

ARE WE PREPARED FOR THE JOBS OF THE FUTURE?

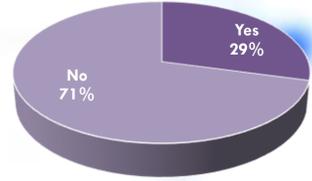
AIM OF THE RESEARCH:

As a result of the changes happening around us, such as digitization, artificial intelligence, and robots, the industries are transforming and changing in almost every profession. As technology evolves, the skills required for successful career development also change. New technologies lead to merging of the physical, digital and biological worlds, and these processes are characterized by the Fourth Industrial Revolution. Due to automation in the near future, many of the professions that seem indispensable, will disappear because, instead of humans, activities will be carried out by robots. According to the World Economic Forum, by 2030, 65% of children entering primary school today will work in completely new, non-existing so far fields. This makes us think about what they could possibly be. Are we, the representatives of the younger generation, prepared for them? This study aims at exploring people's readiness for the professions of the future.

METHODOLOGY: The information of the research was collected through primary and secondary sources of data.

PRIMARY RESEARCH:

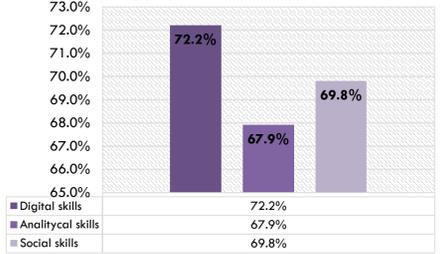
Figure 1. Do you consider that the education the young people receive today will be adequate to the new professions which will arise by 2030?



As an answer to the question in **Figure 1.** 71% of the respondents think that young people will not be prepared for the jobs of the future based on the education they get today and only 29% believe that current education is appropriate for the future. Due to our research appeared that the respondents determine three main skills required for the future jobs – digital, analytical and social.

The purpose of our primary research was to explore the awareness and readiness of the people for the future jobs. It was conducted through online survey created in Google Forms containing open and closed question. The questionnaire was distributed among the circle of people around us as students, teachers, family and friends. As a result we have collected 160 responses.

Figure 2. In your opinion what are the key skills needed to prepare young people for the professions of the future?



As displayed in **Figure 2.** they have rated them in the following order: digital skills as most important (72,2%), followed by the social skills (69,8 %) and analytical skills (67,9%).

Figure 3. What effect do you think there will be the forthcoming mass digitization in the workplace?

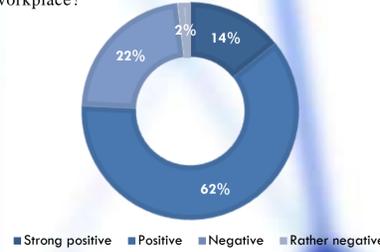
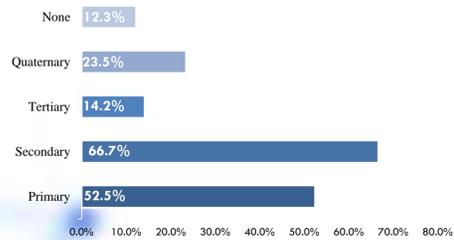


Figure 3. shows that 62% of the people who took participation in our survey think that the effect of the mass digitization is going to be positive and 14% tried to guess that it is going to be strong positive. 22% believe that this issue will cause more problems and only 2% reject using technology at their workplace.

SECONDARY RESEARCH:

In order to support our research we have collected data from available secondary resources, which offer statistics from studies already made on the researched question for the professions of the future. According to a McKinsey survey of young people and employers, 40% of employers claimed that lack of skills was the main reason for the job vacancies and 60% said that new graduates were not adequately prepared for the world of work. The researchers of the World Economic Forum classify the drivers of change that transform the business and the set of skills that employers start to seek in two main groups: demographic and socio-economic (changing nature of work, middle class in emerging markets, climate change, geopolitical volatility, consumer ethics, aging societies, rapid urbanization) and technological (mobile internet, processing power, new energy supplies and technologies, sharing economy, robotics, artificial intelligence, 3D printing, biotechnology).

Figure 4. Which sectors of the economy do you think can be fully entrusted to robots?



According to the asked people secondary (66,7%) and the primary (52,5%) sectors of the economy are most probably those to be fully managed by robots, followed by them with less chance to be entirely covered by robotization are quaternary (23,5%) and tertiary(14,2) sectors and for some of the respondents none of the sectors can be completely ruled by robots (12,3%) (**Figure 4.**).

Figure 6. Do you think you are prepared for the fourth industrial revolution?

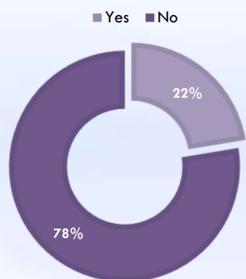
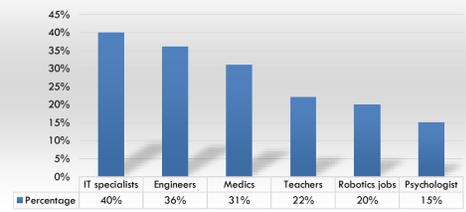


Figure 5. Can you suggest which the future jobs will be?



To the question regarding the possible future jobs (**Figure 5.**) our respondents have placed IT specialists on first place, followed by engineers in the field of artificial intelligence, gene engineering, solar technology, organ designer, etc. On third place they suggest that the medics as doctors, tele-surgeons, pharmaceuticals, nurses will be also much needed. Teachers, robotics jobs and psychologists are the other suggestions made by our respondents.

In regard whether the people are prepared for the Fourth Industrial Revolution (**Figure 6.**) 78% of the people answered “no” and 22% think that they are ready to face it.

Based on the primary research can be summarized that the respondents are aware of the need to improve today’s education in order to acquire the skills essential for the future jobs that they suggest will be most necessary. They realize the effect of the fast developing technologies and most of them expect a positive impact on the jobs in the future.

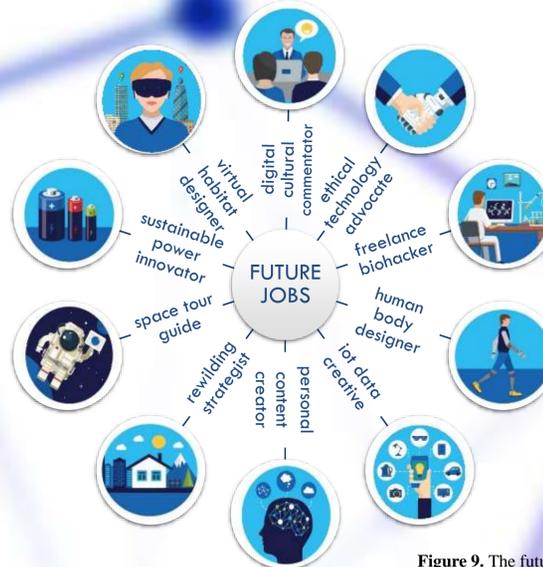


Figure 9. The future jobs

CONCLUSIONS:

The research made provides evidence that the current education needs to be updated in order to prepare the young people for the future jobs and to equip them with the necessary skills for professional development. This could be achieved by the means of close cooperation between businesses, governments and education providers. The fast development of the technologies inevitably leads to decrease in the need of human work and increase in the working hours of the machines.

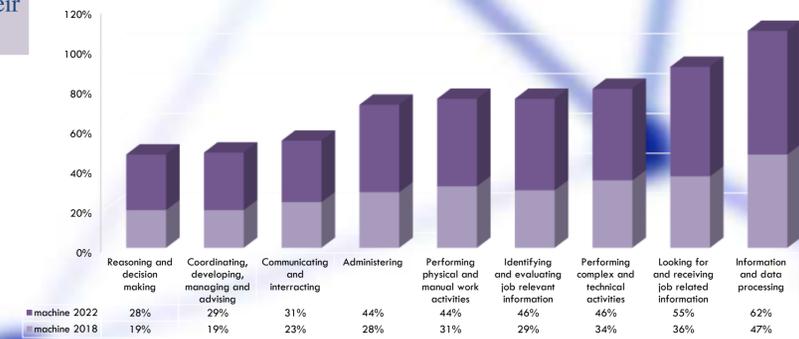
Most of the respondents expect positive effect from the forthcoming mass digitization, but they admit that they are not prepared for the challenges of the future jobs.

FUTURE RESEARCH PLANS:

To broaden this research we could conduct a survey among higher number of respondents in order to collect more accurate data and to compare the opinion of different generations.

Also a survey among universities and employers could be initialized to highlight the need of synchronization between education and business in order to be able to respond to the challenges of the changing world.

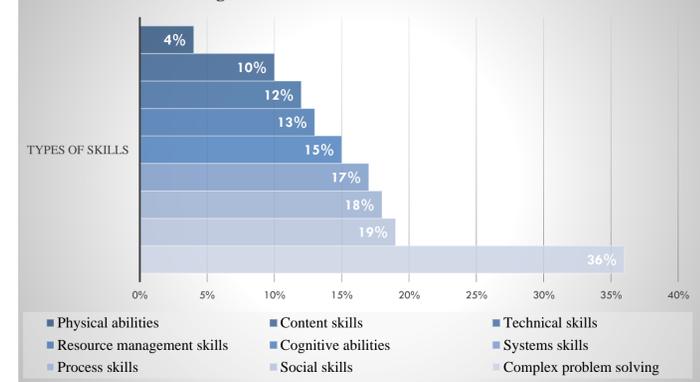
Figure 7. Ratio of machine working hours 2018 vs 2022



We can observe that the machine working hours in various activities related to a working position will be increased by 2020 compared to these in 2018 (**Figure 7.**) which is an evidence for the decrease in the human working hours due to automatization.

The data in **Figure 8.** provide us with information about the skills demand in 2020 as the most wanted skill will be complex problem solving (36%) and the less required will be the physical abilities (4%). Among the other skills are placed social (coordinating with others, emotional intelligence), process (critical thinking, active listening), systems (judgement and decision-making), cognitive (creativity and visualization), resource management (management of financial and material resources, people and time management), technical (equipment maintenance and repair) and content skills (active learning, oral and written expression, etc).

Figure 8. Work-related skills demand in 2020



A research conducted by Microsoft defines the 10 new creative job categories that will be recruiting tomorrow’s university students (**Figure 9.**).

All the information provided is an indication that the change in jobs due to automatization is inevitable. The drivers of change will lead to the immersion of new professions requiring a new set of skills where the physical abilities are no longer sufficient.

REFERENCES:

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2. Technology, jobs, and the future of work, May 2017, McKinsey Global Institute.
3. The Future Laboratory and Microsoft report.