

Altru Salon Report

Our education system must change in response to the impact of Artificial Intelligence. A new discipline, “Humanics” offers a solution.

Northeastern University president **Joseph Aoun** was Altru’s guest speaker at its April 16th Salon. Aoun addressed the topic of AI and offered great insight into the role of higher education in a world where technology has changed how we live, learn and work.

Aoun, who has led Northeastern University since 2007 is among the most knowledgeable in the world on this subject and has a unique perspective. His critically acclaimed book, ***Robot Proof: Higher Education in the Age of Artificial Intelligence***, provides a framework for rethinking the way we educate.

He argues persuasively that the current approach focuses virtually all energy and resources on getting degrees for 18 to 22 year olds is grossly outdated, and it does not serve the rest of the population or address the needs of society going forward. This model can’t work in the new economy where machines are replacing workers and humans must be retrained for new roles to remain gainfully employed. Higher education needs to adapt to this rapidly changing world.

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Humanics is the term and description that Aoun promotes as a new academic discipline that has three critical components. 1) technological literacy, which is being able to understand and interact with machines. 2) data literacy to understands the sea of information generated by machines and 3) human literacy, which is integrating the human aspects that machines cannot replicate.

Below is a transcript from Aoun’s remarks.

NOTE This was the second in a series that is focused on the future of work and the challenges of reskilling workers displaced by robots. Art Bilger, founder of working Nation spoke in February and provided a global overview of a major challenge on the horizon that people are just beginning to comprehend. Future speakers will address how technology can more quickly skill the population.



Joseph E. Aoun, a well-known higher education thought leader and renowned scholar in linguistics, is the seventh President of Northeastern University. Under his leadership, the university has significantly increased its growth in external research funding, created a network of campuses across North America, established leadership in flexible lifelong learning, and recruited 60 percent of its tenured and tenure-track faculty.

President Aoun received his Ph.D. in linguistics and philosophy from the Massachusetts Institute of Technology and advanced degrees from the University of Paris (France) VIII and Saint Joseph University (Beirut, Lebanon). He was recently appointed as Chevalier of the Legion of Honor by the President of the French Republic.

It is a serious challenge with perilous outcomes not generally recognized. The displacement of workers by machines is happening far faster than we realize. Vast number of jobs go unfilled whilst thousands can’t find work. There is mismatch with the job needs and job skills that has led to hardship and frustration that many believe is at the core of current political malaise.

The answer is lifelong and experiential learning which has been a major thrust at Northeastern. In Aoun’s view, to succeed one must become “Robot Proof.”

Joseph E. Aoun – Higher Education in the Age of Artificial Intelligence

Remarks captured April 16th 2019. Altru Salon. New York NY.

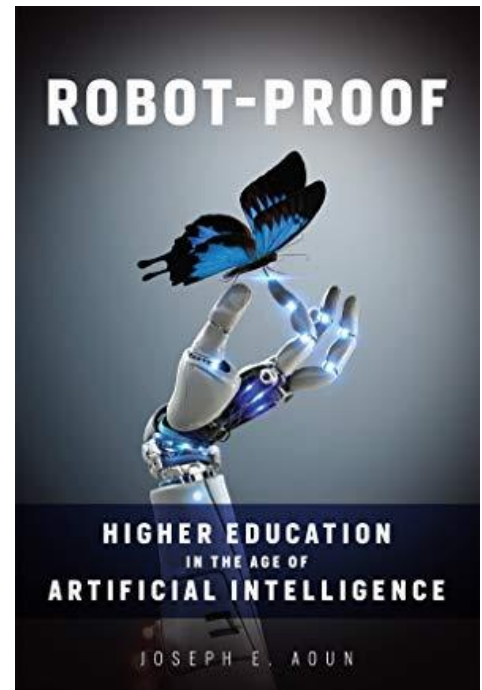
We know that in the next 20 years, jobs are going to disappear. The Economist is arguing whether it's going to be 50%, 40%, or 30%. But essentially, it's a huge number of jobs. The World Bank is projecting that in the next 20 years, up to 70% of the jobs are going to disappear. We know that there will be new jobs being created but we don't know how many.

What we don't know is whether the jobs being created are going to compensate, in the short run for the jobs that will disappear.

In this environment, jobs are disappearing, new jobs being created. So what is the purpose of education? And what is the purpose of higher education more specifically. I'm going to talk about higher education and lifelong learning.

What is the purpose of education? And what is the purpose of higher education more specifically?

In my view the purpose of education becomes to help people become robot-proof. Hence the title of the book. Making employees robot proof should be the purpose and the mission of higher education.



However, it's easier said than done, how are we going to help learners, students, people become productive? It's a lifelong journey. It starts by assuming going back to what Brett said that every learner should master starting in college. Master what I call *humanics*.

What is *humanics*? Humanics is the integration of three literacies, and that every learning person, now should master three literacies. The first literacy is technological literacy, which is being able to understand and interact with machines. The second is data literacy, which understands the sea of information generated by machines. Lastly is human literacy, which is integrating the human aspects that machines cannot replicate. The result is competency.

Human competency, is the ability to be creative, to be entrepreneurial, to be empathetic, to be constantly agile, to work with teams, to be able to look at people in the eye and understand their body language, to be very culturally agile, and obviously, if possible, to be global.

Let us think about it in this way, humanics is the integrations of three literacies. And the third one is that which humans can do that machines cannot. That's the beginning of the term.

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And therefore, the question is, you can study, for instance, creativity, you can study business and entrepreneurship and read all the books on the subject. But it doesn't make you an entrepreneur. It doesn't mean make you creative and innovative. What you need to do is start living in that space. Hence why experiential education is key.

What is experiential education? Experiential education is the integration of the classroom experience with the world experience. There are many ways of fulfilling that.

Let's focus on Northeastern University. Students participate in internship programs for six months each, and all over the world. In 136 countries. And during this period, they start understanding what they are studying. They start understanding

what they are good at, and what they are not good at. They start understanding how to interact with people from different cultures, different devices, and different perspectives, hopefully how to be empathetic, and to look at opportunities. So essentially, what I'm saying, the beginning of your robot proof journey, as a young student, has to be rooted with humanics. Humanics becomes a reality through experiential education.

Experiential education is relevant for another reason. Machines do not know how to negotiate the infinity of context that works and they don't know how to transpose they experienced from the context of the wildly different companies. We human beings are very good at that we are wired to do that.

So let me give you a very simple example and at the same time a true example. For instance, a student who studied literary criticism went to Bosnia to be part of a Co-Op internships. Once there she realized that people were facing the problem of fake news. In this case deadly with news about safe places that were not safe. Fake news can be deadly, especially in Bosnia where information is sensitive and often becomes reality. So she launched a website, and a not for profit precisely to help people report the fake news. What did she do? She essentially used the literary criticism technique to transport the information into decoding fake news. This example demonstrates what we humans do constantly. We transpose our experiences from one domain to another, which machines cannot do.

The message is very simple. Focus on the humanics as a young learner, and then move into an experiential setting, which allows you to find who you are and learn how to interact with people. As machines continue to perform even better; they're going to displace more jobs.

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When I went to college, people told me you set for life. Do you think that now the students going to college are set for life -- Of course not! Why? It is because the world is changing, and it's changing fast. There are new jobs being created with many more disappearing. And therefore we always need to reeducate ourselves, re-skill ourselves and upscale ourselves.

That's an issue. Why? It is because higher education has not focused on lifelong learning as part of our core mission. Essentially, higher education looks at its mission, as educating the 18 to 22. We must focus our attention on lifelong learning because it is a must. Why is it a must? It is because already in the United States, 74% of the learners are lifelong learners. So the 18 to 22 cohort is only a minority.

There are two types of learners, the young learners who are long on time short on experience, the 18 to 22. And they are essential. And then are the other learners who need to re-tool and re-educate themselves. That is all of us there tonight. We are short on time, long on experience. We need to rethink how to do it. By creating on-demand programs that are delivered where the learners are and not only those who are on campus and delivered whenever we need it. The notion of customization of education for lifelong learners. Personalization is key.

Now, if we don't do that, higher education becomes like the railroad industry. And the railroad industry looked at the onset of the airline revolution and didn't recognize its impact. The railroad industry didn't define themselves as being in the transportation business. And we in higher education, unfortunately, don't define ourselves as being in the educational endeavor. We need to change that.

This, in fact, is a profound change in society. When society moved from the agricultural revolution to the Industrial Revolution, society said, we need to expand education. And that's why land grant universities and large public universities were built to meet the needs of the nation. And similarly, when we moved from the agricultural revolution to the Industrial revolution, now to the tech revolution, we started building engineering schools, management schools, etc. Then we introduced computer science, we introduced management, we introduced other aspects about tech about data, etc. and now in terms of AI, what we need to do is expand lifelong learning opportunities. But that is not happening.

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Every government up to now, Republican or Democratic, has focused its education policy in higher education on helping the 18 to 22. And you heard, and you'll hear constantly, the notion of access, I need to give access to students finishing high school, and then I want them to go to college.

Your previous mayor, Mayor Bloomberg, made a remarkable gift of a billion dollars to his alma mater, precisely to help students go from high school to college. But that's not enough. Why isn't it enough? It is because we all need to re-tool. No policy is helping students who are adults, who finished, who are executives, who are in the workplace at any level to re-tool. Thus, our policies have to change.

Some countries are figuring this out. In Singapore and Scandinavian countries for example, every learner, every adult has a lifelong learning account that he or she can use, like a health account. America does not have that. Similarly, in the UK now every company of a certain size must set aside half a percentage point of payroll, to help people re-tool.

The road to becoming robot proof is a journey for life. And you are not going to do it during four years in college, you are not going to do it once after college if you go for a Masters or an MBA or professional degree. It is going to be a lifelong learning journey. Higher Education must rethink how it is delivering that and rethink how lifelong learning should become part of its core mission and its policies.

I'm happy to discuss this and discuss what kind of policies need to be enhanced to help people retool. I am often asked about universal basic income, which I don't think is going to be helpful. Because to start with something controversial, it is not going to encourage people to re-educate themselves.

To summarize what I said in the interest of time, is that becoming robot proof is a lifelong journey. It starts very early on when you are a young student, an undergrad 18 to 24 years old. My advice: Master humanics, and the ways to education through experiential learning. This allows us to differentiate ourselves from machines. We need to focus on what humans can do that machines cannot do. We must recognize that we are constantly going to reinvent, redefine, relearn because that's where we are. Is this society ready for that? I don't think so. As such we have our work cut out for us.