

Distance Education for Students of Pedagogical Specializations at Universities

Helena Zelníčková¹, David Vorel² & Petr Sládek³

<https://doi.org/10.53349/resource.2022.is24.a1116>

Abstract

The paper is focused on distance education for students of pedagogical disciplines of universities. The theoretical part deals with distance education for university students during a pandemic and hybrid teaching as a current trend in the education of university students. The empirical part of the paper describes distance education from the perspective of students. The obtained data are compared with the case study by Zelníčková, Vorel & Sládek (2021), which compared the results of students and members of the customs administration in distance learning.

Keywords:

Distance education
Hybrid teaching
Pedagogical specializations of universities

Distanzunterricht für die Studenten pädagogischer Fachrichtungen an Universitäten

Zusammenfassung

Der Beitrag konzentriert sich auf den Distanzunterricht für Studierende pädagogischer Fachrichtungen an Universitäten. Der theoretische Teil beschäftigt sich mit dem Distanzunterricht für Studierende in Zeiten einer Pandemie und der Hybrid-Unterricht als aktueller Trend in der Ausbildung von Studierenden. Der empirische Teil der Arbeit beschreibt den Distanzunterricht aus der Perspektive der Studierenden. Die erhaltenen Daten werden mit der Fallstudie von Zelníčková, Vorel & Sládek (2021) verglichen, in der die Ergebnisse von Studierenden und Angehörigen der Zollverwaltung im Fernstudium wurden.

Schlüsselwörter:

Distanzunterricht
Hybrid-Unterricht
Pädagogische Spezialisierungen der Universitäten

¹ DTI University, Sládkovičova 533/20, 018 41 Dubnica nad Váhom, Slovak Republic
E-mail: helena.zelnickova@dti.sk

² DTI University, Sládkovičova 533/20, 018 41 Dubnica nad Váhom, Slovak Republic
E-mail: david.vorel@dti.sk

³ Masaryk University, Faculty of Education, Department of Physics, Chemistry and Vocational Education, Poříčí 7, 603 00, Czech Republic
E-mail: sladek@ped.muni.cz

1 Introduction

Distance education is one of the most discussed topics in modern pedagogy. Since the spring of 2020, education has passed a worldwide stress test. Teachers and students alike were confronted for the first time with long-term distance learning, which until then had been a very little used form of education for pupils and university students. For education, this has meant major structural changes in many areas. Long-term distance learning is associated with many negatives. Specifically, it may be long-term social isolation of students or the impossibility of personal consultations at schools or the loss of work habits of students.

However, distance education also has its positives, especially in better student time management or the possibility of better individual work organization (Zelníčková, Vorel & Sládek, 2021). For teachers, however, the sudden transition to distance learning was associated with a sharp increase in work, especially in primary and secondary schools. Here, educators had to reorient their teaching to exclusively cyberspace (EDUin, 2021). The universities were in a slightly different situation, as it was possible to build on existing online courses. University students are already used to mediating study materials through university systems and a large number of students and teachers have had experience with online conferences (Fritzová, 2020, pp. 255-257). The continuing pandemic of Covid-19 has enabled the entry of another form of online education at universities, namely hybrid education (Elznicová & Gleichová, 2021). At present, universities strive for maximum preservation of full-time teaching. However, in the case of lectures for larger groups of students, universities are already forced to reduce the number of students in lecture halls for hygienic reasons and make full use of hybrid teaching. An example is Masaryk University in Brno, which for hygienic reasons switched to a hybrid teaching method in November 2021 due to the unfavourable development of the epidemiological situation (Muni, 2021).

However, for the further progressive development of teaching, it is necessary to find out the preferences of university students, specifically in the field of distance and hybrid teaching. A survey focused on this fact was carried out at the faculties of education at Masaryk University in Brno and Charles University in Prague. The results of the survey are compared with the results of a case study conducted by Zelníčková, Vorel & Sládek at the end of 2020 among high school students and members of the customs administration.

2 Distance education

Zlámálová (2007) characterizes distance education as a form of study where a student cannot be present in person in the classroom. The principle of distance learning is the discipline of students who are strongly motivated to study and can manage their studies effectively.

According to Bednaříková (2013, p. 123), there is a significant shift in distance education and a constructivist approach is applied in teaching.

The Ministry of Education, Youth and Sports in Czech Republic (MŠMT, 2020, pp. 8-10) characterizes distance education as a form of education that can take place offline or online. According to the Ministry of Education, two types of distance education can be distinguished - online education, which is further divided into synchronous and asynchronous. Another group is off-line training and consulting.

2.1 On-line teaching

In the synchronous form, the teacher is in contact with the students through the educational platform and the students are connected at the same time as the teacher and follow his instructions. The main benefits of the synchronous form include the possibility of partial control of the student's work and the possibility to individually consult with students about their progress. Furthermore, the synchronous type of distance education eliminates the social isolation of students. Despite all the positives of the synchronous form of distance education, the negative aspects can also be pointed out. In this case, they can include the impossibility of individualizing the educational content to students, or the possibility of poor-quality internet connection. For university students, the synchronous form of teaching requires careful planning of their free time. On the other hand, the university must perfectly organize the schedule so that there are no collisions within the student's individual schedules. The synchronous form of distance education is also demanding on the technical equipment of students and teachers because both parties must have such means that will allow them to communicate and video call on educational platforms and cloud services.

Thanks to distance learning during the Covid 19 pandemic, many educational platforms and cloud services were given the opportunity to apply, thanks to which contact between teachers and pupils can be realized. These systems enabled the publication of materials, the fulfillment of individual tasks of students. A very welcome benefit is the possibility of organizing video conferences (Zelníčková, Vorel & Marinič, 2021).

The second form of distance learning is the asynchronous form, which allows students to work at their own pace. Students can choose the time in which they will study, but without the possibility of contact with other students. Here, too, various educational platforms or cloud services are used for the education of pupils (Ministry of Education, 2020, p. 9). Due to the impossibility of the student's contact with the teacher, there is a need to process the study materials in quality and comprehensible manner. These are then a key part of the whole distance asynchronous education (Zormanová, 2017, p. 176). The asynchronous form is thus often implemented in the form of individual tasks and contact with the teacher is enabled for students in the form of online consultations. A major shortcoming of asynchronous teaching is the impossibility of teacher-student communication and student social isolation (Ministry of Education (MŠMT), 2021, p. 9).

Despite all the advantages that distance learning brings to education, it is necessary to address its problematic points in the future. These problematic points include the possibility of dependence on the Internet and smart devices, the possibility of cyberbullying. The possibility of digital exclusion of students is also a problematic point (Zelníčková, Vorel, Marinič, 2021a).

2.2 Off-line teaching

Off-line teaching takes place outside the Internet. Self-study or various practical tasks that the student performs at home are often used. Teachers assign assignments to students in person, in writing, or by telephone. During the pandemic, offline teaching was more of an additional form of teaching (Ministry of Education, 2020, p. 9). Despite the reduced flexibility of this type of education, it can be stated that off-line teaching is very well applicable to students who do not have access to the Internet or do not have digital technology. This logically reduces the number of students who are digitally excluded (Paradiso, 2021).

3 Hybrid teaching

Hybrid teaching is one of the modern teaching methods that, thanks to the Covid-19 pandemic, has gained a firm place in teaching. It is currently practiced at all levels of schools. It also plays an important role in universities. An example is Masaryk University in Brno, which follows university traffic lights in the organization of teaching during a pandemic (Muni, 2021).

According to Muni Arts (2021), hybrid teaching is organized in such a way that some students can be physically present in the lecture hall and some students can connect via the Internet and watch the teaching in real-time with remote access. In this case, it is a synchronous type of hybrid teaching. The main advantage of synchronous teaching is the fact that students have the opportunity to ask additional questions and are in direct contact with their teacher.

Another form is an asynchronous type of hybrid teaching, where the student works with video and other materials according to their own time possibilities. At Masaryk University, students can choose the form of their involvement. All students, regardless of whether they have chosen full-time or one of the types of hybrid teaching, have the same conditions for the proper completion of all subjects (Muni Arts, 2021a).

Hybrid teaching seems to be a very effective teaching method. Thanks to it, it is possible to maintain the maximum number of hours of full-time teaching and pass on knowledge from teaching to students who cannot physically participate in full-time teaching. Thanks to streaming lectures, it is also possible to create quality material that teachers can use in future years, when interventions in teaching due to Covid-19 may no longer be up to date.

3.1 Masaryk University and current teaching during the Covid-19 pandemic

The Covid-19 pandemic has changed the overall approach to teaching around the world in all types of schools. The authors of the paper cite as an example the creation of a clear system of informing students about the current course of teaching at Masaryk University in Brno.

Due to the rapidly changing hygienic measures, Masaryk University has created a clear system of informing students about the organization of teaching - the university traffic light. The university traffic light has a total of 4 levels on a scale of 0-3. The level of measures is ensured by the crisis management staff of Masaryk University.

Traffic light 0 - white - does not mean restrictions for students and full-time teaching is limited to the physical presence of a maximum of 150 students.

Traffic light 1 - green - the university is still open to the public; lectures are organized for a maximum of 150 people or in a hybrid form and emphasis is placed on group homogeneity.

Traffic light 2 - yellow - public presence is limited at universities. Lectures over 150 people take place remotely / hybridlike.

Traffic light 3 - red - the public is not allowed to enter the university premises. The personal presence of students at the university is prohibited. A maximum of 10 students are allowed to take the exams with the need to observe hygienic distances (Muni, 2021a).

The university traffic light helps students and teachers to orientate themselves with the measures that apply at the university. At the time of the finalization of the paper, the traffic light 2 - yellow was valid at Masaryk University, where hybrid teaching is a commonly practiced teaching method.

4 Methodology of research survey

4.1 Research Design

The survey monitors the preferences of university students in distance education and hybrid learning. The results of the survey will be compared with the results of the survey Zelníčková, Vorel & Sládek (2021), who sought the opinions of high school students and members of the customs administration on distance education.

The form of the research tool was changed several times regarding the development of the Covid - 19 pandemic. Due to the unfavorable development of the pandemic, the distribution of anonymous electronic questionnaires was chosen in the final. Respondents responded in a modified electronic survey, which was designed for high school students and members of the customs administration.

The questionnaire was expanded to include questions that monitor respondents' preferences for hybrid teaching so that it is possible to build on previous research. Students of pedagogical specializations of Masaryk University and Charles University were deliberately chosen as respondents. The main reason is the orientation of students in professional terminology. This creates a low probability of the possibility of confusion of individual terms. The questionnaire was distributed in October and November 2021 and the answers of a total of 47 respondents were evaluated.

4.2 Questionnaire design and question structure

The anonymous questionnaire is based on a questionnaire created by Zelníčková, Vorel & Sládek (2021) to find out the opinion of high school students and members of the customs administration on distance learning. The questionnaire surveyed respondents' views on four key areas of distance learning:

1. Satisfaction with study results in distance learning.
2. Finding out whether high school students prefer full-time teaching over distance learning.
3. Whether customs officials are more active in teaching.
4. The rate of cheating of secondary school students in comparison with members of the customs administration.
5. Finding out whether high school students procrastinate more than customs officials in individual education.

The modified anonymous questionnaire was extended to key areas of hybrid teaching:

1. Personal experience with online teaching.
2. Technological complexity of hybrid teaching from the point of view of university students.
3. Student preferences in hybrid teaching as a method of the future at universities.
4. The level of knowledge acquired in hybrid teaching in comparison with full-time teaching from the perspective of university students.

The questionnaire was structured into four basic questions, which determine the gender of respondents, the current length of study, type of study and form of study. Because some students do not yet have sufficient experience with hybrid teaching, the part of the questionnaire that deals with hybrid teaching does not include questions addressing procrastination or the level of activity in hybrid teaching. The area addressing respondents' views on online teaching and hybrid teaching was divided into two sets of questions.

The obtained data were processed, compared, and presented in tables and graphs. A separate subchapter 4.4 will be devoted to the comparison with the original survey by Zelníčková, Vorel & Sládek.

4.3 Results

4.3.1 Question No. 1-2

A total of 47 respondents took part in the survey. There were 20 men and 27 women. The respondents were asked within an anonymous electronic questionnaire in which semester they are currently studying. According to the number, students studying the first, third to fifth semester formed a statistically significant group. The numbers of respondents according to the length of their studies at the university can be found in Fig. 1.

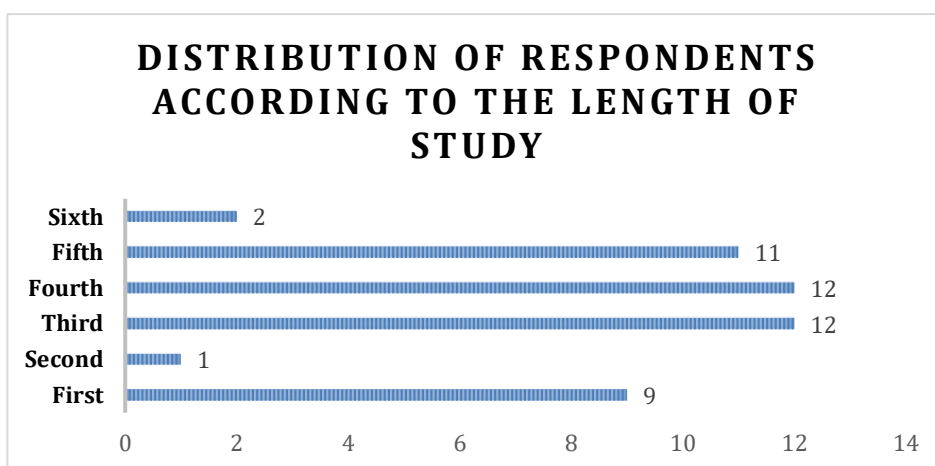


Fig. 1: Number of respondents according to the length of university studies

4.3.2 Question No. 3-4

The anonymous questionnaire ascertained whether the respondents were dominated by students studying full-time or part-time. Among the respondents, full-time students (27) predominated, compared to students of combined forms of study (20) and bachelor's students (29). Data monitoring the distribution of students according to the type of their study can be found in Table 1.

FORM OF STUDY	TOTAL	PERCENT
COMBINED FORM OF STUDY	20	43
FULL-TIME FORM OF STUDY	27	57
BACHELOR'S DEGREE	29	62
MASTER'S DEGREE	16	34
DOCTORAL STUDIES	2	4

Table 1: Distribution of respondents according to the form of study

4.3.3 A set of questions: online education

The set of questions deals with the issue of online teaching from the perspective of respondents. The obtained data showed that the respondents evaluate online teaching negatively. This corresponds to the respondents' opinion on the knowledge gained during online teaching, which they do not consider to be full-fledged in comparison with full-time teaching. Online teaching allows respondents to cheat, which is subsequently reflected in a better evaluation of their learning outcomes. Respondents also admit procrastination. The possibility of social isolation among respondents is an ambiguously evaluable result. Due to the even distribution of respondents (46% vs. 54%), it is not possible to assess whether respondents feel isolated. The answers of the respondents can be found in Fig. 2.

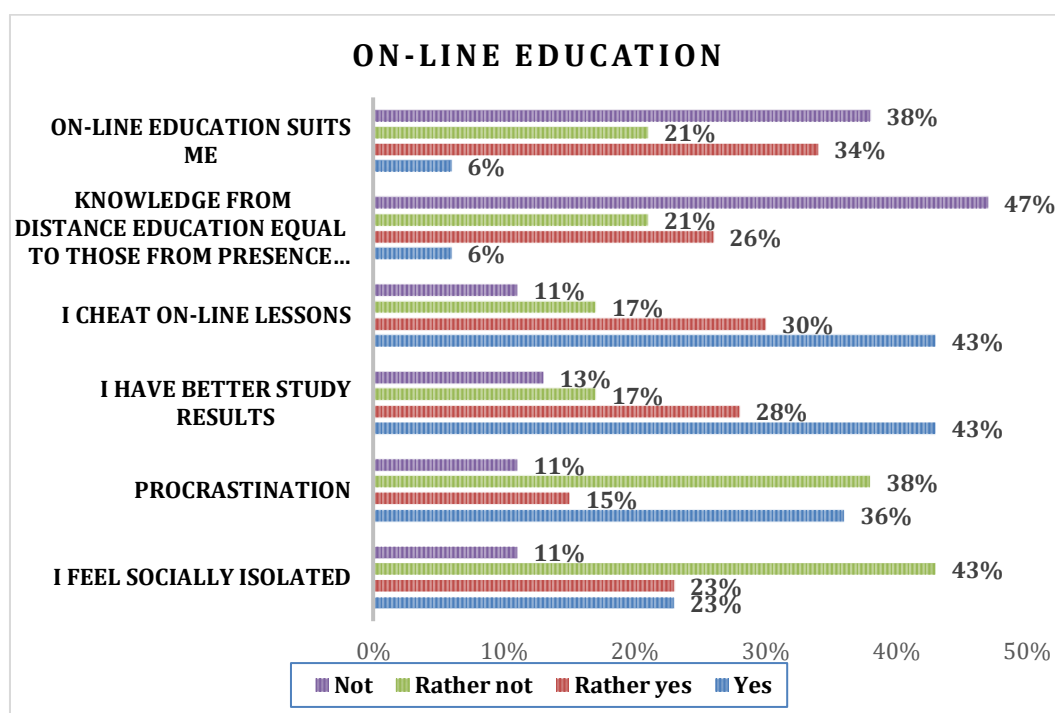


Fig. 2: Online education

4.3.4 A set of questions: hybrid education

The last part of the anonymous questionnaire was a set of questions that focused on hybrid teaching. From the data obtained, it was found that respondents do not perceive hybrid teaching as optimal; in terms of technological provision as technologically demanding. Respondents also said that despite all the benefits that hybrid teaching provides, they prefer full-time teaching. The knowledge that the respondents, in their opinion, acquire is not full-fledged, as from full-time teaching. The answers of the respondents can be found in Fig. 3.

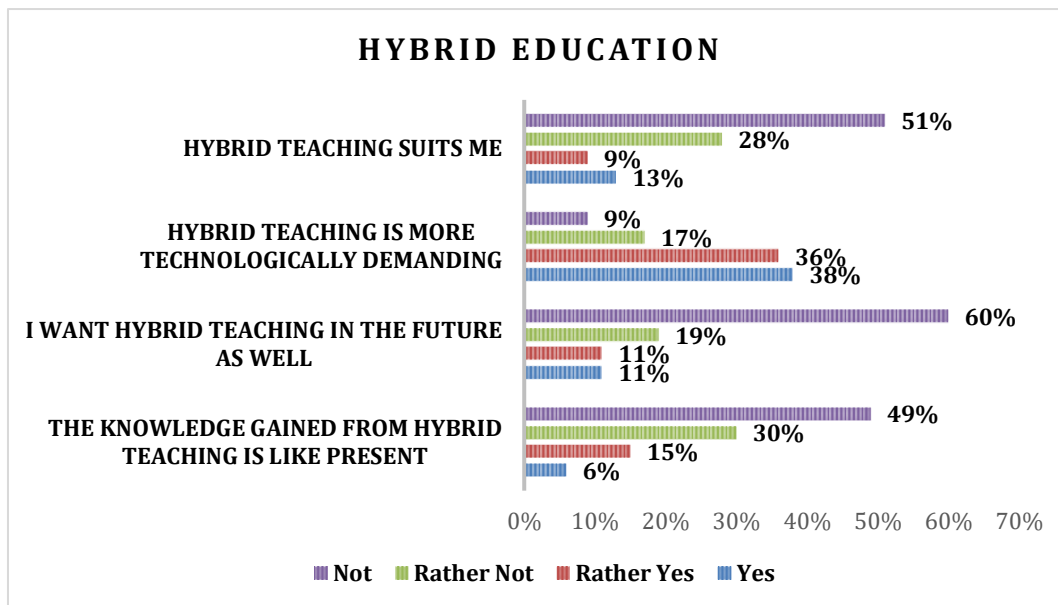


Fig. 3: Hybrid education

4.3.5 Comparison of results with the previous survey by Zelníčková, Vorel & Sládek

An earlier survey conducted by Zelníčková, Vorel & Sládek (2021) focused on the effectiveness of distance learning from the perspective of respondents. The respondents were members of the customs administration and high school students. The current survey is aimed at university students. After processing the obtained data, interesting differences were found between high school students, customs officials, and university students. Secondary school students and members of the customs administration showed less satisfaction with the evaluation of their study results regarding their efforts in distance learning. However, among university students in the autumn of 2021, the opposite view prevailed on the results of distance learning. Here, university students said that they had good academic results. In the original survey, high school students expressed their dissatisfaction with distance learning compared to customs officials who were admitted to distance learning, mainly due to better planning of their free time.

University students said that distance learning did not suit them. This can be related to the opinion of university students, where students stated that the knowledge, they gain in distance learning is not full-fledged compared to full-time teaching. It can be assumed that students prefer personal meetings with teachers.

The original survey also found that both customs officers and high school students cheated. This fact was also confirmed by university students.

The original survey looked at respondents' behaviour in distance learning in the field of procrastination. Both surveys have shown that both high school students, customs officials and university students procrastinate.

The number of respondents who feel isolated was almost equal to the number of students who do not feel socially isolated. In this case, it would be appropriate to conduct separate research to monitor the social isolation of students during a pandemic.

Both surveys show that high school and university students prefer full-time teaching. For customs officials, distance learning is more advantageous because they are likely to be able to organize their free time better.

A high percentage of respondents admitted procrastination. It can be assumed that distance learning is not an ideal model for students. The findings from a survey of university students are also interesting, where students stated that hybrid teaching did not suit them either. This only confirms the fact that full-time teaching is irreplaceable for students of all ages.

5 Discussion

Hybrid teaching is currently a modern trend in teaching. Thanks to the survey, it was possible to find out students' preferences in the field of hybrid teaching. The authors of the survey assumed that university students of pedagogical specializations would prefer hybrid teaching in the current situation.

However, after evaluating the survey, it was found that despite all the experience that respondents could gain from distance and hybrid teaching, they still prefer full-time teaching. This fact is surprising because the respondents themselves stated that they had better academic results. The fact that the students themselves realize that they have to devote more time to their studies and that cheating in the future will not help them to better apply in the field of study, can be assessed positively. Also, the high rate of procrastination due to the inability to control what activities the student engages in, the respondents do not perceive as correct.

The survey did not clearly assess whether university students feel isolated. In this area, it is necessary to conduct further partial research that would monitor the social life of university students.

At the same time, the authors recommend conducting a nationwide survey among high school students and university students to record the development in the preferences of both groups in the field of online teaching and hybrid teaching. The Covid-19 pandemic can be expected to persist for several months and thus have a major impact on education.

6 Conclusion

The Covid-19 pandemic has brought a new perspective to education. Due to the need to reduce social contacts, first distance learning and then hybrid teaching began to be used en masse. Despite all the negatives that distance or hybrid teaching brings to education, it can be said that they are irreplaceable in the current unfavorable pandemic situation. The current generation of students is the first generation to experience long-term distance learning at all levels of schooling. This generation of students is irreplaceable. It can be called generation 0. It is very important to monitor the changes in the whole education system through pedagogical research. Therefore, the authors propose to conduct nationwide research that would monitor Generation 0 for a long time.

At present, it is necessary to support all epidemiological measures that would make it possible not to introduce a nationwide lock-down for full-time teaching at all levels of schools.

References

- EDUin. (2021). Čtyři z pěti učitelů pracovali během distanční výuky více než za běžného chodu škol. Největší překážkou byla klesající motivace žáků [Online]. Retrieved November 28, 2021, from EDUin: Informační centrum o vzdělávání website:
- Elznicová, V., & Gleichová, T. (2021). Vysoké školy reagují na sílící epidemii. Některé budou jednat o distanční výuce [Online]. Retrieved November 28, 2021, from ČT24 website: <https://ct24.ceskatelevize.cz/domaci/3389868-vysoke-skoly-reaguji-na-silici-epidemii-nektere-budou-jednat-o-distanzni-vyuce>
- Fritzová, M. (2020). *Kvalita distanční výuky na katedrách a ústavech historie v době covid-19. Pedagogická Orientace: Vědecký Časopis České Pedagogické Společnosti*, 30(2), 255-265.
- MŠMT. (2020). Metodické doporučení pro vzdělávání distančním způsobem [Online]. In [Online]. Retrieved from file:///C:/Users/Zeln%C3%AD%C4%8Dkovi/Downloads/metodika_DZV__23_09_final%20(3).pdf
- Muni. (2021). MU přechází od 22. listopadu do žlutého semaforu [Online]. Retrieved November 30, 2021, from Muni: Masarykova univerzita website: <https://www.muni.cz/koronavirus/aktuality/mu-prechazi-od-22-listopadu-do-zluteho-semaforu>
- Muni. (2021a). Univerzitní semafor [Online]. Retrieved November 30, 2021, from Muni: Masarykova univerzita website: <https://www.muni.cz/koronavirus/univerzitni-semafor>
- Muni Arts. (2021). Hybridní výuka [Online]. Retrieved November 30, 2021, from Muni Arts: On-line výuka website: <https://www.phil.muni.cz/online-vyuca/vyuca/hybridni-vyuca>

- Muni Arts. (2021a). Hybridní výuka jako doplněk prezenční výuky [Online]. Retrieved November 30, 2021, from Muni Arts: On-line výuka website: <https://www.phil.muni.cz/online-vyuka/vyuka/hybridni-vyuka/hybridni-vyuka-jako-doplnek-prezencni-vyuky>
- Paradiso. (2021). Offline Learning – The Power of Anytime, Anywhere, Any Device Access to E-learning! [Online]. Retrieved November 29, 2021, from Paradiso website: <https://www.paradisosolutions.com/blog/offline-learning/#>
- Zelničková, H., Vorel, D., & Sládek, P. (2021). *INTED 2021* [Online]. In L. Gómez Chova, L. Martínez, & I. Candel Torres, *INTED2021 Proceedings* (1st ed., pp. 7357-7365). <https://doi.org/10.21125/inted.2021>
- Zelničková, H., Vorel, D., & Marinič, P. (2021). Digitální kompetence žáků v souvislosti s COVID-19. In *ICOLLE 2021*.
- Zelničková, H., Vorel, D., & Marinič, P. (2021a). *Využití O365 technologií při výuce ekonomických předmětů na střední odborné škole. In Trendy ve vzdělávání 2021. Trendy ve vzdělávání 2021*. Presented at the. Olomouc: Univerzita Palackého Olomouc.
- Zlámalová, H. (2007). *Distanční vzdělávání - včera, dnes a zítra* [Online]. *E-Pedagogium*, 7(3), 29-44. Retrieved from https://e-pedagogium.upol.cz/artkey/epd-200703-0004_distancni-vzdelavani-vcera-dnes-a-zitra.php
- Zormanová, L. (2017). *Didaktika dospělých*. Praha: Grada.