you know, try to approach a Content analysis saying “Well, okay. I can just apply my qualitative analysis skills to text and I'm just going to go about it that way.” That's partially true. If you're doing a latent content analysis much. If you're really comfortable qualitative researcher, I think you'll find that those skills translate fairly easily to latent content analysis.

I would still look first to published examples and see okay, how are people doing this? How are they communicating their methodology and so on? If you are going to conduct a latent content analysis, which again would be that sort of qualitative approach, I would make sure to clearly articulate your methodology in the steps involved. And the idea is when you do that that you will allow for someone to possibly replicate your analysis. You know, one of the critiques often with qualitative research is there's sort of this subjective element to it—really a subjective element to both qualitative and quantitative—but that subjective element in qualitative research can often times be more pronounced because all of the steps involved in analysis aren't made explicit to the reader. So the reader isn't as clear in terms of’ “Okay, how did you get from A to B?” My suggestion for researchers doing this, when applying the content analysis, is to really articulate the methodology and the steps involved. And even if no one is going to ever replicate your study, you would at least allow for them to attempt it and hopefully to come close to obtaining the same results that you did.

Another suggestion would be definitely keep organized records. You're going to be dealing with a huge amount of text. I think in my first manifest content analysis I went through, I'm trying to think trying to think back the study was published in 2016, so when I was doing it was probably 2015. At least hundreds of manuscripts. At least. I don't think it quite pushed into a thousand or more, but we might be talking 500 or so. So if you're not keeping organized records in terms of, you know, which ones you reviewed what the frequency count was in each—that's if you're doing a manifest content analysis. If you're doing latent on that, it's even more important because you have much more there than just attributing a particular number to a certain manuscript. You're pulling out, “Okay. These are the themes that came out.” There are examples or passages from those articles that support your claim that this particular article, you know, contributed some way to this theme. If you're not keeping organized records about all of this, you know, my guess is there would be a tendency to get very lost in the vast amounts of data that you're working with.

**KL:** Well, this is a great starting point for people who are interested in content analysis as a methodology. Thanks, Kevin, for all the details. We're going to take a brief break. When we come back, we're going to hear a little bit more about Kevin's work research and correctional education programs back in a moment.

The research and action podcast is a team effort and I want to give kudos to our Oregon State University Ecampus multimedia team who ensure the podcast is the high-quality production that it is. OSU Ecampus is home to award-winning multimedia developers who create Innovative tools that improve the learning outcomes among online learners. Take are internationally recognized and nationally awarded 3D microscope. For example, believed to be a first-of-its-kind this academic breakthrough effectively puts a microscope in the hands of distance Learners worldwide learn more about our Innovative efforts at: ecampus.eregonstate.edu/microscope.

# Segment 2:

**KL:** Kevin, I want to switch gears a little bit here and talk about some of your grant-funded work to research correctional education programs. Can you share a little bit about this and how it came to be?

**KR:** Certainly. Well, you know the idea of correctional education, it's a pretty under-researched area in adult ed. But it can often be, you know, within certain states, it can be one of the most, you know, widespread forms of adult ed depending on where you're at or what the state's policy is on that. In the state of Arkansas, I’m at the University of Arkansas, there is a policy statewide that any person who is incarcerated, and when they go through intake if they don't have a GED or high school diploma GED certificate or a high-school diploma, that it's actually mandated that they participate in adult basic education and GED programming. So it's a big, big undertaking within the state and the state puts significant emphasis on education as part of the incarceration or rehabilitation process.

So I've always found this a really natural fit for my field, but we don't have a lot of research going on within my field in this area. So when I first came here to state of Arkansas, and University of Arkansas, I started talking a bit with the Arkansas Correctional School System, which is a statewide agency that works with the Arkansas Department of Corrections, to design and carry out these GED programs and vocational programming I started talking with them about, “Hey, has anyone ever evaluated what the effect of these programs are, you know, key post-release outcomes?” And they loved the idea. No one had ever done it in this state. It had been done in other states. I believe in 2015 or 2016 there was a fairly extensive meta-analysis done by the Rand Corporation on the effect of correctional education post-release employment and recidivism across the United States, and they reviewed dozens of studies. None of those studies ever conducted with the population in the state of Arkansas. So it seemed like a big opportunity to try it out here. What we ended up doing then was pitching the idea to Department of Corrections. They loved it. They funded us for several years. And we worked then for the next couple of years in essentially trading a data set of every intake and release that has happened since they started collecting data in 2005 to current, and then pairing that data with data from Department of Workforce Services, which collects employment data on folks. So we merged incarceration data from Department of Corrections, educational data from Arkansas Correctional School System, and employment data from Department of Workforce Services and the state of Arkansas.

This was a monumental undertaking because these agencies don't speak with one another at all. So the way that they house data, the way that the code data, is completely different in all of these organizations. So we started immediately and sort of forming, or trying to create relationships with each of these organizations, so that we could get access that took a while. At the same time we were pouring through the literature on correctional education and looking for some sort of hint in terms of what variables to look at. What their variables might influence the relationship between participation and its correctional education programs and these key outcomes. What demographic variables, what sentencing variables, what context variables in terms of the types of programming or the size of classrooms, etc.—anything that we could find that the research has shown empirically has some effect on the relationship between these education programs and key outcomes. We did that for the better part of six months. It was a pretty deep dive into the literature until we identified about 30 variables that other research has shown are worth taking a look at.

So when we did that, we were able then to approach these different state agencies and let them know, “This is the information that we want,” and that information pertained to the 30 variables, whether or not people purchase completed these programs and what their earnings might be after they were released. You would think okay this is pretty cut and dry and we can get these data in a fairly short period of time, but that's not the way it works when working with state agencies. Particularly when looking at employment data. In the United States, we view employment data as being something that's almost sacrosanct in terms of privacy. It's extremely difficult to find out what someone's our earnings are. As you can see with our current president, right? No one knows. It's very difficult thing to find out so it's the same thing when you're when you're working with anyone.

So we had to essentially demonstrate or create a way of accessing post-release employment data that, under no circumstance, would we be able to tie that data to a particular individual. So work for services wanted us to actually create algorithms and sort of proofs showing that if we gave them our data set with all the people who were released over the last 11 years, with all the variables we wanted to look at, and they plugged in the employment data, that there would be no possible way when they gave us back that data set we could ever link a person's earning to a particular person.

**KL:** Wow.

Will have to be completely, had to be totally de-identified it had to we had to demonstrate that you couldn't even make unique combinations of any of the other variables like gender and particular sentence and length of incarceration or anything that would point to there couldn't be any unique combination that would someone could sort of go through there and look for unique combinations that would then pinpoint a specific person. We had to show that there were none of those. This process took us better part of the year just to demonstrate that that could be done.

**KL:** Okay that I really that's intense, Kevin. I want to pause here and ask, you know, because some people are listening to this and they're thinking at what point you just decide like this isn't, we can't do this, like I mean, this is I mean was there ever a point where you were kind of questioning like, “Is this worth it?” or were you like, “No, we're going to figure this out. This is important. You know, we want to move forward.” What was your thought process during this period because that's a lot of time energy for you for your team to be kind of going through to figure this out?

**KR:** It was, and you know, honestly it was incredibly frustrating at times, but we understood. I mean there is a right to privacy about certain things and even if we could make the guarantee that hey we're the only ones looking at this, we have actually no right to see someone else's earnings. So we felt pretty confident, you know, one of our aims was if we can show to a really strong analysis that uses, you know, solid methods and looks over a long period of time that these programs really do benefit these post-release outcomes in terms of they decrease the likelihood of recidivism, they increase the likelihood of higher earnings, and we could present these figures to state legislature that we could be doing a really great thing in terms of helping these programs get more funding, they’re really starving for funding. It's a low priority for politicians. You don't see a lot of advocates for this area of education and we felt like if we could do this analysis right and really speak to the outcomes that politicians are concerned with, we could help Arkansas Correctional School System and these programs help more folks who are incarcerated.

So we were adamant we stuck with it. Every time we heard a no we asked, “Okay, how can we work around this?” And seriously often times it felt like we were just getting a continuous stream of no’s with the hope that we would just go away. But we didn't; we kept with it and eventually we alleviated all of their concerns, all of Workforce Services concern, and they obliged. And were able to give us the data that we were looking for and now we've just completed the modeling on those data and the results are very strong. They show exactly what we were hoping for that participation in these—completing these programs—while incarcerated significantly decreases one's likelihood of recidivating, and increases ones likelihood up having earnings post-release, and increases the amount of earnings once gets post-release.

**KL:** Okay, so Kevin, I would love to hear you know based on some of these challenges—and some of them are certainly related to working with state agencies—I would imagine the others are related to working specifically with prisoners, which I think for folks who know about IRB, you know, they here working with prisoners and they're immediately like “I know that there are complicating factors there,” in terms of getting the research approved and moving it forward. I'm wondering what you kind of wish you had known at the beginning of this process that might have made it easier for you? Or that might have you know kind of lessen the amount of stress that you were dealing with as you were trying to work through these things. It may be that you couldn't have known, you know, what some of these things would be, but are there certain lessons along the way that you thought, you know other people could really benefit from if they're working on similar projects, or particularly if they're working with prisoners as research subjects.

**KR:** Yeah. Yes. Well in our case because we were dealing with existing data, so we weren't using the interviews, we weren't going in and working with incarcerated folks directly, the concerns from IRB weren't as much about sort of taking advantage of populations that are vulnerable, which would be the general concern when working with incarcerated adults, the concern from IRB was people's privacy and keeping these data anonymous because these had things like social security numbers, dates of birth, all sorts of very private information and it would be truly catastrophic if there was some sort of breach. So we had to show multiple layers of encryption that we would house these data behind and a sort of chain of possession of the data only certain folks. In fact, three folks—

that's it—could have any access and I had to be in certain places and in certain situations and we had to show that pretty clearly. I don't think that you know in the era of big data now, I think those prophecies are becoming much more normal in large institutions or university specifically research one institutions, I think IRBs are becoming more used to those sorts of studies. So I wouldn't say that that was a really big—I mean it was certainly challenging—but we tended to you know put in the safeguards that were necessary and didn't get a lot of pushback on that. The challenging thing, or that the suggestion I would make the future researchers, is if you're doing something like this at the state level don't make the assumption that various state agencies are all concerned about the same thing. You would think that state agencies operating under a single sort of state are all sort of interested in the best outcomes for that state, and that really was not my experience. State agencies are interested in the outcomes that pertain to that agency, and anything that doesn't, they don't care about.

So if you're trying to or—I shouldn't say they don't care about—I should say that they're much less willing to put in work to help you address those outcomes. So in a study like ours, it really involved multiple State agencies, you know, we assume from the beginning that all these agencies are going to be really helpful and want us to figure out, you know, how our funds best used in terms of educational programming? How do they affect key outcomes that everyone's interested in? But that really wasn't the case so so much of our work was in trying to convince some of the agencies that weren't initially our funders. And it became almost like a public relations project after in the first year or two, and eventually we got past that but I think we all went in with a little naive assumption that everyone would be as interested in us doing this project as we were. And that simply wasn't the case.

So if you're going to work with multiple State agencies, I think realize that each agency has its own sort of mission and objectives and set of things that are of concern to it. And if you can't clearly address those things in some way, you might find that they're not as willing to work with you as you thought.

**KL:** That is such good advice. Kevin, this has been such an interesting conversation. So many good kind of packed in details about these research methodologies and strategies for working with state agencies to do some of this more kind of logistically challenging research work. I want to thank you so much for coming on the show taking time to talk with me today.

**KR:** Thank you. It's been my pleasure.

**KL:** Thanks also to our listeners for joining us for this week's episode of “Research in Action.” I'm Katie Linder and we'll be back next week with a new episode.

# Show notes with links to resources mentioned in the episode, a full transcript, and an instructor 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:

**KL:** In this bonus clip for episode 163 of the “Research in Action” podcast, Dr. Kevin Roessger talks about his most recent research project. Take a listen.

Kevin, I'm wondering if you can share with me about a recent project that you have that you're working on.

**KR:** Certainly. I've been involved with a team of researchers over the last year and a half doing research on the PIAAC data set, which is an acronym for Program for the International Assessment of Adult Competencies. It is an extensive what we call complex survey that has been given to over 32 countries across the world. It's a very long survey that takes quite a lot of time for someone to complete. So through some pretty fancy statistical methods that are way beyond my capacity to talk about, this study is actually only certain sections of it are given to different people, and then so no one actually takes the whole survey. So it's put together then in terms of hypothetical individuals who have taken the whole thing but no one actually has. And although, it is a huge data set that hundreds of thousands of people actually participate in compiling this. What it allows us to do is look at how adults learn internationally. We've never had a survey like this before, there are hundreds of background variables and questions to look at things like people's preferences for certain learning strategies, their skill levels and their employment, their educational level.

The list goes on and on and on it also assessed adults’ competencies in literacy, numeracy and problem solving, and technology-rich environment. So you could look at how folks were doing in these three areas. Most people doing research on PIAAC are essentially choosing one of the countries, like they might just focus on U.S. data. Or they might do some kind of comparative analysis between two or maybe three countries. So comparing sort of how do adults learn in the U.S. compared to say adults in Germany or so on. We thought well, there's a really interesting opportunity here to look at how adults’ preferences for certain learning strategies actually vary across countries. A lot of the criticism of the adult ed literature is that we put forth the sort of learning theories or conjectures about how adults learn best, and we think that those ways of learning or preferences for learning are sort of static across cultures and across the world. This is how adults learn. That's never really sat with me very well because it's not empirically validated. It's primarily a theoretical claim. And there's been a lot of noise in the literature that talks that has been critical of that, frankly, that says well that just ignores all the sort of cultural components of learning.

So Liz Rimmel from Texas A&M was my research partner on this study. And James Reese, who is my graduate assistant, we decided really take a deep dive into PIAAC. And instead of just looking at a single countries data or comparing one or two or three countries. We wanted to actually compile the whole data set across all 32 countries. So this became a monster data set. And what we tried to then do was say, okay, we want to look at adults preferences for certain learning strategies and see sort of what predicts those preferences after we aggregate this whole data set, but we want to see if those. The relationship between those predictors and preferences for learning strategies varies across countries. And this led us into doing something called multi-level modeling with the data set. And, in short, sort of what multi-level modeling means is there's different levels in terms of units of analysis of your data. On one level you may have the learner level which looks at okay, these are learner preferences and these are particular learner demographics, and all of the variables at that level consists at the learner-level it pertained to individual learners.

When you start looking at how some of these things vary across countries, you're now also talking about a higher level of data, which would be a country-level data and here you can start looking at country level variables like a country's GDP or a country's global well-being index or all sorts of variables that pertain to countries. When you start mixing levels like that with an analysis you need to use sometimes it's called hierarchical linear modeling, sometimes it's called multi-level modeling, and that was our approach that we took. The issue was no one has ever tried to do multi-level modeling on PIAAC or a complex survey like this. So we were going with no guidelines. And the software that is often used to analyze PIAAC because there are some specific concerns that have two or specific steps that have to be taken when working with PIAAC that typical software programs like SPSS simply don't have the capacity to do. The software didn't allow for multi-level modeling either.

So what we ended up doing was actually writing our own code. To do the analysis that we wanted to do. And this took us better part of a year to do and our results, after we finished analyzing these data, were just fascinating. The analyses were so big and took so much computational power from computer that we essentially ran our code, pressed run on a Friday night, went home for the weekend, and waited until Monday to see our results because the computer would essentially compute for a better part of the day. And we found some amazing results. That preferences for learning strategies amongst adults very considerably to very high extent across countries.

So there are these sort of cultural elements of learner’s preferences. We found specific things that actually explained what this cultural variation was in that countries that really address their citizens’ basic and psychological needs tend to have adult citizens that have higher preferences for these waves of learning that the adult literature says are sort of inherent in adults.

So really the folks who are learning in the ways that we describe adults as normally learning are really doing so, and mostly westernized countries that are pretty well-off and whose governments take great care of them. And there was a big distinction between Eastern and Western countries. What we espouse as sort of ways that adults learn, like if you take the theory of andragogy—which is based on the sort of six assumptions of how adults learn—that folks in Western countries really have preferences for those assumptions whereas folks in Eastern countries don't nearly as much. So we were able to sort of explain what's going on culturally, economically, and so on about how adults like to learn the way that they do.

**KL:** This is such a fascinating project. We will make sure and link to this in the show notes in case people want to learn a little bit more. Thanks so much for sharing about it, Kevin.

**KR:** My pleasure.

**KL:** You've just heard a bonus clip from episode 163 of the “Research in Action” podcast with Dr. Kevin Roessger talking about his most recent research. Thanks for listening.