ARTIFICIAL INTELLIGENCE IN ADULT LEARNING AND EDUCATION

Transcript of the podcast

Artificial intelligence in adult learning and education

GINA: *Welcome, everyone, to our podcast on adult learning and education and artificial intelligence. My name is Gina, from the [European Association for the Education of Adults](). And we are also part of the EPALE, expert team for adult education.*

In this session today we are:

- *focusing on how artificial intelligence can be a useful tool for adult learning and education.*

- *Then, discussing perceptions regarding artificial intelligence and adult education and learning,*

- *and finally, how can we make a good use of artificial intelligence in adult learning and education?*

I have two colleagues with me from different parts of Europe, who have knowledge, expertise, and experience in the topic. And, I'm very happy to introduce you to Anni Karttunen from Finland. She is an education policy advice and specialist. She has her own company now, Globedu. And if you need anything on education policy, she is the person to go to. I think everyone who's working in Europe on validation and recognition probably has met her, or has at least heard of her. So this is her specialty, and we've worked together on that.
My second colleague here is Maja Maksimovic, university professor of Adult Education at the University of Belgrade. And she's also a former Board Member of the EAEA. We, also, have been working quite a lot in the past and hopefully also in the future.

So, artificial intelligence. I have to say, I come from literature. My background is in language learning, teaching, and so on. So, artificial intelligence is something that I have been ignoring quite a lot as not that important to my job. But of course it is. So, in a way, we were thinking we do need some kind of introduction to artificial intelligence, and especially how it relates to adult education, because this is where, where we're coming from.
And just to let you know, this is really just an introduction to the topic. We will not give you a three-hour lecture on the details of data mining, and so on. But it's really a short introduction to what's being done, what's happening, especially based on the experience of our two speakers. So, if you're interested in the topic, you can let us know under the podcast on the EPALE platform, and we will probably follow that up. And as you can see, it is a topic that goes into the future. So, we'll come back to that. Now, let me ask Annie, to talk about the experience adult education has with AI in Finland, and I think you have already done quite a bit of work in that area. So, Annie, please.

ANNI: *Thanks. Yeah, I was actually quite surprised when I had one big example in mind that I was going to talk about. But then, I got a little bit surprised when I started digging deeper into this issue. That there are actually quite a few sorts of initiatives going on. And there's a lot of interest in artificial intelligence in the field of adult education and learning. Which, of course, is a very positive thing? But I will start with this example, in at the end of 2017. The Finnish Innovation Fund called Sitra, they organized a national competition regarding identifying prior learning, and there were two winners. It was a split award. The amount of the award was a million euros, so it was relatively big, but that was split in two, so each winner got 500,000 euros for their development work. And the other winner was focusing on artificial intelligence and what to do and how to use it in adult education and adult learning.*

And the idea was to create a system that would use, of course, different kinds of data mining protocols to collect data online and compare it to the existing curricula, national curricula. And for example, they would collect data online on company's needs, or the job profiles, , etc. And then, compare them to the curricula and the curricula; there are requirements in the curriculum, national curriculum. So then, when they have further developed a system, and they came up with the idea that it could be also regionalized. So that you could go geographically to your area and see what the special features in your particular region are, which is quite nifty. Alright. So, of course, the development is still going on, but the pilots have already taken place. And one interesting pilot that they did was in the military service people, you know, the young adults, yeah, mostly guys. But of course, there are women now that is doing their military service, as well. And they focused on the sort of leadership training in the military service, and looked at what kind of competencies people there gain, and how do they match with the existing curricula, mostly in higher education. And the results were quite amazing.

So, then they started sort of documenting those, and making a formal document of the competencies that they have gained in the military service, so that when they finish their service, they could go to higher education, to adult learning programs, and show them what kind of leadership experience I have, for example.

So, this is just an example how it works. And now, we actually have started discussions in Finland, with the Innovation Fund, and with this company, Head AI, it's called, developing these artificial intelligence systems. That maybe we could somehow use it for sort of mass scale validation, as well for adult people. So that they could do, for example, data mining, on job ads, to see for example, what is lacking in the education system. What kind of competencies are not mentioned in the education system at all, or in the national curriculum, so that we could quickly start to start developing those systems and also see what kind of existing competencies there already are at the market. That we're not training, but they do exist, and how do we make them visible.

Because, that is the big problem when these competencies are not made visible, so they're not so easy to use for their own. So, this is something we started discussing this new idea in June, this year. And the Minister of labor is involved in this, and the Minister of Agriculture and education is involved in this. And all the sort of major players are quite interested in further development. So, this is one of the biggest sort of national moves, at the moment.

But then, it was very interesting, because at the moment, we have quite a few big sort of national development projects or non-formal learning in adult education. Where the aim is to develop a learning outcome-based adult learning systems. And to have those skills digitalized, and put them in a national database, digital database. And we have had these Zoom meetings or Teams

meetings nationally. And I have been giving some training, and then listening to the people on the field.

And what has been most interesting is that in every session, somebody, like just a regular teacher, they come up with this comment that how could we use artificial intelligence better in our daily work? And that was quite in a way shocking to me because I thought that we were still sort of like taking the very first baby steps and people don't really know and understand about the possibilities of artificial intelligence. But obviously, there's quite a big buzz going on in the field. Even though they're not experts, like neither am I, of course. I'm just sort of reporting of what I know. And you're like, how are we discussing about this nationally. But I was so, so positively surprised that these issues are actually discussed most of the staff of adult education and adult teachers, and trainers.

So I'm quite hopeful that we are on the verge of something quite nice and big. And, of course, above this national database systems, digital database that would include the non-formal learning results as well, that would be a really fantastic opportunity then, for example, data mining. Of course, nobody's personal information wouldn't be compromising that person. But data mining, of just what kind of skills people gain in adult learning. So that would be one use of their intelligence, as well. And also, to be able to chart and map what type of learning opportunities and learning paths we could offer people for their future so they would benefit more and more. For example, in terms of working life, or, or personal development or, or just empowerment purposes.

GINA: *Wow! That is absolutely fascinating. And, I think as you said, it opens a number of possibilities. In the back of my head, I also have sort of my old fashioned, probably more corresponding to your image of the teacher saying, that also sounds a bit like science fiction. Yeah, but probably we are already further, Well, I think, and a lot of other people think.*
Can we come back to the opportunities? You already said a bit about those days, and all kinds of chances to adapt things to each other, and so on. And you talked a bit about the learner. But, could you maybe highlight that, also, from your point of view as a validation expert? What do you think are really the opportunities of artificial intelligence?

ANNI: *Well, yes. Because at the moment, at least, in our country, validation systems are pretty much sort of confined in the education realm. And that is a shame. Because people have so many competencies that should be made visible, either being made from informal context or non-formal context. And that's why it would be in the interest of people, of the individuals who are learning every day something new, to have the opportunity to have their special skills and competences make visible.*
And this sort of enables us to see more clearly what those potential skills would be. Because it is impossible, even though we are a small nation of five point something million people, but still it's impossible to have every single individual, you know, have their skills and competencies individually defined. Because there are no standards. You always have to have some sort of a standard against which you assess the person's competencies.
So, with the help of artificial intelligence, we could get a lot of these standards, or ideas that what kinds of standards are needed, so that these individuals' competencies could then be made visible.
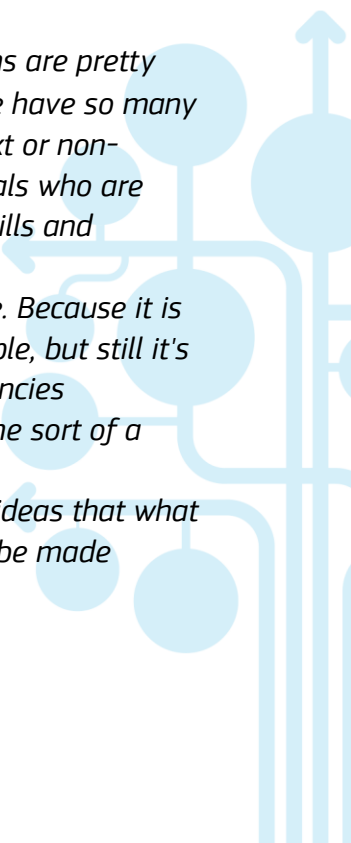
GINA: *Now, okay. Very interesting. Can I ask, do you see any dangers?*

ANNI: *At the moment, no. Of course, some people, and it depends on the culture. I mean, I think, for example, if I was talking about this in Germany, for example, people will be horrified, because they are very sort of concerned about their privacy and their own information issues, , etc., etc. That is completely understandable in these days. But in Finland, we don't have that kind of issues. People trust the systems that we have built, especially the national databases that are secure and you can only access them with your with your own sort of bank information, or whatever. Different kinds of ID systems.*
So, people do trust them a lot. So, if you gave it permission to a sort of like a research organization, to have access to unidentified data, or research purposes. I don't think anybody's worried about that their information is going to be misused somehow.

GINA: *Now, okay. I think that's a very important observation, that they are, of course, cultural differences in approaching that. And possibly, my background as an Austrian, not German, but Austrian, also sort of colors a bit my view on that where I immediately go privacy, and so on. Yeah, absolutely. That makes a lot of sense. Maja, how does it look like in Serbia?*

MAJA: *Wow. So first, thank you, Annli for presenting these really interesting examples that are going on in, in Finland. Well, in Serbia, if...I mean, as usual, we do not trust system. So, there is a there is a hype about artificial intelligence, as well. And that newspaper, I think it was the teachers will be...there was talking about the teachers will be replaced by holograms or something like that. But, I would really like to ask Annie, as you presented how artificial intelligence is used for vocational education*
and training mainly. To analyze feel, sense, feels gap to define what competencies we need for certain jobs that are not that are not occupied. I would like to ask you about opportunities and possibilities. And how do you see...How can artificial intelligence be used in education for democracy and citizenship? Hmm is it possible as for... Hmm usually when we talk about to learning for democracy, we talk about transformative learning and changing perspective. In artificial intelligence, we use; we use some kind of intelligent tutorial system, that basically adjusts to learner. If those chat bots and tutorial system always adjust the learning style, how can we facilitate transformative learning?

ANNI: *Wow that was a very big question. As I'm not an artificial intelligence expert. It's really I'm, I have to really stretch my brain. But how I see it that, I don't have some sort of an answer to you like, o, this is how we should do it. But, what I was speaking about, like when we're talking about, for example, being able to make in mass scale, we're able, if we're able to make people's competencies visible, that actually enhances their sort of... Empowers them, and it makes them more socially aware. And it makes them more prone to be active citizens and to attend adult learning and adult education. And further learning whatever form it is.*
I don't care if it's non formal, or formal or whatever, but or active citizenship as like, in voluntary work, for example. People who realize that, "okay, I got these skills that I can use for, for example, for voluntary work purposes." And I think this kind of great mass movement will further enhance this kind of trends, that, when people realize that "I have skills and competence."
Because we're also talking here, not only about skills, but we're also talking here about

canvassing soft skills. Because this is an important point. Because, especially if we're talking about job ads. They are full of different kinds of soft skills. What kind of person are we looking for? You need to be good communicator; you need to be this or that. They're also filled with soft skills that often are not so visible in curricula. Right?

So if we're able to, sort of, focus our attention to also to the soft skills and make them visible and empower people through that kind of process. I think strengthens this transformative learning and the entire idea of democratization and social activeness… activities. Yeah. Did that answer anything that you ask?

MAJA: Yes, yes, thank you. I'm listening.

ANNY: But this is how I see the process. I mean, whether it's you validation as, as we see now, you know, like person to person sort of validation or group validation in a sort of learning setting. But, it's the same procedure. Validation is always something that empowers people, and makes them more sort of aware of themselves and aware of how they can have an impact into the surrounding world.

GINA: Yes. That, yeah. Again, I think there will probably be cultural differences in perceiving that. And I think it will be, I think, for the next few years that could be one of the questions that we should be working on.

How do we all perceive the directions of that artificial intelligence are going for adult education? Or we thought around and to sort of keep up the discourse on that.

Very interesting. I would like to now give you the floor, because you have been involved in a, well, maybe not the project, but a game, that tries to demystify artificial intelligence. So please, go ahead. It's, I think, very, very interesting. And hopefully, our listeners will think the shame. Go ahead.

MAJA: Thank you, Gina, for inviting me to participate in this podcast. As you said that you, and I think many people feel ignorant about artificial intelligence. And I think that we use it a lot in our everyday life, or in our work, in education.

Even in leisure, when we do data tracking, how much do we run, etc. But we do not really know much about it. And you mentioned one more interesting thing that it feels like when we are in sci-fi movie. And while doing this project, I actually discovered that there is that high tech companies try to create and support this sci-fi imagery of artificial intelligence. They actually hire writers so they can create further narratives, to create artificial intelligence in a way that human imagination will accept it.

So, this is just one example "why artificial intelligence feels so distant from us. And why do we feel that we do not really know much about the topic." We see artificial intelligence, as matrix movie or another movie, and this image of staver or destroyer is really supported. And yes, that's usually how do we imagine. I was really lucky to participate in project that was supported by the center for promotion for the promotion of science in Serbia. As they work, they are engaging the project on artificial intelligence within art science project.

And the idea was actually to create an art, art science work in relation to the topic of artificial intelligence.

And, we have three artists and two adult educators worked on this project. My colleague, Aleksandar Bulajić is also from the faculty of philosophy, and Ana Popović, Isidora Pejović Blagojević and Sunčica Pasuljević Kandić.

We are the authors of this pervasive game. And, we actually wanted to create a kind of educational tool for general public, for citizens, and by playing the game people have an opportunity to think about their relationship with artificial intelligence. "Pervasive game" means that people are actually in reality and in application. They walk around Belgrade. And, they have to resolve certain tasks that they're usually related to the topic of decision making. Decision making, and how do we actually transfer our agency to artificial intelligence in this process. For example, artificial intelligence is used to decide if I can have...I can get insurance or something else. Because they can process, of course, huge amounts of data.

So we created this game to allow people actually to think about their decision, to think about how their relationship will, which technology would possibly influence the future. And one of the topics was also the materiality of digital world. And we talked in some tasks. We talked about data center, and ecological issues of data centers. So, there are many in this project. We cover actually many different topics in different tasks. A nd, actually, the main idea is that it is a kind of learning tool, where people...We actually stimulated artificial intelligence, like a chat bot.

So people engage with chat. With actually created chat bot. It's no, real chat bot. and then they learn more about it. So, this is basically something about the game. And also, we tackle issues such as surveillance, capitalism that is really important nowadays.

We actually give our data to Facebook, how those data are misused, and sold to third companies, etc., etc. So basically, we covered a lot, a lot of issues. And I have to say that this was the first time that I'm actually critically thinking about artificial intelligence. And it really helped me to reconsider my, let's say, digital behavior.

What do I accept? What do I agree upon? When I accept terms and conditions? What does it mean? Where were our digital data stored? Why do I send so many videos, how many gigabytes they occupied in, in data center that needs to use coolers and use a lot of energies, etc.? So, these are just some example of topics that we covered in the game. So, thinking about adult education and artificial intelligence, which is our topic for today, I think mostly about adult education for demystifying artificial intelligence. To learn about artificial intelligence. But also, I think it is important to reconsider and to analyze, dominant paradigm of learning when we use artificial intelligence in adult education.

GINA*: Again, very, very interesting. Thank you, Maja. Can I ask you? I assume you've had other people playing the game and, and so on and, and participating. What's the feedback that you have got?*

MAJA: *After the app, we organized a kind of collective playing of the game. We invited people to come to the center of Belgrade, where actually the game is taking place. And, and after playing, we got together at Kalemegdan, in Belgrade Park, and then the organized workshop where we discuss about the issues that they encounter.*

So, I think it's really good combination to have both. To have both. To have this kind of digital learning experience, that actually takes place in Belgrade. So, it's not completely digital.
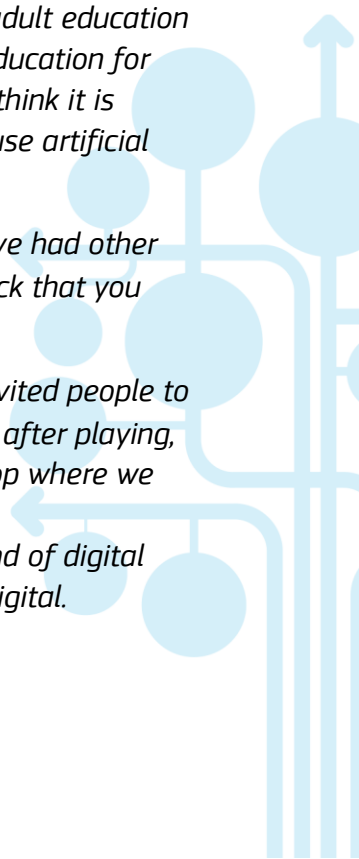
I think it's really important. It's different kind of learning when people are moving around Belgrade and when we give place to certain issue like National Library, or National bank, and then we discuss about data, and other problems related to that place. So, they came and we organized picnics.

And I think really picnics are amazing method, amazing methods of learning during corona time, as we got together in an open space. And what was also really, really interesting for me as an adult educator, is that we have parents with kids, older people discussing about artificial intelligence. And we had different perspective. There was one boy was asked particularly interesting questions about artificial intelligence is that, after playing the game, he said "but why do we talk so much about artificial intelligence when we have such a big ecological issues going on?" So people, really ask critical questions about it. And, we're really engaged in fruitful discussion.

ANNI: Wow, I'm really impressed, because that is something that really brings the issue onto your skin. Very nice and fantastic experimentation and have really, really liked to sort of introduce that here in Finland, as well. Because I mean, it's a very nice way.

I'm sorry; I'm not asking you a question. But I'm just in awe of what you told us it's like...Because sometimes we live in this world and we take things for granted.

We have our phones, and we use them and no matter how many times experts are warning us about different things, regarding you know, like, for example, Facebook, or whatever. So, we don't really pay that much attention to that. But then, when you have to critically think of these different aspects. And even notice, if you think, artificial intelligence is used in your clothes, as well, many times. So yeah, very interesting. Wow.

GINA: I have to say I'm, I'm really happy about your examples, because for me, it shows in a way, Annie, you were looking at it from a...Let me summarize it that way. You are looking at it also from a systematic level. As in how it can be used and validation and skills gaps versus job offer. And Maya you have now given the example of how you can involve the grassroots level into the discussion of artificial intelligence. And I think we need both approaches, you know, to make progress. Because, you do need people to ask the questions, to be involved, and to help shape it. Because, it's not just a systemic or systematic question. You wanted to say something. I interrupted you. Sorry.

MAJA: It's very much related to your comment. We need public discussions on decisions, such as face recognition camera that are around Belgrade, or that will be introduced also in some cities in European Union. Because there is no, I think there should be a regulation...

There should have been regulation about that. But at the end, Member States didn't accept. Maybe I'm wrong to check, but I think there is a huge debate now about this issue. I wanted to say that the game will be translated into English, it is adjusted to Belgrade, but I would be really happy to send and distribute to both, to you and to EPALE community. You can try it out without being in Belgrade.

GINA: And that sounds great. Yeah. Thank you very much.

Um, I think we have been discussing the issue now, quite intensively and we don't want to discuss it too long. But, if you in the EPALE community are interested in following that up, I would like to

invite you to comment in the comment section on the website where you'll find the podcast. And we can then continue the discussion.

And if you're very interested, we might do another podcast, or maybe at some point even an online discussion on the topic. So, thank you to my speakers.

It was a really interesting experience. And, I think you heard from the various wows, that we are all impressed by the developments that are there at the moment, and the developments that might still come.

So, thank you very much, and I hope you all found it very interesting.

Thank you for listening and don't forget to share your views on the topic in the comment section and sign up to EPALE to hear more news about adult education!

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