GENDER INEQUALITY IN IT TECHNOLOGY: CAUSES AND PROSPECTS

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ABSTRACT

The article discusses the impact of the growth of information technology on a sharp increase in the need for IT specialists. More often than not, tech corporations use a policy of attracting women to tech jobs to meet this challenge. In order to bridge the gender gap in technology, to encourage girls and young women to choose professions in the field of information and communication technologies, international organizations are pursuing policies aimed at attracting them to the field of IT technologies.

KEYWORDS: *IT Technologies, IT Specialists, Gender Gap, Technology Corporations, International Organizations, Training Centers, Competitions.*

INTRODUCTION

Every year, the information and communication technology (ICT) sector is developing rapidly, technological progress continues to transform the nature of production, employment, interaction and people's lives. The COVID-19 pandemic has spawned a "new normal" when the shift to teleworking and changes in consumer behavior have become trends that accelerate the digitalization of the world with all the opportunities it opens up [1]. It gave a powerful impetus to the digital transformation of many aspects of modern life, making possible not only remote work, delivery of goods, but also virtual events and the use of cloud technologies. The demand for the use of programs such as Microsoft Teams, Skype, Cisco's Webex and Zoom has increased [2].

Since the beginning of the COVID-19 pandemic, digital technologies have also been successfully applied in the field of health (screening the population, tracing infection, prioritizing the use and allocation of resources, developing targeted responses). In Chinese hospitals, robotic assistants delivered medicines to patients, collected garbage, bed linen, moved independently in

crowded places, recognized faces, remotely measured the temperature, simultaneously tracking up to 32 people. Scientists in Singapore have invented a cleaning robot that can be remotely controlled using a laptop or tablet, which can wash and disinfect hard-to-reach surfaces - under tables and beds. To eliminate the risk of transmission from infected patients to healthcare workers, Stanley College Hospital in Tamil Nadu, India, used robots to dispense food and medicine. In the Chinese provinces, drones with loudspeakers and thermal imaging drones were used to determine the temperature of a person's body, even on his balcony, and report the data to a medical facility [3].

ANALYSIS AND RESULTS OF THE STUDY

Information technology, having become the most promising industry in the modern world, is sharply increasing the need for IT specialists. More often than not, tech corporations use a policy of attracting women to tech jobs to meet this challenge. This opens up new perspectives for women with high levels of technical expertise.

In Uzbekistan, as well as throughout the world, the demand for experienced programmers is steadily increasing. However, as noted in the first Voluntary National Review (VNR) of Uzbekistan (2020), "despite numerous reforms and the results achieved in the education system, there is still a shortage of staff for programmers in the labor market. The demand for experienced programmers is still high, and there are very few candidates with relevant qualifications in the market. There is an urgent need for personnel who have a fundamental education in the field of IT and applied experience "[4]. In order to develop the digital economy, widely introduce modern information and communication technologies in all sectors and spheres, first of all, in public administration, education, health care and agriculture, to meet the labor market needs for qualified IT specialists, a decree of the President of the Republic of Uzbekistan "On approval strategy "digital Uzbekistan - 2030" and measures for its effective implementation "dated 5 October 2020 and the President's decree" On measures to further improve the education system in the field of information technology, development and integration of scientific research with the IT industry "dated 6 October 2020 ... Priority tasks for the further development of the ICT sphere in 2021 are also defined in the President's Address to the Parliament and the people of Uzbekistan dated December 29, 2020. All these important legal documents create a solid foundation for ensuring the development of the digital economy, increasing the efficiency of the training system for IT technologies.

According to the analysis, in Uzbekistan in 2017, the total number of women employed in the ICT field was about 30%, including in universities and colleges, the average number of girls who chose the IT field was about 15% and 27%, respectively [5].

By the beginning of 2020, the proportion of the population with information and communication technology skills, compared to 2017, improved in all indicators by an average of 0.9 PP. To meet the demand for experienced personnel, new directions and specialties have opened in the universities of the Republic [4]. Statistical data show that over the past 4 years, the trend in enrollment among female students at IT faculties was at the level of 15–25% [5].

In the republic, much attention is paid to increasing the interest and participation of women and girls in professional activities at enterprises in the ICT sector. With the support of the Ministry for the Development of Information Technologies and Communications, various IT contests and

competitions among young people are organized and held, such as the Best Soft Challenge, the national Internet competition MIT (Milliy Internet Tanlovi), Technovation Challenge, etc. Challenge for girls aged 15-18 as part of an international educational program for the development of IT and entrepreneurial skills in the field of information technology in 78 countries. The aim of the competition is to develop girls' skills in critical thinking, entrepreneurship in innovation spheres and programming, to increase the interest of girls in technical professions, as well as to attract the attention of the general public to the gender issue in technological spheres of the economy [5].

At the same time, there is a growing interest in coding bootcamps. These courses have won international recognition. Programming courses emerged in 2011 in the United States in response to two emerging trends: an increase in demand for software developers in all sectors of the economy and, to a certain extent, insufficient development of computer science curricula in formal educational institutions. In recent years, the number of courses has grown exponentially, with about 40 percent women. According to experts, the model of training courses can contribute to both reducing the skills gap and bridging the gender gap in the high-tech industry. Such rapid skill acquisition courses are beginning to emerge in different regions of the world [6].

In 2020, 14 specialized schools with in-depth study of computer science and information technologies were created in the republic (by 2023, it is planned to increase to 205). In each region, through the organization of Digital Technologies Training Centers, work has been established to educate the population, especially youth, the basics of programming, to create websites and mobile applications; IT Park branches have been opened in Andijan, Fergana, Syrdarya, Jizzakh and Samarkand regions, where more than 400 enterprises that have developed over 900 software. In 2020, 107 Digital Technology Training Centers were organized and over 200 jobs were created. In order to further develop IT education, it is planned to open a branch of the Tashkent University of Information Technologies in the Tashkent region, and technical schools for training personnel in the field of information technologies will be created in the regions. By the end of 2021, it is planned to open 100 Digital Technology Training Centers in all districts and cities of the republic [7].

In order to support women entrepreneurs in IT and girls who choose this profession, popularize the work of women in the high-tech industry, on the initiative of the MirzoUlugbek Innovation Center, the IT Women'sGap forum was convened (April 2019). The forum emphasized the need to change social stereotypes, to take special measures to integrate women in IT spheres [8].

The megaproject "One Million Uzbek Coders", implemented in cooperation with the Dubai Future Foundation (UAE), the IT Academy at IT-Park, Inha University in Tashkent and the Muhammad al- Khorazmiy, which covered over 120 thousand listeners in a short time [9]. The project is aimed at remote free education of the general population in relevant IT specialties through a specialized online portal (uzbekcoders.uz) [10].

According to hh.uz, if the increase in vacancies in the IT field in January-February 2019 compared to the same period in 2018 amounted to 65% [11], then in January-November 2020 compared to the same period in 2019 it amounted to 76.3%, which indicates an increase in demand for specialists in this field. In the course of the study, the company found that: 69% of job seekers are men [12].

In 2021, the implementation of the TechBika project for girls aged 12 to 30 began with the aim of training specialists for IT-Park residents and establishing a training system in eight areas in the field of information and communication technologies [13].

CONCLUSION

Undoubtedly, the further development of IT technologies will lead to the emergence of new production processes for the effective functioning of which will require mixed teams of specialists, both men and women. The active participation of women in this process serves as the basis for the optimization of economic, political, social and cultural processes. This will actualize the issues of correcting the existing gender gap, gender inequality in the field of IT technologies. Around the world, new perspectives are opening up for highly skilled women in technical fields. To solve the problem of greater involvement of girls and young women in the field of IT technologies, it is necessary to understand the cultural and social roots of the problem and create de facto conditions for equality of rights and opportunities. According to the authors of the Education at a Glance 2016 study, the causes of gender inequality in the IT sphere should be sought already at the stage of education. Since, due to social prerequisites, gender stereotypes everywhere, technical specialties are chosen mainly by boys. Therefore, there are so many IT specialists among men. For example, according to research in 2019, more than 91% of IT professionals in the world were men. In all countries of the world there is a stereotype that information technology is a "non-feminine occupation" [11].

Thus, the emerging modern technogenic civilization based on the rapid development of fundamentally new technologies is becoming a decisive factor in the cardinal transformation of all forms of social development. New information and communication technologies increasingly make it possible to model and predict the development of complex global processes and systems (ecological, economic, political, social and others), which contributes to the rationalization of these systems and increasing their degree of sustainability. According to analysts in the field of information technology, further digitalization of the world economy will lead to bridging the gender gap by attracting a large number of women to IT technology [10].

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