Episode 81: Joanna Garner

# KL: Katie Linder

# JG: Joanna Garner

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

# [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 am joined by Dr. Joana Garner, the Executive Director of the Center for Educational Partnerships at Old Dominion University in Norfolk, Virginia. Originally from the United Kingdom, Dr. Garner completed her Bachelor and Master’s degrees in psychology at the University of Surrey, before earning her Doctorate in educational psychology at the Pennsylvania State University. Her work covers a range of topics pertaining to learning and identity development particularly related to STEM education.

**KL:** Thanks so much for joining me today, Joanna!

**JG:** Thank you for having me!

**KL:** So I’m really excited to dive into some of the common pitfalls of presentation slide design with you, because I know you have done some research in this area and this is something that I think researchers struggle with quite a bit. So what are some of the areas of presentation slide design that you think people struggle with the most? What have you found in your experience and your research?

**JG:** Well that’s a great question, and actually – first of all I’d like to make a broader call to think about common pitfalls with presentation in general. And the reason for that is because in my opinion and my experience, you can’t really separate the slide design portion from the delivery of the presentation or the presenter himself or herself. Um and some of this is because from an educational psychology perspective and a cognitive psychology perspective, the audience experiences a presentation holistically and dynamically. So the audience is looking at the presenter, and looking at the visual aids, and trying to use their limited attentional resources to try to sort of follow along. Um so I think one of the most common pitfalls really is that people think about the presentation slide design separately without thinking about the whole presentation and how the whole thing is going to go.

**KL:** I love that idea of kind of trying to mix all of them together in a more holistic way. I’m wondering, Joanna, if you can speak to – when people are preparing their slide design, I think one of the challenges might be that they don’t always think about their audience. They’re trying to think about the content itself, and maybe communicating it in a way that makes them like the least nervous, or something like that when they’re giving presentations. And it might not even be that they’re thinking about the audience and what the audience might need in terms of mixing you know, the presentation itself with the slide design itself, the text, the visuals; all of those components.

**JG:** Yeah so actually you’ve really hit on a very big issue for us of people who work with presentation, slide design, and slide delivery. I like to think of a presentation as an opportunity to teach the audience something, or at least carry them on a journey from point A to point B and kind of tell a story, even if it’s a technical story, along the way. And so I think often times people have more of perspective that they create visual aids that are somewhat to support them while they are giving their presentation, and not really to support the learning and the engagement of the audience. And so I think sometimes people can choose presentation slide content, that really support their own delivery, but it actually doesn’t match what we know about what the audience learns. So what we do know about how people learn in these settings is – first thing is that people have limited attentional resources. Um and so what we’re trying to do when following a presentation is use our limited auditorium visual attention to follow along, and one of the things that we found in our own research, and others have found in research on multimedia learning, is that people really struggle when you overload that limited attentional resource. Um and there’s specific things people can do to support the audience’s attention. So one of them for example might be not to show the exact text that the presenter is speaking about, because that violates a multimedia learning principal called ‘redundancy’. Another way to support the audience’s comprehension might be to have – instead of a phrase heading at the top of the slide, to have a sentence that the audience can use to really kind of hang their comprehension on, and then to support the sentence assertion with visual, explanatory pictures, images, evidence. So another feature that we have found, another principal that we have found is that when you do put images on presentations slides as many people do, not all images are created equal. Uh and so there’s um some – quite some extensive research in the educational psychology lecture about this. That when we put in images that don’t really help the audience, they’re superfluous or they’re supposed to be just kind of funny, you know, the screen being type of thing; It doesn’t really help the audience learn. What does help is if it’s more of an explanatory image. So that’s sort of one category or topic that we know about – is how people design presentation slides really tends to focus on what they need, and doesn’t really consider the audience learns. A second issue, I think you really opened a Pandora’s Box there when you asked that question, is that we struggle as experts with something called the ‘curse of knowledge’, and I don’t know if you’ve heard about this [I have heard about it, but I still haven’t brought it up!]. So the curse of knowledge is a term that’s been coined in I think psychology in economics, and it basically refers to when you are a content expert, that you see the presentation of that content differently from a novice. So what I might think of as being a perfectly clear explanation of something, you as a novice might not follow along. And so this kind of creates a difficulty if you’re creating a technical presentation, because you know, it might just not make sense to what your audience members are thinking or if they’re following along with you or not. So one of the recommendations that I have is that you have what we call a ‘critical friend’ and that you practice your presentation multiple times before you give your presentation - Um and this does a couple things. One is that is allows you to be fluent with your ideas, and often times leads people to restructure the points that they’re going through with their presentation. But the second thing is if they can find a critical friend who can say, “Hey, I didn’t follow that” or “Can you change X, Y or Z?” It gives you an opportunity to go back and change the presentation so that it really does make sense to your audience.

**KL:** These are some phenomenal tips, I’m so glad you also brought up the expert versus novice. There is an online EBook that talks about this that is free available. There is a chapter specifically on how experts differ from novices, so we can link to that in the show notes because I think it’s very helpful in the classroom and also of course when you’re preparing presentation slide design. Alright, so one last question in this area of you know, common things that people ask about, what about level of text? What level of text is appropriate in a slide design?

**JG:** That’s another great question, um and I don’t think I have a single answer for you, so if you were hoping that I would give you a word count or a font size, I’m not going to be able to give you an answer. However, I think the first thing to really think about, if you’re thinking about text on the slide is, “Who is this slide for? Is this really a crutch for me as the presenter?” in which case the answer is usually “Don’t put the text on the slide”, or “Is it something that’s going to teach my audience something? It’s a key point that I want to make.” And so with the assertion evidence approach to presentations, which is what Michael Alley and I have been working on for several years no. We advocate for sparing use of text, so we have a sentence heading at the top that’s usually left justified and it’s no more than two lines in length. So it might be somewhere in the ballpark of six to twelve words or something like that. Um and then underneath that when we have the visual evidence, um you could put labels sparingly around the visual evidence, or you could put one or two small call outs again that would have a coherent sentence. So we advocate for using natural language rather than using um topics and subtopics, and phrased headings, and the bulletin list. And part of the reason that we advocate for this is again, it comes back to how people learn. So people don’t tend to learn terribly well when the content on the slide is redundant with the content that’s being spoken verbally as I mentioned before. But also if you are a novice, you may not know how those three or four bullet points all fit together. And so you’re focused on those three or four bullet points there, you stop listening to the explanation that’s being given, and it doesn’t help you to build a coherent mental model of the overall content So the exception to this rule, as with many rules there’s an exception, a lot of the faculty that I work with, and I work primarily with undergraduates, graduate students, and faculty who are giving either technical presentations at conferences, or they’ve been invited to give a keynote talk for, or they’re giving a job talk. One of the exceptions I have found is if you’re presenting qualitative research. So in qualitative research often times we like to use an authentic representation of the participant’s voices, so we might pull a quote, and put a quote on a slide. If we do that though, typically what I find effective is if you let the audience read the quote. So obviously you want to make it brief enough, and large enough font that the audience can read it. An alternative is to still provide the same amount of text or words, but blank the screen and read the quote to the audience. So essentially you’re not providing any text on the slide, but you’re still providing the quote to the audience. And this comes back to again, you know, my earlier point about the audience having limited attentional resources. One of the most powerful things that you can do as a presenter is control your audience’s attention. We know that their attentional resources are limited and the amount of time that they can pay attention is also limited, and so if you can guide your audience to attend effectively to you and to your visual aids then it will lead to audiences taking away a much more coherent message. And if I can just – can I continue on the same kind of a tangent here, is that okay? [Yes. Please!] Okay! So one of the most effective things, we’re talking about text on a slide, and I want to come back to the idea of what a common pitfall that people make. Often times what people do when they start a presentation is they have an opening slide; a title slide. And a title slide is up on a screen or it’s up on multiple screens around the room, and the audience immediately has to choose whether they pay attention to the slide, or whether they pay attention to the speaker, who may or may not be standing next to the screen. Um and what I tell faculty and graduate students is that the audience, especially if this is an invited talk, the audience is there to see and hear you as a presenter. They have come because they want to know what you think about a topic or they want to hear about your research in particular, and so you are the most interesting thing. The slides should not be the most interesting thing, so make sparing use of slides. And there’s on example that I just want to give, I was giving a talk at an educational research conference several years ago and I opened my talk with a blank screen. So I just hit, there’s a function on most of the controls or in PowerPoint where you can just blank the screen, and I opened by addressing the audience and from my perspective all the eyes were on me, which was exactly what I wanted, because I wanted to make an introduction and make my first point before going into the slide. And somebody at the back of the room obviously was not used to this form of presentation, and so they were waving at me, “Do you know that your screen is blank?” you know, I could see them saying “Your screen is blank. Your screen is blank.” And I sort of gave them a thumbs up, “Yep. I know.” And as soon as I hit the remote so that I had my title slide, I lost everyone’s visual attention. They all looked at the screen. Now sometimes you want that to happen, and sometimes you don’t. And so my point being you have to choose, when is it appropriate to show any visual aid? That’s the first question that I ask myself. And then going from there is what kind of visual aid to I want to provide?

**KL:** I love that tip. I think that the start of the presentation is such a powerful time, and you want to make sure that you’re using it effectively. I do want to point out that long term listeners probably heard the reference to Michael Alley, who has also been a guest on the show. We’ll be sure to link to his episode in the show notes. Thanks so much, Joanna, for pointing us back to that. We’re going to take brief break when we come back we’ll hear a little bit more from Joanna about the best practices for presentation slide design. Back in a moment.

# Segment 2:

**KL:** Joanna, I’m wondering if you can talk with me a little bit about some “Must Dos” in presentation slide design that make slides really effective. And I would imagine that by talking about Must Dos, you might also run into some “Must Don’ts”. So what are some suggestions that you have to share with us?

**JG:** Right. Right. So Must Dos, so again, coming back to this idea that the way that I think about presentation slides design is enveloped in a broader question of, what should my presentation look like? How should my presentation be delivered? So the first thing that I think about is when should I be using slides? At what point in my talks should I be using slides? Um and then what I do is I create an outline for my talk, and it usually has somewhere in the range, three maybe four ideas or messages as Michael Alley would say. So one of the things we do is create this outline, and we actually have a template for this on the assertion evidence document assertion-evidence.com website; it’s called a mapping slide. And it gives the audience, and it gives you as you’re preparing it, it gives you and the audience a really clear roadmap about where you’re going. And one of the things, while we’re talking about the assertion evidence slide design, I just want to get in there about the research that we’ve done that’s been kind of interesting is, when you use this method, so that’s the mapping slide approach followed by building your talk on messages using the assertion evidence slide design, the audience members benefit. So they tend to come from that presentation with more understanding and more capacity for reasoning with the information, but you as a presenter benefit. Your learning and your ability to use the information that you’re presenting, your understanding of your own knowledge, your own content, also improves. So it’s a nice kind of, you know, it’s a double header or a winner in both areas. That the audience benefits from that and the presenter benefits from that. So one of the Must Dos for me is to have a really clear roadmap of where I’m going. A second Must Do would be to really practice my talk, so think about creating your slides with your assertion, your evidence, you visuals and then run through your talk multiple times. And this is one of things that happens often times when I work with subject matter experts or content experts like faculty members or professionals is they think, “Oh well I know what I’m going to say.” And so we’re so used to creating these presentations in our heads as we’re going through and creating the slides, and a couple of things happen. One is it takes an awful lot longer to get through the content than we think it does. So when we’re rehearsing it in our head, it can go quite quickly. When we stand there and deliver every single point we have wanted to say, it can take two time as long, even three times as long. The other thing that tends to happen, is people create slides that don’t necessarily have clear transitions between them. And so when you practice, you not only practice what you’re going to say for that particular slide or that point, but you also practice the Segway from one point to the next. And that can really help with boosting your confidence as a presenter. It appears you have confidence, it appears you’ve practiced, it makes it look very polished. So I would say that’s something else you could do that’s a Must Do.

**KL:** So I want to pop in and ask, because I think people might not understand the distinction between doing the practicing and really knowing your transitions and your road map versus memorizing your talk, and I’m wondering if you can talk about the difference between those. Is there ever a situation in which memorizing your talk is a good way to go? Is there something that you want to be careful about there? Could you address that?

**JG:** Sure. So I think um – I think if you memorize your talk it sort of depends on the situation. So I have actually given presentations, I was contracted by a Department of Education, one of the State Departments of Education, to do presentations that needed to be almost exactly carbon copies of one another. And so in that particular situation I did create a script for myself, and I did practice that script along with the presentation slides. However that was actually before I delivered the presentations, by the time I got to presentation delivery phase I had memorized the script to the point where I had refined it, revised it and I could do what Michael and I call ‘fashioning words on the spot’. So I could look at the slide and I could pick up even if it had stopped or somebody had asked a question, and I could pick up and look at the slide and say, “Okay. I know what the big idea here is, and I know perhaps one or two things that I need to point out on this slide.” And then I could address it and tailor it to that particular audience. So if you memorize the script, it can come across as if it’s not terribly natural in terms of the language, which is one thing that’s sort of a style issue. But a bigger issue I think is that if you memorize the script and somebody stops you, or asks you a question, or asks you to phrase something in a different way, then if you haven’t had that practice of doing it then it can put you – it can literally put you on the spot.

**KL:** That’s an excellent point. Joanna, I’m curious and I’m wondering you can talk a little bit more about the elements of slide design that people can focus on if they want to be better presenters, but they maybe have limited time or energy to devote to this. What are the places that might give them the biggest bang for their buck in terms of trying to be better with elements of slide design?

**JG:** That’s a really good question, so I think there are several things people can do, and some of them are very um, you know, concrete and specific to specific aspects of the slide and some of them are a bit bigger picture. So one thing you could do is on our website, which is assertion-evidence.com; it’s www.assertion-evidence.com. There are templates that you can download that you can use when you create a talk or a presentation, pull that template up or pull up a similar one that you’ve done before, and then use that to develop your slides. The second thing I would say is pay particular attention to your mapping slides, so what are the big sort of two, or three, or four big messages that you want to get across, and then also even write down, what do you think your audience’s purpose of being in that presentation is? What do they know, what do they not know, and how can you support their comprehension using distinct text and explanatory images, and remove when you go through and refine your presentation, remove anything that might send the audience off in a direction that’s kind of tangential or not central to the points that you’re trying to make. And then the next thing I would say is practice, and practice with a friend.

**KL:** Excellent. So you’ve mentioned at least one website resource that folks can check out, and we will definitely link to that in the show notes. Are there other resources that you would recommend for people who are trying to be better at designing their presentation slides?

**JG:** Sure. So there’s another website that I would recommend, and its www.engineeringambassadors.com. And this is a website where we have some examples of effective technical presentations, and the technical presentations are using the assertion evidence approach to slide design and also presentation delivery. So you can go online and you can watch some videos of young professionals giving these types of talks. So that’s a good resource to go to.

**KL:** Excellent. Thank you so much! Alright, we’re going to take another brief break, when we come back we’re going to hear a little bit more from Joanna about her current research. Back in a moment.

# Segment 3:

**KL:** Joana, some of the tips and strategies that you’ve already offered to us have been great, and so specific, so useful uh for me and I’m sure for our listeners as well. I’m wondering if you could talk about with the research you conduct on presentations more generally, what is some of the value you’ve found for this research. What are some of the benefits that you find as you are looking into these different aspects of effective presentations?

**JG:** So that’s another great question. That’s a really nice big picture question, and I think ultimately the value of the research that we’ve been doing is that we are – we have been able to help people, to empower young people to justify and communicate some really big ideas that are really important to them, and to be able to help them have a lasting impact on their audiences. So – uh if I can just dig into that a little bit and unpack that, one of the things that we have found through tying together assertion evidence presentation techniques with the engineering ambassador’s project which I alluded to earlier when we talked about resources. One of the things that we found in interviewing the ambassadors and the students, the undergraduate and grad students that learn these techniques, is that they gain significant amounts of confidence to give a talk in front of a small or a large group of people. And if you’ve ever given a presentation in front of a room of people, you know that it can be quite anxiety provoking, right? [Absolutely!] So one of the things that we found, and we actually had one of the interviewees that I spoke with after one of these training events - these training workshops, um particularly pointed out the value of these ‘practice out loud sessions’ or these ‘critique sessions’ that we do. So I mentioned individuals can practice to a critical friend or to someone who’s willing to at least give them a little bit of feedback. Um when we train individuals to use the assertion evidence technique, we are training them through this style of having multiple iterations and multiple critique sessions, and this one student said to me, he said “You know. I thought that this would be like the Hunger Games of presentations, but it actually – it was exactly the opposite. It was the most supportive, and useful, and welcoming environment and my talk improved tremendously.” And his confidence to give those types of talks improved tremendously. So I think when we think about the value of this research, we’re not just empowering people to give these presentations and teach the audience a very specific topic, we’re actually empowering them for the future. To be able to go out and be a young professional who can communicate effectively, or a scholar, or a faculty member, or someone who’s in the commercial world, or running a business and to be able to communicate ideas effectively, and have a lasting impact of their audiences. So that for me probably sums up the value of the work that we’ve been doing.

**KL:** That’s incredible. Joanna I’m wondering if you have areas if future research that are particularly exciting for you, or if you have topics or questions that you’re really looking to explore.

**JG:** So some areas of On-going research and future research for us includes finding the contexts and the reasons why this type of presentation approach might be adopted sooner rather than later in organizations, or in agencies, or in school settings. So that’s one area of research. Another area of research that I’m really digging into is, what is the impact on the – in the engineering ambassador’s case, what is the impact on their professional identity? These are young professionals who are going to graduate and go into the work place or go into graduate school, and how does this impact how they think about themselves? So for example, recent research that we have done shows that this type of presentation training increases their self-confidence, their self-efficacy if you like to give these presentations. It creates what we call ‘new action possibilities’. Things that they could do, that they didn’t think they could do before. So obviously that’s, you know, a powerful outcome. It also changes how they think about themselves, but it also leverages or it gives them a way to speak about topics that they are passionate about. So one of the projects that we are just beginning right now is to look at the impact of this kind of, in our case the engineering ambassadors, to look at their outreach experience and how that impacts them as a mouthpiece for bigger issues in society. They seem to be passionate about science topics, and engineering topics, and they link quite closely to societal issues. So how do we use STEM subject areas in the research, and the learning that we have from STEM subject areas, how do we use that to benefit society? And so when we find students who are very passionate about that for themselves and their community, giving them these communication tools empowers them to make even more impact. So we’ll be looking at that over the next couple of years.

**KL:** That sounds fascinating. I think that you’ve pointed out a couple different ways that researchers who are trying to present and maybe are feeling a lack of confidence in their presentation can really boost their confidence. One of those things was practicing, and then another one was having passion for your topic and really feeling strongly about communicating it with an audience. I’m wondering if you have any final tips for people who are, you know, a little bit afraid of public speaking or presentation. maybe in terms of their slide design, or maybe in terms of just their general presentation, of how they can increase their confidence as the go in front of an audience and share their work.

**JG:** So I think one of the things that happens when people stand up in front of a room of – an audience, whether its small group or large group, is you feel kind of like you’re under threat. You know, it’s like the lions are looking at the prey. Um and so think about it in terms of your role as a presenter. What is your role? Your role is not to tell them absolutely everything about a topic. We didn’t even really talk about handouts in this conversation, but one of the things that Michael and I have talked about a lot in our work with students and with professionals is that you can provide a handout that gives additional information. So you don’t have to tell them everything in that talk, and often times you only have a limited amount of time, so you can give them the highlights if you’d like and they can delve into the details with the handout.

So that’s one thing that I think can be helpful. Another thing that can be helpful is to practice receiving questions about your topic, and so this refers back to the idea of having a critical friend. Have your friends or your informal advisors for example could ask you questions, and you could just write them down. You don’t need to answer them immediately. And then when you’re in that talk, if someone breaks in and asks you your question you can say, “That’s a wonderful question. I will get back to you on that. You can write it down, and you can keep going. So you don’t have to know everything immediately, and on the spot. You’re in control and you’re driving the attentional train of your audience, and not the other way around.

**KL:** Well Joanna, you have given us so many strategies, tips, and practical things to think about here in this episode. Thank you so much for taking the time to come on the show and talk about some of the common pitfalls and practices for presentation slide design. Thank you!

**JG:** Thank you, Katie! It’s been fun!

**KL:** And thanks also to our listeners for joining us on 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’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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# “Research in Action” transcripts are sometimes created on a rush deadline and accuracy may vary. Please be aware that the authoritative record of the “Research in Action” podcast is the audio.

# Bonus Clip:

[Intro Music]

**KL:** In this bonus clip for episode eighty-one of the “Research in Action” podcast, Dr. Joana Garner discusses her opinion on slideshow animations. Take a listen.

Um, Joana I want to shift a little bit because I think you have raised some important points on how we should be thinking about our audience and the presentation slide design tools that people frequently use. I am thinking of specifically of Microsoft, PowerPoint, and some other things that are available, they have embedded some tricks and things you can do with your slides that I think some people think are great for audience engagement. Like animations for example. I am wondering what your thoughts are on animations? Because it is probably true that they can go a little bit wrong or they can be overdone, or they can be distracting to an audience, even though the presenter might be trying to use them as a way to engage. Do you have thoughts on that?

**JG:** I do. I think um when you are thinking about animations I think, about this from an education psychology perspective. So I am always thinking about what it is that we are trying to teach the audience. So let’s say for example we are trying to teach them about a process or about how a technical machine like an MRI machine works. This is actually a topic we have used Michael Alley and I at Penn State have used to study how people learn for multi-media presentations. And what we have found is that again like not all pictures are created equal not all animations are created equal. So if you are going to include an animation in your presentation. I would say a couple things: I would say make sure that it’s really central to the point you are trying to make and not just in there for fun. Not that I am not an advocate for fun, but in this context if you are trying to teach your audience something it really needs to help you make a point. That you can’t make in some other way, so it needs to explain or help the audience to put something together, or a concept, or an idea or a process together. The second thing that I would say though is that, and this comes back to my earlier point about thinking about this holistically; is that if you are using an amination on the screen what is the presenter doing while the audience is engaged with the animation? So for example if the animation is showing how a process happens or how something changes over time, but the presenter is talking over that animation such that the audience is trying to divide its attention between the animation and the presenter. Then that’s probably not going to be the best use of the animation. So to overcome this either the presenter can chose to stay quiet. As awkward as that sounds during a presentation to just stay quiet and allow the animation to be the subject of the audience’s attention. Or they can do a narration that matches and supplements the animation.

[Music plays]

**KL:** You just heard a bonus clip from episode eighty-one of the “Research in Action” podcast with Dr. Joana Garner discussing her opinion on slideshow animations.

Thanks for listening!