



# Lifelong Learning in Pandemic Situation – Challenge and Need

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**Abstract:** End of 2019 and beginning of 2020 year bring a global pandemic caused by new disease named as COVID-19. This pandemic has huge impact not only on healthcare system but also on the global economic, political, technological, social and educational system. This paper considers effect of pandemic at lifelong learning, chance and motives for education of adults. The sample consisted of 67 adults who are completed or started some available form of additional education in first half of 2020 year. Questionnaire with mostly closed questions was used for the survey. The research shows that pandemic caused actions for lifelong education through availability of information (79%) and through free and discounted educational programs (73%). The most significant motives for learning within this group of adults are connected with professional needs and career (39,7%) and 27% of answers indicates at desire to learning and self-development. This research covers only a small number of motives and factors that have influenced lifelong learning in a pandemic situation. In future research, this area should be investigated from more different aspects.

**Keywords:** lifelong learning; education; pandemic; COVID-19

## 1. LIFELONG LEARNING

The concept of Lifelong Learning refers to idea that any individual can learn whole life regardless of age or professional status. That is a form of self-initiated education that is focused on continuous personal development. The aim of this kind of education is improving knowledge, skills and abilities of adults to become more competitive in the labor market and/or for personal fulfilment. This type of learning implies all forms of knowledge acquisition, through formal, non-formal and informal learning [1, 2]. According to [2], Lifelong learning contains: (1) learning from home, (2) education of adult or the acquisition of formal qualifications and skills later in life, (3) continuing education through seminars and courses, (4) professional knowledge acquired through professional development and on-the-job training, (5) learning from a personal environment or self-learning using different sources and the Internet application. Useful prerequisites for lifelong learning are the desire for change, curiosity and the desire for knowledge, as well as self-centeredness, metacognitive awareness and tendency for lifelong learning [3].

Significant impact, at lifelong learning, have globalization and technology development (especially Digital technology). New technology constantly changing context of life and work. New professions are developing and existing professions are expanding, this require update of existing and

acquisition of new knowledge and skills (qualifications). At the same time knowledge and information growth accelerates and make it necessary to update qualifications in shorter cycles [4]. This is challenging situation for educational system and for individuals. There is at least 2 reasons for this: (1) It does not exists educational system or program which can teach people everything that they may need to know in the future. (2) No one can predict what specific knowledge someone will need or not need in the future [5]. To answer on challenging time, school learning and workplace learning need to be integrated toward a lifelong learning. This is a responsibility of educational system and individuals. Educational system needs to foster flexibility in curriculum, teaching method, adoption of new technologies, and sharing information [4,5]. Individuals need to awake inner curiosity, desire for learning and critical thinking.

## 2. WHAT ARE EFFECTS OF COVID-19 PANDEMIC?

Since December of 2019, new disease, named COVID-19, spread out of worldwide and change every segment of life and work [6].

The biggest impact of pandemic was at health care and health services in affected countries. The most of hospitals needed reorganization, work and infrastructure adjustment to new situation because

it was not designed to deal with unknown and unpredictable disease such is COVID-19.

For the purpose of virus prevention, some countries, including Serbia [7, 8], declared state of emergency for whole or part of country, sometimes it included a curfew, and some countries lockdown their borders [9].

Governments of affected countries also gave recommendation for conduct in pandemic conditions and whole population needed to accept new rules of conduct, protection and physical distance [10].

As consequence of pandemic, global economy are facing with the largest global recession in history. In economic senses this relate to the loss of Gross Domestic Product (GDP) in the countries affected by the epidemic, the growth of the unemployment rate in them, the deterioration fiscal indicators and foreign trade relations [11]. In Serbia, situation is similar as in other countries. Small business and jobs that can't be done from home are the most affected by pandemic and recession [12]. A lot of business entity are temporarily reduce or completely stop their production in first wave of pandemic. Some people had lost or have risk to lose their job. If pandemic would last a long time it may cause deterioration of human capital, competence and skills of workers who do not go to work. Are people aware of all this? How people will develop new skills and in what field of interest? Where they can retraining for some new jobs and new conditions of work? How all this will affect on lifelong learning?

Under curfew and isolation measures people had more free time for family, relax, learning and personal development. To help people to get through this difficult time on site of Government of Serbia start to work Digital Solidarity portal at <https://www.digitalnasolidarnost.gov.rs> . On this site there are all the information about free platforms for distance learning, work from home, free online books, courses, movies, music and television content during the COVID-19 pandemic.

As everything else even a educational system needed to transform in a short term. Different countries worldwide have introduced various solutions during the pandemic to continue the education process, some of those are: TV broadcasts, resources, video lectures, online channels [13]. In Serbia, like in other affected countries, after closing schools and universities, students started with online education thought some of available online platforms and web conference tools (Google classroom, Microsoft Team, Zoom, Skype, Viber, Moodle, Cisco Webex, etc). Also started to work TV station for teaching students of primary and secondary school. This TV station was some type of knowledge base, with recorded lessons and instructions, but students had online support from their teacher through email,

Viber, Skype or other communication platforms. This way of learning has some good sides, but it is more difficult for both the teacher and the students. Problems existed in practical and laboratory lessons which are not possible to perform online and one part of students did not have all necessarily equipment (smartphones, computer, fast internet connection) for this type of study [14]. As the epidemic progressed, the number of online courses, workshops, and seminars (that were either free or discounted) increased. Changing method of education especially suited to adults who are out of school system. Adult learners need flexibility to contend with competing priorities (work, school, home, family) [15,16], and this situation provided them a chance for acquisition of new knowledge, skills, certificates and diplomas, in any time, everything from their homes.

### 3. RESEARCH METHODOLOGY

Aim of this paper is to examine motives and needs that drive adults to further education in times of crisis caused by pandemic. Main questions of this research are: (1) Does pandemic of COVID-19 have an influence on the decision and desire for further education of adults? (2) Whether the availability of information and financially affordable courses are a motive for lifelong learning or it is something else? (3) In what area people see chance for their prosperity in next period?

During June of 2020, 67 adults were surveyed anonymously. Every of respondents needed to fulfill the condition that in last six months have completed or started some available form of additional education like course, seminar, training or workshop. The sample is suitable research. It consists of the former students who have attended the Faculty of Technical Sciences in Čačak between 2007 and 2012 year and their friends and family members who participate at some form of education in past period. The questionnaire was distributed via social networks. Participation in research was at voluntary bases.

Questionnaire was divided in 3 parts. First part of the questionnaire provides information about respondents such are gender, age, level of education, income, the connection between current job and previous schooling, number of children and their age. Second part of questionnaire was about courses, training and workshops that respondents attended (number of educational programs, type, price, area of education and teaching method). Third part of the questionnaire is dedicated to the attitudes, motives and factors that influenced at respondents for further education and connection of educational program to current job and previous education.

There are 19 items, of which 2 were double chose questions, 9 were multiple chose questions, 2 were

open question and 6 was assessment scale with 5 level of agreement.

Demographic and socioeconomic characteristics of participants are presented in table 1.

**Table 1.** Characteristics of participants

Gender	Answers	
	N	%
man	26	38,8
woman	41	61,2
Age	Answers	
	N	%
<24	13	19,4
25-30	30	44,8
31-37	21	31,3
>38	3	4,5
Level of education	Answers	
	N	%
Secondary school degree	15	22,4
University or high school degree	52	77,6
Income	Answers	
	N	%
Below average	19	28,4
Average	43	64,2
Above average	5	7,5
Number of children's	Answers	
	N	%
0	36	53,7
1	11	16,4
2	19	28,4
3	1	1,5

The average age of respondents is 29 years. Average age of surveyed men is 27,5 years and for women it is 30 years.

According to official data [17], in Serbia, the average salary without taxes and contributions (net salary) calculated for May 2020 was 58,892 dinars (about 500 eura). 64,2% of respondents describe its income as average. Interesting is that 61,5% respondents with diploma of university describe its income as average and that only 7,7% respondents with diploma of university have income above average. This is related to the fact that most of the respondents (46,3%) do not do the job for which they were educated and 16,4% does not work at all. Connection of income and type of job (does someone work job for which he were educated?) is confirmed by significant negativ correlation between these variables ( $\rho=-0,59$ ).

Most of respondents (53,7%) does not have children's. Majority of childrens (72,7%) are younger then 6 years; 19,3% of childrens belong to group 7-11 years and rest (8,0%) is older then 12 years. The author's assumption is that some of characteristics of respondents have influence on characteristics of courses that they attended (this will be explained in the next part).

#### 4. RESEARCH RESULTS

The author's assumption is that the number and age of children affect at the number of attended courses because it reduces the available time for learning because children need care and attention, which decreases with the age of the child. In total sample, this could not be proven, but at sample of only women there is negativ correlation ( $\rho=-0.367$ ) between variables number of children's and number of educational programs. Women who have children's (mothers) have less time, chance, possibility and energie to attending courses and educational programs. The correlation between children's age and the number of attended courses cannot be proven. Also, the correlation between income and amount of money spent on educational program cannot be proven.

Table 2 presents information about form, cost and area of additional education that respondents attended. Question about Area of education had an open form, the responses are grouped by similarity. Category Other covers: make-up, hairdresser, groomer, geronto housewife, tailor, electrical working and construction. In pandemic situation large number of courses was discounted or free, in this questionnaire, and in Table 2, price is the total amount of money spent for all courses.

**Table 2.** Characteristics of courses

Number of attended educational programs	Answers	
	N	%
1	47	70,1
2	18	26,9
>2	2	3,0
Price of course *summary for all programs	Answers	
	N	%
<100 Eura	37	55,2
100 - 200 Eura	28	41,8
>200 Eura	2	3,0
Learning method * multiple answers possible	Answers	
	N	%
Online	67	84,8
Practice	7	8,9
Combination of online learning and practice	5	6,3

Type of education * multiple answers possible	Answers	
	N	%
Course	60	59,4
Training	13	12,9
Workshop and seminar	28	27,7
Area of education	Answers	
	N	%
Economy, accounting, business	60	31,6
Work on computer, web design, graphic design	36	18,9
Languages and communication	33	17,4
Marketing and Consumer psychology	25	13,2
Other	13	6,8
Programming and coding	19	10,0
Education	4	2,1

55,2% of respondents spent less than 100 eura on education in last 6 months. No women would spend more than 200 eura on courses, but men would (7,7% of men paid educational program over 200 eura).

Most of respondents are educating in area of economics and business (31,6%), programming and ICT (cumulative 28,9%), then in learning language and marketing (Table 2). Those professions and area of education are popular in last few years and could not be connected with pandemic. Professions related with ICT, programming and coding are more popular to respondents who work the job for what they did not educate for (53% of this group of respondents).

Question about motives that stimulated respondent to learning, was an open question in the survey and respondents needed to put minimum 3 motives for attending course. The responses are grouped by similarity and presented in table 3.

**Table 3.** Motives for lifelong learning in pandemic situation

Motives that triggered lifelong learning	Answers	
	N	%
Respond to professional needs	41	15,3
Progress in professional career	40	15,0
Possibility to start a firm	8	3,0
Re – qualification	17	6,4
Possibility to lose a job/already lost a job	16	6,0
Change the family situation	19	7,1
Free courses	30	11,2

Free time	16	6,0
Desire to learn	24	8,9
Development of new knowledge	22	8,2
Restoring forgotten skills	13	4,9
General education and information	15	5,6
Other motives	6	2,2

Most of answers refer to job and professional career 39,7% (cumulative %) 27% of answers indicate a desire to learn and self-development. Low costs of courses is a high ranked motive for education (11,2%). 21,5% of respondents are motivated with their economic situation (cumulative % for Change the family situation, possibility to lose job, re – qualification).

Table 4 presents answers to questions about factors that triggered learning in pandemic situation. Mean values and standard deviation for those factors are presented in table 5. Every listed question had the same scale for answering but in the table empty answers are omitted.

**Table 4.** Factors for lifelong learning in pandemic situation

Pandemic of COVID-19 had an influence at my decision about education	Answers	
	N	%
Absolutely not true	9	13,4
Not true	1	1,5
Maybe, I am not sure	7	10,4
Yes	23	34,3
Absolutely true	27	40,3
Free time and monotony had an influence at my activity about education	Answers	
	N	%
Absolutely not true	15	22,4
Not true	9	13,4
Maybe, I am not sure	15	22,4
Yes	12	17,9
Absolutely true	16	23,9
Availability of information and courses affected at my activity about education	Answers	
	N	%
Maybe, I am not sure	18	26,9
Yes	28	41,8
Absolutely true	21	31,3
Discount price of course affected at my activity about education	Answers	
	N	%
Maybe, I am not sure	14	20,9
Yes	17	25,4
Absolutely true	36	53,7

**Table 5.** Factors for lifelong learning in pandemic situation – mean and standard deviation

Factor	Mean	Std. Deviation
Pandemic of COVID-19	4,28	1,012
Free time and monotony	3,07	1,480
Availability of information and courses	4.33	0.805
Discount price of course	4.04	0.767

From tables 4 and 5 can be seen that pandemic affected at need for education and triggered some actions about lifelong education (74,6% vs. 14,9%) but it has great diversity in answers. More unified attitude of respondents is about impact of price (73,1% vs. 0%) and availability of educational programs (79,1% vs. 0) at lifelong learning. Interesting is that free time and monotony has slightly influence at lifelong learning (41,8% vs. 35,8%). 26% of only women had neutral attitude on this factor, and 41,5% said that this factor did not have any influence at their educational activity.

Results about connection of educational program with job and previous education are presented in Table 6.

**Table 6.** Characteristic of new knowledge

Scale 0 -100 %	Answers %	
	Connection of course with current job	Connection of course with formerly education
0	25.4	13,4
25	0	1,5
50	16,4	10,4
75	14,9	34,3
100	43,3	40,3

25,4 % of respondents used pandemic situation for learning something what is not related with current job and 14,9% what is not connected with previous education. 43,3% of respondents used pandemic for developing skills related to current job and 40,3% had only updated professional skills and knowledges.

Most of respondents who do not work job for they educated for (49.2%), used pandemic situation for expanding knowledge about current job and 38,7% of them continue education in same area as before. 45% Respondents who does not work at all attended courses which does not connected with their formal education.

## 5. CONCLUSION

Pandemic of COVID-19 change context of life and work. People need to follow new rules of conduct (hygiene, protection and the most difficult – isolation and physical distance). This situation accelerated transformation of educational system

and influenced at concept of lifelong learning – New programs for education of adults, Requalification, courses, training programs and seminars started to be online and available to a wider audience.

The presented findings emphasize the positive side of digital technologies (their involvement in the lifelong learning) and affordable education. Digital technologies have given adults the flexibility they need (to manage place, time and tempo of learning), access to resources (information) and chance to learn (if they want it).

This paper has various limitations: small sample size, limited information about educational program and learning method. Also there is no information about: satisfaction with educational program, contributions of educational program and barriers and obstacles to learning. For future research need to supplement the questionnaire with those items and repeat the survey on a larger sample.

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