United Nations Educational, Scientific and Cultural Organization | UNESCO Institute for Information Technologies in Education

Digital Technologies and Futures of Education

Virtual round table held by UNESCO IITE and UNESCO's Education Research and Foresight Programme

On September 8th, 2020 in the context of UNESCO's global initiative Futures of Education leading Russian experts gathered to explore ongoing and emerging fundamental transformations in education which will impact society, politics, economy and culture and lead to further economic, technological and socio-cultural changes.

The round table discussion "Digital Technologies and Futures of Education" moderated by Mr. Alexander Molchanov, founder of LLC Professional E-education, was opened by the welcome speech of Mr. Sobhi Tawil, Director of Futures of Learning and Innovation at UNESCO HQ. He emphasised that the main goal of the UNESCO's Futures of Education global initiative is to reimagine knowledge and learning in our permanently changing world. Within the framework of the global initiative an independent International Commission has been convened to work under the leadership of the President of the Federal Democratic Republic of Ethiopia, Her Excellency President Sahle-Work Zewde. By 2021, the Commission will develop a global report on transformations and prospects for education in different regions of the world. Mr. Tawil underlined that we have reached a moment to reimagine all the changes, in particular, through the prism of education. The society alters faster than anticipated, especially in terms of its digital and technological transformation.

The round table has given the opportunity to engage Russian experts in the discussion on futures of education. This opportunity is of great importance because, as Mr. Tao Zhan, director of UNESCO IITE highlighted, Russia has developed extensive expertise in fostering education and integrating digital technologies. Mr. Zhan acknowledged the significance of the experience, gained during the COVID-19 pandemic, for reimagining the futures of education. "Russian educational experience is profound and unique, and today's discussion will make considerable contribution to the UNESCO's Futures of Education global initiative" – said Mr. Zhan.

Russian experts actively explore the current and future transformations in society and education to identify the major divides and trends at national and global scope. Mr. Pavel Luksha, professor at Moscow School of Management SKOLKOVO, reported preliminary results of their research of the impact that global transformations have on education. In particular, it was noted that the short-term perspective indicates that working from home and maintaining safety in all spheres of life have become a new normal. Also, it has been revealed that our society becomes increasingly digital and green. Though education and business assess the importance and influence of certain changes from different perspectives, for example, educators consider promises of artificial intelligence for further improvement, while business values mostly automation of manufacturing and industry 4.0, in general. Which skills will be necessary for efficient integration into the society of the future? The expert underlined the importance of

flexibility and openness to the world around, the ability to learn and re-learn, as well as empathy and trust, skills to create teams and work in them. In addition, the expert draw attention to the significance of using emerging technologies (VR, AR and serious games) in distance education and development of educational ecosystems. Motivating learners and engaging them become priority skill for teachers. Mr. Luksha also mentioned that it is important to create piloting zones for testing various future educational models.

The discussion of potential transformations in education was continued by Ms. Lyubov Dukhanina, Head of Chair at National Nuclear Research University, Member of the State Duma of the Russian Federation and Chairperson of the all-Russian NGO "Knowledge". In her opinion, "Digital economy will reduce the number of workplaces, but will create new ones as well. According to the research of the World Economic Forum, digital transformation will make 75 million workplaces disappear by 2022. During the same period other 133 million workplaces in new professions will be created due to the labour redistribution between humans and machines." Ms. Dukhanina believes that schools have to prepare learners for the future, in which "acquiring one competence will not guarantee stable income and workplace, people will have to learn how to acquire new competences throughout the life in order to succeed professionally." The expert underlined that transition to this model and the progress of education are possible only if teachers continue professional development throughout their careers. In Russia new forward-looking initiatives are already being launched to "equip teachers and prepare them to using technological solutions and new educational content with due consideration of the specificity of children's mind and personality." Teacher training itself has to become more tailor-made and adaptive to goals and tasks of education, and it should lead to the practice of specialized knowledge acquisition and certification of specific skills (micro-credentialing).

Though teacher professional development and adaptation of teachers to the constantly changing world are very important issues, development of future school models in not least important and the foundation for the school 2050 is now being formed in universities. Mr. Kirill Barannikov, Vice-Rector for Development at Moscow City Pedagogical University, discussed the trends to be focused on to shape the education system of the future. In particular, he underlined that during the COVID-19 pandemic two timelines merged: the "nearest future to which we were prepared" and the "future to which we were not prepared because it would have had to occur in 15-20 years." The expert believes that we evidence "silent revolutions in education" driven by the shift of criteria of quality: learning outcomes are valued higher rather than time spent on their achievement and the ability to apply gained knowledge to practice. Different education models are developed in different countries: some focus on interactive, on-practice and project-based learning, others create self-organized educational environments in which learners can use different elements as "constructor kit" to develop individual learning paths, certain countries aim to create holistic system of child activity rather than single components. We still have to understand which models are more suitable for the school and society of the future, which settings should be configured to help schools do their job while there is a shift to homeschooling.

While discussing the models for future education and training teachers to acquire future competencies, one could not avoid elaborating on the views of future societies and their social effects and divides. These questions were covered by Mr. Alexander Sidorkin, Dean of College of Education at California State University, Sacramento. He spoke of workless society – a society with the universal basic income and high unemployment rate. The roles of school and knowledge, according to the expert, will change in a such society. Will there still be a room for formal education? The expert believes that schools as social institutions will always exist but their main objective might change: instead of preparing people for future professional activity, they will teach them to become "architects" of their own life even if there is no job and clear society-defined paths for lives and careers.

"Our uncertain world requires education to set new objectives, design new approaches and didactics" – said Ms. Marina Rakova, Vice-President of Sberbank and Head of Digital Education Platforms Division. The expert underlined that, in addition to acquiring subject matter and interdisciplinary knowledge, it is necessary to develop soft and digital skills. She presented the SberClass platform designed for primary and secondary school based on the experience of different countries and the core concept of personalised education. All educational content for this platform was developed from scratch. The expert believes that every child should acquire learner's skill to find own objectives for learning, choose own learning trajectory. In this context, the platform is a digital tracker, a kind of mentor that helps learners achieve goals that they determined themselves.

Mr. Isak Froumin, Head of the Institute of Education at State Research University – Higher School of Economics, discussed the ability to set educational goals autonomously for adults as well as for children. According to Mr. Froumin, tools for self-evaluation become more valuable, and the issue of acknowledgment for skills acquired outside the education system or in the framework of "fragmented" education ("micro-education") is increasingly important. "The education of adults will rely on their own assessment of what they do not know and where they want to acquire missing knowledge," – highlighted the expert, – "and we will see unpacking of universities, schools and other traditional educational institutions." To complement his colleague's speech, Mr. Ilya Korshunov, Deputy Director of Institute of Education at State Research University – Higher School of Economics, draw attention to the importance of acknowledgement of micro-credentials by society and employers.

Speaking of modern school students' self-sufficiency, Mr. Artem Soloveichik, Editor-in-Chief at Publishing House "Pervoye Sentyabrya", shared his thoughts about the situation caused by the COVID-19 pandemic. In particular, he focused on the change of the strategy used by teachers to work with their students. Before the pandemic child's abilities were considered to be the basis for the learner's success but their autonomy was not the most important. It has changed during the pandemic and now autonomy comes first. In the context of distance education, it is possible to group children by their self-sufficiency rather than their abilities. Thus, teacher will be in contact mostly with children who have not managed to complete tasks on their own (or with

their parents' help). One of the expert's conclusions was that teacher's work is to focus on learners' motivation to acquire knowledge and training their self-sufficiency, namely self-definition of learning outcomes, self-acquisition and self-assessment of knowledge. Also, the expert suggested the following system of goals for the person of the future: the goal of upbringing – free-spirit person, the goal of education – a comprehensive picture of the world, the goal of life – seek for self-fulfillment.

What conclusions one can draw from the ideas that experts shared during the round table? The futures of education, as the experts believe, will be based on hybrid models, incorporating latest digital technologies and face-to-face modes. Yet, to design the education system of the future properly, it is necessary to continue the study of people's digital behaviour, develop digital didactics and shape digital skills. The experts highlighted that education is not the information industry, but rather the industry of relationships, and people are not ready to pass their function to build relationships to a machine, so it is difficult to imagine education without schools or universities as social institutions. Also, they think that there will not be one school type or one educational modality, but rather a variety of school types, models, education systems to consider the needs of different educational stakeholders. The focus of education will be on learners who are motivated and autonomous enough to set their own learning goals and accomplish them. Education is expected to become a continuous process, which is in progress during the whole lifecycle and which incorporates a variety of tools to formulate learning trajectories, to assess and self-assess, to receive credentials for acquired knowledge and skills to apply it for career purposes, as well as for self-design outside the framework of job market under changing economic and social conditions.

The recording is available on UNESCO IITE YouTube channel.