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Moving the Needle – Episode 45

00:00:00 Scott Riley

Welcome to moving the needle casual conversations about ways big and small to impact student learning brought to you by the faculty Center for Teaching and learning at the University of Maryland, Baltimore.

00:00:12 Scott Riley

I'm.

00:00:13 Scott Riley

Scott Riley too. Let's move the needle.

00:00:16

I.

00:00:19 Scott Riley

Welcome back.

00:00:20 Scott Riley

Needle the world of educational research, is rich with fascinating ideas, many of which are born from simple observations and thought provoking questions posed by faculty.

00:00:30 Scott Riley

One of the most impactful of these questions came from Richard Mayer.

00:00:34 Scott Riley

How do people learn academic material from text and graphics?

00:00:38 Scott Riley

Those seemingly straightforward this question is fueled decades of research and laid the foundation for what we now know as the cognitive theory of multimedia learning, or ctml.

00:00:50 Scott Riley

Today I'm excited to delve into the history, influence and future of ctmo with our recurring guest Doctor Eric Belt.

00:00:57 Scott Riley

Doctor Belt is an adjunct assistant professor and a senior academic innovation specialist with the Faculty Center for Teaching and Learning.

00:01:05 Scott Riley

Join us as we explore how mayors work, has shaped modern educational practices, and what lies ahead in the field.

00:01:12 Scott Riley

Welcome back to the show, Eric.

00:01:14 Scott Riley

So today is a unique approach to a moving the needle episode.

00:01:19 Scott Riley

Today you and I are going to discuss a big topic in.

00:01:23 Scott Riley

Educational research, cognitive theory for multimedia.

00:01:28 Scott Riley

And we're going to look at it from a couple of different angles, but I wasn't aware of it beforehand.

00:01:34 Scott Riley

I think it's important that we discuss it.

00:01:36 Scott Riley

What is the cognitive theory of multimedia learning?

00:01:40 Eric Belt

Oh.

00:01:40 Eric Belt

Yeah. So Richard Mayer is basically kind of dedicated his whole career to sort of just testing this theory.

00:01:48 Eric Belt

Boils down to a simple educational research question, which is, you know, do people learn?

00:01:53 Eric Belt

Better with words and pictures at the same time.

00:01:58 Eric Belt

And then he just conducts a series of simple tests about this. And I guess the study of this theory has led to a whole bunch of principles and insights on to, like, congruence principle, the spatial principle, whether or not.

00:02:14 Eric Belt

The words should appear close to images on a on a screen and stuff like that.

00:02:19 Scott Riley

Yeah, I think that's an excellent summary of.

00:02:22 Scott Riley

Theory and I want to impress how influential or impactful mayor is in this.

00:02:29 Scott Riley

I know it was his idea, but basically every paper I tried to read to get more familiar with this almost always had Richards name attached.

00:02:38 Scott Riley

I looked at three different.

00:02:40 Scott Riley

The one that you sent me, the past, present and.

00:02:43 Scott Riley

Cognitive theory of multimedia learning.

00:02:45 Scott Riley

But then I also looked at a paper by Jocelyn Parang and mayor, learning about history and immersive virtual reality.

00:02:53 Scott Riley

Immersion facilitate.

00:02:56 Scott Riley

And then the third one was Robert K Atkinson and Mary Marile.

00:03:00 Scott Riley

Also, Richard Mayer looking at fostering social agency in multimedia learning and it was really interesting to see how like you said.

00:03:08 Scott Riley

Mayor has dedicated his life to this like basic research idea, and it's kind of grown and become more complicated and really cool overtime.

00:03:17 Scott Riley

It like he's everywhere if you see, was the acronym CTM.

00:03:23 Scott Riley

Mayors, probably on in that paper.

00:03:26 Eric Belt

Absolutely big name.

00:03:27 Scott Riley

With that in mind, I'm really.

00:03:30 Scott Riley

So I know you read a couple of articles as well.

00:03:33 Scott Riley

What surprised you about the articles that you read surrounding this theory?

00:03:38 Eric Belt

You know, when I think of the theory like this and its words and pictures, and I try to apply it to my teaching.

00:03:45 Eric Belt

And you know what I do in the classroom? And I I teach predominantly online classes.

00:03:50 Eric Belt

When I think about this, I think about.

00:03:53 Eric Belt

Recording lecture videos.

00:03:55 Eric Belt

And the kinds of things that I do while I'm recording my lecture video, am I appearing on screen?

00:04:01 Eric Belt

I talking over a PowerPoint.

00:04:03 Eric Belt

Do I have images and graphics and things you know in the picture while students are watching it and stuff like that? So you know the theory made me think of all the sort of factors that can affect learning.

00:04:17 Eric Belt

In that one instance of content delivery or direct instruction, or, you know, just presenting information.

00:04:27 Eric Belt

That surprised me. Student preferences.

00:04:31 Eric Belt

You know the the characteristics of the lecturer, like what they're doing on screen kind of made me think of different things and and then interactivity, you know, for the most part.

00:04:43 Eric Belt

A traditional asynchronous lecture video is a passive presentation of information, so you know, are there ways to incorporate interactivity with, you know, drag and drop?

00:04:56 Eric Belt

Quizzes or knowledge checks or whatever the case may be, but is that appropriate given?

00:05:02 Eric Belt

The insights that the cognitive theory of multimedia learning has shared with us.

00:05:07 Scott Riley

Yeah, I want to jump on that.

00:05:09 Scott Riley

I agree, and I think the best way to summarize it is the depth of the field, right?

00:05:15 Scott Riley

You were just listing off a couple of things to consider when talking about creating online lectures, and mayor has this 25 page paper.

00:05:23 Scott Riley

About other things that you can consider that involve multimedia learning and so.

00:05:29 Scott Riley

For me, I was really interested in the coherence principle. That was something that surprised me was, you know, as a educator, I I like to put as much as I can on the slide, which I know is a a big no no in the education space, but.

00:05:45 Scott Riley

There's this really interesting principle that he talks about the coherence principle where how what is the minimum amount of information necessary to get the learning to happen and what information is extra that is superfluous.

00:05:59 Scott Riley

It's not needed and a couple of the studies that he did.

00:06:03 Scott Riley

Came up with some results that were pretty surprising to me as far as what's useful and what isn't or what's.

00:06:09 Scott Riley

Necessary to maintain coherence in what isn't.

00:06:13 Eric Belt

I mean the other principle that in addition to that one that stood out to me was the signaling principle, which was just about how do you add queues, adding queues to highlight the organization of essential material so.

00:06:28 Eric Belt

You know, I'm assuming you know, a cue might be like when a bulleted list appears on screen during a lecture video, or something along that it kind of cues the the viewer into kind of what to pay attention to.

00:06:41 Scott Riley

Do you think you're drawn to that because of the online space that you teach in, in that that might be a larger contributing factor to student?

00:06:49 Scott Riley

Engagement or student retention of knowledge is that these signaling factors can help.

00:06:54 Scott Riley

Take them to where the important stuff is when you are not present to do it for recorded lectures.

00:07:00 Eric Belt

Yeah, I think that that's part of.

00:07:02 Eric Belt

I think that it also could be the nature of my background with instructional design.

00:07:08 Eric Belt

Segmenting and chunking and modularization or breaking things down into smaller pieces.

00:07:14 Eric Belt

Is something that's just drilled in us, you know from day one, so.

00:07:21 Eric Belt

I think that's part of it.

00:07:22 Eric Belt

And and you kind of breaking down a lecture.

00:07:24 Eric Belt

And a video lecture, even into its component parts.

00:07:27 Eric Belt

And are there ways to sort of draw attention to certain things?

00:07:31 Eric Belt

And I think that we do that to some extent in the design of courses, whether they're online or face to face, you know, face to face, we might give a handout, you know, and say, hey, this is what I want you to take away with you because this.

00:07:44 Eric Belt

This is what I want to try to.

00:07:45 Eric Belt

So in the online space, it might come through in more.

00:07:48 Eric Belt

Bulleted lists or highlights or things like that, or in a lecture video. And it also depends, too, on how much you rely on those sorts of things to deliver your content.

00:07:59 Eric Belt

You know, it really depends on the nature of the course, the context, whether or not I would.

00:08:04 Eric Belt

Rely on a video lecture to convey that information or.

00:08:07 Eric Belt

It's more of sometimes I think when I I taught a course a couple of times, I see students struggling with a certain aspect. Then I might interject with a video lecture to try to help.

00:08:19 Eric Belt

And see if that does help.

00:08:22 Eric Belt

Move things along or get students to where they.

00:08:24 Scott Riley

Need to be one of the things that really intrigued me and that I was surprised by is when mayor introduces this topic, he talks about it in a very low tech sense, you know.

00:08:36 Scott Riley

Do stationary or static pictures go like with text?

00:08:39 Scott Riley

Does that affect?

00:08:40 Scott Riley

The placement of the.

00:08:41 Scott Riley

But it was, you know, text.

00:08:43 Scott Riley

And pictures on paper or on a static PowerPoint. But by the end of it, he's talking about how it could be used in immersive reality. And so for me, what I was really surprised by was the longevity of the theory. Being able to translate from text and paper.

00:09:00 Scott Riley

All the way into this sci-fi level of.

00:09:03 Scott Riley

Where we're talking about how does the 3D representation of the spatial 3D representation of process effects student learning.

00:09:12 Scott Riley

Thought that was really cool to talk about something like.

00:09:15 Scott Riley

The other thing that I kind of want to talk and I there's probably no smooth transition to it. So I'm just going to kind of.

00:09:21 Scott Riley

Over is what were some things you learned that you didn't know before?

00:09:25 Eric Belt

Careful planning is essential when you know, and I I you know again, I kind of really stuck to applying this to delivering a video lecture.

00:09:37 Eric Belt

You know the engagement and control.

00:09:40 Eric Belt

Needed and I guess what for students.

00:09:43 Eric Belt

So I guess what I mean by that is, you know most media players allow the students to pause, stop, rewind, speed things up.

00:09:50 Eric Belt

So, you know, paying attention to that.

00:09:52 Eric Belt

And then the optimal video length, that was something that I was, I guess continued to struggle.

00:09:59 Eric Belt

So I was curious about that and try to read up on that to see if there is there an ideal length of the video that.

00:10:07 Eric Belt

You know, will keep students engaged and what I came to find was that most of the studies that talk about this generally frame it as under 10 minutes and then a lot of them point to this one study that was done.

00:10:21 Eric Belt

I think in 2014 in AM MOO.

00:10:25 Eric Belt

And in a in a massive open online course, you know the students that are participating in those are different audience, a different type of like student or learner than you would find in your traditional classroom.

00:10:39 Eric Belt

So you know, you kind of have to take that with a grain of salt, but for them it was videos under 6 minutes.

00:10:46 Eric Belt

So yeah.

00:10:48 Eric Belt

I guess it just gets at that idea of segmenting and and chunking things up and highlighting the important things so optimal.

00:10:56 Eric Belt

Length.

00:10:57 Eric Belt

I learned that I can talk a lot and I can talk, especially when I'm talking about something I like when I'm recording a video lecture or.

00:11:06 Eric Belt

Just in general, if I'm passionate about the subject, I can just keep talking and talking and that might.

00:11:12 Eric Belt

Have a you know adverse effect on the students watching the video.

00:11:16 Eric Belt

Also, just the benefits and challenges of.

00:11:19 Eric Belt

So, you know, I tend to think of when I record video lectures.

00:11:25 Eric Belt

We think we need like a production studio.

00:11:27 Eric Belt

A green screen.

00:11:28 Eric Belt

You know, three people editing the content, an audio technician.

00:11:32 Eric Belt

We need to produce this high quality thing and in actuality.

00:11:37 Eric Belt

What I've come to find for what I just read through in a couple of these studies is that students like seeing their instructor in their natural environment. As long as the video and the audio is clear, then the rest is less.

00:11:52 Eric Belt

Of a thing.

00:11:55 Eric Belt

It's not to say that it's not.

00:11:56 Eric Belt

Doesn't have its.

00:11:58 Eric Belt

And then we can't make those kinds of videos in different.

00:12:01 Eric Belt

Thing outlets or avenues or whatever, but I think that learning that it's OK to record a video at home, to talk to my students was beneficial to.

00:12:12 Scott Riley

Me 100.

00:12:13 Scott Riley

And I like that because it takes a little bit of the pressure off of you, right?

00:12:17 Scott Riley

You can focus more on.

00:12:19 Scott Riley

Teaching the students than is everything in its exact place, looking the way it it needs to, which is is comforting to me as an educator that students like that versus.

00:12:30 Scott Riley

Oh well, if this person doesn't look like an authoritative figure on the subject, what could they possibly have?

00:12:37 Scott Riley

Sorry, an authority on the subject, not authoritative.

00:12:41 Eric Belt

Well, you know, that's part of it too, right? When we get into teacher student.

00:12:45 Eric Belt

But you know, I think that there's a vulnerability to the teacher student relationship in that when we share aspects of ourselves.

00:12:56 Eric Belt

In in inappropriate way.

00:12:58 Eric Belt

It helps invite students to do the.

00:13:01 Eric Belt

You know to because learning is a is a an emotional endeavour.

00:13:05 Eric Belt

A. It's a vulnerable space.

00:13:07 Eric Belt

And so, you know, if we're always sort of buttoned down in the suits and with the, you know, the little text of our name that appears under us in the graphic like we're a newscaster, then it might be hard to kind of form connections or want to rel.

00:13:22 Eric Belt

Somebody one-on-one.

00:13:24 Scott Riley

So for me, one of the things that I learned and I'm going to take it in a very different direction, is the the amount of effort and the complexity of creating a theory like this in my mind, when mayor presented it, I was like, oh, that seems pretty.

00:13:40 Scott Riley

Like you mentioned, it's a simple question. You know, does tax do taxed?

00:13:44 Scott Riley

And graphics work Better Together or separately for educational outcomes.

00:13:50 Scott Riley

But the amount of people involved in it, and even even in his paper, he has to break down the construction of the theory into something like 7 different categories or seven different steps.

00:14:02 Scott Riley

Which, when I think about it, none of them surprise me.

00:14:05 Scott Riley

Know building a theory is a team based thing.

00:14:07 Scott Riley

An iterative process it builds.

00:14:09 Scott Riley

On old ideas and tries to change something and innovate something in the.

00:14:15 Scott Riley

But the way he describes it was a pretty fun moment of discovery for me.

00:14:21 Eric Belt

Yeah, absolutely.

00:14:23 Eric Belt

You know, it's something.

00:14:24 Eric Belt

That idea I I tend to say it or reiterate it to doctoral students or you know.

00:14:32 Eric Belt

And colleagues, is that there's when it comes to educational research, there's no such thing as an original idea. And you can even apply that too.

00:14:39 Eric Belt

Uh.

00:14:40 Eric Belt

Maybe all disciplines are fields, but yeah, the idea that we're ********** with our ideas and it starts small and can build into other things and take.

00:14:51 Eric Belt

Lines of inquiry. So you know a lot of times those doctoral students or candidates.

00:14:55 Eric Belt

That they have that original line of inquiry, that they're just dead set on trying to follow and.

00:15:01 Eric Belt

It's about, you know, that's why lit reviews are so important, right?

00:15:05 Eric Belt

What else is already out there, you know? And it's not to say that you can't.

00:15:09 Eric Belt

A study.

00:15:10 Eric Belt

A new study on us, something that's already been done, you know, replication and continuing lines of inquiry is needed.

00:15:17 Eric Belt

You know a lot of.

00:15:18 Eric Belt

We try to start from scratch and that could just be more time consuming.

00:15:22 Scott Riley

Yeah, especially if there are, like you mentioned, no, completely original ideas. You don't want to reinvent the wheel.

00:15:28 Scott Riley

And so I I will second to all of our listeners how important literature searches are before coming up with an experimental design or a study.

00:15:38 Scott Riley

So one other thing that I found really interesting that again I feel like I subconsciously knew, but I felt like I learned while reading these papers is how interwoven psychology is with education and educational research.

00:15:53 Scott Riley

I was impressed at the amount of psychology that was referenced, especially for the paper on social cues, which looked at the effect of using a computerized voice for online classes.

00:16:07 Scott Riley

Versus a human.

00:16:10 Scott Riley

Voice and justice. The amount of references to psychology and how it affects student learning was is impressive.

00:16:18 Scott Riley

I enjoyed learning about it.

00:16:20 Eric Belt

Ecology is sort of ever present.

00:16:23 Eric Belt

It's like one of those disciplines that you can just kinda find in a lot of different things.

00:16:27 Eric Belt

Humanities education stuff.

00:16:29 Eric Belt

But what came to mind for me, as you were talking about that?

00:16:34 Eric Belt

The weather, like the instructor, should appear on screen or.

00:16:39 Eric Belt

So I I did a, you know, I read a a study that kind of compared a couple of.

00:16:39 Scott Riley

Oh, that's a good one.

00:16:44 Eric Belt

Types of lectures. SO1 where.

00:16:47 Eric Belt

It was just a talking head, so somebody just on screen talking at you.

00:16:54 Eric Belt

Another where it was voice over PowerPoint, which is fairly.

00:16:57 Eric Belt

You know, I hope I'm not tripping anybody up with how I'm describing these, but another that was sort of a picture in picture. So like a voice over PowerPoint, but with the little icon of a person.

00:17:10 Eric Belt

Talking head on top of that.

00:17:12 Eric Belt

And then another one which I I guess the style you could label it would be like Khan Academy where the the person is not on the instructor's not on screen but their hands are on screen and they are, you know, solving math problems or gesturing or things.

00:17:30 Eric Belt

That so?

00:17:31 Eric Belt

You know, out of all of those.

00:17:33 Eric Belt

What's the most appropriate?

00:17:34 Eric Belt

What's the most effective?

00:17:35 Eric Belt

What's the most engaging?

00:17:37 Eric Belt

Kinds of things so.

00:17:39 Eric Belt

What what I took from the studies that I read was that an instructor appearing on screen either talking to the camera or writing on a whiteboard or chalkboard.

00:17:50 Eric Belt

Are as effective as face to face lectures and more engaging than voice over videos only.

00:17:56 Eric Belt

There there is something to the psychology of an instructor gesturing to the chalkboard.

00:18:06 Eric Belt

Or an instructor.

00:18:08 Eric Belt

Talking on screen or appearing on screen to the learner.

00:18:14 Eric Belt

Being more receptive to those things and what's happening.

00:18:17 Scott Riley

And it's a it's an important correlation.

00:18:20 Scott Riley

The human element can't be or it's difficult to remove the human element from education and get the same effect, which is what makes me feel good as an educator.

00:18:31 Eric Belt

Yeah. I mean, there's there's a simplicity to it.

00:18:34 Eric Belt

You know you get more into like philosophical phenomenological research. This idea of a teacher gesturing at the chalkboard.

00:18:41 Eric Belt

That is, you know, kind of speaks to mayors.

00:18:46 Eric Belt

Signaling principle as to what to pay attention to or what to.

00:18:50 Eric Belt

Know.

00:18:51 Eric Belt

The what the teacher is writing on the chalkboard is a queue.

00:18:55 Eric Belt

So it kind of all comes together in a symbiotic way that I can't really articulate.

00:19:00 Eric Belt

But I'm just saying that it's all all connected.

00:19:03 Eric Belt

It's all related, all beneficial to education in general.

00:19:08 Scott Riley

And to kind of continue on this topic with the connection of psychology and education, I have read some studies as well that looked at the effects of using VR versus what what they call basically total VR versus partial VR, which would be.

00:19:24 Scott Riley

Partial VR was a computer screen with some narration and some.

00:19:28 Scott Riley

So you know, if a thunderstorm is, if the process of lightning is being displayed on the screen while someone narrates there's wind, sounds and things like that.

00:19:37 Scott Riley

Versus total VR, where the student puts on the headset and then watches the process from like the front porch of a virtual.

00:19:45 Scott Riley

House and with respect to the connection between Sychology and education, there was a lot of discussion about how the likely fact so VR total VR was less effective than partial VR.

00:20:03 Scott Riley

And the reason for.

00:20:03 Scott Riley

The the discussion that they had on that topic was that the psychology behind being immersed in what could be a potentially stressful situation.

00:20:14 Scott Riley

Creates distracting factors which hit the coherence principle.

00:20:18 Scott Riley

Too much going on.

00:20:20 Scott Riley

And the student has too much sensory input to be able to fully focus on the concepts that are being taught.

00:20:28 Scott Riley

So a little disheartening for me 'cause anybody who who has heard me speaks knows that I'm a huge fan of virtual reality, but.

00:20:36 Scott Riley

Again, it just highlights the importance of really thinking about the psychology behind the educational principles that we're trying to conduct or research.

00:20:47 Eric Belt

Absolutely. And you know, VR is an emerging space and you know, obviously there's emerging technologies all around us, the AI and the wearable tech and and things like that.

00:20:57

So.

00:20:59 Eric Belt

I think it speaks to how.

00:21:03 Eric Belt

It's very much the method, the teaching method that we choose to employ or try to enact with these technologies, and not necessarily the technology itself. And VR is a little different because like you said, there is a lot of stuff going on.

00:21:19 Eric Belt

In that sort of immersive world made me think of second life back in the day. Oh.

00:21:25 Scott Riley

Yeah.

00:21:25 Eric Belt

But.

00:21:27 Eric Belt

But you know, I think that there are scenarios and use cases and things that we can achieve with these types of technologies that would not otherwise be possible.

00:21:39 Eric Belt

You know, you think you'd like, you know, virtual reality field trips to a place that we can't travel to or or things like that or or, you know, breaking down a crime scene through virtual reality without having to go to a crime scene.

00:21:52 Eric Belt

Know things.

00:21:54 Eric Belt

Like.

00:21:55 Eric Belt

So there's types of scenarios where it's appropriate and then not like only the scenario, but how we choose to engage the technology is very important because there are a lot of moving parts with virtual reality. You know, whether it's tethered, whether it's free, whether you have the joy.

00:22:11 Eric Belt

I mean, all those sort of tech that goes into it can be overwhelming, so.

00:22:15 Eric Belt

Comes down to breaking.

00:22:16 Eric Belt

Down to what do you want students to take away from after going through this?

00:22:23 Eric Belt

And what's the path of least resistance tech wise to get there?

00:22:29 Scott Riley

Yeah. And I think a great way to describe that is it should be a learner focused approach rather than a tech focused approach, which is what you described.

00:22:39 Scott Riley

So the next thing that comes to mind for me as you we've talked about all these things we've learned.

00:22:44 Scott Riley

Talked about the things that were surprised about so.

00:22:47 Scott Riley

Is there anything that you're going to change as a result of?

00:22:50 Scott Riley

I know you mentioned that you've really started to think about segmenting and how how segmenting is going to work for you in your online lectures.

00:22:58 Scott Riley

There anything else that you're going to change based off of reading about educational research, specifically ctml.

00:23:06 Eric Belt

Yeah, it got me.

00:23:08 Eric Belt

You know, like it's it's along with the segmenting, you know, keeping things shorter.

00:23:12 Eric Belt

Can I do to try to help myself keep things shorter?

00:23:14 Eric Belt

I'm going to use scripts a little bit more and maybe not.

00:23:19 Eric Belt

Word for word. I'm going to type out everything. I'm going to say in the lecture, but I will.

00:23:24 Eric Belt

I give myself an outline and I'm going to, you know, I'm going to record myself.

00:23:29 Eric Belt

Going to time myself.

00:23:30 Eric Belt

I'm going to watch.

00:23:32 Eric Belt

I want to listen to.

00:23:33 Eric Belt

I'm going to try to learn from, you know, myself in these ways and to try to make myself better so.

00:23:40 Eric Belt

I think a lot of the times there's a.

00:23:41 Eric Belt

And hesitation, you know, a slight fear and anxiety to engage with recording oneself and and listening and watching to yourself 'cause it can be an uncomfortable space.

00:23:54 Eric Belt

Know my wife's like I don't want to hear myself like even I hear a voice message on her phone.

00:23:58 Eric Belt

Doesn't want to hear that so.

00:24:00 Eric Belt

I get it.

00:24:00 Eric Belt

And it can be very uncomfortable in the kind of unsettling, but I'm going to try to work at doing that so that it can ultimately benefit the students. Like the more I sort of hone this part of my craft as a teacher.

00:24:16 Eric Belt

The the better I think I'll be at it and you know, hopefully the the more well received it will be by the students and along with scripting or or outlining. I'll probably try to.

00:24:33 Eric Belt

Interactivity when it makes sense to do.

00:24:37 Eric Belt

I don't want to overwhelm or overload, you know, with a lot of quizzes and checks and things that are happening during a video. But maybe I could see myself maybe adding a video like a a knowledge check after a lecture video.

00:24:51 Eric Belt

Know what did you take away?

00:24:53 Eric Belt

And that could be a combined thing.

00:24:55 Eric Belt

You take.

00:24:56 Eric Belt

What you learned, but also what could be improved and how I'm doing this because I need to be more receptive to that.

00:25:02 Eric Belt

As it's going on, and sometimes our course evals don't really capture that sort of minutia, right?

00:25:08 Eric Belt

But it'd be good to know.

00:25:10 Scott Riley

So for me, one of the things that I really want to change is I'm going to look at my PowerPoint slides in a whole new light. Now, after reading Mayor's work on ctml, the level of detail with which he did or the the.

00:25:26 Scott Riley

Number of scenarios he experimented with about what happens when you place text outside or far away from the image.

00:25:34 Scott Riley

Happens when you place it in the image and the.

00:25:37 Scott Riley

Pretty convincing results that he had.

00:25:41 Scott Riley

For how some scenarios are better than others, it's going to make me approach creating PowerPoint slides in a completely different way. You know, I already needed to cut things out, but now the placement of the text with the images, there's a whole.

00:25:56 Scott Riley

Set of statistical studies that show that there is a better way to do it, and so that's one of the things that I'm going to consider. I'm not going to burn the midnight oil trying to get the perfect placement, but I am going to be intentional now.

00:26:07 Scott Riley

About where I pair my images and text, hopefully to help with signaling as well.

00:26:13 Scott Riley

If I group things to.

00:26:14 Scott Riley

Together, that may help with, you know, sending the students the cues that, hey, this information is important.

00:26:19 Eric Belt

Yeah, and that made me think too, you know, with little extra videos and the instructor appearing on screen and things like that. I don't think that you necessarily have to appear on screen the whole time.

00:26:31 Eric Belt

So it might be at the beginning or at the end and maybe if to the extent it's possible. I don't know if like recording traditional like voice over PowerPoint, it's as easy to gesture or highlight with the technology that's going on.

00:26:44 Eric Belt

But you know what's important to that is the students see in your hand and you know, in addition to the highlight or what's going on with.

00:26:53 Eric Belt

So yeah, I think appearing on screen in some way.

00:26:57 Eric Belt

Whether at the beginning or towards the middle of the end, I don't think you have to appeal on screen the whole time, but that's something that I'm going to try to incorporate as well.

00:27:04 Scott Riley

So now that we've talked about the changes that we would make, I've been inspired by mayor and now I want to do some educational research as well. I've still got.

00:27:14 Scott Riley

20-30 years left to my career, I could catch up to mayor.

00:27:18 Scott Riley

So I want to ask you, Eric, how do I get started in educational research?

00:27:23 Scott Riley

What are some practical tips for trying to become the next mayor?

00:27:27 Eric Belt

I would say that most of our research interests, I would venture to guess, stem from a a personal commitment, right and inspiration a.

00:27:39 Eric Belt

A problem of practice, something we relate to for whatever reason and in the educational world. What tends to happen right with the students that I work with and colleagues, is that you experience something as a learner.

00:27:54 Eric Belt

And you hate it.

00:27:56 Eric Belt

And you want to research it and you're going to study it to prove that this is a better way to do it or this is the appropriate way to do it or things like that.

00:28:07 Eric Belt

And there's good and bad to.

00:28:08 Eric Belt

So like often times, it's about, you know, with it's about scale and scope.

00:28:18 Eric Belt

And kind of finding what it takes. As we all know is doing a lit review to see what's already been written about things. But.

00:28:26 Eric Belt

Your your original idea or your thought, or that you want to explore with educational research.

00:28:34 Eric Belt

It's going to be smaller than you think, right? So.

00:28:39 Eric Belt

The the simplicity of mayors approach is that is a small question. With such a big.

00:28:50 Eric Belt

Impact and influence, right?

00:28:53 Eric Belt

And I think that, you know, crafting an educational research question is one of the biggest challenges.

00:28:59 Eric Belt

Learners engaging in this space is because you want to.

00:29:04 Eric Belt

You want to keep it open-ended, but you want to keep it.

00:29:07 Eric Belt

And there's an art to it. And the more you comfortable you get with the more engaged you get with the topic, the more opportunities you'll start to see questions emerge.

00:29:16 Eric Belt

So sometimes we come at it like I've already had this question and I'm going to answer this question because it needs to be answered.

00:29:23 Eric Belt

And it's that question's already been asked 17 different times by 100 different people in these 47 studies, right?

00:29:30 Eric Belt

Unique about your?

00:29:31 Eric Belt

What are you really trying to get at so?

00:29:34 Eric Belt

Starting small is, I guess, the best open-ended.

00:29:39 Scott Riley

But small. I like it a lot, and if I can add to that, I think the other thing and this is something that I I really try to do in all of my research practices is to go out and find other individuals who are who are doing the.

00:29:55 Scott Riley

And learn from them.

00:29:57 Scott Riley

So ideally, if there was a community of learning for scholarship of teaching and learning, that's where you would want to go to see what others your other peers are doing in the same space.

00:30:09 Scott Riley

To see if you can learn from them on top of what's been.

00:30:12 Eric Belt

Written, we do actually have shameless plug, a learning community starting this fall.

00:30:20 Eric Belt

Where we are going to get into educational, research and scholarship. It's called the Ed Crafters community connection.

00:30:30 Eric Belt

EC3 and yeah, we're excited about it.

00:30:33 Eric Belt

You know, you and I are going to be hosting these meetings, monthly meetings on Friday.

00:30:40 Eric Belt

I think it's the third Friday of every month from 12 to one virtually online. You can register for it.

00:30:48 Eric Belt

On the Fctl website, we're going to sort of take deeper dives into crafting educational research, getting into these kinds of questions, and developing the studies and and how to really start.

00:31:03 Eric Belt

Acclimating to this space.

00:31:04 Scott Riley

Talk about serendipity. That's awesome.

00:31:08 Scott Riley

With that, I really want to thank you, Eric for coming on today and chatting with me about Ctml, creating theories, scholarship of teaching and learning.

00:31:18 Scott Riley

This was a lot of fun on my end.

00:31:20 Eric Belt

Yeah, I had a.

00:31:21 Eric Belt

This was a lot of fun too.

00:31:22 Eric Belt

For having me.

00:31:25 Scott Riley

Thank.

00:31:26 Scott Riley

For joining us today on moving the needle.

00:31:28 Scott Riley

Visit us@umarillon.edu/fctl to hear additional episodes.

00:31:34 Scott Riley

Leave us feedback or suggest future topics we'd love to hear from you.