Episode 143: Katie Linder

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

On this episode, I am popping in to share with you a new research tool that we just released here at the Oregon State Ecampus Research Unit that I thought you might be interested in learning a little bit more about. So I wanted to share a little bit about what the tool is, why we created it, who it’s for, and then give you kind of a sneak peak of what is in the tool so you can decide if it might be useful for you.

So this tool is called the report reader checklist, and it is a guide to help readers evaluate the quality and rigor of study reports specifically in the field of online and distance education. Now I think it could be used more broadly than that, you would have to check it out to see if it would be a good guide for your particular field or discipline. But part of the reason why decided to create this tool in the research unit was in the field of online distance education research, there are a lot of study reports that get released each year. And I would say typically we read maybe between a dozen and fifteen different reports that come out. And these are reports sometimes that are surveys that are done by like inside higher ed, where they do a survey of faculty technology engagement, or maybe EDUCAUSE will release a study or one of the other kind of major national organizations like quality matters or the online learning consortium or up SIA. There's lots of different organizations that will engage in and they'll release reports based on their study findings. This is also something that the ECampus Research Unit does as well. We’ve released several study reports that are really more kind of descriptive reports of what our data is saying and in part we choose to do that because of speed, as we all know the peer review process is a little bit long and many times we want to just get information out there.

So we will release a study report, and this is something that the field of online and distance education is very familiar with as a way of sharing out results of studies, but here in the research unit we also wanted to have a little bit of a guide that we could provide to people that would help them to look at these reports and to see what is kind of the level of quality and rigor of these study reports. Because they aren't necessarily undergoing peer review and we also know that several people in the field of online and distance education come into that field from lots of different directions and may or may not feel confident in looking at academic research and really processing, digesting, and understanding what that research looks like.

Now one of the major goals here in the Ecampus Research Unit is to increase research literacy and to really provide tools and resources that will help people to better understand academic research. Now this is a huge reason why we do the podcast and it may have been what drew you to the podcast is to learn a little bit more about different kinds of research from a range of fields. So a big reason why we decided to create this tool was for people who might feel a little bit lacking in confidence when they read these reports and they want to better understand what they should be looking for that would help them to process the information. The other reason that we included it was people often use these reports in our field to make decisions or to make changes based on the study results and we wanted to help people to identify the strengths and the weaknesses of these reports, when they were choosing whether or not to act on the results that were coming out of those study reports. So that was another big reason that we really wanted to offer this as a tool for people.

So as I said kind of who is this for, we really did create this for people in online teaching and learning in our field, who are kind of trying to digest these reports because we saw this as a larger phenomenon in the field itself, that we had all these reports that were coming out all the time and also, I think sometimes people just kind of set the report aside, or they'll read the executive summary but not really dive in more because they don't quite know how to process the report or they don't have a lot of time to process the report. So this is also definitely a tool to kind of help people to look at reports and look for specific things that might be useful to help them understand both the quality and the rigor.

Now I also think though that this is a tool that applies a lot more broadly than the field of online teaching and learning and I think you could also potentially apply at least some of these criteria to academic journal articles if you wanted to have a systematic way of looking at them and kind of taking notes on their level of quality and rigor. So this is something that could also be used for that; so what is it? Well first of all it's a one-page document that you can download that has six areas and each of those six areas has a certain number of criterion listed underneath it of what you would look for and in the next segment I'm going to go into a lot more detail of what is in each of those six areas so you can learn a little bit more, but you can first of all go to the website which is ecampus.oregonstate.edu/checklist and you can download a one-page version of the checklist if you want to take a look. But the other thing that we did was create a supplementary website because when you read the checklist you might read one of the criterion and not quite know what it mean you know like maybe this is not an area of academic research that you're familiar with and you want to learn a little bit more about it. So on the website we have included extra kind of contextual information for each of the areas each of the six areas describing why we think it's important and also we've described each of the individual criterion so that you can better understand what we mean when we say that for example: the report meets Americans with Disabilities Act a ADA accessibility standards you might read that and say well I don't even know what that means well you can go to the website and learn a little bit more about what that would include. Now if that's not enough we also decided to include examples on the website we really wanted people again to use this as a research literacy tool and we thought “well what if you read the contextual information and you still don't quite know what we're talking about well then we've linked to a range of different reports that would meet a particular criterion.”

So for example, taking that particular criterion of it meets a ADA accessibility standards we would link to a report and say, “here's how you know that it meets those standards” or we might say, “we'll link to a report” and then give you a page number of where to look in that report, where you could find the specific thing that we're talking about, that would offer an example of that particular criterion. Now one of the important things that we really wanted to emphasize through this tool is it's kind of challenging for reports to do all the things that we have on the checklist oftentimes these reports are written in a context of many other projects going on and so we also see this as a potential tool for people who are writing reports that they could look at this and say, “have I included each of these things in a way that's going to be clear for readers?” So it works both ways; it could be for readers who are wanting to check off these items on the reports but it could also be for writers who are looking for kind of a final checklist of how they included all of these things that would help readers to really process the information in this study in a way that's going to make the most sense to them.

Okay, so let me give you a quick preview of what I'm going to be talking about in the next segment when I go into a deeper dive of what is on this checklist. So of the six areas that we've included the first area is context and we do that areas on the checklist and on the website and kind of the rough order in which you might encounter them in a report like this. They're not always going to be in this order but when you're reading a report you should kind of probably see the context there might be some kind of introduction or a short kind of preface that would allow you to know why the report was written.

The next section that we've included criterion for is the methodology section, and in some of these reports the methodology section will be upfront oftentimes it's included in some kind of appendix. So it's not necessarily right in the front of the report but we've included some criterion of what you would want to look for in the methodology section. The third area is an area that we labeled study participants, and this is when we're looking more deeply into what do you know about the sample that was included in the study. Now sometimes this is included in the methodology, but there was enough important information just about study participants that we decided to include it in its own area of the checklist. So the first three areas are context methodology and study participants the fourth area is reporting results and this is when we're really kind of diving deep into, what is the content of the data that were collected for that particular study, that they're trying to communicate the authors of the study are trying to communicate to the audience. The fifth area is transparency and this is something that we found to be really important particularly for studies in our field because it is not uncommon for those studies to be in partnership with a vendor or an organization that may have some kind of interest in the data for that study not necessarily a conflict of interest, but definitely they may have reasons for why they want to know that particular question and it was really important for us to kind of put out front the importance of explaining the role of those entities in the overall study as a whole. The sixth area is reader experience and this is really helping the reader to understand and adjust the content as much as we can.

So I'm going to take a brief break and then I'm going to come back and talk about the specific criterion that we decided to include in each of these areas and also give you a reminder about where you can find all of this information on our website. Back in a moment.

In addition to producing the “Research in Action” podcast as the research director at Oregon State University Ecampus, I'm fortunate to develop teaching and learning resources that contribute to the field of online education recently we released an edited collection titled *High-Impact Practices in Online Education: Research and Best Practices.* This collection was edited in partnership with more than 20 experts in the field of online learning and it offers the first comprehensive guide to how HIP’s are being implemented in online environments and how HIP’s can be adjusted to meet the needs of online learners find out how this book can benefit your work at Ecampus.OregonState.edu/HIP

# Segment 2:

**KL:** In the last segment, I gave you a little bit of an overview of what we created in the report reader checklist, why we created it, who it's for, and a little bit of a content preview of the six areas that we decided to include in the checklist. In this segment I want to give you a deeper dive of what we have included in each of those areas in terms of criterion and each of them has four to five criterion that we decided to include.

Okay so the first area context here are the different things we want people to check off that the report includes. The first one is that the report describes the larger purpose or need for the study, why did they decide to engage in the study in the first place. The second is that it explains the history and/or any theoretical frameworks in detail. Now for a lot of the reports in our field as I mentioned they might be a repeat study of something that came before so the context of that and how maybe the instrument has changed over time or what the last year's results indicated versus this year's results. Placing those things into context is going to be really important. The third aspect for this particular area of context is it includes the research aims or goals and there may be research questions, for example, that are going to be listed out. What were the original goals intended for this particular study, and then the fourth is it offers suggestions for further research and that also contextualizes maybe the limitations of that particular study and the directions for future researchers.

Okay so that's area number one context for different things to look for. The second area methodology has five different things to look for. The first one is that the report includes a methodology section period. There should be some kind of methodology section that explains how they decided to go about organizing the design of the study and the analysis the second item in this area is that it's clear how the data was collected and then the third it's clear how the data was analyzed. So in some of the study reports that we've seen over many years of looking at these reports this isn't always clear and so it's something that we really want to make sure is included in these reports that we know how data was collected and then how that data was analyzed. The fourth item is that if statistical analyses were used specific tests are named. So again you get really clear indication of what exactly was done to the data to get the results that are being included in the study report, and then that fifth item under methodology is that if coding was performed the coding procedure is described.

Now in a lot of studies, including some that are in peer-reviewed journals, you may have coding and you know that coding happened but it's not entirely clear how it was done, and so for qualitative studies it's really important that coding procedure be described. So those are the five items under methodology. The third area study participants has four items in it the first one is that participant and/or data sources are described in detail. Now in our field of online teaching and learning it's not uncommon to have data sources like IPEDS data from federal databases be included in a study report and broken down in a particular way and so those data sources need to really be described on the other hand if there were participants that were giving data for the study those need to be described.

 Also the second item under study participants is that it's clear how that participants were recruited what was the list of participants that was generated how are they contacted how did they decide to opt into the particular study and what were they asked to do to give particular data that is being described in the study. The third item under study participants is that the sample represents an appropriate level of diversity. For the study aims and that would mean that there is an appropriate description of the demographics of the sample that's being used in a particular study and then the fourth item under study participants is that if sub groups are included in the analyses, they are appropriately defined and labeled and that would also include things like data visualizations. If you're breaking down the data in a study into different subgroups you'd want to make sure that that's always clearly defined and labeled. So that is the four criterion under study participants. The next area is reporting results, and this one has five items under it. The first one is that all numbers used in the report are easy to comprehend now this is one of the ones that I think is kind of tough for people because they might think, “well it's not the report it's me if I can't understand all the numbers that must be a problem on my end with my kind of quantitative literacy,” but sometimes the reports are not always clear in terms of how numbers are being calculated or how they're being displayed. So this is something that we think is really important for report readers that all the numbers need to be easy for them to comprehend. The second item is that is offered whenever data is being described or shown.

Now we've seen some reports where there will be percentages offered in a data visualization for example but no mention of an overall end, so we don't really know what those percentages stand for. For example eighty percent of five people is very different than 80 percent of 150 people so having that end in all of the data visualizations but also mentioned throughout any time that reporting results is happening is going to be really helpful to help people understand the scale of what is being said in the report. The third item is that missing data is identified. now this is something that I think is really rare to be in these study reports and it's something that we are working really hard to make sure is in all of our study reports here at the campus research unit there are lots of reasons why data might be missing especially in studies that use survey instruments where you might have people who skip a question or they stop answering questions halfway through the survey, but if their data is used in any way shape or form it should be really clear that there are certain questions that have different ends than other questions. In terms of how many people decided to answer them and this is something that is often not reported in study reports in our field when there is missing data so this is something that we included under reporting results.

The fourth item is that it's clear how the study findings fit in with the study's purpose research questions and methodology, and this often has a lot to do with how the reporting results is organized within a study report and how the findings are kind of pointing back to certain questions, that might have been answered in an instrument for example, or in an interview protocol so this is really about alignment between the study's purpose the research questions, and the methods and then, the fifth item under reporting results is it the data visualizations. Including things like graphs, charts, and tables enhance your understanding of the results. So as a reader you can look at the data visualizations and you feel like you have a better understanding and that they're not confusing the results more for you. So that's the section on reporting results the fifth area of this checklist is transparency and there are four items under here.

The first one is maybe a little bit controversial but we think it's important and that is that raw quantitative data, for example tables of frequency counts get included in the report or in an appendix now some people would say they don't want to share their data they want to kind of use it for their own purposes or they may have other reasons like reporting additional results in a different publication for example like peer review, but we feel it's really important for a lot of the studies in our field to let people have access to the data so that they can kind of crunch their own numbers if they have additional questions. Now for reports that use things like IPEDS data people can go and find that and they can kind of look and run their own calculations but for reports that are including survey information or things like that where people who are reading the report might want to look at those raw frequency counts to see this is also where it's a really easy place to share when you have missing data, is in those frequency tables. This is something that we think is pretty important to include.

The second item under transparency is that you include the instrument and/or the study protocol and that that's provided to the readers. And this is something again, that's also pretty rare. Some people may feel that their instruments are proprietary and they don't want to share them out but this is something that I think really contextualizes a study and we feel it's very important that people can see for example the order in which questions were asked, and also maybe there were questions that were asked but the reported results for those questions were not included in the study report for whatever reason. It allows people to see the full picture of what got asked within a particular study the third item under transparency is that authors are clear about any conflicts of interest or other motivations for their role in the study now this was something that came up really early on in Oregon State. Our Ecampus research units work because we partnered with a vendor for one of our early studies on closed captioning and how closed captioning helps students learn, and what we learned through that partnership especially when we were starting to disseminate results is that people were very skeptical and thought that it may have been that the vendor paid for certain kinds of results to come out of that study and so one of the things we ended up really clarifying was what was the role of the vendor in that particular study and they helped us to generate the research questions in the research unit side. We designed the research they helped us to recruit people for the research based on their contacts but we analyzed the data and also when we released the results from that particular study we did it in a live webinar, and the vendor did not know what the results were. They were not given kind of even a preview of what we had found in that particular study.

So it was helpful I think for people to hear the exact role of what the vendor offered in that in terms of their involvement and certainly they paid for the time of the researchers in our unit to conduct that study but they weren't overly involved in, for example, the analysis of the study results which I think was a big concern of people who were hearing those results. So our third item under transparency, again, is the authors are clear about any conflicts of interest or other motivations for their role in a study. The fourth item under transparency is that any commentary or discussion is rooted in data results or study findings shared within the report and this is really ensuring that for example, you don't move from correlational to causal when your study results don't really support certain kinds of statements or certain kinds of outcomes that people might kind of jump to as readers to try to better understand what actions they should take from a study so really rooting commentary and discussion in data results is going to make sure that readers have a very clear context and picture of basically how far the study results can go and maybe the limitations of those study results as well.

Alright, so now the sixth area of this report reader checklist is the reader experience and this area has four different aspects. The first one is that the report uses language that is easy to understand. In other words it's not filled with jargon or maybe even acronyms that a lot of people wouldn't necessarily know what they mean. So using language that's easy to digest and understand is the first component.

The second component is one that I mentioned all the way back in segment one about meeting ADA accessibility standards, and that really has a lot to do with the digital version of a report especially if it's like a downloadable PDF, that the report would use things like headers that would assist with screen readability, that it would also use things like alt text if there were diagrams or figures or tables that were used so that screen readers could really understand that report and it would be digestible for people who have sensory or print disabilities where they need additional assistive technology. The third area under reader experience is that the report includes an executive summary or some kind of abstract for ease of digesting study findings and this is definitely for those folks who don't have a lot of time and they're trying to kind of run through and see what are the big takeaways from the report and they want to see some kind of summary. The fourth and final item under reader experience is that the study report is an appropriate length for the scope and the reporting of results. It's not too short and that it's not giving enough information about things like the methodology or appendices that might be helpful for context. And it's not too long or maybe organized in such a way in a really long report that it's really hard to get through or it's hard to kind of understand where the information is that the reader really wants to find so this is one of those Goldilocks criterion.

It's just right in terms of what the report calls for a length to make sure that has the appropriate scale and scope. Now, I don't expect that you would have been taking notes during this whole time that I've been talking about this and you might be interested in seeing all of these things on that special one pager that we have created so I encourage you to go on to Ecampus.OregonState.edu/checklist and download your own copy of this one-page report.

I think it'll be really interesting and hopefully helpful for you as you're digesting research findings not only in the field of online and distance education but maybe in your own field or discipline as well. Now, of course, we are always really interested in your feedback on this document on the website on the examples that we've provided online as well so please feel free to email us and offer that feedback at ECResearchUnit at OregonState.edu you can also find us on Twitter @ECResearchUnit, if you want to find us there and offer your feedback as well we hope that you will check this out.

Let us know what you think and, of course, share it with any friends or colleagues that you think would be helped by it. Also, thanks so much for listening to this episode on a report reader checklist and we'll be back next week with a new episode.

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