

PROCESS ANALYSIS OF THE ENTREPRENEURIAL EDUCATION IN TERMS OF COVID 19 - A CASE STUDY

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Abstract: *This paper presents the results of research in the territory of the Republic of Serbia in the field of higher education in terms of acceptance of online teaching methods. In this paper, a descriptive analysis of data collected by research work was applied. The analysis includes data related to entrepreneurship students in the territory of the Republic of Serbia in the period from March to June 2020. Students were surveyed in terms of their attitudes and results and results achieved in a specific, non-standard way of conducting the teaching process in COVID. The results of the research indicate an excellent response and acceptance of the new way of teaching. Students achieved on average more points in online teaching compared to the number of points achieved in colloquia conducted in traditional teaching. The results also indicate a very high percentage of passing in relation to the traditional way of teaching.*

Keywords: *entrepreneurship, education, covid, analysis.*

1. INTRODUCTION

Entrepreneurial education is a formal type of education for professionals in the field of entrepreneurship. Higher education institutions present a plan and program according to which future entrepreneurs will be educated. In standard circumstances,

es, the education of entrepreneurs is done according to the traditional way of education. The traditional type of teaching includes theoretical lectures, exercises and exams that are held in the premises of the higher education institution. crucial skills of entrepreneurs. Consequently, many higher education institutions have included in teaching the skill of negotiation as a very important skill that students can acquire and improve.

Since the spring of 2020, teaching in the Republic of Serbia has been conducted in the way that until then was exclusively performed on accredited study programs of DLS. The reason for that is the outbreak of the COVID-19 pandemic and its spread all over the planet. Specifics of this virus in terms of mode of transmission, speed of spread, etc. influenced the need to adapt the higher education system to such circumstances.

According to indicators, 10% of the world's student population is affected by school closures, 174 million students are being taught of school. At the end of April 2020, schools were closed in 180 countries, with 85% of students worldwide out of school. This will have immediate costs both for learning and for the health of children and youth.¹

2. ONLINE EDUCATION

Education is a permanent process of acquiring and improving the theoretical and practical knowledge of the individual and the nation as a whole. Online learning is not new. This type of learning has existed for a long time and many world educational systems and institutions use it.

Online learning means switching from the traditional way of learning (face-to-face learning) to the use of various devices that enable distance learning. Successful online learning therefore requires that students (and teachers) be familiar and skilled in the use of these learning devices². The International School in Monza is part of the world's largest experiment in educational technology (edtech) in history. With 1.5 billion students out of school and hundreds of millions trying to learn exclusively online, the experiment will reshape schools, the idea of education and what learning looks like in the 21st century. The pandemic forces teachers, parents and students

1 <https://openknowledge.worldbank.org/bitstream/handle/10986/33696/148198.pdf?sequence=4&isAllowed=y>,

2 Garcia E., Weiss, (2020): "E.COVID-19 and student performance, equity, and U.S. education policy Lessons from pre-pandemic research to inform relief, recovery, and rebuilding", Economic Policy Institute, Washington, page 9.

to think critically, solve problems, to be creative, to communicate, cooperate and be agile. It has also been discovered that there is another way³.

Research related to online learning and teaching shows that they are effective only if students have consistent access to the Internet and computers and if teachers have received targeted training and support for online teaching. Given the insufficient availability of the Internet for all students involved in teaching, as well as the fact that many professors are encountering this type of teaching for the first time, distance education during the pandemic had certain difficulties. Developed countries could financially support this way of teaching, which is not the case with less developed countries. Proof of this is the fact that the coronavirus rescue package signed by Biden includes more than 7 billion dollars for the Federal Communications Commission to finance Internet connections and devices at home through the E-rate program, which usually pays for services in school buildings and libraries. There is an evident increase in pressure on the FCC to also use regular E-rate funding to connect students at home⁴.

The educational process in the conditions of COVID is forced to support flexible methods that have not been applied before. The teaching process in such circumstances is based on creativity, electronic communication. Professors, assistants and students are forced to conduct communication that was mostly of a direct type in a new, more indirect way. For the first time, students have the opportunity to choose the time of listening to classes (video lectures), and the time of reading theoretical material (scripts in pdf or word format).

Students who, in addition to studying, also performed certain business obligations (time-limited work, part-time services, assistance in family entrepreneurship, professional sports, etc.) experienced such opportunities for flexible study as a significant relief.

There is software that enables better performance within distance learning (online teaching). Microsoft teams and Zoom allow teachers to see their students in the course of their work, which significantly compensates for the lack of insight of teachers into students' reactions when monitoring classes. In this way, feedback is enabled, which teachers often mentioned as significantly missing. Such software allows teachers to pay more attention to less successful students, while the rest of the group does standard tasks. The importance of such software is reflected in better access to

3 <https://qz.com/1826369/how-coronavirus-is-changing-education/>

4 <https://www.washingtonpost.com/education/2021/03/15/pandemic-school-year-changes/>

introverted students⁵. Although this type of support is more based on primary and secondary school students, the possibility of greater support and focus on less successful students is a space that can be compensated in such teaching circumstances.

On the other hand, students who were supporters of the traditional (direct) way of organizing classes faced the novelties to which they had to adapt. Traditional forms of teaching allow more direct communication and transparent feedback. Regardless of whether they are supporters of traditional or new ways of communicating and thus studying, students must get to know and prepare for business communication in the future. Whether within a large organizational system or at the level of associated entrepreneurs, online communication and communication via social networks awaits them. An example of this is IBM, where more than 70% of 355,000 employees regularly use instant messaging software in communications and workplace contact.⁶

The pandemic forces professors and students to think creatively and to focus on better communication and cooperation in order to achieve the planned results. Students must take responsibility for their learning, they must show initiative to acquire knowledge and find important information. In an opportunity to personalize their learning according to their affinities. This is especially important for entrepreneurship students, considering that this is exactly what is expected from future entrepreneurs. Within the traditional method of teaching, creative workshops are organized as part of practical classes for students. In such circumstances, when due to COVID professors are not able to organize creative workshops in terms of physical presence of students, the organization of virtual classrooms and networked student activities is an excellent alternative.

The importance of online teaching in terms of preventing the spread of the COVID-19 virus

According to the regulation of the Ministry of Education, Science and Technological Development, classes in the second semester (summer) 2020 were held through online communication. In that way, the mass spread of the COVID-19 epidemic was prevented.

UNICEF provides support in home and distance learning and works with partners to develop innovative educational solutions. UNICEF has supported education authorities in organizing distance learning. 79 licenses were acquired for Camtasia software to record distance learning lessons. UNICEF listens to adolescents and

5 Anderson, J. (2020, March 30). The coronavirus pandemic is reshaping education. Quartz. Retrieved from <https://qz.com/1826369/how-coronavirus-is-changing-education/>

6 Robbins, S., (2005) Menadžment, Data status, 269

young people to ensure that their voices are heard and that their unique needs are understood and addressed during the crisis and long-term recovery. Messages about *COVID-19* reached more than 700,000 young people on social media. The result of a social media campaign. #VolunteersOnNetwork conducted by volunteers had more than 20,000 interactions on over 400 volunteer posts. UNICEF cooperates with the Government of the Republic of Serbia, WHO, other UN agencies, the Serbian Red Cross and NGO partners, with a focus on vulnerable children, adolescents and families with children - those living in poor households, Roma settlements, centers for asylum, residential institutions and foster families⁷.

3. METHODOLOGY

In this paper, a descriptive analysis of data collected by research work was applied. The analysis includes data related to entrepreneurship students in the territory of the Republic of Serbia in the period March-June 2020. Students were surveyed in terms of their attitude and experience of a specific, non-standard way of conducting the teaching process in the conditions of *COVID*.

4. RESULTS

The results of the research indicate the implementation and acceptance of a new way of organizing teaching, in accordance with the circumstances imposed by the *COVID* pandemic. The students commented on the process of monitoring the classes, performing the set test tasks, taking the colloquium and success in those colloquia. The information obtained from the students referred to the description of the implementation of the distance learning process, the contents that were included in the teaching process and the subjects they took in that period (semester).

The following are the activities included into online teaching:

1. e-mail communication with every single student 24/7
2. Presentation of online material for student to prepare themselves:
 - Presentation (PowerPoint),
 - Learning material (Pdf; Word)
 - Video presentation

7 <https://www.unicef.org/serbia/korona-virus-covid-19>

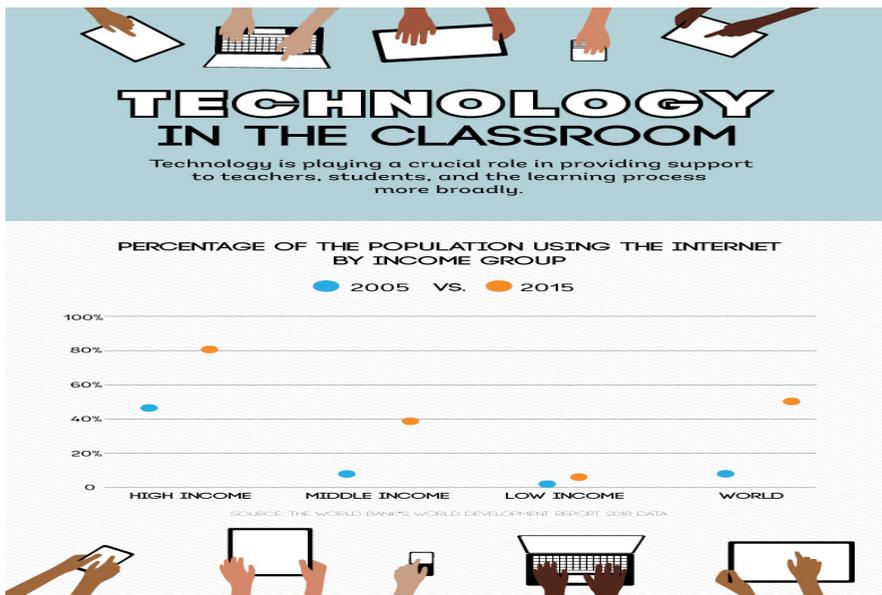
- Video conferencing classes
 - Topics and instructions for preparing a seminar paper
 - Student self-assessment questions
 - Instructions for preparation for the colloquium
3. Presentation of online questionnaires
 4. Replying to students' questions

In addition to the mentioned activities within the online teaching, there are additional possibilities for organizing classes in the form of interactive teaching.

Interactive teaching

Interactive teaching is a novelty in our country. This type of teaching has long been present in the United States and in Western European countries. Online studying has its advantages and disadvantages, but the pace of life, economy and social development increasingly imposes the need for alternative ways of studying.

Figure 1. Percentage of the population using the Internet by income groups



Source: <https://www.worldbank.org/en/news/immersive-story/2019/01/22/pass-or-fail-how-can-the-world-do-its-homework>

The results of the research indicate that e-mail communication has reached its peak. Over 98% of students have used active e-mail communication within the subject Entrepreneurship. If this data is compared with the physical monitoring of teaching within the same subject in the previous year (82.6%), it can be stated that this result of active monitoring of teaching is excellent. Such a high level of student activity indicates the interest of students in a new, unusual way of conducting classes, preparing and taking colloquia and exams. Randjelovic et al. [5] in their work analyzed the modification of the teaching process and distance learning activities of the Serbian educational system during the *Covid-19* crisis. The research showed that communication between teachers and students has reached a much higher level in this time of crisis, especially thanks to web portals and platforms, as well as social networks of general type and other ways of communication based on modern technologies, and that professional development of teachers should be focused. to maintain these modes of communication even in regular circumstances.

The pandemic has had a strong impact on teaching methods, assessment and satisfaction with the education of young people in Serbia⁸.

Most students in today's educational institutions belong to Generation Z. Members of these generations grew up in a truly globalized world with which technology is deeply intertwined. Generation Z students achieve their communication and feedback through applications such as Facebook, Messenger, Snapchat, WhatsApp, WeChat and Zoom, so a high response rate of following classes via the Internet is as expected⁹.

Digital Classroom

The digital classroom was actively used by 77% of students, which leads to the conclusion that teaching in such circumstances is very well accepted. This percentage of 77% is less than the percentage of interactivity in working with students via e-mail, which is 97% due to the fact that lectures and assignments in the digital classroom are precisely defined in time, that a number of employed students worked in a state of emergency and could not to respond to established deadlines.

8 Randelović, M., Karalić, E. Đukić, D. (2020): "Digitalizacija obrazovnog procesa u Srbiji tokom Covid-19 krize", *Naučni skup Nauka i nastava u vaspitno-obrazovnom kontekstu*, Pedagoški fakultet u Užicu, Stručni članak str. 203-216, ISBN: 978-86-6191-062-3, 23. oktobar, 2020.

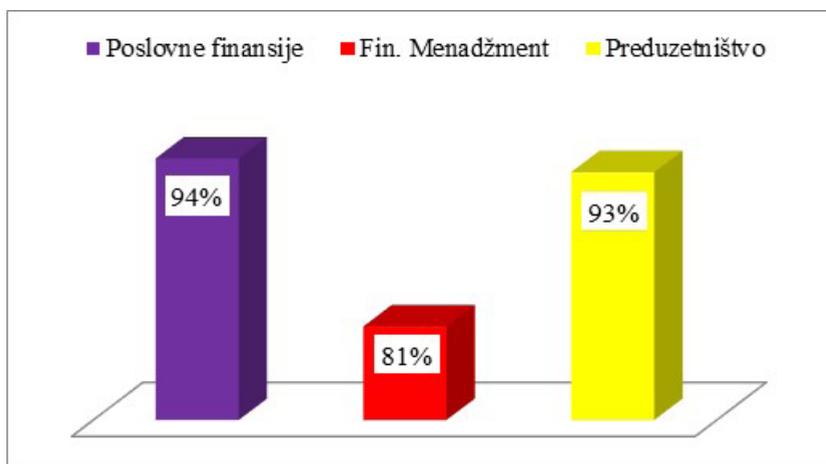
9 Orville, H., COVID19 causes unprecedented educational disruption: Is there a road towards a new normal?, *Prospects* (2020) 49: 13

Teaching via google classroom

The capabilities provided by the Google classroom platform are great. Ease of use and settings represent a significant relief for professors and students who have not had points of contact with this type of implementation of the teaching process and solving tests (colloquia).

The digital classroom is accessible to students attending the course. Interactive communication is enabled at all times. The practicality of this type of communication and teaching has shown its results in extraordinary circumstances. The students have excellently accepted this type of teaching and expressed satisfaction with the rapid adaptation to this way of learning.

Figure1. Results of students' turnout



Based on the results presented in Figure 1, it can be noticed that the turnout was quite high. This indicates the fact that for most students, this way of taking the exam was much less demanding than in the period of the traditional method of teaching. Students are able to adapt their learning to their affinities and interests. These are the advantages that students have encountered in the circumstances of COVID. This type of teaching enables significant autonomy of students in terms of organizing their student obligations and private obligations.

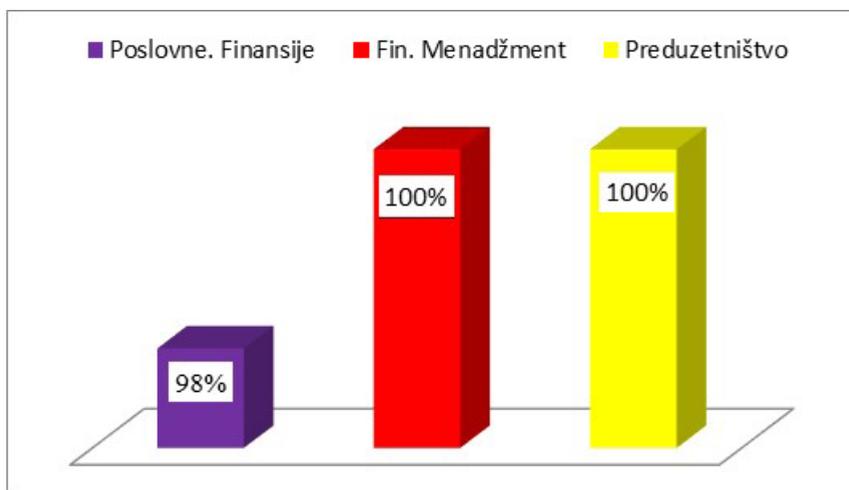
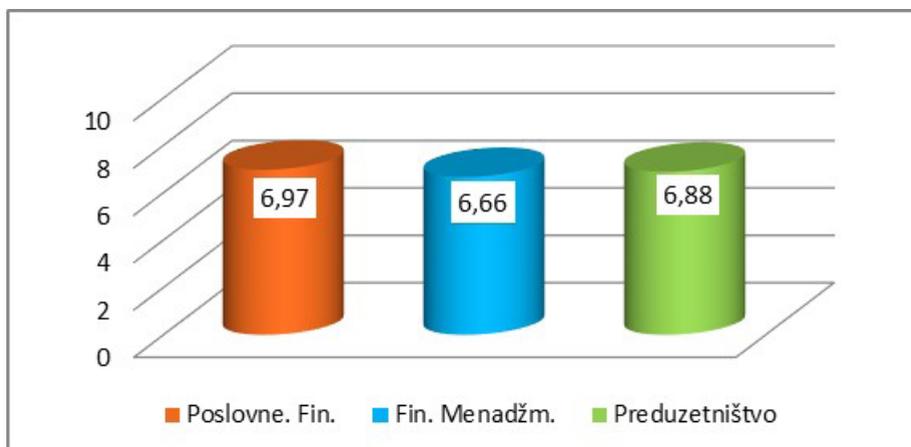
Figure 2. Percentage of students' passing by courses

Figure 2 presents data related to the percentage of turnout and pass rate of students in the colloquium through distance learning (online, platform).

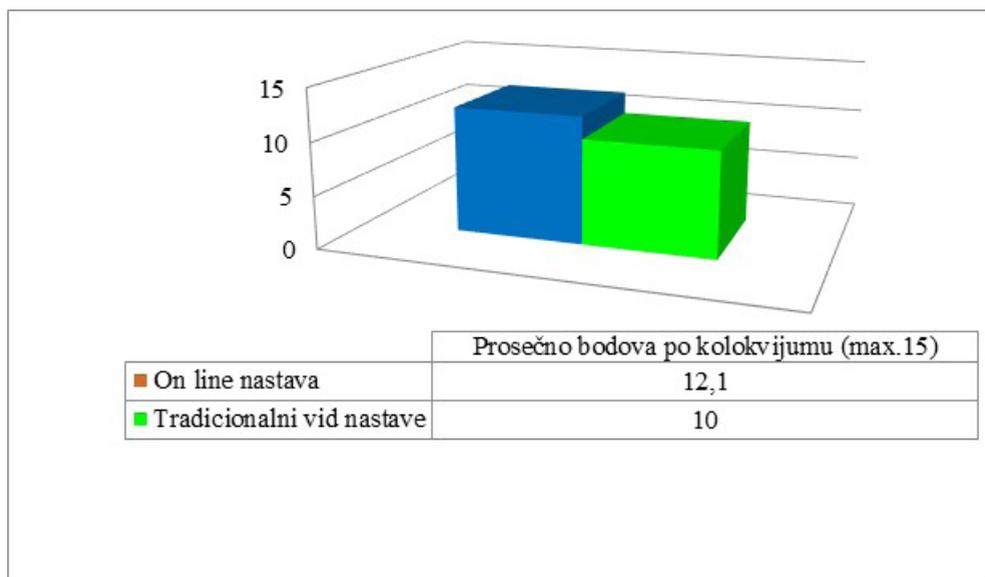
Figure 3. Average grade achieved per course

The results presented in the previous figure (Figure 3) indicate the approximate value of average grades by subjects. Given the fact that the averages are below the value of 7, it is quite clear that a larger number of students are satisfied with lower

grades. This is worrying given the fact that taking the test, which involves a closed type of answer, is a significantly easier form of taking than the traditional type of taking the oral exam. These grades, on the other hand, should be taken with a grain of salt due to the fact that many students rely on the final preparation just before the exam. Colloquia, which are an integral part of the teaching process since the introduction of studying in Bologna, are a significant tool for achieving more points and easier exams. Many faculties use online tools for assessing students' knowledge. In this way, they replace the traditional way of assessing. In this way, the error rate during evaluation in terms of relevance will be higher¹⁰.

The closure of schools, colleges and universities did not manifest itself only through the interruption of classes. Restrictive measures within higher education also affected self-assessment. In higher education, many universities and colleges are replacing traditional exams with online assessment tools. This is a new experience for both teachers and students, and as a result such assessments are likely to have higher measurement errors than usual¹¹.

Figure 4. Comparison of average grades for traditional and online teaching



10 Stepanović, 2020, 192

11 Orville, H., COVID19 causes unprecedented educational disruption: Is there a road towards a new normal?, Prospects (2020) 49: 13

Compared to the results of the traditional way of making the colloquium (10 points out of a possible 15), the results of the online colloquium are better (average 12.1 points out of a possible 15). The reasons for such results can be found in several factors. One of the factors that influenced the results is the type of questions used in online teaching (closed type of questions). The second possible reason may be the interest of students in a new type of exam that is different, more innovative, interesting and comfortable (solving the colloquium from the “armchair”. Another possible reason is the possibility of joint solving in terms of group exams with the student who knows best loudly gives answers to the questionnaire. Student ingenuity could be a special topic for research and processing.

5. CONCLUSION

Education in the circumstances of COVID-19 has undergone significant transformations and adjustments. The fact is that many higher education institutions, professors and students were not informatively and mentally ready for new circumstances and a completely different way of teaching. Although the situation surprised many, the students showed great flexibility and their adaptation and acceptance of all models of online teaching went as expected. The younger population of professors generally did not have a problem with organizing classes with maximum support and use of technology. The results of the research indicate a very good response of students and maximum acceptance of the new way of monitoring classes, active participation in the work and taking the tests. The results also show that students are more effective in online teaching circumstances. There are positive and negative consequences of the influence of COVID-19 on the teaching process. Higher education institutions and professors must be ready to base their future work on new approaches and the increasing use of technological achievements that are inevitable in the present and certainly to a greater extent in the future.

REFERENCES

1. Garcia E., Weiss, (2020): “E.COVID-19 and student performance, equity, and U.S. education policy Lessons from pre-pandemic research to inform relief, recovery, and rebuilding”, Economic Policy Institute, Washington, page 9; <https://files.epi.org/pdf/205622.pdf>; Pristupio:15.05.2021.

2. Orville, H., (2020): „COVID19 causes unprecedented educational disruption: Is there a road towards a new normal?“, *Prospects* (2020) 49:11–15; <https://link.springer.com/content/pdf/10.1007/s11125-020-09475-0.pdf>
3. Randelović, M., Karalić, E. Đukić, D. (2020): “Digitalizacija obrazovnog procesa u Srbiji tokom Covid-19 krize”, *Naučni skup Nauka i nastava u vaspitno-obrazovnom kontekstu*, Pedagoški fakultet u Užicu, Stručni članak str. 203-216, ISBN: 978-86-6191-062-3, 23. oktobar, 2020.
4. Robbins, S., Coulter, M. (2005) *Menadžment. Data status*, Beograd
5. Stepanović, S. (2020):“Uticaj pandemije virusa korona na obrazovanje“, *Nastava i vaspitanje*, 2020, 69(2), 183-196
6. Anderson, J. (2020, March 30). The coronavirus pandemic is reshaping education. Quartz. Retrieved from <https://qz.com/1826369/how-coronavirus-is-changing-education/>; Pristupio:16.05.2021.
7. <https://www.worldbank.org/en/news/immersive-story/2019/01/22/pass-or-fail-how-can-the-world-do-its-homework>; Pristupio:16.05.2021.
8. <https://openknowledge.worldbank.org/bitstream/handle/10986/33696/148198.pdf?sequence=4&isAllowed=y>; Pristupio:17.05.2021.
9. <https://www.unicef.org/serbia/korona-virus-covid-19>; Pristupljeno:17.05.2021.
10. <https://www.washingtonpost.com/education/2021/03/15/pandemic-school-year-changes/>; Pristupio:15.05.2021.
11. <https://qz.com/1826369/how-coronavirus-is-changing-education/>; Pristupio:16.05.2021.