

Fuat Ramazanov:

I really want my students to appreciate the human creativity because for them to understand AI creativity, I honestly believe that they first must understand what human creativity is, appreciate human creativity, and then compare the result of human and AI outputs.

Matthew Worwood:

Hello everyone. My name is Doctor Matthew Werwood and.

Cyndi Burnett:

My name is Doctor 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 field of education.

Matthew Worwood:

Will 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.

Cyndi Burnett:

If you have been thinking about how you might use generative AI in your classroom, particularly when it comes to teaching creativity, then you're going to love this episode with our guest today. So today we welcome to the fueling creativity and Education podcast Fuat Ramazanov, who is the director of the International Business Management Program at the Exenda School of Management, a private post secondary institution in Vancouver, Canada. He is an advocate of experiential learning and teaching for and about creativity. As an adult educator, he is passionate about using innovative approaches to teaching that stimulate engagement and learning and boost confidence and creativity in his students. He is a doctoral student at the

University of Calgary with research focused on exploring undergraduate students perceptions of the intersection between human and artificial creativity throughout the creative process. Fuat, welcome to the show.

Fuat Ramazanov:

Hi and thank you for having me and thank you for a lovely introduction.

Cyndi Burnett:

So fuat, I know that you believe that much like fostering creativity in education, where there's teaching with creativity for creativity and about creativity, that there should be teaching for AI with AI and about AI. So can you tell us a little bit about each of those three things and how they relate to creativity in the classroom?

Fuat Ramazanov:

This is a good question. Teaching for AI about AI and with AI is a new concept compared to well known the concept of teaching for creativity with creativity and about creativity. And I think it's important in the arrow of AI to emphasize the importance of teaching creativity and AI for several reasons. The most important reason I believe that creativity is important skill for the 21st century knowledge economy and AI is becoming an important skill as well. Many researchers now predict that the future of work is about humans and machines to collaborate together. And I also believe that as we interact more with AI, it's important for us as humans to understand the outputs of artificial intelligence and specifically generative artificial intelligence, how we will integrate these outputs in human knowledge. And it's also important to recognize bias in all of that. So that's why it's very important to teach this concept to students before they go to the work.

Matthew Worwood:

And just to follow up on that. And I'm going to be a little bit tough because we've had a few episodes around generative AI. How do you actually teach for generative AI when it's moving at such a fast pace? For example, you referenced how to identify bias. What happens if we get to a point, twelve to 15 month time where things have changed and maybe there's a new thing that we need to address? How do we deal with this pace of change that we're talking about?

Fuat Ramazanov:

Well, that's a great question. So how do I teach generative AI? I first of all start a very open and honest conversation with my

students in the very first class. I start by saying, okay, let's discuss how we're going to use generative AI in our course and the very basic tasks that I give them. I immediately give them the job posting for the position about the course that I'm teaching. For example, if it's a project management, job posting can be about project management. And I ask students to look into the job description and task and identify the tasks that humans can do better now and where AI can help humans to perform these tasks. And that's kind of bring a very good discussion in the class. Then I ask students to think about how this job can change in the next five years and kind of design and brainstorm the possibilities that can happen with this particular job in the five years.

Fuat Ramazanov:

So that's kind of I start the discussion with my students and it moves on throughout the whole course. No matter if I teach in course about creativity or other subjects, I make my students to use generative AI in different ways. One way how I make my students to use generative AI is to use it as a brainstorming partner. I know there's been research about using AI as a brainstorming partner, but I do it a little bit differently. I grab a concept from marketing, well known concept about developing a Persona. When we develop a new product and we don't know about the preferences of users yet, we create a Persona concept which is like potential artificial user of the product, and we start researching and interviewing people about the preferences and perceptions about that product. So I do the same with my students. I ask them to develop an AI Persona by interviewing and doing research about the potential preferences of that person.

Fuat Ramazanov:

And use that findings of their research on interviews in designing their prompts. So I don't want them simply write any prompt. I want them to write educator prompt as if they were talking or interviewing real people. And by the way, that can also address a concept of bias, because when we write a prompt in AI, and if you don't specify what exactly want from AI when we do it, this Persona, we can give a name to Persona, we can give a gender to Persona, and that kind of make it a little bit personalized approach to development Persona. So students really feel that Persona is a partner in a brainstorming session.

Matthew Worwood:

One of the things that I really like about the framework or outline that you've just shared with us is that I understand that it's experimental because I'm sure you're modifying and tweaking these

assignments based on your experience, but actually what you're presenting to your students are very kind of real world applications and use cases of generative AI in terms of the Persona. I love the idea of being able to go and conduct research. Correct me if I'm wrong, but in essence, the students are still going out and generating knowledge about the problem. They're generating knowledge about the users who might use the product to address that problem. And then from that knowledge that they've gained, they're then developing an informed prompt for the generative AI tool. Is that correct?

Fuat Ramazanov:

It is correct.

Matthew Worwood:

So that's like a real great use case at the backend. Tell us a little bit about the evaluation piece. Now they've got the output. How are you guiding them through the iterative process? Do they take the Persona, for example, as is, or do they tweak or modify the Persona based on that knowledge they've now acquired about the user?

Fuat Ramazanov:

All right, that's a great question. But before I answer this question, you mentioned something about, like assessment touch, something that touches an assessment. I personally believe that in era of AI, we as an educators should revisit our approach to pedagogy, to curriculum, and to assessment. And what I am trying to do in my assignments, I'm trying to follow the recommendations that came from Margaret Beaman and Rose Lakin when they said that in a time of AI, a portion of our assessment should both assess and develop personal epistemology and evaluative judgment. By personal epistemology, it's about understanding what knowledge is in order to know what it means to know something. So in my situation, I really want my students understand what creativity is in order to assess creativity from AI later. And I also want my students understand the quality of the output of AI. I try to go to the real world and speak to real people or do research through human body of knowledge and understand how it might look like if it's created by human or generated by human.

Fuat Ramazanov:

And when they use AI, because AI use a training model which may not be perfect in any given situation, and then they have a real chance to compare through the output which they crafted and to see the results, because they know the result of human interview. If they had

an interview with humans and they know the result of their own research, and now they know result of AI, and that gives them a chance to compare all these results and see if there's any bias, if there's any discrepancy, is the result of AI output creative or not?

Cyndi Burnett:

So how are the students feeling when they're bringing this forth? Something that's AI generated and something they've generated, and the AI is coming out as on top in terms of more creative or just stronger overall, how does that make them feel? And then what do you suggest they do about it?

Fuat Ramazanov:

As an educator, I always try to give an assignment and bring the scenarios which yes, in one situation really shows that AI can generate really creative output, but also given assignments where I show them that AI outputs is not creative. So this really helps them to critically analyze the output, not like fully taking it for granted, like the AI outputs, if you take a very simple task, when we need to find the alternative uses of everyday item, then yes, AI may be creative in giving like 50 or 60 out in a second. But if we go to more specific or ill defined business problems, then a output is usually not that creative. So I really give my students to see the difference in both. I start with a simple task and then go to more complex tasks. And through this analysis, through this experience, students can really see and appreciate human creativity. So one way of doing that, again, I'm mentioning this, I really want my students to appreciate the human creativity, because for them to understand AI creativity, I honestly believe that they first must understand what human creativity is, appreciate human creativity, and then compare the result of human and AI outputs.

Cyndi Burnett:

I really like that. And just yesterday we had a conversation with a woman from Australia, Cheryl Yin Low, and she was talking about finding your everyday creativity and bringing that into the forefront. So what you're suggesting is really helping students be aware of their own creativity and human creativity, and then looking at AI generated creativity and then looking how they work in collaboration. So how do you suggest they work through the creative process together, and then how do you assess what they produced and how much effort they've actually put into something?

Fuat Ramazanov:

Well, you mentioned important work, creative process. When I started searching the model for creative process, I kind of struggled because many models of the creative process include the steps such as incubation, which is not always possible to do in a classroom environment with AI specifically. So I ended up my search with selecting the creative problem solving method by creative education foundation. And I selected this because every step of the process has diverging and converging steps. And we know from research that AI is good in both diverging and converging steps. And again, when I design my experiments, my approach is I put humans in the loop. I put humans first, and this is actually aligned with the US Department of Education report, artificial intelligence and future of teaching and learning. And their recommendation is emphasize humans in the loop.

Fuat Ramazanov:

Humans first in the loop. I make my students to, after reading a case study or like ill defined business problem, to come up with a problem formulation. Then they allowed to use AI to refine it in or like come up with a better, lets say, version of their problem statement. And then I started diverging phase. And I start always by making my students to do it individually in a silent mode. And I make them to record their ideas on post it notes. And I usually ask them to record on yellow sticky notes and record at the short statements. And this is important because we know that the output of AI is typically, if not mentioned in the prompt, typically is a sentence or some long words, but it's not like two or three words, which my students usually put on yellow notes.

Fuat Ramazanov:

So I make it consistent. I ask students, hey, make sure you record the three, four words on the yellow sticky notes. So when the brainstorming is over, I make my students to go together and filter out the repeat results and record their fluency scores. Then I allow them to use generative AI and craft their own prompts for the same problem and generate the output. I ask them to record the output of AI on a different posit notes, for example red. And then I ask them to put everything on the board. And by doing so, I make them to visualize. Okay, so here's a human output, he's a output, and I give them a perception.

Fuat Ramazanov:

I think that experience gives them the opportunity to see what they can do and what AI can do. And that's the first experience. Okay. All right, let's start it. What I do next, I ask them students to group and moving to the fluency score now, I ask them to group their output

together with AI, come up to few groups and then do a more focused brainstorming in each of these groups. So after several iterations, when we have enough ideas, I ask my students to post all their outputs together with AI outputs on CoCD box. Creativity experts know what this is talked about, it's about now. Wow.

Fuat Ramazanov:

And how ideas. So then that also gives another opportunity to see where these ideas are like human and AI generated, where they put them in a wow, like really creative or like really general. And that's how I make my students to experience the whole process. And then we select and make them to select best three ideas. And we continue with the next steps, like evolving and trying these ideas. And then we do some PMI exercise. Plus minus. Interesting again, I asked students to brainstorm pluses, minuses, and I ask, I allow them to use AI to also suggest plus minuses and interesting points about this idea.

Fuat Ramazanov:

So I make them to use AI throughout the whole process and making also visualizing the output of the whole process so it's very clear for them what's happening, at which stage. Sometimes I take a different approach. I end up the discussion in day one and move it to the next class. This is how I allow them to incubate. Because I mentioned previously, Fernand, I was looking for the best method of using creative process. What I struggled with finding the model that has incubation. Unfortunately, AI doesn't have it yet and potentially will not have it. So that's why I make them to incubate, take a break and come next class and we continue brainstorming with AI again.

Matthew Worwood:

I mean, there's lots of things I like about what you're sharing, and I'm going to kind of finish what I'm about to say with a question, trying to bring it into a k through twelve environment in a moment. But I really like that there's an element of kind of action research, a lab type component. It's not just about teaching them the process of, you know, we got to identify this specific action within the creative process where we're going to use AI. But it's also about that idea of comparing the human creativity to the artificial intelligence output. Where are the best ideas being generated? How are the best ideas being generated? And you're probably just getting students to think more critically about the tools in more of a kind of research evaluative way, in addition to teaching them how to apply AI within the creative process. So I actually think there's two different things that you're doing, which I find really, really

fascinating and hopefully you're almost kind of like establishing a framework where you yourself get to kind of test each new iteration of these large language models as well. So you might get to a point where the group is typically saying, oh look, the human plus AI model produces the best ideas. But maybe that might change next year when there's an update to one of the large language models.

Matthew Worwood:

Now to bring this into the k twelve classroom immediately, I'm thinking anyone who implements a project based learning environment might be able to think about bringing in some aspect of what you're doing within your environment to their classroom. The thing that I'm curious about for some educators, and I want to premise this by saying educators who might not be as familiar with AI as you, have you been experimenting with different large language models, and have you found some large language models to be better not just in terms of their output, but more accessible to students in your classroom?

Fuat Ramazanov:

I only use the chat GPT free version that is available for public. Again, I also mindful that not all students can have access to other versions. And in Canada, I don't think we have access to other language models that may be accessible in the United States. So chat GPT is widely accessible. So I mostly use chat GPT for my students in my class.

Cyndi Burnett:

So when you have assignments in your class fought, do you allow students in general to use chat GBT in submitting their assignments, not in the physical act of submitting their assignments, but in actually creating their assignments to submit?

Fuat Ramazanov:

Well, I already mentioned the Persona assignment, so that's how I want them to do a research in a real world or interviewing real people. That's one way. And then yes, I'm totally fine. They need to submit an assignment and show the prompt that they designed indicating how it's linked to their research. So that's, that should be evident that that's part of the assignment. Another assignment that I personally like what I do, I give a students a list of ideas generated by humans and generative AI. Instead of asking them to come up with ideas, I only give them a list, let's say with 40 or 50 ideas. I'm mentioning it deliberately that this is likely for this concept.

Fuat Ramazanov:

Everything has been explored, so humans and AI thought about it, and easily. So your goal is to come up with new ideas and other ten ideas. And again, yes, I allow them to use AI. If you use AI in this situation and use it creatively, because this is probably a true test for creativity for AI. If they use AI creatively and can come up with new ideas, then why not again. What I'm testing here, I'm giving my students a chance to show their creativity or to show their understanding how to design prompts by going beyond what is known, probably because in a theory of creativity, we can come up with new ideas by combining other ideas in unusual way. AI may not know that, but if they, as humans know that, and they design a prompt in a way that make AI to combine other ideas and then show me how it's done and show the output, totally fine, I accept it.

Cyndi Burnett:

I think it's sort of fun to think about giving students a list generated by AI that might be sort of the usual ideas that are generated, and then to really push them to think beyond that and to teach them how to really bring in questions that are going to spark novel ideas. And I think that's a really interesting way to utilize it in the creative problem solving process. I'm curious how you might use generative AI in evaluating your outcomes. So if you're using the creative problem solving process and you have an outcome, how might you use generative AI to evaluate that, or can you even use it to evaluate the outcomes?

Fuat Ramazanov:

Well, I think here I agree with creativity researchers, specifically David Crupley, who discussed in his 2020 1st article. And he puts like humans in control of the beginning and end stage of the creative process. And as I mentioned before, I make my students to visualize the whole idea generation output on the CoCD box and make them to choose the best ideas. And when they choose the best ideas, we run another cycle of PMI, like kind of going through understanding and analyzing these ideas, plus minus interesting. And this is where they again use AI as a tool. But again, the final call, final decision I still leave for my students to make in collaboration of humans and AI in the future. I still believe that humans will hold and must hold a central role because they must understand AI output ethics of biases and everything. And this is part of my teaching.

Fuat Ramazanov:

I really want them to see AI as the tool. And by the way, when people say AI is a tool, I want to make it clear AI can be as a learning

support tool and thinking support tool. So I teach my students that AI is a syncing support tool here. So just use it and move on.

Matthew Worwood:

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Matthew Worwood:

All right, so far, given how much you've been playing around with AI in the classroom, and this is something Cindy and I have been talking about. So, Cindy, I'm really kind of seeing this very much as a three way discussion that might not necessarily yield an answer. But right now I'm teaching a w class. All of the papers that I'm getting from my students is good, and they all seem unique. And they're unique because I can see that the students are bringing their unique perspectives and connections, and I kind of feel that they're learning as they're interacting with these tools. But I'm not sure how much writing they're actually doing by themselves now. Like, it's just a really unique time. And so I'm just wondering, like, are we actually nearing a point sooner than we thought where we're actually are going to hand over a lot of writing assignments and math assignments over to AI? And what's the potential consequence of that? I mean, I don't know.

Matthew Worwood:

Like, as I said, I don't know if we're going to yield an answer, but I'm just throwing this out there. This is what I'm dealing with at the moment. It's like AI is being used, and actually, I'm starting to

feel like it's being used somewhat effectively. I'm not a point where I can't tell if, you know, I can come up with this strategy or that strategy to work out if people are actually plagiarizing whatever. I'm not interested in that. I don't have the time for that anyway. But I just, I can't work out what is the impact on learning, and I can't work out how I feel about this. Does this make sense? I mean, let's.

Matthew Worwood:

To try and make it clearer, are all w classes next year going to 50% of the content be written by AI? Are we okay with that?

Cyndi Burnett:

And, Matt, let's just reference what a W class stands for, which is a writing course.

Matthew Worwood:

Yeah, an intense writing course on writing. And what's interesting, the key piece with intense w classes, at least at the University of Connecticut, is revision. And so I'm going through and I'm revising the paper, and quite often there's revisions to be done. And if the students are revising it and hopefully revising it by themselves, that brings up another layer of okay. That means that they're obviously engaging their creativity, their input, their intentions, their motivations into this process. But nevertheless, I have no doubt that the people might be listening to this episode right now saying, what are you generally telling me that you're okay with students just having their paper 50 60% written by AI? And I'm struggling with it. I just don't know what the answer is right now.

Fuat Ramazanov:

Well, I think I had the same experience when I started thinking and designing my experiments, because I realized that AI is here to stay and students will use it no matter what policies we put in place, because chat GPT is publicly available. So what I start thinking for myself when designing experiments, where should I focus myself? Because what is still unknown, how this process of generating ideas works in AI. But what we know and what we can potentially control is the input and output of AI and what I am doing. Like in particular for these, my students, when they use AI and designing prompts, another question they ask them to reflect is, why are you using this particular prompt? What make you to believe that this prompt gives you the best output? I want my students to reflect on that as well when they using AI and writing prompt to get that output. Are you happy with this output? Is this output exactly what you expected to

achieve? Is this output is something similar to what you would write as the human. So I think that reflection is important in this process. And I actually put this in my grading as well. Reflection part of that, using AI, because humans need to not only use AI, but also understand the interaction with AI and reflection really helps surface that.

Fuat Ramazanov:

I practice this reflection and I read students reflection papers and it actually surfaced some other good recommendations. So if all educators include reflection on how humans and students use AI, I think that will be a good data for a potential research. So my answer is, make students to focus and make you to evaluate their inputs and how they write and why they make decision that this prompt is good. Because even we write one prompt and when we enter two times in AI with like 5 seconds different, it gives you a very different output. Right? So what makes students to believe that the output that they get and put in paper is the best one? I think that kind of question can help us to a little bit surface the answer to your question. And that's what I believe I do, and that's what I do.

Cyndi Burnett:

So the way I look at it, and I think this is a really interesting question. Matt is if we're looking at AI as a collaboration tool and it's our ideas. So you say, I'm going to do a brain dump of my ideas of what I want to say, and then it helps you communicate those ideas in effective ways. Then I say that's the future. I think that's one version. The second version is if you just ask generative AI to write you a paper on how to tolerate ambiguity in business and it just generates something and you hand it over, that's another thing that's not positive. But if you're using it to help you communicate your ideas, I think it can be really positive. I think my biggest concern with students using this, particularly in college, is that does that weaken their communication skills when they speak to other people? And I would say if I read something that generative AI.

Cyndi Burnett:

So I'll give you an example. I just wrote a LinkedIn post that I'm going to be posting in about an hour. I wrote down all of my ideas. I hit the button, it improved it for me and I looked at it and I said, wow. What I really like is that it did this and this and it functioned. It put it in this way and it did this for me. And now when I communicate, that's the language I'm going to use, then that's a positive thing. So I think it is a lot about reflection, like Fouat said, and it's here to stay.

Cyndi Burnett:

There's nothing that we can do to say, well, let's go back to the old days because it's. It's not going to happen. Right?

Matthew Worwood:

Yeah. And I think the phase two, the version two that you referenced, I actually don't think is happening that much anymore. I mean, that, that is a big thing that I feel I've seen, at least in my environment, maybe nine months ago. And I think this goes to your point, fuah, as well, to educators out there. I think my takeaway from this conversation right now is that if the students are using it, they're going to be using it. We're at a point now where you probably don't have the bandwidth or the ability to really stop them using it or penalize them because it's unlikely you're really going to be able to catch them the way you think you can catch them. But to the example that Fouart has really shared, it really emphasizes the fact that they need handholding. You know, if in our debrief for what the thing that I'm hearing is you're hand holding your students through this.

Matthew Worwood:

And I think that's the most important thing if you're educators. I say it again, if you think your students are using AI, it's not a case of saying don't use it. I think, unfortunately, it's a case of we need to handhold them and identify and teach them best ways to use it. And then, Cindy, to your point, time will tell what's the impact on human development and cognitive development in the classroom? And my gut feeling is we can't answer that. And I think, I like to hope that we're not just going to dismiss that because I think there could be some repercussions, particularly if we start seeing this practice being used, you know, at the later elementary middle school, because I think there's a lot of cognitive development to be had in terms of when we're engaged in writing and clarifying our thoughts. Hopefully, we're not having AI clarify our thoughts, we're having AI clarify our communication. So all good points need to keep pondering this. Fouart, thank you so much.

Matthew Worwood:

I mean, what a fantastic example and playbook that you've shared for us. We are running out of time. So we do ask you to share three tips that you could provide to educators who are thinking about bringing creativity, creativity and AI into their classrooms.

Fuat Ramazanov:

Sure. My number one tip is start each class with a creative warmup activity. It can be a simple question asking to students come up with five ideas of using product ABC in this environment or by these users, or can be anything that makes students to think and come up with ideas. Number two, I suggest that make learning visual. I emphasize, and I again recommend all the educators use post it notes, sticky notes, and make students to record the ideas. Post them somewhere in the class visible. And if they use AI, pause the ideas generated by AI using different post it notes, different colors to show the difference. So students should see the output of human thinking and AI output at the same time and should see where it goes, who does what, and what can happen if that collaboration continues.

Fuat Ramazanov:

And number three, I think I would also say that educators should experiment and create a better, best version of their own creative process. There are many possibilities out there right now, especially with AI humans input first, AI input first, or whatever. So every educator should come up with their own unique creative process. Thank you.

Cyndi Burnett:

Thank you Fuat. And thank you so much for joining us today on this episode of the Fueling Creativity and Education podcast. Now, for those of you who are listening, if you have an educator friend who has been talking about artificial intelligence and generative AI and how they might not use it in the classroom. Send them this episode and ask them to have a conversation with you over lunch about the potential uses and implications of allowing your students to use generative AI in the classroom. My name is Doctor Cindy Burnett, and.

Matthew Worwood:

My name is Doctor Matthew Werwood.

Cyndi Burnett:

This episode was produced by Matthew Werwood and Cindy Burnett, our podcast sponsor. Our answer is curiosity to create, and our editor is Sam Atkinson.