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Education 4.0 in the Era of Fourth Industrial Revolution

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Abstract: *The current study facilitates the discussion on implications of the Fourth Industrial Revolution (4IR) on education. World technological development and digitalization are unmistakable tokens of the 4IR; they will undoubtedly have a positive impact on transition to Education 4.0. Authors examine the key challenges and features of the 4IR for the Russian educational system. The fourth industrial revolution (IR4.0) is changing the world around us. IR4.0 has a key role in the evolution of education system. Within range of this article, the author focuses on researching important impacts of the fourth industrial revolution in coming time: training activities of higher education institutions; curriculum content, teaching methods , learning environment, methods, materials, equipment, demand and process of learners have many changes. On that basis, the author analyzes some orientations for the higher education development in the context of the fourth industrial revolution.*

Keywords: Industrial Revolution 4.0, Education 4.0, Education System

I. INTRODUCTION

The World Economic Forum Davos-2016 heralded the fourth industrial revolution and predicted a "major shift to the future of work". Disruptive technologies, fueled by Industry 4.0, have begun to fuel a world that was once turbulent, changing, complex and ambiguous and impacting our lives and relationships. , as well as the future of our work. Technological breakthroughs are rapidly changing the boundaries between tasks performed by humans and those performed by machines. In 2018, an average of 71% of all tasks performed by humans in industries in 12 selected areas; but by 2022 it is predicted to drop to just 58%. , a new set of jobs will emerge, where human skills and EQ will be most important and valued. As artificial intelligence increases, education must create better human skills to advance MI and AI. Industry 4.0 is defined by connected network physical systems, powered by IoT and powered by data, creating a fully interconnected society. In such a disruptive, hyper-connected world, education has no choice but to adapt to these changes in the industry brought about by disruptive technologies. The solution is to deploy Education 4.0

As Education 4.0 represents changes, in line with Industry 4.0, we see that lectures and memorization (Education 1.0), Internet-based learning (Education 2.0) and knowledge-based education knowledge (Education 3.0) is not enough. It's time to focus on innovation-based education (Education 4.0). What is Education 4.0? Education 4.0 is a focused approach to learning that aligns with the Fourth Industrial Revolution and transforms the future of education using advanced technology and automation. Technology begins to permeate the educational process in the new millennium, and students and teachers begin to use technology in fundamental ways (Education 2.0). Education 3.0 emerged as technology advanced, especially the widespread adoption of the user-generated Internet. This gives students access to their own resources, e-learning capabilities, and platforms to communicate with teachers and other students. Education has become more connected, with students having direct links to a variety of sources of knowledge, rather than focusing on back-and-forth exchanges between students and teachers. Education 4.0 is a learning technique associated with the fourth industrial revolution and focuses on transforming the future of education through advanced technology and automation. Smart technology, artificial intelligence and robotics are part of this industrial revolution. Adaptive learning that integrates artificial intelligence and machine learning in education will keep students up to date. Students

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must be able to master the skills required by rapidly changing technology, they must be guided rather than instructed, and knowledge must be given to them, not passed on to them. . Creativity is the foundation of Education 4.0. It emphasizes the need to prepare students to face challenges, face-to-face.

Education 4.0 will require a gradual paradigm shift:

1. Need-based education instead of supply-based education
2. Skills-based rather than knowledge-based education
3. Lifelong learning instead of face-to-face learning
4. Emphasis on EQ rather than just IQ
5. Keeping up with change requires revisiting traditional educational models with a futuristic approach.

Students must master skills defined by rapidly changing technology; they must be led, but not guided; informat
be made accessible, but not made available.

General education and vocational education should aim to prepare students to compete with outside job worke

Megatrends in Education 4.0

1. More personalized learning - This implies that there will be individual learning processes for eac
   This will certainly have a positive impact as it will allow students to learn at their own pace. It will
   teachers identify each student's strengths and weaknesses and guide them accordingly.
2. 2) Accelerating opportunities for distance learning - The foundation of Education 4.0 is to provide you with learning anywhere, anytime through a suite of online learning tools that promote distance learning and at your own pace. The concept of Active Blended Learning (ABL) is evolving, where students can actively participate in learning beyond the classroom. In this way, students will master both hands-on and experiential learning
3. Selection of instructional tools - This means th students will be able to choose the tools and techniques they wish to acquire. get this knowledge. Techniques such as associative learning and flipping classes are some examples.
4. Domain-specific experiences - When the integration of technology into specific domains facilitates greater