Week2-theresearchersrole_audioonly

Mon, 8/24 3:40PM 48:30

SUMMARY KEYWORDS

theory, research, designs, problem, questions, study, concepts, broad, constructs, paradigms, specific, methods, area, starting, ultimately, literature, post, information, important, type

SPEAKERS

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Andrew Colombo-Dougovito 00:01

Everybody, welcome to week two. So, last week we talked about what research was. Today, we're going to talk about start to finish. What do you do and what the role of the researcher is in the research process. Before we do that, though, I'd like you to do a little quick, right? So you can either pause this video and go into discussion point number one now, or come back to it once you've watched this. But what I want you to do is think of a major research problem in your area, or in what you're interested in. And I want you to summarize that in a few sentences, to maximum and then I want you to think about what types of methods have been primarily Have they been quantitative, qualitative, or mixed methods? What type of research designs have you been exposed to? And what research are you most drawn to? And how might your research paradigm influence this? So you should have already considered that in last week's discussion post. But in this one, I want you to think about now, how your research paradigm impacts the type of methods you might be drawn to. If you don't know at this point, I want you to take a little bit of an educated guess. Think about what you learned in your undergraduate experience or in your experiences to this point. If you're in a wanting to do physical therapy, for example, what areas do you think at this point are their issues Or where there may be those slivers of light or spaces between knowledge that you might have to bridge the gap. If you don't know what types of methods have been used, again, take an educated guess. Think back to the things you've read, or things people have made you read, and what types of things you've read about in those different studies. Again, in addition to your initial posts, you need to respond to at least three others to receive full credit for the discussion. So on to

today. So again, we're going to talk about the research process, and a little bit more specific terms than we did last time. We're going to further delve into paradigms. We're going to talk briefly about theory. And then we're going to talk about finding a problem because as you'll notice, when you're first assigned We'll be writing a statement of the research problem. So the research process, as you might notice, I have it represented as an hourglass, for these specific reasons. First, you're going to have a broad area or questions that are generated from the literature. You're ultimately going to want to narrow those down into answerable questions. So first starts with understanding what's going on. And that takes reading, reading as a part of the research process. So as you're thinking about your areas, and the pieces that might be missing at this point, or, at least, that we don't know about yet. It's gonna start out really broad. And you're gonna have to, like an hour class does push that down into a very, very narrow area. Something that's very specific. That's answerable. Once you have that, then you can do the opera opera ization. You can collect the data, and you can analyze the data. And we talked about operationalizing, the specific concepts or constructs that you're using. Well, that's how you come up with the independent and dependent variables. And without those, you can't collect data yet. So you have to figure out those things. And that's where you get squeezed into the middle part of the our class. Once you've collected and analyzed your data, then you're getting to the other side of the hourglass now. And you reach research conclusions. So you make interpretations based on your data. And from the interpretations. You make inferences that are related to your research question that ultimately gets situated in the broader research context. So you put it back in that literature that you started from. And then the process gets flipped over again. And you start all over. And what I want to point out is, is that many of you are starting out in 2000 foot view. You're way out in space, looking at the earth and trying to figure out a problem. What you ultimately have to do is based on the knowledge that you know, of your particular area, and that of others, is that you have to start delving further and further and further and further until you get to what you're actually wanting to study. Which might be as small as a little beetle. The Earth. But what we know of ecosystems is that that little beetle has a big impact in its area, which then has an impact on others. The world is complex and interconnected. So even though you're delving really into that one specific area, you want to know what the impacts are beyond just that little teeny thing that's in your screen. And so again, looking at this model in a slightly different way. We always start the research process with a lack of understanding that builds down into what our assumptions are, and even what type of research design we then do. Keep going throughout those processes until we get to our findings. And our insights. And then we deepen our understanding. So we add that information back to the literature back to the evidence base. so other people can take your research, and then they can answer new questions. Just to further get this ingrained into your brain. And another way of looking at the research process is this step by step ordeal. And you'll notice that a lot of the things

I'm going to mention here are actually assignments in this class. So you first start with a research problem. Looking at the literature, broadly speaking, where's the issue? What are you trying to address? From there, you're going to do what's called a literature review. Where you're going to do a little bit more in depth analyses of the research, which may cover the big broad concepts in what you're talking about. So say for example, we're talking about physical activity that we know. I'll use a more specific example. The population I work with autistic individuals have low physical activity participation. We know that's an issue. We also know it's an issue because they're not getting the health benefits of physical activity. They tend to be more overweight, and they tend to have more CO occurring conditions that could be been benefited from physical activity engagement. So that's kind of the big broad problem. In a literature review, I might look at, well, what is the obesity rate of autistic individuals across their lifespan, or the particular age group in which I'm focused on What do we know of the health benefits of physical activity? How have people intervened in the past, what type of interventions have been done? And when I structure my literature review, and we'll talk about this further, later in the semester, I would start from broad and get more specific and guide the reader to my ultimate problem to my study. Once I have the problem, in the review done, then you propose your research questions which are very specific. And they usually dictate what type of methods or methodology that you might use. So your question may be quantitative or qualitative or some mixture of each. And therefore, that's going to dictate the type of design which could be qualitative or quantitative or mixed methods. You can see there's different examples within each of those boxes. Some of the quantitative design it might be experimental or correlational or a survey design. In mixed methods, it could be exploratory explanatory or convergent. In qualitative it could be grounded theory or ethnography or, or phenomenology. And these are not meant to be all encompassing examples. There are many, many, many other ways within each of those different types of designs. But those are just some examples, and we'll talk about them again, further throughout the semester. Once you have your design, then you're going to figure out how you're going to sample. How are you going to recruit participants? What instruments are you going to use? What's the protocol you're going to go about using to collect your data or to generate your data? How are you going to analyze the data That you collect? And then how are you considering your interpretation. And once you have that, then you can come to your discussion, your conclusions, your limitations, and what you would propose for future research. In this class, you will do all of those things up until the actual data collection, which in our proposal that you'll complete, you'll actually consider how you're going to analyze that data, even though you're not going to do it right now. So moving on, in discussing research paradigms. We want to think about these as a school of thought that provides the framework for research activities, ie, the goals of the research, and the types of questions that are posed, methods employed, and the type of interpretations that are ultimately made. And when we discuss paradigms as I briefly mentioned last week,

there are differences in meaning and how meaning is constructed. So, for example, in one community of scholars, the first step always begins with the assumption that the goal is to relate variations in student achievement to variations and behaviors of teachers. Additional aspects may be added, ie use of individual students data versus class averages, student or teacher character, character, mystics as potential mediating factors, but in the end, the fundamental question remains unchanged. This is a quantitative example of meaning. Another may focus on classroom discourse, the same students The sense students make of instruction, the social organization of the classroom. And in the end, the fundamental characteristics of the question remain the same. So we're all trying to understand what is going on in the classroom. But depending on how you define what's important, might change how you're ultimately going about figuring out what is going on in that classroom. And the last, there's a belief that classrooms are complex, and that to understand how teachers and learning processes occur, an intertwined multifaceted approach must be used. And that would be someone who would fall into a mixed methods type of researcher that would probably pull from both different areas. paradigms are not methods paradigms are not designed paradigms aren't statistics. But they are philosophical framework for making decisions about each of the above. So they help guide you to the appropriate areas to do your research that helps build a little frame, as many of you are probably concerned about, there's many, many different ways in which to do research. There's many, many different ways in which to conduct a single research study. Starting with your research paradigm helps helps put that in a bit of a frame. If you consider research to be constructed as as constructivists do. You might be somebody who leans a little bit more toward qualitative type research. If you're more of a post positivist, you're more likely to lean toward doing quantitative research. If you're a pragmatist, you might be toward mixed methods or even one or the other. So again, this is a limited view. But we can look at research in multiple different ways in your paradigm that puts you into a little bit of a box in where that information falls into. So if you are more objective, you might fall over here. And you're looking at, you know, universal, first holistic type of information. So that's might be where post positivist might, might also be over here we're looking for explanatory or descriptive type of work. Someone who is ticular stick, its objective, and descriptive might fit a little bit more into the box, right near the middle, which might be more qualitative and kind of depending on where you fit in with All these pets were your paradigm is going to help guide you toward different types of designs, or questions or methods. And that's what a paradigm is supposed to do. It helps initiate the decision making process about the designs you're using, the methods you're using, the protocols for the analyses and the synthesis and how you interpret those findings. And there's no set answer to any of those. I can't give you a a tool book and tell you this is what you follow and this will get you where you need to go. It just doesn't work that way. There can be different combinations of each of those answers for different studies. As I mentioned last week, I'm a radical pragmatist and I tend to lean toward quality Data Type

work. But that's mostly the types of questions that I asked. When I do when I ask a question that has or needs quantitative methods, then I let the question guide where I'm going. I don't try to force a question into a certain type of method or a certain type of design, because then that just leads to bad research. And so again, as we delve into the research paradigms, as I mentioned, there were more than just what we talked about last week. And depending on who you're reading, and when you're reading it, there can be many different forms, and they've often split off in different combinations. So you can see in just the small chart, there's post positivism and positivism which Denson and Lincoln actually combined into one group. We have contract constructivism, but in which Morrison also considers interpretive. We have critical theories, which can also include feminist, post structural, or postmodern, or even participatory frameworks. And you'll see in this piece we also have pragmatism. And we have constructivism, and critical theory and participatory that are put off to the side. And positive infant positivism and post positivism and I include this because it also gives you just little brief nuggets of the ontology and epistemology of each of those different areas. And sorry for my notes on there, but hopefully they're helpful for you. And you can pause the video if you need to, so you can take time to read each of those little areas. We can also look at what types of inquiries they may have, and what types of theories form the basis for these paradigms, as well as what types of quality control they might use and what types of ethics they consider. Again, you can pause this, if you need to read it a little bit further. We can also look at it in terms of the philosophical assumptions and what types of methods might be used. So you can see in qualitative approaches typically that's where your phenomenologies are happening and grounded theories, and that they're operating from a constructivist type of paradigm. You can also see that the uses of these practices Where they might position qualitative work? Again, you can pause this video so you can take time to read each of those as different areas. So, what about theory? Where does that play a role? Well, theory is a system of interconnected abstractions or ideas that condense and organize knowledge about a social world. So, theories should be parsimonious, internally consistent and have clear criteria meaning, they have to be pretty specific theories have to take what is typically abstract and condense that information into something that is understandable. So, for example, we have the self efficacy theory that Bandura puts forward about how individuals have self efficacy given any situation that they might encounter. And he talks about how learning experiences influence your self efficacy. So you may use mastery experiences, things that you've done, learn vicariously can learn by hearing about it. And there's different ways in which we develop self efficacy. And it's written specific enough that each of us can look at those constructs and understand what they mean. But it's also broad enough and consistent enough that it can be used across different scenario. It also has clear criteria that can be refuted, though, in the 30 almost 50 years It's been around, it's yet to be refuted. theories are also attempts to retrospectively explain and prospective prospectively predict. So this is where we might

try to explain how things have happened, or predict how things might happen in the future. But it's important to understand that theories are not models. They're not perspectives, they're not systems approaches. They're not philosophical assumptions, or statistical assumptions. They're they're theories, they're meant to be tested. Models might just give a design about how things work. And theories can certainly have a model. perspectives are typically not broad enough to be considered a theory. a systems approach again, like a model is just organizing a structure. In our again, our assumptions, whether they're philosophical or statistical, haven't been tested enough or aren't specific enough to be considered here. So, when we use concepts in theory, again, these are ideas that are expressed in symbols or have words having two parts, either a word or a term and a definition of that word or a term. So we can have concepts that are very concrete, that go all the way to very abstract, but they have to be measurable. We have concepts that cluster together and form webs of meaning, such as the social ecological theory, which clusters different concepts about what different spaces are and how they impact an individual's day to day life. Within theory, they have to specify how the concepts are related to one another. And why these concepts and why these relationships exist. Sometimes, they do specify a causal relationship telling us why and how one thing causes another such as, by increases in the size of social welfare organizations tend to lead to the increases in centralization within government. To further specify this theory, again is an interrelated set of concepts and propositions that are organized into a deductive system to explain relationships about certain aspect. perspective is an emphasis on a point of view. It may be that concepts are at an early stage of development that We're trying to broaden. Or that they might be broader or higher levels of abstraction, such as a humanist perspective, or developmental perspective. paradigms, again, are those modes of thought. They're the general way of seeing the world. And how you see the world might influence the theories that you use. The models or guides for practitioners, then interact with the operationalized theory. So they provide that concrete action technique that theory doesn't necessarily have. And dimension is a feature that can be focused on individually or separately, but can only be understood in relation to the other features. So you might talk about one dimension of a theory. But remember that you can't just pull it out by itself. It has To be related to everything else, are put in the context of everything else. We can have deductive and inductive cycle of theory construction. So detective, like Aristotle starts with the theory. It builds a hypothesis, it does an observation and confirms whether that original theory and hypothesis was correct or incorrect. With induction, that's more like Sherlock Holmes, it starts with the observation and looks for patterns. And then through those patterns develops a hypothesis which is then tested to develop a theory. So as we think of this process, a little bit further, we can look at deductive and inductive work in cyclical fashion. So detective against theories, moves to hypothesis and observation, and then builds those observations into empirical generalizations. With induction, we start with observations and go the same way. We're just starting in a

different place, because then you build on the theory and comes around to furthermore observation. Now when you're constructing your research projects, theory can help organize the principles for programs. Maybe some maybe an intervention can suggest how a standard approach might derive from a well articulated and comprehensive social or behavioral theory. And it can serve as a guide in conceptualizing the causes of problems and proposed mechanisms of action for intervention. So theory, theoretical models are important to under How a problem should work and where one should look for indications that are proud program isn't successful. Rarely is a program or an intervention unsuccessful due to theory. likely if it's unsuccessful, was the intervention implemented correctly to have fidelity and its measurements? Or the track or the staff trained and all the same way? Or were some doing the program differently than others? Are there characteristics about the clients that resulted in different outcomes? So theory helps give you more confidence in understanding all of the different constructs that are within your own study, or your own intervention or your own program. And although theory is great many human service programs are not based on any explicit theory. If you human behavior, or social or behavioral science, the science theory. Such a theoretical programs tend to be based on common sense, or that intuition. Or they might be based in authority, because somebody told them that was important. Or maybe it was tradition. So it's just something that they've done for a really long time. We base it in theory, that means we're basing it in the prior evidence, because that's where theory comes from. It's rooted in that evidence of, of science that's come before it. So, theory frames how we look about a topic and how we think about a topic. It can provide those background assumptions, which help build a more sound study. theories are open to revisions by new data. That's why they theories, they're not yet a law, a law cannot be changed because the law has been quote unquote proven. In theory also suggest ways to connect a single study to a broader class of explanations. So, we're all using similar theories, we can compare findings from one study to another, even if they're in different areas. Yet, when we look at theory, and practice, there's a big gap. Through courses like this and through the knowledge you're gaining, you hopefully will be able, those of you who don't ultimately go on to be researchers or scholars, but go on to be practitioners can connect theory to practice. Also, those of you going on to be scholars but not practitioners. You'll be able to better connect theory to practice. That way it's easier for for those consumers To be able to use it, and to be able to connect it with other information that they might know. So, our last point for today, finding a research or the problem. So research problems, or issues or concerns, that investigator presents and justifies in a research study. And it's not just necessarily something you think's important. You need to show there's evidence and not just tell me that there's a problem, but use the evidence to show me guide the reader to what is the issue. This can start out broadly. In fact, it should. So as you're thinking about your problem, think about the broad issues that are at stake. What might be the global health concerns, what might be sport or activity issues that are that we're facing? They're using

research evidence you're going to justify why that's an important topic and why it needs further study. So you're going to tell me what the issue is? What controversy might lead to the study? It doesn't have to be controversy in the bad sense. But what differences are exist in the literature? What isn't yet certain? And what concern is being addressed behind the question? What are you trying to get at and why is that important? So just some examples. You might have basic science questions that add to the knowledge base of theory of teaching and learning are classroom practices or training methods. And that can be theory generated. We can have practice relevance, relevance, and urgency. So what is the best way to teach acts or program models for promoting wire learn how to access see This is really important in the current pandemic of how do we track down? How do we contact trace? What's the best way of doing? So there's an urgency to that question. We also have an urgency in developing policy. So how am I policy? Why regulation x or z? We have that currently in the pandemic of what impacts of certain policies have an impact on the pandemic, ie mass query. And we can also be programmatic and progressive and systematic versus one time focus. So the idea is that your research question should build upon each other. Those of you going into scholarly pursuits may have to consider a research program. How multiple seemingly unconnected studies between more broader Understanding what is not a research worthy is research done for achieving self enlightenment. Something that is only good for one person but doesn't lead to new information that is valuable for others. research done for the sole purpose of comparing data sets isn't research where they either such research that does such as compared to the increase in number of women employed over 100 years with the employment of men over the same time span doesn't really add to our knowledge or understanding. Looking at what policies influenced the numbers of women employed compared to men is a research worthy comparison. But just simply comparing those two Numbers doesn't really help anything. or asking questions that result in yes or no answer such as is homework beneficial to students? whether it's right or wrong, yes or no, it doesn't really add to anything. But asking something like how does self reflective homework increase? Students wants to know outcomes? That could be a research where the question. So the trouble comes is looking for a legitimate problem. Now, we haven't even talked about research questions yet, but you're just looking for the problem. And so, the place to start is defined academic and scholarly literature. You can do this through a library you'll have access to it. You can go no matter where you are, and look up research on different topics. You could also start at Google Scholar and look for papers and information of topics that are of interest to you. You could go to places like researchgate and find papers of topics that interest you. And look at what those scholars are also writing. You can attend and participate in professional meetings and conferences or lecture series and webinars. And often that might be where the most recent information is. Now in our current pandemic, actually physically attending is very difficult. But many organizations are now moving conferences completely online, or they've been producing lecture series and webinars in

order to allow spaces for scholars Continue to talk about recent work, but is safe for everyone because it's in a remote format. And typically, those are recorded and put on YouTube. So people can watch them in perpetuity even after the organ event is completed. You can also seek advice from experts. Many of you are probably considering or you will consider who is going to be your thesis advisor. If that's what you choose to do, you may also just look for somebody who's an advisor because you're doing a culminating project. So, all of the faculty at umt have their CVS available. If you look up their faculty page, you can see the things that they're interested in researching. And that might be a place to start in cultivating those mentee mentor relationships or even just a professional network. That you can tap into, about information that you're looking for. When you're thinking about how this all comes together, right? I'm starting you down the path. And I hope you can see the pattern coming here is we're talking about a philosophical worldview. And then we're going to talk about the questions that we're asking. And that's going to ultimately lead into toxic design and our research approaches, and you can start to see how all of this is interconnected and interwoven. One piece is not going to be completely and wholly separate from another. As we talk about research designs, and you're starting to think about where you're you're falling into In how you're going to go about your research project is a little bit of a research design primer. And so I've mentioned these a little earlier. But with quantitative designs, or quantitative methodology, you have experimental designs. That might be a randomized control trial, or something where you're testing or you're looking for how things impact one another. There's non experimental design such as surveys which are more descriptive in nature. And there's longitudinal designs as well as correlational designs. In qualitative research, we have narratives. There's phenomenologies grounded theories. ethnography is case studies. And there's many other within There's just some surface level designs. And within mixed methods, you can have convergent explanatory exploratory, or even complex designs that have embedded core designs from quantitative and qualitative areas. Now, in two weeks, your problem statement is due. And so over this time over this weekend, next week, I want you to really start delving into your topic, your area of interest. And so, in doing so, you're going to start with a with the topic with the subject area, you're going to present some broad information as though who is reading it doesn't fully know your topic area. You're gonna then talk about the issue or something that needs to solution, you're going to provide evidence, whether that be evidence from literature, or practical experiences doing own data collection or anecdotal accounts that need more research. You're going to provide deficiencies in that evidence, What's missing? And then how can we remedy that. And this is going to build on one another. And so you're going to start broad, and the flow of ideas should get more specific as you move along. It helps sometimes to map these things out. So if you use things like mind mapping, you can actually draw where to start and how concepts branch off from one another. And that can be helpful sometimes to think about the big broad themes that that fit that influence. Your

specific topic area. As you're constructing your problem statement, you need to have some kind of leading. For example, you might start with a sentence like gatekeepers act as agents of acculturation when they disseminate information within their ethno linguistic communities. So that's telling me right off the bat, that there's an issue with information being passed between groups who share different language backgrounds, and that there's certain individuals who act as gatekeepers of that information. You're going to declare then, the originality of that problem. So a second sentence might be yet no study has proved the information seeking behavior and information dissemination. practices of those gatekeepers in the complex digital environment of today. So, even though we know gatekeepers are holding back this information, we don't know what that process looks like in a digital environment, which is then where you indicate the central focus of the study, and to provide an explanation of significance in the benefit derived from the investigation of the problem. So you might finish that that paragraph by saying, insight gained from such a study will be useful for public libraries to service the residents of ethno linguistic communities. You would then go on to provide evidence of why libraries might be the important role and why looking at the digital environment is an important space to look at. That would ultimately lead you to your specific research problem, which is that we need to do more research on x So in short, the research problem is a succinct, comprehensive statement that includes a problem that is defined. So it's clearly incompletely stated. You have your justification. You have details on who, what, where. And you might foreshadow some of the implications of your findings. So what might this influence for your research statement? At the moment, I want you to do a one page, single spaced problem statement. So you should have a clear introduction that defines your problem. A couple paragraphs that outline using the research evidence, some of the areas that are important and why we should look at them. And that should ultimately lead me down to what your study is ultimately going to be about. And why it's going to be important. So, to get you started on this for activity, discussion number two, on your own so for your post, I want you to jot down your topic, what known research known issues or gaps in potential designs. And I want you to create that lead in declaration, central focus and explanation. And at this point, if you want to make each four of those leading declaration, central focus explanation, a bullet point and write a sentence or two afterwards, you can frame your post around that. Once you've made your post, you have to respond to three others at least, like the other posts. And when you look at the other people's problems, I want you to discuss any strengths and weaknesses of their statements, what types of approaches they make might use to have a dialogue, abroad dialog, starting to think about the research process, and the research methods we might ultimately use. So, in circling back around, we have started here, we started with the problem. You're going to start building a little bit into the literature review. For your research statement. You'll ultimately delve a lot further into broader topics for your literature review assignment, but for now, you should be at least broadly looking at the

literature. We also talked a little bit about research designs. We're ultimately going to talk about how to develop research questions before we get into the design piece. But it's important to start thinking about As we're looking at the types of problems you see, is also to notice what types of designs have been used. If the research you're using is more qualitative, that might be good evidence, or good reason to do a qualitative study. It's not the only reason. But it can start to frame how you're thinking of your own process. In conclusion, as you've mentioned, research as a process. I've reiterated this now for two weeks, so hopefully you're getting that point. paradigm frames our thinking. It doesn't tell us what exact study to do or how to do it. But it gives us a frame for where to start. Theories provide useful frameworks and are connected to paradigms are understanding of our worldview ultimately will shape the design we use will lead to better understandings and implications if we have a good handle on our research design. In moving forward, be very reflective as you consider the research problem that you're looking to address and how that research paradigm is framing your thinking about your research paradigm. I'm looking forward to learning about the problems you see and the types of projects you're designing.