

Czech Higher Education in Continuity With the Challenges of the Contemporary World

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Abstract

The significant impact of the primary idea of the conference became tangible not only in the disruptive period of the COVID-19 pandemic, which strongly affected all levels of education without exception but also in the current post-covid era. Czech higher education also had to deal with some problems during its journey. The primary goal of education, according to the requirements of the Ministry of Education, Youth, and Sports presented in the Strategy of the Education Policy of the Czech Republic until 2030+, is a more significant focus of education on the acquisition of competencies needed for an active civic, professional, and personal life. This means motivating university students sufficiently, but at the same time equipping them with essential and indispensable competencies so that they can use their potential to the maximum extent within the dynamically changing world not only for their development but at the same time concerning others and for the benefit of the development of the entire society. Thus, the presented study, in continuity with the results of the survey among students of the Faculty of Multimedia Communications of the Tomas Bata University in Zlín, offers a path leading to the possibility of eliminating persistent problems in education both in the reflection of pandemic changes and in the post-Covid period. The way to re-strengthen the integration of theory and practice in the continuity of cooperation with regional non-governmental, non-profit organizations is reflected in an initiative approach to teaching and strengthening regional development.

Keywords: Higher Education, COVID and Post-COVID Era, Key Competences, Project Education/Teaching, Integration of Theory and Practice, Non-state Non-profit Organizations, Regional Development

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Introduction

"Education has the power to transform and change while constantly transforming and changing." As already mentioned in the abstract, the reflection of the impact of the primary idea of the conference became intensely tangible not only in the revolutionary period of the COVID-19 pandemic, which strongly affected all levels of education without exception, but also in the current post-COVID era. We are witnessing many social changes that affect all areas of human activity without exception. But to be able to respond to these changes, the educational system must be adequately prepared for them. Due to significant changes in society caused by dynamic development, adapting the content, methods, and forms of education to current developments becomes necessary. At the same time, create an environment in educational institutions that will be safe, fair, stimulating, and sufficiently challenging for everyone (*Strategy 30+*). Czech education also had to deal with several problems on its way. The presence indicated the need to set new paths to transform current forms and methods and improve Czech education. The presented study directs its attention specifically to the field of (Czech) higher education.

Higher Education in the Czech Republic

The tertiary education sector in the Czech Republic (CR) is divided into higher education and tertiary professional education. Higher education is traditionally provided by universities at ISCED 645, 7 and 8 levels. Higher vocational education is organized by practically oriented tertiary professional schools (conservatories) at the ISCED 655 level. Significant changes in Czech higher education took place on the basis of the Sorbonne and Bologna Declarations. Based on them, the current form of study was transformed into a two-level system (bachelor's and subsequent master's study program). Since 2001, a three-level structure of higher education has been strictly introduced: 1. *Bachelor's degree program* (ISCED 645, 3-4 years): preparation for the performance of a profession and at the same time for study in a subsequent master's degree program; state final exam, usually with the defense of a bachelor's thesis ("bachelor" - Bc., BcA.). 2. *Master's degree program* (ISCED 7): a) (ISCED 747, Bc+1-3 years): primarily acquiring theoretical knowledge with the possibility of their application and developing abilities for creative activity or talent; state final exam with thesis defense (e.g. Ing., Mgr., MgA., MUDr., MDDr.); the field of medicine and veterinary medicine and hygiene state rigorous examination; independent program ISCED 746, (4-6 years): graduates with a "master's" degree (Mgr., MgA.), rigorous state examination with defense of a rigorous thesis in the corresponding field of study (e.g. JUDr., PhDr., RNDr., etc.). 3. *Doctoral degree program* (ISCED 844, 3-4 years): scientific research and independent creative activity in the field of research, development or creative activity in the field of art; doctoral examination with dissertation defense (Ph.D., Th.D.). Higher education institutions in the Czech Republic are divided into universities (all degree programs in continuity with research, development, innovation, or artistic and other creative activities, 24 public, 2 state, 3 private), and non-university (bachelor's degree programs, exceptionally master's degree programs, 2 public, 33 private). From the founder's point of view, public (2, public law institutions), state (2, military and police, without legal personality, ministry), and private (33, legal entity) (see Table 1) (Higher education Czechia, 2023).

	Total number	Type of study program			
		Bachelor's Program	Master's Program	Follow-up Master's Program	Doctoral Program
Total number of universities	304.054	182.454	32.526	70.033	21.375
Public universities	276.422	160.755	32.526	64.064	21.291
Private universities	28.152	22.033	-	6.056	87

Table 1: The total number of students at all types of universities in the Czech Republic (2021/22).
Source: Göttlichová according to Czech Statistical Office, 2022.

Until 2003, more male students than female students studied at universities. However, female students outnumbered their male counterparts by almost 30% over the next seven years. In the last three years, a quarter (33 thousand) more women than men have been studying at universities in the Czech Republic. In contrast to the number of students, the number of university graduates in the Czech Republic continues to decrease. In 2021, 60,547 people graduated from higher education institutions in the Czech Republic, 2,400 less than in the previous year and by a third less than ten years ago (Cieslar, 2022).

Higher Education and the Pandemic

Now that the education system seems to return to normal after the pandemic, it is time to follow up on its impact after almost three years of disruption. In 2022, UNESCO published a report *Resuming or reforming? Tracking the global impact of the COVID-19 pandemic on higher education after two years of disruption*. The authors of the report pointed out that in May 2020, the International Association of Universities (IAU) initiated the implementation of a research project on the impact of COVID-19 on higher education (Regional & National Perspectives on the Impact of COVID-19 on Higher Education) (Delgado, 2023). The survey analysis is based on 424 complete responses from unique HEIs in 109 countries and two Special Administrative Regions of China (Hong Kong and Macao). The conclusions showed that about 67% of HEIs switched to online teaching, about a quarter suspended classes while searching for solutions, and 7% ultimately canceled their teaching processes. Almost all involved universities confirmed the negative impact of the transition to an online form of teaching, with only 2% of universities (7 universities) reporting that teaching and learning were unaffected (Marinoni et al., 2020).

The Impact of the Pandemic on Czech Higher Education

In Czech higher education, the academic year 2020/2021 took place almost exclusively in distance learning (135 days). Theoretical teaching was (as of spring 2020) almost entirely moved to the online space; practical education was implemented only in some fields (e.g., medical or health care) in different arrangements depending on the currently valid epidemiological measures (vlada.cz, 2021). The results of a survey carried out by the Ministry of Education, Youth and Sports of the Czech Republic (MEYS in Czech, 2021) on public universities (PU) showed that (not only) the well-being of students and academic staff, the MEYS and the entire educational system will have to focus much more attention to achieve effective educational outcomes. 23,060 students and 4,588 academic staff took part in the survey. The focus was, for instance, on the effects of the pandemic and distance learning on physical and mental health, factors affecting well-being, the financial situation of students and academic staff, or the consequences of limiting contact and face-to-face teaching

(on a scale of A/very often, B/often, C/sometimes, D/occasionally, E/rarely). The most significant adverse impacts from the student's point of view were in the areas of: 1. mental health (A/32%, B/24%); 2. overall life (A/34%, B/16%); 3. physical health (A/33%, B/13%). From the point of view of the negative influence of factors in continuity with well-being, negative aspects such as 1. uncertainty regarding rules (A/43%, B/29%); 2. lack of social contact with classmates (A/43%, B/27%) and with friends (A/38%, B/29%), etc. Subsequently, the pandemic and distance learning impact on university students play a significant role in the educational process, especially the loss of students' motivation to study, resignation from study activities, and the students' negative feelings (see Table 2) (Duspivová, Barták, 2021).

	very				
	often	often	sometimes	rarely	never
Loss of motivation to study	35%	22%	20%	11%	13%
Decrease in the quality of work	10%	13%	20%	22%	34%
Resignation from the study activity	27%	22%	15%	10%	25%
Negative feelings of the student	23%	15%	16%	13%	33%
Considerations about change of the major	11%	8%	11%	12%	58%
Considerations of dropping out	13%	9%	13%	15%	51%
Considerations of therapy	12%	10%	14%	13%	50%

Table 2: Consequences of the impact of the pandemic and distance learning on students N=23,060.
Source: Modified according to Duspivová, Barták, 2021.

In the same way, we can also talk about the overall assessment of distance learning by students compared to academic staff (see Chart 1).

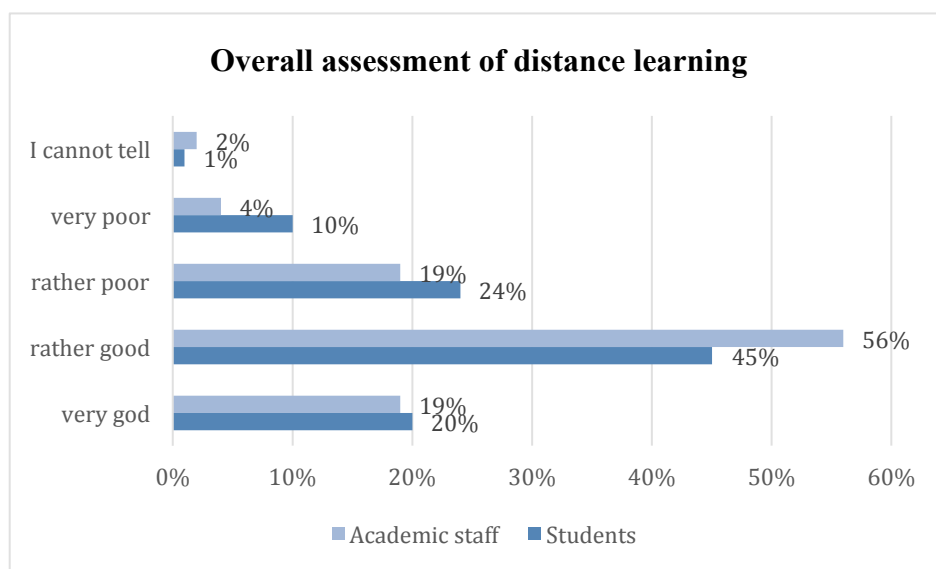


Chart 1: Overall evaluation of distance learning by university students and academic staff, N=23,060.
Source: According to the Ministry of Education, Culture, Sports, and Science, 2021.

Methodology

Problem Formulation

As mentioned in the UNESCO IESALC report, the impact of the pandemic on higher education has been profound and varied for each institution and country, generally showing great efforts to adapt to changes at all levels rapidly. The pandemic, with its strong impact on the education system, has revealed the essential need to transform educational activity. However, the rapid return to face-to-face teaching and learning and the stabilization of enrollment patterns suggest that the changes will only lead to a partial transformation of higher education as a face-to-face experience. Thus, higher education institutions may introduce some necessary new procedures long-term (Delgado, 2022, 2023, Marinoni et al., 2020, Plakhotnik, M. S. et al. 2021). We can ask whether university students will be sufficiently prepared for a professional career in continuity with the market's and society's needs? As reported by the EU Commission, more than three out of four companies in the EU currently need help finding qualified employees with the right skills, which is reflected in the demand for increased education and training of students. In the words of reporter Anna Zalewska (2023): "The world is changing at a fast pace ... and we have to face the challenges it brings. We need new skills, ... to respond to different organizational needs. Preparation for the labor market begins already at school ... it is therefore necessary to coordinate education in accordance with the current labor market (Europe Parliament, 2023)."

Changes in Czech Higher Education in Continuity With the Impact of the Pandemic

The problems brought about by the pandemic, with its impact on higher education and the dynamically changing world, were reflected in the necessity of setting a new strategic line for the education policy of the Czech Republic. The main challenge of *2020-2023 Strategic Implementation Plan (SIP 2023)* thus became "a dynamic response to a changing world." Priority objective 1 is thus oriented towards 1.A *Developing competencies directly relevant for life and practice in the 21st century*; 1.B *Developing methods for ensuring the quality of education and verifying learning outcomes*; 1.C *Strengthening the connection of study to practice and preparation for future application*, and 1.D *Further development of the professional profile of the study and strengthening of its prestige* (MSMT-12689/2022-3). *SIP 2023* represents an integral part of the strategic management of the Czech higher education system in direct continuity with *the Strategy of the Education Policy of the Czech Republic until 2030+ (Strategy 2030+)*. Implementing *Strategy 2030+* aims to create and develop an open educational system in direct continuity with the changing external environment and provides relevant educational content from a lifelong perspective. The goal of education is to provide a motivation to an individual equipped with essential and indispensable competencies, who can use his potential to the maximum extent in a dynamically changing world for the benefit of his development, as well as concerning others, but also for the benefit of the development of society as a whole, i.e., competencies needed for an active civic, professional and personal life. *The Strategy 2030+* thus primarily responds to "4. the industrial revolution" (Morgan, 2014; Schwab, 2017; Schwab, Mallert, 2021) or the "second age of machines" (Brynjolfsson, McAfee, 2015), which are among the current trends transforming many areas of human activity - and whose technological and social aspects require the development of the necessary competencies for success in personal and working life and on the labor market (MSMT 2020) (Fryč et al., 2020, Program, 2021).

Problem Solution

Innovation

Innovations change the direction of education and can replace or displace existing models, i.e., existing methodologies and ways of transferring knowledge by opening up new learning alternatives. We also include innovations in teaching methods, such as the development of new learning materials, mechanisms, and spaces, and transforming the role of students and the way they absorb and use educational knowledge (García-Morales et al., 2021). Universities must move away from a system of predominantly "lecture-based learning" to "problem-based learning" methodologies that more actively engage students (Marinoni et al., 2020), with a subsequent reflection in the re-evaluation of the skills and competencies required of students in the current environment.

Integration of Theory and Practice

One of the primary sources of innovation representing a significant driving force of sustainable economic development is creativity, which, in continuity with innovation, is of fundamental importance for the development of business and for Europe's competitiveness on an international scale; the orientation of attention leading to the acquisition of key competencies of university students, which would not be possible without ensuring a fully functional knowledge triangle: *education - research - innovation*. It is a partnership between the business world and the education, training, and research sector that can ensure a better focus on the skills and competencies required by the labor market while strengthening innovation and entrepreneurial capabilities within the educational process. In today's dynamically developing world, the set path must be aimed at supporting a more comprehensive academic community, where representatives of civil society and other interested parties will be involved to create an atmosphere that promotes creativity and a better alignment of professional and social needs, as well as the personal satisfaction of individuals. Here, more than in the pre-pandemic era, the necessity of supporting the development of transferable skills of university graduates in continuity with the development of cooperation between universities and employers (commercial and non-commercial spheres) is coming to the fore, for example, in the area of continuing to expand student practice opportunities within the educational process, in the effective contribution of employers to the creation of educational programs, teaching, practice and evaluation of results, etc. In particular, it is crucial to eliminate the persistent problem, represented by the unsatisfactory integration of theory and practice, reflected in the need for more sufficiently well-prepared, initiative, and motivated individuals.

Project Learning/Teaching

One of the ways leading to the strengthening of student motivation in continuity with reactive involvement in the educational process is the support of project teaching in continuity with the requirements of *Strategy 2030+*. Within the framework of pedagogical terminology, we are talking about a teaching method derived from pragmatic pedagogy and the principle of instrumentalism, in which students are led to work on specific projects independently, in conjunction with gaining experience based on practical activity and experimentation. We are, therefore, talking about a method that supports student motivation and cooperative learning, whether it is projects in the form of integrated topics, practical problems from real life, or functional activities leading to creating a product or product (Průcha et al., 2003). Although

W. H. Killpatrick (*The Project Method*, 1918) is considered to be the creator of the project method, we find the basis in the concept of pragmatic philosophy of J. Dewey (1859-1952), which is based on the claim that experience is the basis of knowledge, i.e., applying knowledge to life. Man encounters various problematic situations in our ever-changing world. Active experimentation is vital for the research process, by which we gain experience and knowledge, which we store and thus create a "toolbox" for further problem-solving. Learning can only be effective if it is active and based on experience. One experience is reconstructed based on another. The school is supposed to function based on real-life situations, and its main task must be to teach individuals to adapt to change (Dewey, 1926).

Key Competencies

Even the present shows us that the independent implementation of projects, the goal of which is to connect life, learning, and work, leads to the acquisition of professional and organizational competencies. By the end of May 2022, 25,000 people had been contacted. Companies or institutions use an interactive tool for data collection to fill out a questionnaire, the aim of which was, among other things, to find out the preference criteria for university graduates when hiring (Study of employers' needs). The research was carried out within the National Pedagogical Institute of the Czech Republic (2023) framework. The return represented 1188 completed questionnaires, of which 946 were complete. The conclusions showed that employers (N=652) expect a greater willingness to further education and development (60%), flexibility (47%), knowledge of new technologies and more advanced IT knowledge (45), originality of ideas (42) from university graduates (N=652). %) and an excellent ability to communicate in a foreign language (40%). Among the most common shortcomings of university graduates when entering the labor market insufficient preparation in the field of practical experience (48%), willingness to take responsibility (45%), the ability to lead and manage others (38%), the ability to deal with people (29%) stood out), the ability to solve problems (25%) and work under pressure (25%), etc. (Doležalová et al., 2023). The research thus confirmed that more and more emphasis must be placed on developing cooperation between universities and employers (commercial and non-commercial spheres) in continuity with market requirements. The respondents' answers also confirmed the necessity of a close connection between the employer and educational spheres, which they see as one of the ways that lead to the knowledge, abilities, and skills of school graduates being more in line with the requirements of the labor market.

Civil Society – Non-profit Sector – Non-governmental, Non-profit Organizations

As the previous text showed, we still need to address several things that must be addressed. However, it is more than just the commercial sphere representing an opportunity for university students. A significant role is also played here by civil society (CS), i.e., the nonprofit sector (NPS), specifically non-governmental, non-profit organizations (NGOs), bringing together different groups of citizens with other interests, a plurality of topics and goals, characterized by various structures, financing, legal forms, employees, etc. OS and its organizations play an important social, political, and economic role in democratic countries. Characteristic features include "participation and action, the central features of the activity are presented by spontaneity and creativity, autonomy and voluntariness" – "with room for creativity and innovation" (Miléřová, 2020). Already in 2016, *the Council of Europe* presented a new *competence model* for democratic culture in continuity with application to the educational system with an orientation to the development of curricula, procedures, and evaluation, at the same time also modeling attitudes and behavior, democratic processes in

the classroom, cooperative teaching, project-based teaching, and service learning with the explicit goal that active citizenship is best learned actively, and not by passive lecturing.

Out of the twenty established competencies within the competence model, the following stand out: *analytical and critical thinking skills; skills of listening and observing; empathy; flexibility and adaptability; linguistic, communicative and plurilingual skills; co-operation skills; conflict-resolution skills; knowledge and critical understanding of the self, responsibility; autonomous learning skills; self-efficacy* in continuity with one of the significant values – valuing human dignity and human rights (xxx). Similar preferences were also confirmed by research carried out in 2021 among 198 NGOs of the Zlín Region (ZR), where the following preferences stood in the foreground: communication skills (82%), teamwork skills (72%), capability of problem-solving (68%), taking responsibility (63%), adaptability and flexibility (61%), willingness to learn (58%), leadership skills (58%), etc., a significant change in preference was then noted by IT skills (49%) and foreign language knowledge (38%), in connection with patience, empathy, moral approach, tolerance, etc. NGOs saw the biggest problem for students in the ability to solve problems, lead and make decisions, and teamwork (Göttlichová, 2021).

Objectives and Methodology

To fulfill the strategic line of the University (*Strategy 2023+*) in continuity with solving problems due to the pandemic crisis, as well as the needs of a rapidly changing society with an impact on the education system, it is also necessary to understand the attitudes of students, to know their approach to solving the set problems, possible proposals to implement procedures, teamwork skills, and appropriate communication. The research was carried out in as an online questionnaire, which took place, like every year, in June 2022 among 138 students of the Faculty of Multimedia Communications of the Tomas Bata University in Zlín (FMC TBU). The answers are presented in direct correlation with the monitored issue in the post-pandemic period, i.e., comparison of students' preferences for competencies: A/2022/commercial and B/2022/non-commercial spheres, here with the values of the pre-pandemic period (C/2019/NGOs, 114 students of FMC TBU).

For the needs of the study, it is beneficial to find out whether students perceive a difference in their preference for key competencies in the commercial or non-commercial sphere and to what extent we can find changes in the perception of key competencies in the period before and after the pandemic, which is presented by the presented values (see Table 3), reflecting previous data presented (see Doležalová et al., 2023, Göttlichová, 2021). At the same time, what do they see as concerns, whether they are interested in focusing their attention on the problems of NS and participating actively in their solution, including within the practical activities of the educational process? As the results of the survey showed, the preferences of competencies in the given sectors do not show significant differences if we do not take into account the specifics of the preferred choices of NGOs, the comparison of the values before and after the covid period confirmed, in addition to the already (recurring) essential competences, the necessity of increasing IT skills, knowledge of a foreign language and willingness to learning, especially the necessity of taking responsibility in the commercial and non-commercial sectors.

Key competencies/preference (students)	2022/A		2022/B		2019/C	
	%	rating	%	rating	%	rating
Communication skills	40.2	3	58.5	2	66.7	1
Capability of problem-solving	38.5	5	52.2	4	54.4	3
Team working skills	37.2	7	58.4	3	55.2	2
Taking responsibility	68.0	1	77.6	1	47.4	4
Mastering information processing	38.0	6	29.5	8	12.8	7
Adaptability and flexibility	26.5	8	37.0	6	24.6	6
Willingness to learn	43.2	2	36.6	7	11.5	8
Ability to make decisions	39.4	4	37.8	5	29.8	5
Reading and comprehension to work instructions	14.5	9	8.8	11	10.5	9
IT skills	12.5	10	10.2	9	1.0	12/13
Leadership skills	6.2	12	8.0	12	4.9	10
Foreign language knowledge	11.5	11	9.8	10	2.0	11
Work with numbers in the working process	4.5	13	2.4	13	1.0	12/3

Table 3: Preference of key competencies in terms of university students.
Source: Göttlichová, 2022.

Even though students in the greater half (57.6%) indicated agreement within the requirements of the commercial and non-commercial sectors, the research pointed out, as in the framework of *the competence model*, the necessity of other necessary competencies (see Table 4), due to the difference like the work of both monitored sectors.

Other crucial key competencies for NOs	University students	
	%	rating
Empathy	24	1
Moral and ethical approach	21	2
Interest in the field	18	3
Relationships, kindness	16	4
Willingness, understanding, tolerance	11	5
Solidarity	8	6
Openness	6	7

Table 4: The most preferred differences in requirements for university graduates by NGOs.
Source: Göttlichová, 2022.

Part of the research was also finding which competencies the students consider problematic within the framework of NGO requirements (see Table 5).

The most common concerns perceived by students	University students	
	%	rating
Taking responsibility	64	1
Ability to make decisions	39	2
Leadership skills	36	3-4
Capability of problem-solving	36	3-4
Adaptability and flexibility	18	5
Mastering information processing	16	6
IT skills	14	7

Table 5: The most frequent concerns in continuity with NGO competence requirements in the perception of students.
Source: Göttlichová, 2022.

It is clear from the table that these are competencies important for university graduates, regardless of whether it is the non-commercial or commercial sector. At the same time, these are also the competencies that, among other things, are aimed at by the FMC TBU *Projects of Non-profit Organizations* course, enabling students to have an independent, creative approach to solving social problems. Fully 89% of students confirmed in the research the significant benefit of project implementation both for NGOs and for themselves.

Solution

Projects of Non-profit Organizations

One of the options aimed at achieving the set goal, which is to improve the quality of higher education, creating conditions for an easier transition of graduates to the labor market - and currently mitigating the impact of the pandemic, as well as the dynamism of the onslaught of the requirements of the current rapidly changing world and meeting today's demands, is the realization of a unique course at the Institute of Marketing Communications at FMC TBU in Zlín - *Projects of non-profit organizations (PRON)* - with a reflection of the combination of theory and practice in the form of direct participation of students in real projects (based on the needs of regional NGOs and students' creativity), while comprehensively mastering knowledge project management methods in practice (see Figure 1).

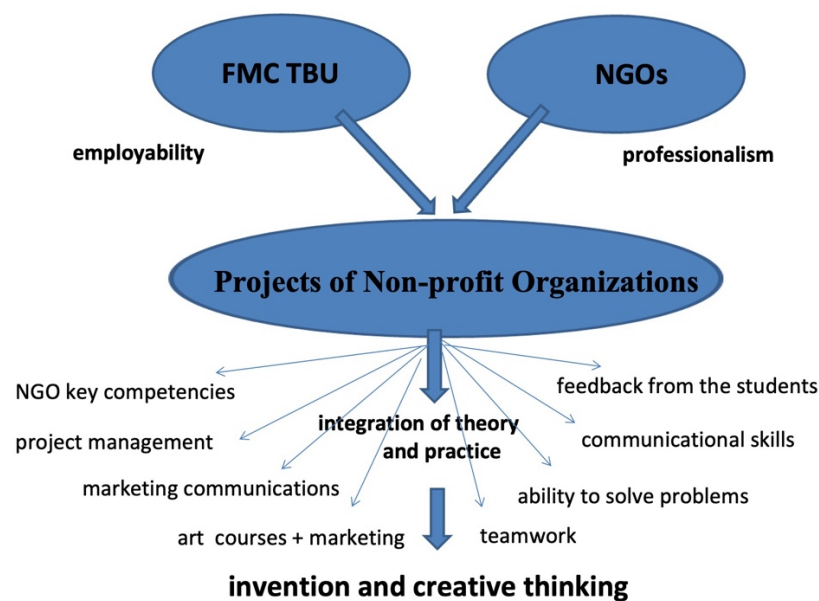


Figure 1: Projects of non-profit organizations.
Source: Göttlichová, 2018.

The course is oriented to the systematic and procedural side of project management project planning and the system of controlled communication and management of project documentation. In continuity with the requirements of potential employers in the commercial and non-commercial sphere, students encounter the specifics of teamwork, learn to discuss, process, and prepare written materials, learn about their abilities and the importance of the individual's share in determining common goals and distributing responsibility, analyze variously complex problems with the identification of their essentially, to look for an approach to their solution, to plan, implement and evaluate the effectiveness of the solution - i.e., to fulfill the essence of the curriculum based on the application of so-called vital skills within the educational process and on the requirements of practice reflected in teaching innovation. An essential aspect of the course is the connection between the work of art students and marketing communications students, enabling the implementation of projects in the entire spectrum of possibilities and preparing students for a future profession where teamwork becomes necessary. Through their projects, students help regional NGOs in the realization of their mission, whether it is helping children in orphanages, disabled citizens with various forms of illness, seniors, oncological patients, cultural organizations, or animal shelters, i.e., everyone who needs help.

Although the impact of the pandemic played a significant role here, too, as many organizations were forced to end their active activities due to the necessity of the transition to online communication, for which NGOs lacked technical equipment and knowledge, the students were (and are) a great asset at this time. Despite the necessity of transferring the implementation of projects to an online environment, it was possible to obtain the necessary financial and material assistance for NGOs to support the implementation of their activities. Still, at the same time, thanks to engaging online workshops, fashion shows, educational presentations, interesting competitions, etc., we also made this problematic period more pleasant.

Conclusion

As indicated by the presented study, *Czech higher education in continuity with the challenges of the contemporary world*, it is evident that the higher education system in the Czech Republic "has the power to transform and change, while constantly transforming and changing" ("Education has the power to transform and change while constantly transforming and changing."). It was a pandemic, and at the same time, an unceasing dynamic development, which revealed persistent problems in the University of Education and, at the same time, placed obstacles in the path set so far. And as it turns out, it will be a challenging road. One of the possibilities for solving problems is more effective constructive cooperation and communication between universities and the economic sphere, aimed at creating a higher-quality curriculum based on the necessary practice requirements in continuity with the demands and criteria of employers reflected in the key competencies assigned to university graduates. An important aspect is the subsequent reflection on teaching innovation in continuity with the enrichment of the educational program aimed at increasing the quality of professional education, which is increasingly applied in the form of direct participation of students in authentic projects while comprehensively mastering the knowledge of project management methods. To implement all the steps, it is necessary to provide the actors in education with the needed support directly in the region where they operate and to connect them. Economic entities of a commercial and non-commercial nature, based on the reflection of the level of the so-called key competencies of students, can subsequently present an offer of employment to university graduates, representing an essential advantage for both parties. And as J. Dewey (1926) already stated: "One gram of experience is more valuable than a ton of theory."

References

- Competences for democratic culture: Living together as equals in culturally diverse democratic societies.* (2016). Printed at the Council of Europe. ISBN 978-92-871-8237-1.
- Delgado, F. (2022). Post-COVID-19 transition in University physics courses: A case of study in a Mexican University. *Education sciences* 12, no. 9: 627.
<https://doi.org/10.3390/educsci12090627>
- Dewey, J. (1926). My pedagogic creed. *Journal of education*, vol. 104 (issue 21), 542-542.
- Doležalová, G., Staňková, K., Kuzmová, T., Novotná, H. (2023). *Šetření potřeb zaměstnavatelů. Výzkumná zpráva ze sběru dat 2022.* Published by the National Pedagogical Institute of the Czech Republic.
- Duspivová, K., Barták, T. (2021). *Impacts of the COVID-19 pandemic on the well-being of students, results of a survey among university students.* Published by the Ministry of Education, Youth and Sports (MEYS) in Czech.
- Erik Brynjolfsson, E., Andrew McAfee, A. (2015). *Druhý věk strojů: Práce, pokrok a prosperita v éře špičkových technologií.* (1st edition). Jan Melvil Publishing. 296. ISBN 978-80-87270-71-4.
- Fryč, J., Matušková, Z., Katzová, P., Kovář, K., Beran, J. et al. (2020). *Strategy for the education policy of the Czech Republic up to 2030+.* Ministry of Education, Youth and Sports. ISBN 978-80-87601-49-5 (paperback publication).
- García-Morales, V. J., Garrido-Moreno, A., and Martín-Rojas, R. (2021). The transformation of higher education after the COVID disruption: Emerging challenges in an online learning scenario. *Front. Psychol.* 12:616059. doi: 10.3389/fpsyg.2021.616059
- Göttlichová, M. (2018). *Projects of non-profit organizations.* TBU Zlín.
- Göttlichová, M. (2021). *Application of non-commercial marketing in continuity with the development of the relevant key competences of the students (FMK) of TUB Zlín.* IGA TBU.
- Göttlichová, M. (2022). *Application of non-commercial marketing in continuity with the development of the relevant key competences of the students (FMK) of TUB Zlín.* IGA TBU.
- Hyánek, V., Pařil, V., Pejcel, J. (2020). Definition of the civil sector and non-governmental non-profit organisations within the national economy (socio-economic importance). Research report. Faculty of Economics and Administration.
- Kilpatrick, W. H. (1918). The project method: The use of the purposeful act in the education process." *Teachers College Record*, 19, 319-335.

- Marinoni, G., Van't Land, H., and Jensen, T. (2020). *The impact of COVID-19 on higher education around the world*. IAU Global Survey Report UNESCO.
- Morgan, J. (2014). *The future of work: Attract new talent, build better leaders, and create a competitive organization*. Wiley. 256. ISBN 978-1118877241.
- Plakhotnik, M. S., Volkova, N. V., Jiang, C., Yahiaoui, D., Pheiffer, G., McKay, K., Newman, S., and Reißig-Thust, S. (2021). The perceived impact of COVID-19 on student well-being and the mediating role of the university support: Evidence from France, Germany, Russia, and the UK. *Front. Psychol.* 12:642689. doi:10.3389/fpsyg.2021.642689
- Průcha, J., Walterová, E., Marek, J. (2003). "Pedagogický slovník." Portál. 322. ISBN 978-8071787723.
- Schwab, K. (2017). *The fourth industrial revolution*. Portfolio. 192. ISBN 978-0241300756.
- Schwab, K., and Malleret, T. (2021). *COVID-19: The great reset*. RIVA PUBLISHING. 284. ISBN 978-8090832220.

Resources

- "Higher education – Czechia" by European Commission (2023): <https://eurydice.eacea.ec.europa.eu/national-education-systems/czech-republic/higher-education>
- "Impacts of the COVID-19 pandemic on university students" by Published by the Ministry of Education, Youth and Sports (MEYS) in Czech (2021): <https://www.msmt.cz/dopady-pandemie-covid-19-na-studenty-vs?lang=1>
- "The Impact of COVID-19: How are Universities Three Years After the Pandemic? " by Delgado Francisco. Observatory of the Institute for the Future of Education (2023): <https://observatory.tec.mx/edu-news/impact-of-covid-19-higher-education-unesco/>
- "MEPs stress importance of vocational training and lifelong learning" by NEW European Parliament. Press Releases (2023): <https://www.europarl.europa.eu/news/en/press-room/20230707IPR02423/meps-stress-importance-of-vocational-training-and-lifelong-learning>
- "Plán realizace Strategického záměru pro oblast vysokých škol pro rok 2023 (MSMT-12689/2022-3)" by the Ministry of Education, Youth and Sports (MEYS) in Czech (2022): https://www.msmt.cz/file/57910_1_1/download/
- "Program na podporu strategického řízení vysokých škol pro roky 2022 až 2025 (Program)" by the Ministry of Education, Youth and Sports (MEYS) in Czech (2021): https://www.msmt.cz/file/53756_1_1/download/

- "Rozhodování blíže k lidem. Přehledová studie na téma občanské participace a partnerství veřejné správy a organizací občanského sektoru se zaměřením na ústřední orgány státní správy" by Miléřová Jana. Glopolis o.p.s. (2020):
<https://www.vlada.cz/cz/ppov/rmo/dokumenty/strategie-spoluprace-verejne-spravy-s-nestatinimi-neziskovymi-organizacemi-na-leta-2021-az-2030-189753/>
- "Strategy for the Education Policy of the Czech Republic up to 2030 (Strategy 2030+)" by the Ministry of Education, Youth and Sports (MEYS in Czech).
https://www.msmt.cz/uploads/brozura_S2030_en_fin_online.pdf
- "University education – students: public and private universities" by Czech Statistical Office (2022): <https://vdb.czso.cz/vdbvo2/faces/en/index.jsf?page>
- "Vysoké školy v Česku studuje cca 300 tisíc studentů, klesá zájem o techniku, v kurzu je zdravotnictví" by Cieslar Jan. Český statistický úřad (2022):
<https://www.czso.cz/csu/czso/vysoke-skoly-v-cesku-studuje-cca-300-tisic-studentu>
- "Zpráva o dopadech pandemie covid-19 na vzdělávání. Pandemie covid-19 jako příležitost pro vzdělávání" by Vláda ČR (2021): <https://www.vlada.cz/assets/urad-vlady/poskytovani-informaci/poskytnute-informace-na-zadost/material.docx>

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