

Jim Diamond:

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Matthew Worwood:

Hello, everyone. My name is Dr. Matthew Werwood.

Cyndi Burnett:

And my name is Dr. Cindy Burnett.

Matthew Worwood:

This is the fueling creativity in education. Podcast.

Cyndi Burnett:

On this podcast, we'll be talking about various creativity topics and how they relate to the fields of education.

Matthew Worwood:

We'll be talking with scholars, educators, and resident experts about their work, challenges they face, and exploring new perspectives of creativity.

Cyndi Burnett:

All with a goal to help fuel a more rich and informed discussion that provides teachers, administrators, and emerging scholars with the information they need to infuse creativity into teaching and learning.

Matthew Worwood:

So, let's begin. Hello, welcome back to another episode of the Fueling Creativity in Education Podcast. And in this episode, we welcome Professor Jim Diamond, who is a researcher in the field of digital media and learning focused primarily on the use of educational games to enrich K through twelve learning and teaching for students and teachers. He is the faculty lead for the program in Digital Age Learning and educational technology at Johns Hopkins School of Education. Jim diamond uses design based research methods to create and study technologies that foster individual learner

agency in real world learning settings. He has extensive experience in educational research, design and evaluation, and his area of interest include history, social studies and civic education, stem education, computational thinking, and disciplinary literacy. His research has been funded by the National Science Foundation, the MacArthur Foundation's, Haystack Digital Media and Learning Initiative, the Gates Foundation, and the Robin Hood Learning and Technology Fund. Jim, welcome to the show.

Jim Diamond:

Thanks, it's nice to be here.

Cyndi Burnett:

So, Jim, we are nearing one year since the public release of Chat GPT. What has been your initial thoughts on this platform in terms of its anticipated impact in the teaching and learning environment?

Jim Diamond:

What a great question. So I think I've watched myself go through an arc. I started very excited, and I think this is not that unusual for any of us that have been in Ed tech long enough, right? We see new technologies come along, they come into the field, lots of people, or at least certain groups of people, get very excited about them. There are some groups of people who think really well and really clearly about how these tools can get used in educational settings. There are other groups of people who think less well and less clearly about how these tools get used in educational settings. And we have good conversations. So I started out very excited. I think I started to come to a place where I felt like maybe this is following a similar trajectory to what we've seen in the past.

Jim Diamond:

Maybe we're not going to wind up blowing up the schoolhouse. Maybe we're not going to radically revise education as we know it for lots of reasons, many of them good. But where I'm getting to now, the more that I play and the more that I explore with Chat GPT, the more interested I get in it as a kind of assistant for teachers and for students, right? So depending on how well and how effectively you use it, it can be an amazing dialogue partner. That is where I am today. I'm really interested in approaching it as a dialogue partner to push my own.

Jim Diamond:

Thinking, to push others thinking, to help.

Jim Diamond:

With brainstorming again, provided that we're prompting it well. So I've gone from a place of being incredibly excited and thinking this could change everything to I'm not sure it's going to change everything, but it really could be a very different technology in terms of helping educators and our learners.

Matthew Worwood:

And Jim, just to build on that a little bit and kind of dig a little bit more into the perspective that you're developing about how it might be applied in a teaching and learning space. And I think one sharing that journey is important because I think all of us as educators kind of like almost like, look at this thing as a 10,000 foot view and it can be very overwhelming. And I think what we got to keep doing is start narrowing it down and saying, okay, how is it going to interact in my space, my classroom environment? And it sounds to me that's something that you've been thinking about doing. So to kind of expand a little bit more on that, could you talk a little bit about what we currently understand when it comes to this interaction with other people interacting through dialogue, how that assists learning and then the connections that you're making between our understanding of that to something like Chat GPT or these other future virtual robots.

Jim Diamond:

So if we think in terms of something like a Socratic dialogue, right, if we think in terms of a format in which we are engaged mutually respectfully.

Jim Diamond:

In asking and answering some question, and.

Jim Diamond:

The way that we do that is we engage in a back and forth with one another, right?

Jim Diamond:

We ask a question, I make this.

Jim Diamond:

Proposal, I assert this, you respond, you may ask another question. And we keep going back and forth. And ideally, in this scenario, we are being generative as opposed to destructive, right? So ideally, in these kinds of scenarios, we are operating in a safe at the very

least, Dyad, right? We both feel okay about one another as dialogue partners. We both feel like we're here to help one another either not even necessarily get to an answer, but to clarify our thinking about some problem or question, right?

Jim Diamond:

So this is my thinking about some. Form of a Socratic dialogue, or just some form generally of a dialogue. And again, most important, that it's meant. To be generative for me as an Educator, and it's meant to be safe. It's meant to be approached with a sense of mutuality and reciprocity. Now, Chat GPT as a technology does. Not necessarily approach me with a sense of reciprocity or mutuality, right? It is a technology. And what it's doing, what we know, right, is that it's very good at predicting strings of words. Really, really good at that so good in my experience so far that I can actually forget at moments that I am engaging with a technology, right?

Jim Diamond:

It feels like I'm engaging with a human dialogue partner on the other end. Now, I think there are advantages to that.

Jim Diamond:

There are disadvantages to that, right? I mean, I think lots of good can come from anthropomorphizing technologies. Lots of problems can come from anthropomorphizing technologies. But to go back to your question, so the benefits of a dialogue are that we are free to engage one another openly. We put our ideas forward, we respond to one another's ideas, we can critique in a friendly fashion, we can build off of one another in a friendly fashion. And you see this, I think, in really productive classrooms, right, when we see teachers and students building off one another's assertions and claims and questions, well, you.

Jim Diamond:

Can do the same with Chat GPT. And I think you can do it in a very safe way. Does that make sense?

Matthew Worwood:

Yeah, absolutely.

Jim Diamond:

Yes.

Cyndi Burnett:

So yesterday, Jim, I was in a classroom talking with a middle school teacher, and she was talking about how she wanted to teach sort of the ethical guidelines of using Chat GPT and generating new work. So what would you recommend for teachers to help students really understand the boundaries? Because it is a fine line and it's something I've been thinking a lot about myself, which is, how much is it okay that these are my ideas, that I'm sort of transforming into something like content improver, that makes them stronger and more cohesive so that a fourth grader can read them and understand them? And when is it we've crossed the line? And how do we keep students that?

Jim Diamond:

So I can answer that question for myself. It's a question that every educator and every administrator and every school district and every university, any educational setting is going to have to ask that question of themselves and come to their own answers. To me, the most important thing, not just with this technology, but with any technology, is before we even begin with the technology, we have to ask ourselves, we have to remind ourselves what we're doing here as educators, right? What are my goals? What are my objectives? What am I hoping that my students can do? What am I hoping that my students are interested in doing? What am I hoping that the engagement with this activity is going to motivate for my students. So I have to ask myself those.

Jim Diamond:

Questions first and remind myself of what I'm doing. And now I can start asking myself, okay, so what are the boundaries? And this is a really good question. So I was talking with somebody the Other day, so you may be aware. For example, that OpenAI now has a policy of saying you have to be. Over the age of 18 to use Chat GPT, right? But they say between the ages of 13 and 18 you have to have parental permission, essentially. Now, exactly how OpenAI came up with. That age range, I'm not sure. The more I've thought about it, I Think the more in support I am of it. So if I'm thinking as a former Elementary school teacher if I'm thinking about The use of a tool like Chat GPT, I need to be really confident. Really confident to begin with that I feel like my students have a certain level of skills and competencies in reading And writing, in problem solving, before they.

Start to engage with a tool like this to help us create new content. Now I am very open to being Challenged on that, right? And I think that, as with everything, we need research, right? This is so new

that we need A lot of work. We need to see what it looks like. For example, when children who are twelve And under are using generative AI like. This and doing it over longer periods of time, are we seeing them become less critical thinkers? Are we seeing them become less effective problem solvers? I don't think anybody knows the answer to that yet. Right? And by the way, the same holds true for any age range, of course. Right. These are also reasonable questions to ask of adults as well. Right? And I know I'm going on a little bit of a tangent here, but so much of the conversation that I'm Hearing in the K Twelve space about.

Jim Diamond:

Chat GPT is its use in helping with administrative, mundane administrative tasks, right? Which include, for some, lesson planning. Now, I don't necessarily think of lesson planning as a mundane administrative task, but I think there are plenty of people who do. And so what happens if we offload most of our lesson planning to Chat GPT or some comparable tool? As educators, what is that going to mean for teachers competencies with respect to engaging in design thinking for lesson and unit development, for example?

Jim Diamond:

I don't know yet. But to come back to your question about what are the boundaries, all of Us have to ask those questions and We need to do so as members of a community. That's the other thing, right? We've got to engage all the relevant stakeholders in these conversations. And if we don't, we set ourselves Up for failure, in my view. But we also have to let our kids play. We have to let our kids play. So even if we're going to say. There's an age range here, then we Have to sit next to our kids and play, right? As teachers or parents or guardians or peers or whomever. I really think we need to let our kids play with these technologies alongside us. I don't know if I'm answering your question, but I don't know that I have a great answer to that question yet either.

Matthew Worwood:

Just to build on that. I think you shared a lot. I think I recently shared an article called Think Like a Futurist. And the reason why I referenced that article, Think Like a Futurist, is one of the actions that futurists quite often do is scenario build, which is what I think you're doing a little bit. You're creating a scenario. And the other thing is you sometimes can look back in history you had referenced in your first answer this idea that we've had past technologies. And some of us might be in a position to think back to

the World Wide Web, for example, and start thinking about some of the questions and the ways we explored the World Wide Web and the eventual impact that had in our classroom environment. And you could say that there might have been opportunities for us to predict challenges with media literacy, but I do think that there is a level of domain knowledge that you kind of need to have certain conversations.

Matthew Worwood:

So if you're learning about molecular modeling, for example, which is a subject that I'm not going to say anything more, but the title, if you're learning a little bit about that, right, you're going to have to know terminology in order to engage in that discussion. And any information or knowledge that you generate from that discussion, you've got to have a reasonable amount of domain knowledge to go and apply it to a learning prompt or a learning task. And so then, as part of the scenario building, you're making me think that we might be looking at a situation where we have these chat bots that are kind of set at different ages. But what's most important is we as educators and as parents, in the same way we do with video games, in the same way we do with video content, we need to make sure that our students are interacting with the most appropriate chat bot for their subject area and for their age range.

Jim Diamond:

Yeah, I couldn't agree more. And I strongly suspect that that is what we are going to see develop. Right. So I don't know if you've had an opportunity to play with Con Migo yet. Right. So Khan Academy's homegrown AI chatbot, which I actually think is using open AI's technology. I may be wrong, but I think that's right. I think we're going to see more of that, right? But the other thing, as you're talking, Matt, it makes me know, and you referenced media literacy and obviously already we're talking about AI literacy, right? And people have been talking about AI literacy for a while, predating the explosion of Chat GPT. And we have all kinds of literacies now, right? There's lots and lots and lots of literacies and we can sort of pick what we mean by that. But it is every bit as necessary. Here, for example, as in previous generations of technology, right? So if by literacy we mean critical approach, then I think that's the right thing, right? So what we don't want is any of our kids or any of us, period, to be consuming that which is produced by artificial intelligence uncritically, in the same way that we don't want anybody. Consuming anything uncritically, right? And I think that is going to be a real challenge here, again, for. All of it, not just for our kids, right? I mean, if you're in a rush and you turn to Chat

GPT, and. I've done this, right, that I've used ChatGPT for all kinds of things now to help me prepare lecture slides, to. Help me engage in literature reviews for articles, right? Because it can do it near instantaneously. However, it's not always right. And we know this. And if I don't take a breath.

Jim Diamond:

And stop and look at what this is producing and this is the same for lesson planning, right? I did a whole bunch of this. So I teach a gaming and simulations course that is primarily graduates. They're K twelve teachers, right? So most of my teachers are K Twelve teachers pursuing their first graduate degree. And in the gaming and simulation course that I teach, they have to create two lessons in the course and they have to take existing lessons, ideally, and in one part they have to gamify them, and then in another part they have to integrate aspects of game based learning into their lessons. So what I told them the last.

Jim Diamond:

Time I taught the course was, if you want, use Chat GPT for this. Because it can help, and if you haven't done it, I recommend it highly. I recommend taking your lessons and giving them to ChatGPT and playing with Your prompts and just pick something, pick Gamification if you want and start to iterate with it. And I have seen some incredible products. But to go back to the issue of approaching it uncritically, I've also seen some really problematic products right where ChatGPT just isn't getting it right. Especially when you start to move in the direction in my case of game based learning and the logic starts to fall apart. A few times that I've seen now. So again, we can get it to help us produce something quickly. But if we're going to call them literacy skills, let's call them literacy skills, right? We need to be able to stand back, read, review what it's producing, critically think about what we know. So to go back to your point about domain knowledge, i, as an educator. I hope, have the proper domain knowledge. That I can apply to what the AI is producing so that I can say, okay, this looks okay, or okay, good start, and I'm going to build off of this. Or like, no, I'm going to stop it there. And then of course, you can also tell ChatGPT, BTE, stop with that piece, right? But continue along these other lines. So no matter what developing AI literacy. If what is being forecasted to happen with AI over time, if in fact these technologies are just going to be everywhere in educational settings, then we need to make sure we are building AI. Literacy skills as soon as possible.



In fact, it's probably, if not the most important thing we can do. It's one of the most important things we can do.

Matthew Worwood:

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Matthew Worwood:

So, Jim, I feel fortunate that I had the opportunity to take some of your classes at Johns Hopkins University. And the classes that have had a particular impact on me is how you got me to think about the importance of program evaluation. That the kind of need to know what impact your actions are having in that environment and on the different student groups. And the reason why I bring that up is it's not just about chat GPT. Within your space, you've probably evaluated a whole bunch of different technological tools. We as educators, particularly those highly innovative educators, always looking to bring new things in, design new experiences, using new tools. I wondered if you could tell us a little bit about the importance of evaluating the impact of those tools, particularly when it comes to that teaching and learning environment and meeting those objectives.

Jim Diamond:

It's incredibly important and for several reasons. I mean, first, obviously, because we as educators constantly need to be evaluating our activities with respect to student learning and student outcomes, right? At some level, we as educators, we do this automatically and we do it all the time, right? We need to stick our finger into the wind and we need to see which way it's blowing. And we need to say,

this sounds like it's going okay. This doesn't sound like it's going okay. So we can do it as informally as that all the way into areas like action research, right, where I, as an educator am asking myself some questions and really trying to be systematic about collecting data to help me answer that question. So we regularly need to be doing it for thinking about student outcomes. We also need to be doing it particularly if you are an administrator or you're somebody who is charged with responsibilities for committing resources to the purchase and use of technologies in school systems. Well, we need to be evaluating them to determine whether we're using our resources effectively, right? And ideally we are doing that in a way that's very sensitive to the specific contexts in which we're working.

Jim Diamond:

Now, as you both know, often we don't have that luxury as educators or as administrators, right? We often rely on maybe a salesperson or somebody at a higher level to say, well, look, there's data to support. This and ideally there is some kind of data to support it, but it can be a luxury to engage in that kind of systematic investigation. But it's incredibly important one to do. It in nearly any way you can, I would say. But to do it such that we are really honoring is the word. I would use the context in which these tools are being used. Because, as we know, the context changes from place to place to place. And because a thing works in one. Place in a building doesn't mean it's going to work in another place in a building. Never mind if it works in one state doesn't mean it's necessarily going to work in another state. So we're obligated as educators, all of us k Twelve Higher Education we're obligated regularly to be evaluating these tools to support student learning, to help me understand whether I'm actually meeting my goals and objectives as well, right? I thought the affordances of this tool would help me to accomplish objectives A B and C. Are those affordances helping? Are they doing what I thought they were doing? Are they doing something else? And is that a problem or is that a benefit?

Matthew Worwood:

And just to build on that because sometimes I think you almost alluded it to it. We have so many things going on in our classroom environment and so many things that we're meant to be doing and the idea of kind of observing what we think is happening isn't always happening, particularly when we're always looking at that same group as the group that we're evaluating its success. And we might be forgetting that the other group over the other side of the classroom is not actually interacting or benefiting from this tool in the way

that we thought they would be, or at least we're assuming they are based on how we're observing another group. So my question is, and I'm putting you on the spot let's just choose Chat GPT for a moment and let's choose a social sciences classroom, can you kind of give the teachers that are listening some questions that they could be asking when they bring in a new technology tool and use it within an activity?

Jim Diamond:

So let me think about so for Example, let's say you are a 7th Grade social studies teacher and you are focusing on a specific aspect of historical thinking skills, right? So sourcing is a historical thinking skill that we try to develop among our kids, right?

So who produced this text? Right? When was the text produced? Did the producer of the text have an agenda? Right? For example? So really trying to push our kids again to think critically about the sources of information Okay, so I might ask myself as a teacher at the end of this Lesson, do I see an improvement in students sourcing skills?

now, just like any other assessment you're doing, you have to start with what a strong outcome looks like. Right. Now, you might do that on a multiple choice test. I don't think that's ideal. Probably what you're going to do is you're going to give your kids a passage, a textual passage from some primary source, right? And you're going to want to know what questions they're asking about this text.

Jim Diamond:

Okay, so you're interested in sourcing. You want to see if there's an improvement from the beginning of the lesson to the end of the lesson. And now you're using chachipt. Okay.

Jim Diamond:

So now you have to think about, okay, well, what can Chat GPT do in this situation? Well, it can do a lot, right? And there's any number of ways I can imagine actually approaching the use of the technology. Again. You could set it up as a dialogue partner. You could have it become sort of an informant, right. For the students. Maybe they have to investigate some source related to the American Revolution or whatever and well, turn Chat TVT into somebody who is present at the Boston Tea. Party or something like that. Have one group of kids engage with the AI Chatbot. Have another group of kids read a passage from a textbook. Now, that's not great to me, right? I mean, so these kinds of media effects, types of studies, I don't know that a teacher

is necessarily going to engage in that. I think really what you're more interested in is, well, I want all my. Kids to use the tool because I Made that decision, but I want to see if there are differences in the way in which they engage with the tool that actually helps them become better sourcers of information. Right. And in that case, I think what you want to do is one is your kids their interrogation of what's in Chat GBT is going to be documented. And so you're going to be able to scan quickly to see what kinds Of questions they're asking. Right. And I think another thing that you can do is you can have your kids engage in a kind of reflection task after they use the tool, right.

Jim Diamond:

So from beginning to end, are you Asking yourselves, do you have any different questions? And why, like, as a result of engaging with this technology, what changed for you? Now, if I'm a teacher listening to This, to your point, it's work. That's work. I mean, they're going to have to read these student reflections or they're going To have to read these chat GPT transcripts So that's a piece of work. So, again, you really have to think. In advance, what am I trying to get out of this?

Cyndi Burnett:

Jim, I have one more question because you have so much knowledge around evaluation, and the question I often get from teachers in the creativity field is how do we evaluate our students creativity? So I'm wondering if that's something you've thought about and if you have any advice for our educators.

Jim Diamond:

I have actually conducted in the past, I had an evaluation with a tool that was meant to help a group of kids become more divergent in their thinking. And so that is one way that Our teachers or any educator can evaluate at least one aspect of creativity So you have to start with, well, what is your definition of creativity in this context? How do I know somebody's engaged in creative thinking or creative activity? And so you have to spell that out. So call it operationalization. How do I, as an educator, operationalize creativity? How do I know creativity when I see it? And in the case of this technology. We were using, it was a writing tool, and prompts would come up as Students were writing, and the prompts were intended to poke And what I mean by poke is poke at the learner's thinking. Like, can you do this differently? What else might you add? Is there another point of view? And ultimately, what it was meant to do in

this case was to help. These learners think divergently about writing a Response to the question they were answering And in this case, the way we evaluated it was there was a kind Of very crude, sort of very raw Evaluation of it, right. Which was just sort of what's the raw number of different approaches that the student wrote into these boxes And then another way that we evaluated it was how those approaches were synthesized at the end of the product.

Jim Diamond:

And this is years ago, so I don't remember specific numbers, but let's say at that raw number, a kid was answering a question and she introduced six different ideas, right? And so, again, at that raw number, there's six ideas. Pretty good. But then in the end, how many Of those ideas made it into the actual response to the question and how effectively were those synthesized?

Cyndi Burnett:

Thank you. Well, Jim, we are all out of time, unfortunately, but we would. Love to ask you the question we ask all of our guests, which is what three tips would you give to educators to help them bring creativity into their classroom?

Jim Diamond:

These are probably not going to sound very sexy, but these are my tips. Give yourself time. Time is always our friend, and none of us ever have it. But when we're under pressure to get things accomplished, we can narrow our thinking pretty quickly. Not everybody's like this, right? I think some people actually operate really well under the pressure of time. And if you're one of those people, maybe actually you don't want to give yourself time. Maybe you actually want to get yourself to the last minute to start producing. But if you're anything like me, give yourself time to create. So that's one time. I think two is to the extent that you can dial down your editor, your internal editor, and we all know the editor, that's not going to work. Not creative enough, not iridite the not enough, not enough, not enough. And that can come out pretty quickly. And at least in my case, that editor has never disappeared entirely, right? But I can sort of recognize the editor and move it aside for a second. Or just let it get a little quiet so that you actually just give yourself the freedom to get stuff down. Whatever it is, right. Unedited, raw, just get it out. Pictures, writing recordings, whatever it is that's going to enable you to get your Ideas out, just get them out and don't worry about what they may look Like in the end, and don't worry about what they look like right now.

Right? And then I think the third thing I would say is that the more that we can engage with those with Whom we feel safe around our ideas, the better. The safer we are to engage in Dialogue, the more generative we can be And so if you're an educator, my hope is you're not working on your own My hope is that you've got colleagues, if not colleagues in the building, colleagues elsewhere, people who know what you're doing professionally, and ideally, people who may share the same domain knowledge that you do. And having at least another person like that where you can just share a thing with and say, hey, I'm trying to work toward producing something.

Jim Diamond:

What do you think?

Matthew Worwood:

Well, Jim, thank you so much. I think you've shared so much, not just about program evaluation, but I really liked how you got us thinking about how Chat GPT and similar platforms might be used in the future. And I invite everyone listening to start thinking in that way. How might you utilize tools like Chat GPT in your classroom environment? If you like this episode, we encourage you to take it and share with colleagues, particularly colleagues that might be interested in integrating new technology or perhaps have a history of integrating new technology tools in the classroom. And don't forget to tune in as Cindy and I work toward a Micro Listen and Learn series over the winter break with more information coming regarding that. My name is Dr. Matthew Werwood.

Cyndi Burnett:

And my name is Dr. Cindy Burnett. This episode was produced by Matthew Warwood and Cindy Burnett. Our podcast sponsor is Curiosity to Create, and our editor is Sam Atkinson, our channel.