EVALUATION OF PRE-PANDEMIC AND PANDEMIC EDUCATION FROM THE PERSPECTIVE OF A UNIVERSITY INSTITUTE STUDENTS

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Abstract

The circumstances of the COVID-19 pandemic have brought a turbulent change to all levels of education around the world. Even in these cases, however, it is necessary to maintain accountability, i.e. the responsibility of educational institutions for both consequences and quantity and quality of their services. For this purpose, various evaluation processes are implemented across universities to identify and ensure the quality of teaching and learning. In this context, the paper deals with the first results of a comparison of higher education in both pre-pandemic and pandemic period, causing the closure of all types of schools and a complete, forced transfer to a distant, untested forms of education. In both monitored periods, the same research tool was used, namely an online evaluation questionnaire, in which the respondents had the opportunity to express their opinions on the lectures and seminars studied, on the conditions of teaching and learning, on the approach of the teacher, and on the overall assessment of the course. The target group were students of bachelor study programmes of a university institute in the Czech Republic. This study provides evidence that, although the pandemic struck without warning and very fast, the university institute concerned was able to cope with the necessary reforms in the organization of education, and from the students' point of view, while maintaining the quality of teaching provided. Even, the complete distance teaching and learning at the time of the pandemic was on average rated better than the pre-pandemic.

Keywords: *Evaluation, higher education, distance learning, quality of education, students' satisfaction.*

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1. Introduction

The circumstances of the COVID-19 pandemic have brought a turbulent change to all levels of education around the world. At universities, students, tutors, and lecturers had to adapt to use a number of different online communication platforms to ensure a continuous learning process. In addition to information and communication technologies, or the Internet elements such as online gaming worlds and artificial intelligence, come to the forefront, requiring new literacies (Volery & Lord, 2000; Gallardo-Echenique et al., 2015; Tuan, 2015; Ramírez-Hurtado et al., 2021). The important thing is then that with a pandemic, the digital competence has become a key concept in discussions on the kind of skills and understanding learners' needs in the contemporary society (Calvani et al., 2008; Ferrari, 2012; Gallardo-Echenique et al., 2015). Even in these cases, however, it is necessary to maintain accountability, i.e. the responsibility of educational institutions for both consequences and quantity and quality of their services. For this purpose, various evaluation processes are implemented across universities to identify and ensure the quality of teaching and learning.

Concerning online distance teaching and learning during COVID-19 pandemic, the opinions differ worldwide. There are a large number of studies finding positive effects for student learning in the online or hybrid format compared to the traditional face-to-face format. Some of the authors observed that distance and online education is at least as effective, if not better, than traditional education (e.g. House et al., 2007; Tuan, 2015; Chakraborty et al., 2020; Aziz Ansari et al., 2021).

Conversely, there are a number of research findings pointing that online learning is generally less effective than the conventional face-to-face format. Compared to the number of studies that found positive or neutral significant effects for student learning results in the online format, the number of studies that found mixed or negative significant effects is much smaller, however (e.g. Hebebci et al., 2020; Asgari et al., 2021; Ramírez-Hurtado et al., 2021). The most prevailing expertise is that there are

many more studies that found zero (neutral) findings for the effects of online learning (El Firdoussi et al., 2020; Al-Kumaim et al., 2021).

In response to what needed to be addressed urgently, the COVID-19 crisis has presented an opportunity for the development of effective learning solutions and universities anchored to the traditional face-to-face teaching model have striven to adopt strategies to ensure the service quality of their online teaching to satisfy the students (Ramírez-Hurtado et al., 2021). The same was true for the educational institution concerned, namely for the Institute of Education and Communication of the Czech University of Life Sciences Prague. Many activities had to be alternated in order to continue with the least possible negative impact on the aims of the university. Specifically, the institute switched to completely distance teaching in March 2020, and the schedule of the academic year was changed, which made it possible to change the dates of state final examinations and the conditions of the admission procedure. Internal and external training was organized for academic staff focused on distance teaching, including technology platforms used for this purpose. The training also covered the verification of distance learning outcomes. All the educational activities for students have also moved to the online environment. The MS Teams platform was chosen as the main platform for distance learning. Experts from the application sphere were involved online in lectures and seminars. Thanks to all these measures, there was no significant increase in study failure.

The author is long involved in the issues of educational evaluation, such as e.g. the following research (Němejc & Smékalová, 2016; Smékalová & Němejc, 2019; Němejc et al., 2020). In this context, the paper deals with the first results of a comparison of education at a selected educational institution of the university in both pre-pandemic and pandemic periods, in the latter case causing the closure of all types of schools and a complete, forced transfer to a distant, unverified forms of education. The data found are the first insight into the issues examined which will be further monitored and investigated by the author. The results will show how the students of a university institute subjectively evaluate the concept of the courses, their opinions on learning conditions, and on the performance of the teachers in the pre-pandemic and pandemic periods of education.

2. Methodology

The research sample was obtained by a deliberate selection based on the already established innovated rules of evaluation processes of the university. Specifically, the data set was then represented by an evaluation survey in the form of anonymous online evaluation questionnaires of the respondents, i.e. first, second and third year students of the bachelor's study programmes of the Institute of Education and Communication of the Czech University of Life Sciences Prague.

The subject of the empirical survey was the opinions and satisfaction of students with: (a) the concept of the courses, (b) the conditions of attending lectures and seminars, and (c) the view of students on the performance of their academics. The expressions were selected on a numerical scale from 1 to 4, with 1 representing the minimum rating and 4 the maximum rating, and there was an “I don't want to comment” option.

Two periods, pre-pandemic and pandemic ones, were monitored and compared. The pre-pandemic period included the classic concept of contact teaching at the university, the pandemic period meant a complete transition of teaching to fully distance synchronous online education outside the university. The evaluated data were based on the evaluation survey for each course, not on the number of respondents, as each respondent was required to express their opinions on each course of their study plan of the semester. The evaluation questionnaires are regularly distributed online in the university system from the end of the semester to the examination period to obtain relevant data.

Specifically, the evaluation of the courses was based on the following semesters, with the following representation of opinions:

- summer 2018/2019 (pre-pandemic period) with 935 expressions of students' opinions;
- winter 2019/2020 (pre-pandemic period) with 2235 expressions of students' opinions;
- summer 2019/2020 (pandemic closure of schools) with 1587 expressions of students' opinions;
- winter 2020/2021 (pandemic closure of schools) with 1587 expressions of students' opinions;
- summer 2020/2021 (pandemic closure of schools) with 1009 expressions of students' opinions.

Contact teaching was thus presented with 3170 questionnaires, distance teaching during the pandemic was made up of 4183 student statements. The return rate of the questionnaires was 100% due to rules and notifications in the university system, no questionnaire was excluded. The data were analyzed using the average of the values on the scale for each of the areas studied and for each semester concerned. The data were processed and compared.

3. Results and discussion

The empirical survey deals with the first results of the comparison of education in the pre-pandemic and pandemic period from the perspective of students of a university institute with a focus on the concept of studied courses, educational conditions and performance of their academics. The results are presented in Table 1.

Table 1. Opinions of undergraduate students on the concept of studied courses, educational conditions and performance of their academics (mean per item, mean per area, overall assessment).

Scale: 1 = minimum - 4 = maximum; N = "I don't want to comment"	Pre-pandemic period of education		Pandemic period of education			Pre-pandemic period of education	Pandemic period of education
	Summer 2018/19	Winter 2019/20	Summer 2019/20	Winter 2020/21	Summer 2020/21	Total mean	Total mean
	Mean						
Opinions on the course - total	**3.52**	**3.56**	**3.69**	**3.67**	**3.83**	**3.54**	**3.73**
The content corresponds to the declared goals and topics	3.65	3.68	3.78	3.72	3.88	3.67	3.79
The course is suitably included in connection with the courses completed so far	3.57	3.61	3.71	3.73	3.85	3.59	3.76
The subject was a benefit for me (for acquiring and developing knowledge, skills, etc.)	3.45	3.50	3.64	3.57	3.82	3.48	3.68
The subject is important for my study programme	3.41	3.46	3.62	3.64	3.78	3.44	3.68
Opinions on study conditions - total	**3.61**	**3.68**	**3.76**	**3.67**	**3.87**	**3.64**	**3.77**
Requirements for the course are clearly communicated at the beginning of the semester	3.69	3.78	3.83	3.71	3.89	3.74	3.81
Teaching is connected with the latest knowledge and practical examples	3.51	3.61	3.73	3.62	3.86	3.56	3.74
Information sources for teaching are available	3.54	3.64	3.73	3.69	3.85	3.59	3.76
Teaching spaces and their equipment meet the needs of this course	3.68	3.69	-	-	-	3.69	-
Opinions of the teacher - total	**3.60**	**3.67**	**3.75**	**3.63**	**3.86**	**3.64**	**3.75**
The information is presented in a clear and comprehensible manner	3.62	3.69	3.77	3.63	3.88	3.66	3.76
The teacher has the ability to motivate students	3.48	3.57	3.69	3.52	3.82	3.53	3.68
The teacher is willing to help students also outside of class	3.66	3.71	3.79	3.70	3.87	3.69	3.79
The teacher encourages the active involvement of students in teaching	3.65	3.74	3.78	3.69	3.88	3.70	3.78
The total study load is reasonable	3.61	3.64	3.72	3.64	3.84	3.63	3.73
Overall assessment	**3.58**	**3.64**	**3.73**	**3.66**	**3.85**	**3.61**	**3.75**

In both periods being compared, it is obvious from the results of using an identical research tool, i.e. an anonymous online evaluation questionnaire, that the respondents evaluated the items under investigation favourably. In all cases, the mean values are far above the average of the four-point scale.

In the detailed view of the results, one of the best rated items was the ”Opinions on study conditions”. Namely, it is an item “Requirements for the course are clearly communicated at the beginning of the semester” with a mean values of 3.83 and 3.89 in the summer semester 2019/20 and summer semester 2020/21, respectively. Both periods concerned belong to the period of education during

the pandemic. On the other hand, the item “The subject is important for my study programme” from the assessed area “Opinions on the course” was among the worst perceived evaluated items. The item reached average values of 3.41 and 3.46 in the summer semester 2018/19 and in the winter semester 2019/20, respectively. However, they still exceeded the values above the mean of the four-point rating scale.

Looking at the detailed mean values according to the areas, the results reveal that the most valued *opinions of students on the course* were the following: “The content corresponds to the declared goals and topics” and “The course is suitably included in the connection with the courses completed so far”. Interestingly, a better mean rating was achieved for education during the pandemic.

Also in the area of *“Opinions on study conditions”*, the students' own experience reveal that the facts “The requirements for the course are clearly communicated at the beginning of the semester” and the “Information sources for teaching are available” were the best evaluated. More favourable values were achieved during the pandemic compared to pre-pandemic period.

In case of the last observed area – *“Opinions of the teacher”* – the students expressed the highest degree of their agreement in the following items: “The teacher is willing to help students also outside of class” and “The teacher encourages the active involvement of students in teaching”. Also in this case, it is possible to underline the fact that the performance of teachers during the pandemic was perceived by students better than in previous periods under standard conditions.

In summary, it can be stated on the basis of the use of the same tool, in the composition of similar subjects and teachers, only in different conditions of contact or distance education, all items in all areas under investigation were perceived better from the perspective of students during distance learning of a pandemic.

Now, it is possible to speculate why the results are as they are – i.e. very favourable from the point of view of the management of the educational institution concerned, despite the fact that the conditions in the pandemic period were very difficult, hard to predict, with the need to adapt very quickly. Such results may have been achieved by teachers' greater effort to deliver perfect performance and to facilitate the study of their students as much as possible, may be by the reality how much more time they were forced to spent in their teaching process. Perhaps, the quality of the education provided could be maintained or even exceeded, because the pandemic has thus opened up certain opportunities for finding and applying new ways, in particular teaching and learning, which differ from established practices. Internal and external trainings focused on distance learning, including technological platforms used for this purpose, were promptly organized for academic staff. The training also included ways to verify results during distance learning. The fact that the creation of overviews and worksheets continued, which made it easier for students to study, may also have had a positive effect. The completion and improvement of various constantly accessible study resources continued, for example videoconferencing and recording, online ICT resources in the MS Teams or the content in the LMS Moodle. Thanks to all these measures, there was no significant increase in academic failure.

In the future, following the presented empirical survey, it certainly deserves a comparison of other periods in current post-pandemic education, in the sense in which the mean values will depend on whether the deficit of students' socialization and students' enthusiasm for transition from home to university environment, realizing educational opportunities and face to face discussions, will be reflected in the fact that students' satisfaction and further results will be even better, or not.

In any case, the university institute can be satisfied with the results achieved based on student subjective evaluation, as it has been shown that the periods of difficult distance learning in completely new conditions have been managed while maintaining the required conditions of quality of education.

4. Conclusions

The resolution of the Government of the Czech Republic of 12 March 2020 in response to the COVID-10 pandemic meant the complete closure of all types of schools for several months. It was necessary to respond promptly to technical unpreparedness and methodological support of educational institutions and participants in education. The pandemic thus forced educators to look for non-traditional solutions and to reconsider existing ways of teaching, including the use of new technologies.

Comparison of results from the pre-pandemic and pandemic period provides evidence based on students' own experience with the concept of the courses, their opinions on learning conditions, and on the performance of their teachers. Although the pandemic struck unpredictably, the university institute was able to cope with the necessary reforms in the organization of education while maintaining the quality of education provided. Even, the complete distance online teaching and learning at the time of the pandemic was on average rated better than the pre-pandemic, specifically in all monitored areas.

It can be stated that according to the results, even in times of the pandemic, the planning and implementation of the educational processes of the university institute worked, both at the curriculum

level and to ensure optimal conditions for completing university courses and everything related to them. However, it will be necessary to monitor and compare the evolution of the situation also in the context appropriate to the current times of post-pandemic education.

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