Desk research report in the project "Preventing post-COVID Social Exclusion Together"

Partial report on education systems during the COVID-19 pandemic in the Czech Republic

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1 Purpose and methodology of the research - characteristics of existing sources, short information about the authors of the study

This document is one of four desk research reports (from all the V4 partner countries). It is the second output of the project "Preventing post-COVID Social Exclusion Together" (Strategic Grant No. 22110213). The project is co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants from the International Visegrad Fund. The mission of the fund is to advance ideas for sustainable regional cooperation in Central Europe. It is implemented by a transnational Research Team composed of:

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The main goal of this project is to support social integration of young people, and their families, residing in rural areas and small towns in less developed regions of Central and Eastern Europe during periods of epidemic threats. This goal is to be achieved through the development of recommendations for civil society on how to successfully create Local Support Groups - Rapid Response Teams in the local environment. This project aims to help reduce the scale of educational and social inequalities in peripheral areas where the introduction of remote education had far more negative effects than in urbanized areas and metropolises.

Each of the project partners developed a separate diagnostic document for the country they represent. The development of a partial analysis is a necessary stage for the implementation of further research activities undertaken in this project.

The documents have a similar structure, however, due to the specificity of the countries some chapters of the partial analysis may differ from each other (e.g. in terms of the statistical indicators or sources used).

This document covers the situation in the Czech Republic.

1.1 Purpose of the research and research issues

In connection with this project, diagnostic research was undertaken in the countries of the Visegrad Group.

The main part of the research will be carried out using the survey method (the technique of the auditorium survey). The survey research is preceded by the so-called "from behind the desk" analysis (desk research analysis). The analysis aims to provide answers to the following questions:

1) What is the structure of the education system in each partner country?
2) How did the SARS-CoV-2 pandemic evolve in the selected country in 2020–2021?
3) What impact did the pandemic have on formal education?
4) What impact did the pandemic have on the social inclusion of young people and their families in the context of social, educational and digital exclusion?
5) Which of the regions of the selected country in the Visegrad Group should be considered peripheral regions and be considered as location for the survey research?
6) What are the examples of good practices implemented to counteract the phenomenon of exclusion (social, educational and digital) during the pandemic?

The structure of this document is determined by the questions listed above.

The purpose of the analysis carried out in the second chapter is to present the education system in the Czech Republic. The analysis takes into account the structure of education, stages of formal education, compulsory education, and legal acts regulating formal education at the central and regional level.

The purpose of the third chapter is to outline the course of the SARS-CoV-2 pandemic in the Czech Republic in the years 2020 and 2021, and to present its impact on formal education. Particular attention was paid to the implementation and continued use of remote and hybrid education, and the impact of the pandemic on the social inclusion of young people, and their families, in the context of social, educational and digital exclusion.

The fourth chapter deals with the selection of the region in which the research will be conducted: a region that meets the criteria of a peripheral region. The results of the analysis presented indicate that Ustecky kraj meets the criteria. The analysis included in the fourth part of the study allowed for the characterization Ustecky kraj in the context of economic development, taking into account such indicators as: unemployment rate, GDP per capita, percentage of long-term unemployment, average salary, and indicators characterizing access to infrastructure. This section also presents the “peripheral areas” of the studied region.

The fifth chapter presents recommendations on how to support regional institutions in counteracting the phenomenon of exclusion during a pandemic. The description of good practices during the SARS-COV-2 pandemic was preceded by the characteristics of potential regional institutional recipients. Then, the legal regulations related to the epidemic situation and the most important recommendations regarding the amendment of legal acts in the context of implementing remote education requirements during a pandemic were indicated. Recommendations on the implementation of good practices aimed at counteracting social and educational exclusion of students (and their families) without or with limited access to the Internet and digital equipment were also presented.

1.2 Qualitative data analysis - desk research summary

Research, that has been conducted and published to date on the topic of the impact of COVID 19 on school practices and the situation of (disadvantaged) families, was conducted mainly through on-line surveys or through interviews. An important source of information are also special surveys organized by the Czech School Inspectorate, a public body responsible for monitoring and evaluation of the teaching quality in schools.

According to the OECD (2021) report which showed the number of days schools were closed between March and December 2020, the Czech Republic, with about 62 instruction days of closure at the primary and upper-secondary level, is very close to OECD average and with fewer days of school closure than other Visegrad states such as the Slovak Republic or Poland.

During the school closures amid the first wave of the COVID-19 pandemic (spring 2020), almost 3 out of 20 lower-secondary students were excluded from remote education, but the situation improved during the autumn of 2020 and winter of 2021. The pandemic had a negative impact on student well-being. For more than a third of students (mainly from disadvantaged backgrounds) the adaptation to remote learning was a significant challenge. As a result, about 2,6 % of primary school students, 5 % of lower-secondary school students and 4,5 % of upper-secondary school students have serious knowledge gaps that are unlikely to be solved during the 2021/2022 school year, as estimated by Czech teachers (Pavlas, Zatloukal & Andrys, 2021).

Studies in the Czech Republic so far dealt with the impact of the pandemic on the whole sector of education with relatively low attention being paid to socially disadvantaged students. Most scholars agree that the impact on this group of students will be more severe compared to the general student population, although empirical evidence is rather scarce or anecdotic. For example, one study (Kovalčík, 2021) found that despite improvements over time, for about 20 % of families the communication with the school was not established; and about one third of parents of disadvantaged students had a problem with homework due to the complexity of the subject matter.

2 Czech education system in a nutshell

2.1 Structure of the education system, stages of formal learning and compulsory education

The Czech public education system has a long tradition dating to 1774, when compulsory school attendance was instituted. The current structure of the formal education system (year 2020/2021) is displayed in the **Error! Reference source not found.**.

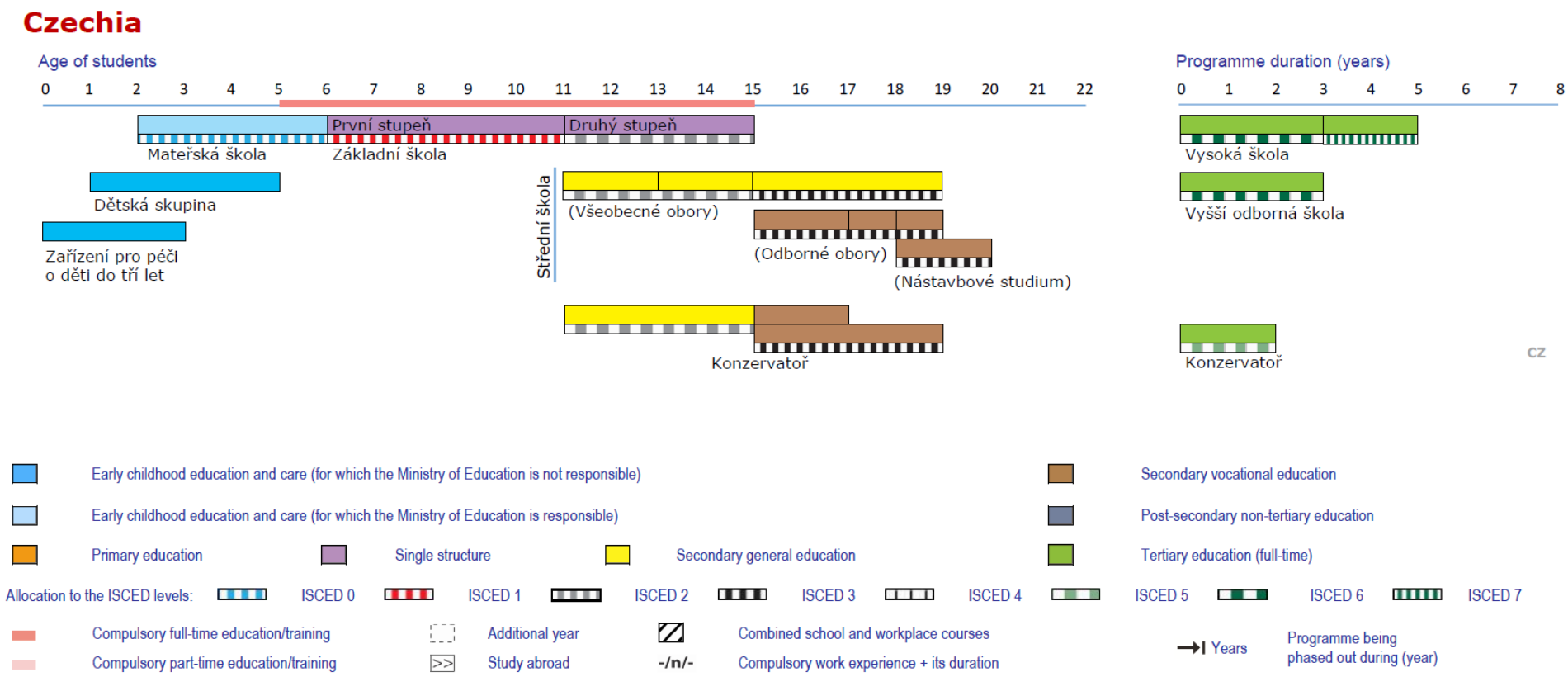

Figure 1. The current structure of the Czech formal education system (2020/2021)

Preschool education is organized and fully publicly funded by the state and may begin in the kindergarten (Mateřská škola) at the age of 2, however, the typical starting age is 3 (there is a legal entitlement to early childhood education and care in kindergarten). Parents may also choose so called "Children groups" (Dětské skupiny), private institutions for early childhood education and care which is overseen by the Ministry of labour and social affairs, but they usually have to pay additional fees.

Compulsory education in Czech Republic lasts 10 years. It includes one year of pre-school and then covers primary (ISCED 1) and lower-secondary (ISCED 2) levels. After completion of primary education in the first level of basic school (Základní škola), most students continue to the second level of basic school. This can either be in the same school, if the basic school has both levels (around two thirds of schools, usually in more populated areas), or in another basic school (around one third of schools, usually in small villages). Around 10 percent of students transfer, after passing the unified entrance examinations in 5th or 7th grade, to an academic-oriented grammar school, so called multiyear gymnasium (Víceleté gymnázium). They may complete their upper-secondary education there. Some artistically gifted students may also choose the conservatory (Konzervatoř), which is aimed at developing artistic talents (playing music instrument, etc.).

After the completion of lower-secondary education at the end of 9th grade, students can generally choose from three different tracks:[1]

1) about 13 % choose four-year academic track schools (Gymnásium) concluded by Maturita examination which entitles them to continue their university studies, as most of them do;
2) about 53 % enter four-year technical track schools (Odborné školy) concluded by Maturita examination, which include a variety of specializations and also a relatively small portion of on-the-job trainings);
3) about 34 % go to three-year vocational schools (Odborná učiliště) concluded by an Apprenticeship certificate; they may take a two-year follow-up course (Nástavbové studium) to undertake Maturita examination.

Entrance to the tertiary level of education (Universities) is dependent on the successful completion of maturita examination and usually also on adequate scores on entrance examinations which are fully in the hands of universities. Following the Bologna declaration, most study programs are divided into three-year Bachelor and two-year Master studies, with the possibility to earn a Doctoral degree in many study programs.

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[1] Shares of new entrants are calculated from figures in MEYS (2020a, p. 88), students of multiyear gymnasia are excluded, as in most cases they continue their studies in the academic track at the upper secondary level.

The current Czech education system has the following **key features**:

- the public education system is highly decentralized with responsibilities distributed among the central government, regions and municipalities;[2] with substantial autonomy granted to schools in terms of budgeting, staffing, school curriculum etc.
- the system is early-tracked, i.e., the first student selection into multi-year gymnasia happens when students are 10 or 11 years old; this early tracking worsens the educational and social situation of regular track schools as the high performers, usually from families with higher socioeconomic status, leave;[3]
- the Czech education system is marked by significant educational inequalities. According to PISA and other large-scale assessment studies, the strength of the link between the socioeconomic status and achievement is above the OECD average, there are also significant regional achievement disparities even after accounting for the average socioeconomic status;
- a strong accent on vocational education and training is traditional, however, no dual education programs (similar to those in Germany or Austria) exist in the Czech Republic;
- relatively low rates of early leavers from education[4] (7,6 % in 2020/2021) compared to the EU average (9,9 %).

2.2 Legal acts regulating formal education at the central and regional level

Among the most important laws governing the formal education system[5] are:

- **Act n. 561/2004 Collection of law, on pre-school, basic, secondary, tertiary professional and other education (The Education Act),** which sets the principles and goals of education, defines framework educational programs as a base for school curriculum, and regulates the organization of schools.
- **Act n. 563/2004 Collection of law on pedagogical staff**, which defines the status of various pedagogical workers (not only teachers, but also educators, school psychologists, teacher's assistants, special education needs teachers, etc.) and their qualification requirements

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[2] ***The Ministry of Education, Youth and Sports*** *is responsible for the state, conception and development of the education system; allocates financial resources from the state budget; sets out the qualification requirements and working conditions of teachers; determines the general content of education from pre-primary to secondary level; approves educational programs of tertiary professional schools.*

The Regions *establish upper secondary schools (ISCED 3); establish conservatoires (ISCED 2, ISCED 3, ISCED 5); establish tertiary professional schools (ISCED 6).*
The Municipalities*: establish nursery schools (ISCED 0); establish basic schools (ISCED 1, ISCED 2); ensure the compulsory schooling. (Eurydice, 2021)*

[3] *Besides higher achievement gaps between regular track and academic track students confirmed by PISA studies, the disciplinary climate in regular track schools is perceived much worse by regular track teachers compared to the academic track teachers (Boudová et al., 2020).*

[4] *Defined as a share of persons aged 18 to 24 who have completed at most lower secondary education and are not involved in further education or training (source).*

[5] *Full list can be found on the web pages of the Ministry of education, youth and sports.*

- **Act No. 111/1998 Coll., on Higher Education Institutions**, which regulates the functioning of universities and other institutions providing higher education, guarantees their academic freedom, defines various types of study programs (e.g., bachelor, master, doctoral) etc.

3 The course of the SARS-CoV-2 pandemic in the Czech Republic and its impact on formal education

3.1 The course of the pandemic in the Czech Republic and its consequences on the field of education (2020–2021)

The SARS-CoV-2 has been brought to the Czech Republic on the 1st of March 2020 by three people traveling from Italy (Štorkán et al., 2021). Since then, the number of infected people has increased and decreased repeatedly till today (August 2021) with four big waves of new cases in March-April 2020, October 2020, January 2021 and March 2021 (as the figure below shows). The Czech government usually quickly adapted its measures against the spread of SARS-CoV-2 to the situation which was present at hand at a given time. Below, we briefly sum up the one-and-half-year development of the spread of the coronavirus in the Czech Republic with accent to consequences to the field of education.

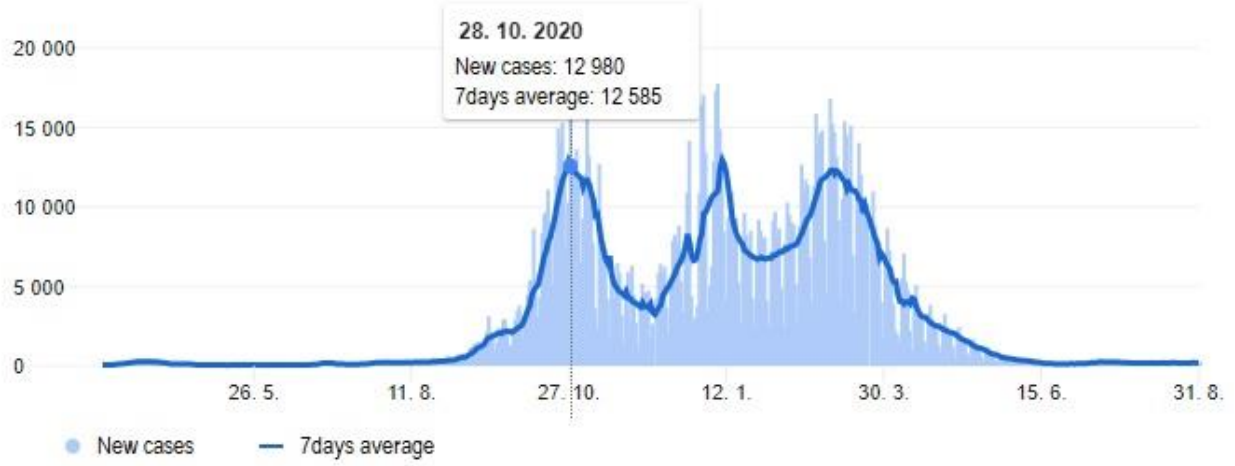

Figure 2. The changing number of new cases of the SARS-CoV-2 infection in the Czech Republic from the mid of March 2020 till the end of August 2021 (source: Statistiky, Google.com)

Two weeks after the identification of the first cases of infection, the Czech government adopted new measures (Government of the Czech Republic, 2021). It declared a state of emergency which was valid from the 12th of March until the 17th of May 2020. One of the first government measures was the cancellation of full-time education in primary, secondary and tertiary educational facilities, universities and other educational facilities (valid from the 13th of March 2020). Besides, the first "lockdown" meant mainly a ban on sporting, cultural, religious and other activities involving more than 30 people, retails sales and sales of services on business premises (with some exceptions), accommodation services and limitation of free movement with the exception of travel to and from work and trips necessary to ensure basic human needs. From the 19th of March 2020, people were obliged to wear a face mask or another covering of the nose and mouth (Government of the Czech Republic, 2021), which raised a great wave of solidarity among people (e.g., many people handmade and distributed masks for others who needed them, as they were sold out in the shops).

At the beginning, only the number of the infected increased with time. Since the second half of March 2020, the number of the cured gradually increased, but initially the number of the infected grew more quickly than the number of the cured. The highest numbers were

registered during April, from May 2020 the situation begun to improve (Statistiky, Google.com). That is why the Czech government started to cancel or relax some strict measures, also partially thanks to the Municipal court in Prague which declared four of the main government measures as non-legal (Government of the Czech Republic, 2021; ČTK, 2020). Step by step, most of the measures were reversed. For example, the limitation of free movement was cancelled, the shops were reopened, services were re-allowed, only educational facilities and schools were not open fully. From the 11th of May, only pupils in the last year of upper secondary schools and conservatories could again return to school, but in a group of a maximum of 15 people. Finally, from the 8th of June 2020, primary schools, secondary schools, conservatories and higher vocational schools were re-opened for all pupils and students who needed consultations, but the limitation on the number of pupils in a group remained (15). During the summer of 2020, schools were required to provide distance education for pupils who could not physically go to school or in the case that the school is closed. Pupils begun to be obliged to attend distance education as part of their compulsory education. The government also agreed to fund schools to acquire technical equipment and software to provide online teaching (Government of the Czech Republic, 2021).

Summer of 2020 was a time for Czech people to relax from a lot of epidemiological measures and related obligations. Concerning the spread of the SARS-CoV-2, the newly infected were identified only in some regions or mass events (Štorkán et al., 2021).

The situation worsened in September 2020. The number of infected started to raise again at the end of August and continued to increase during September and October. This time not in tens, but in thousands per day (Statistiky, Google.com). During September and the first half of October, a lot of measures from the first wave was reintroduced. For example, wearing a face mask indoors was required (from the 18th of September also during school lessons and lectures), limitation and finally closing of most of shops and services, and limitation and finally ban on mass events. The Czech government agreed on new measures almost every day and prepared for the second lockdown. The dynamic development of the situation and government decision making can be easily seen on the government's approach to the education field. Meanwhile, on the 12th of October 2020, the government decided to close universities and secondary and higher vocational schools and conservatories (and ordered to teach online). The second stages of primary schools were obliged to teach half of the students in person, and half online (so called "rotation teaching"). Two days after, closing of all primary schools was declared, too. Pupils and students were obliged to attend (join) school online. And from the 2nd of November, even special schools had to start to provide distance education. Only kindergarten and children's groups (day care centers for the children younger than 3 years old) stayed open and the potential closing of individual organizations could be caused only by identification of some infected children or teachers (Government of the Czech Republic, 2021). The highest number of infected was registered at the end of October, then the situation begun improving until approximately the mid of December when the number of infected started to raise again (Statistiky, Google.com).

With an improving situation and perspective, the government was pressed by the people tired of the lack of freedom, traders, and providers of services to relax several measures at

least before Christmas, so the government did. That is also why the limitation of teaching at schools and universities started to be reversed (Bartoníček et al., 2021). As of the 25th of November, students in the last year of secondary school, post-secondary vocational school, and conservatory programs could go back to school as well as some strictly defined university students. Also, one-on-one lessons were permitted in art and language schools. From the 30th of November, all primary school pupils and the last year of lower-secondary school pupils could return to school in person. The remainder of lower-secondary school pupils as well as students in the corresponding years of grammar schools had to adapt to "rotation teaching" (one week in person, one week online). (Government of the Czech Republic, 2021) Reversal of the measures did not last for long. From the mid of December, the numbers of infected were again raising (Statistiky, Google.com) and the previously relaxed measures were declared again. Pupils and students of most of schools had two days added to their Christmas holiday – 21st and 22nd of December (Government of the Czech Republic, 2021) – and before Christmas, the students, their teachers, and their parents were not sure what a new year will bring to them. The minister of education declared that at least the first and the second grades of primary schools and preschool facilities would be allowed to continue with lessons in person from the beginning of January (Štorkán et al., 2021), but this could change quickly. As the epidemiological situation was getting worse and worse, his promise came true. The rest of students and pupils had to stay at home again and continue with online learning.

From the end of December 2020, the vaccination against coronavirus started. At first it was offered to doctors and medical staff and the oldest people, but step by step it started to be open for younger cohorts and other groups. At the beginning of January, the number of newly infected people reached almost 18 000 a day, but the worst situation was registered in the mid of January (the third wave). (Statistiky, Google.com) As the number of infected was quickly raising, a lot of measures were declared (the ones already used before as well as completely new ones). The state of emergency was extended several times and lasted till the end of March 2021, when it was substituted by a pandemic law allowing the government to manage the situation almost the same way as before (Štorkán et al., 2021). The longer that the restrictive measures were in place, the willingness and devotion of people to follow the rules decreased, and consequently, measures seemed to have rather limited effects. Also, the new mutations of coronavirus spread to the Czech Republic and influenced the increasing number of infected. At the beginning of February, the minister of health told journalists that the government measures ceased to work because people did not respect them (Bartoníček et al., 2021).

The fourth wave of the COVID-19 pandemic came to be true at the beginning of March and (the already limited) freedom was again more limited because it was "forbidden to leave the district, or the City of Prague, in which the person in question has permanent residence or domicile, without good reason, such as travel to a workplace or to a doctor". (Government of the Czech Republic, 2021) The limited movement was strictly enforced by the Czech Police. As of the 3rd of March, employers were required to ensure antigen tests for their employees, and employees without negative test result were not allowed to be at workplace. Most pupils and students at that time had already been at home and attended online learning, only primary schools (the first and the second grades), kindergartens and day care centers for children

under the age of three, special schools and two-year practical schools could provide in person teaching. From the 1st of March 2021, the above mentioned educational facilities were closed as well (Government of the Czech Republic, 2021). March and April 2021 were months of the hardest lockdown in the Czech Republic. From the second half of March, the trend started to again be optimistic, the number of infected people was decreasing although the weather did not fit into the usual Spring weather and it was quite cold even during May 2021 (Statistiky, Google.com; Zaňková, 2021).

This time the Czech government was careful about relaxing measures too quickly. The existing measures could have been reversed only in regions where the situation was considered to be good (according to clear criteria). (Government of the Czech Republic, 2021) That is also why schools were re-opened differently in various regions. The first were Karlovy Vary and Hradec Králové Regions where the youngest children could return to their kindergarten and day care centers from the 21st of April. In the other regions, it was permitted only for children who reached five years of age by the 31st of August 2020 and for children of parents with selected professions and employers (for example nurses and doctors). The next region where the youngest children could again attend kindergartens and children's groups was Plzeň region (26th of April). From the 26th of April, secondary school was also allowed to provide practical training and students in the last grades of higher education institutions were permitted to start practical and clinical instruction. From the 3rd of May, pupils of the lower level of six-year and eight-year grammar schools, the first four years of the eight-year conservatory education programs and lower secondary schools could attend "rotation teaching" again, but only in the Hradec Králové, Plzeň, Karlovy Vary, Pardubice, Liberec, Central Bohemian Regions and Prague, where the situation regarding the spread of the coronavirus was considered as good (the obligation of "rotation teaching" for schools in the mentioned regions was cancelled by the 17th of May). Other groups of pupils and students were allowed to attend in-person teaching from the 10th of May 2021. Pupils and students in reopened schools had to be tested, at first twice a week, and later only once a week. Finally, since the 8th of June, pupils, students and teachers were not obliged to cover their mouths and noses during lessons and lectures (in all regions except for the South Bohemian, Liberec and Zlín Regions). Not only school-related measures were relaxed. Step by step, most of the restrictions concerning shops and services were again cancelled, but not all of them (Government of the Czech Republic, 2021). Although, the number of infected people was stable or declining (several tens of new cases a day) and a great number of Czech people probably had an immunity against coronavirus (half of the Czech population was vaccinated and many others infected and cured by August 2021 - Šeliga, 2021), the government still insisted on restrictions such as covering of the face inside buildings or limitation on travelling. A lot of services, cultural, sport and other events continued to remain accessible only for vaccinated people, people who are cured (180 days after the infection) and people with a negative test result (Government of the Czech Republic, 2021). At the end of the summer holiday, the ministry of health declared that closing the schools again is not an option in the case of a worsening epidemiological situation (MLD, 2021).

3.2 Impact of the pandemic on the area of formal education

Although, it may seem that the Czech pupils and students were off school for a very long time, the OECD report (2021) shows that a lot of developed countries had a similar approach to school closures and that the number of days that schools were closed increases with the level of education. "On average across the 30 countries with comparable data for all levels of education, pre-primary schools were fully closed for an average of 42 days in 2020, while primary schools closed for 54 days, lower-secondary for 63 days and upper-secondary schools for 67 days." (OECD, 2021, p. 8) **The Czech Republic is very close to OECD average, with fewer days when schools were closed than other Visegrad states such as the Slovak Republic or Poland**, as **Error! Reference source not found.** shows.

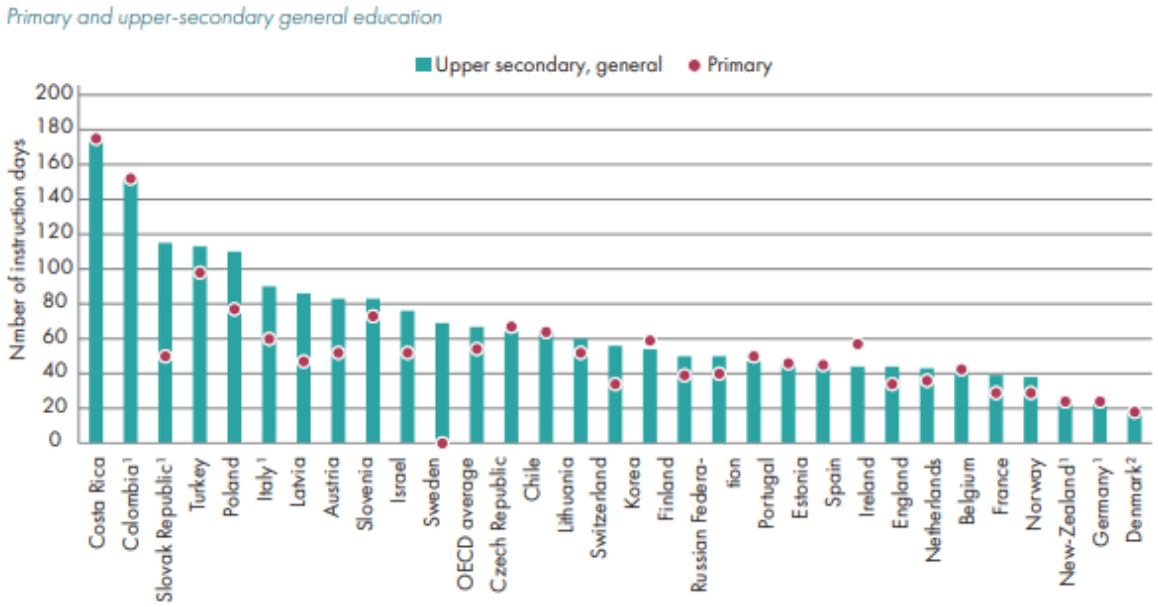

Figure 3. Number of instruction days (excluding school holidays, public holidays and weekends), where schools were fully closed in 2020 (source: OECD, 2021)

After the first year of the SARS-CoV-2 pandemic, during February 2021, primary schools remained fully open in 30% of the 33 monitored countries, lower-secondary schools were open in 24% of the countries, and upper-secondary schools were only open in 9% of the countries (OECD, 2021, p. 7). The Czech Republic, which faced the fourth wave at the time, belonged to the countries with the most careful and strict approach to the closure of schools (see the next figure – OECD, 2021).

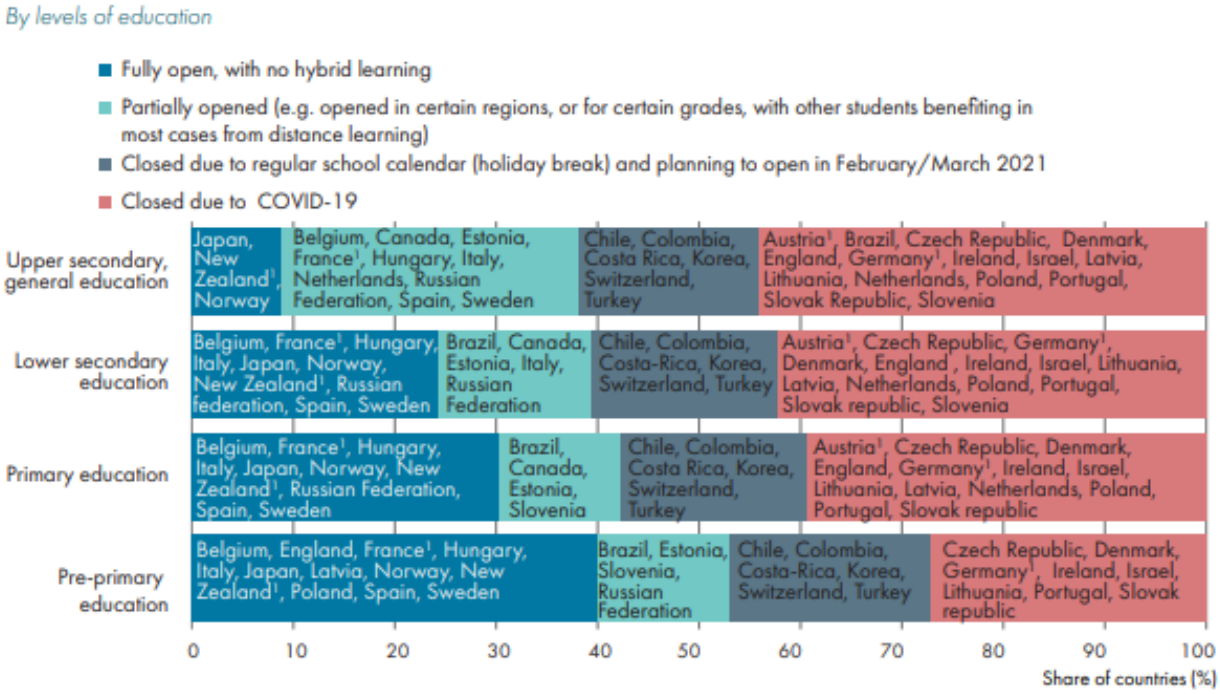

Figure 4. School closures as of the 1st of February, 2021 (source: OECD, 2021)

The SARS-CoV-2 pandemic significantly affected the Czech formal education in many aspects. According to the Czech school inspectorate analysis (2021) of the one-year experience with distance or hybrid education in the Czech schools, the distance education reality, which the government decisions brought to schools, was affected by several big problems such as:

- technical problems – a lack of necessary equipment on the part of teachers as well as pupils and students (especially socially disadvantaged ones);
- educational problems – a lack of time to teach the entirety of the curriculum (most teachers reduced the curriculum to the necessary minimum consisting of the Czech language, Mathematics and a Foreign language);
- inclusion/exclusion problems – impossibility of the inclusion of all pupils and students in distance education for many reasons (not only a lack of equipment or knowledge to use the equipment, but also the inconvenient conditions for learning at home);
- motivational problems – sufficient motivation to effectively participate in distance education is needed on the part of teachers (task of school directors) as well as pupils and students (task of teachers and parents);
- social and psychological problems – isolation, lack of personal contact, worsened possibilities of communication on all parts and limited possibilities of teachers and other school staff to solve problems such as bullying.

But as the analysis of the Czech school inspectorate (2021) showed, the situation in 2021 is much better than it was in 2020. Thanks to financial intervention of the state, schools were equipped with the necessary digital technology. More intensive work with digital technology had impact on better digital competences of teachers as well as pupils and students. The schools found out how to adapt the school curriculum to an online form although they still do not fully benefit from all the possibilities that distance education offers.

According to Jann, Münich and Zapletalová (2021), the government decision about long-term prevalence of distance education could have very negative impacts on the future (professional career, earnings) of present pupils and students. Besides, the losses caused by closures of in-person teaching are not as easily visible as the losses in the productive sectors of the economy, but they can be calculated and they will manifest themselves years later in the form of reduced productivity, earnings and public budgets.

3.3 Impact of the pandemic on the social inclusion of young people and their families (social, educational and digital exclusion)

This chapter presents a literature review on the issue of the COVID-19 pandemic impact on the area of formal education, with a special focus on the education of socially disadvantaged children in the Czech Republic.

Existing inequalities in prepandemic-times

Even in **pre-pandemic times**, the Czech education system was marked by significant inequalities that were reflected by the education policymakers already back in the 1990s (Kotásek et al., 2001). Many academic and government sources that map and analyze prevailing inequalities that already exist, and the current education policy strategic document for years 2030 and beyond, advocate the reduction of educational inequalities in the Czech education system as one of the two main priorities (Fryč et al., 2020).

The main issues regarding the existing inequalities are the following:

- The Czech Republic has a comparatively very strong relationship between the level of one's educational attainments and their parents' education. PISA studies and other large scale assessments found that the strength of the link between student achievement and their socioeconomic status is above average. Furthermore, the Czech Republic has a very high share of low-performers (about 30 % of students), which is higher than the shares in some comparable post-socialist countries. Also, there is a very strong link between formal education and income and labor market success. Thus, **the educational system is not very successful at mitigating the negative effects of low socioeconomic backgrounds** (Prokop et al., 2021).
- This can be attributed, to a large extent, **to the high level of academic stratification of schools**. This is nurtured by early tracking in education, which occurs already at lower-secondary level of education, and leads to increasing achievement gaps between those in academic tracks and those in regular tracks (Straková, 2010). In addition, unlike in Finland, Estonia or Poland, there are significant inter-school achievement differences. For example, in reading, PISA 2018 shows above average inter-school variation in average reading performance (37 %), whilst in Poland it is about 18 % and in Finland about 8 %. At the same time, the intra-school variance of student achievements is below the OECD average (OECD, 2019, p. 86).
- Another problem is that of **spatial dimension**. Some regions (including the Ustecky region) of the Czech Republic are comparatively disadvantaged, and even after accounting for individual socioeconomic status, the average achievements of students attending schools in these regions are lower than of their peers living elsewhere. There are significant differences in the average student achievement among regions, for example, whilst students in Ustecky Region on average achieve approximately as much as an average Serbian student, students in Prague reach the level of average Japanese student (**Error! Reference source not found.**).

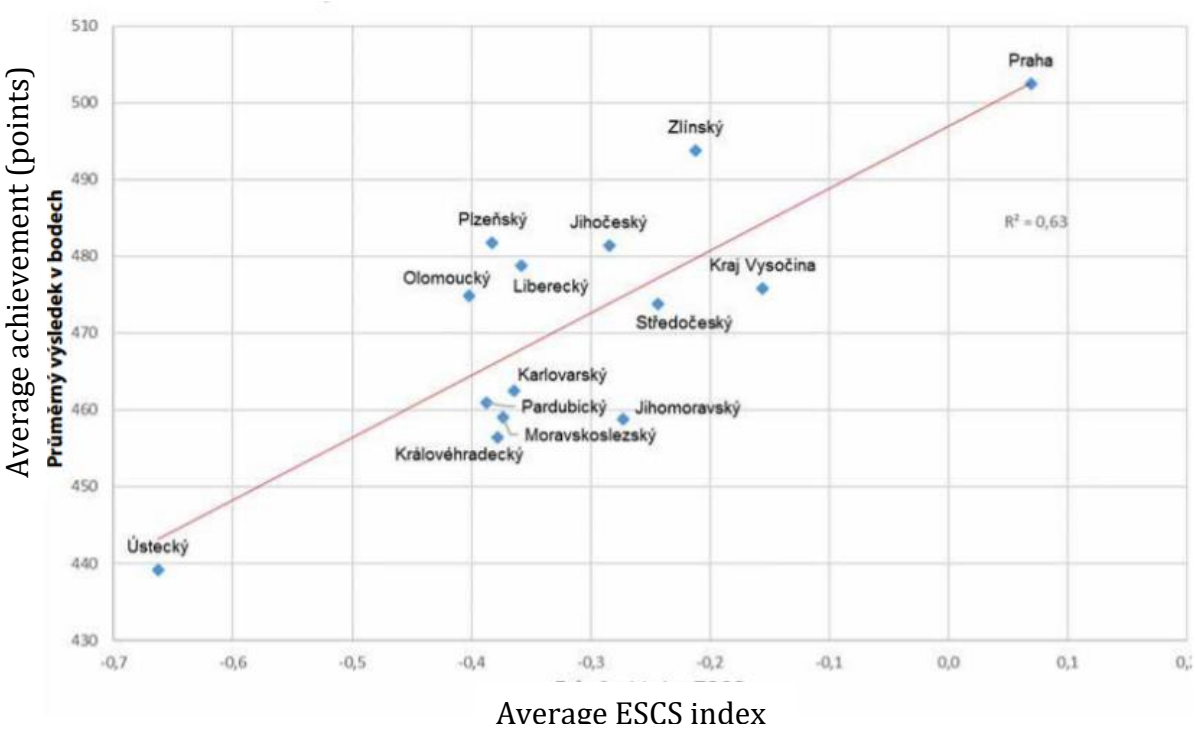

Figure 5. Average reading literacy scores (PISA 2018) and average ESCS index in regions of the Czech Republic (source: Blažek et al., 2019, p. 43)

- „**Residual schools“** (i.e., those with low average student ESCS) provide bad learning environments that may have negative influence on gifted students. Students in these schools have about 5 – 10 % lower probability to aspire for university education compared to their peers in socioeconomically „average“ schools, even though they have the same results in numeracy, literacy and science testing (Prokop et al., 2021).
- Segregation **represents another challenge**. In the Czech Republic, there are more than 80 schools in which the majority of students are Roma, and almost 60 schools where they represent at least one third of population. As the system is decentralized, some school founders (municipalities) actively prevent the segregation by employing appropriate policies, but many school founders actively create such segregated schools or do nothing to prevent the exclusion (Prokop et al., 2021).

These existing inequalities are likely to be exacerbated and exposed by the COVID-19 pandemic and school closures.

Impact of the pandemic on inequalities

The first published research on the topic of the impact of the pandemic on inequalities is the study by Brom et al. (2020). They surveyed a large sample of 9810 parents, which was not representative as participation in the survey was voluntary and survey administration was conducted online. Generally, the study found that teachers most often assign tasks, but to a smaller extent actually explain tasks and/or actually teach the subjects, and parents would prefer that teachers engage in the latter two activities more often. Despite quite a large sample, the survey reached only a fraction of people with low socio-economic backgrounds, and thus brought only limited knowledge about the impact of school closures on disadvantaged youth during the first wave of the pandemic.

Czech School Inspectorate's representative survey (Česká školní inspekce, 2020) among school principals found that 11 % of primary school students and 16 % of basic school (primary and lower secondary school) students did not communicate on-line with the school during the first Covid-19 lockdown in the spring of 2020, mainly due to the inaccessibility of a computer or internet. School principals reported that the schools are trying other communication channels to reach these students, but with varying luck. Thus, about 9500 students were not being educated during this period, as concluded by the CSI. Although, internet accessibility significantly improved in the past years in general, there are still households with limited or no access to the internet, especially among low-income groups. According to the Czech Statistics Bureau (2019), in 2018, 98 % of households with children possessed an internet connection. However, among the households in the lowest income quartile, 53% reported having no access to the internet.

A follow-up study by the Czech School Inspectorate (2021) mapped the situation in schools after one year of experience with the pandemic and **showed significant improvements in student participation in the remote instruction**. Surveyed principals attributed this improvement to legislative changes (see 5.3) that made distance education obligatory, to improved accessibility of ICT equipment, and also to improved communication and "habituation" of all stakeholders to the "new normal". The report mentions, that low motivation is a problem hindering participation in remote instruction in schools, especially among socially disadvantaged students, and states that schools with low rates of participation are located, above all, in Ustecky region (p. 15–17).

This echoes the study by Federičová and Korbel (2020) who estimated that the **impact of COVID-19 pandemic on education is most severe in regions with lower teacher qualifications** (i.e., Ustecky kraj, see 4.2), but also found that the school ICT infrastructure in structurally disadvantaged regions, including Ustecky Region, seems to be rather above average compared to the rest of the republic. Jann et al. (2021) then add that the capability of the Czech education system to level the playing field and compensate for socioeconomic disadvantage is already comparatively low, and that the school closures will deepen the existing inequalities in the future. However, quantitative empirical data allowing the evaluation of the real impact of school closures on the achievement gaps is not yet available.

Recent studies by a private research company PAQ Research (Bicanová, Korbel, Gargulák, & Prokop, 2021; Bicanová, Gargulák, & Prokop, 2021) compared the situation of students before and after the pandemic using representative samples and previous findings from various studies (TIMSS, PISA etc.). They found that the school closures affected students in many different ways. Importantly, **more students preferred going to school (in person)** compared to pre-pandemic times. The study found that higher shares of students of 4th and 5th grades (80 %, +15 p. p. compared to pre-pandemic) stated that they liked going to school (in person), which suggests that more of them realized how important the socialization function of the school is (meeting peers, teachers). More negative views were expressed by students who were unable to follow the school instruction. School closures and other pandemic measures had a **negative impact on student well-being**. An increase by more than 20 percentage points of students felt a bad mood more than once per week, and this finding is

consistent across various grades (5th, 7th and 9th). Poor student well-being is more often present among students of incomplete families, among students of less educated parents and among students from households in which another language than Czech is spoken. **Adaptation to remote learning was difficult** for more than a third of students. About 36 % of students (mainly from disadvantaged backgrounds) claimed they were unable to follow remote instruction. Also, **the availability of ICT in homes was not optimal.** According to the survey findings, 41 % of primary and lower-secondary students used a device that was shared with other family members or borrowed.

A study conducted by the Czech School Inspectorate and published before the beginning of the 2021/2022 academic year (Pavlas, Zatloukal, & Andrys, 2021) focused on the return of students back to „standard" schooling. Based on teachers' (n=27 815) reports, the study estimated the number of students with serious knowledge gaps to be 14,5 thousand at the primary level, 22 thousand at the lower-secondary level and 18 thousand at the upper secondary level of education. These knowledge gaps are, according to teachers, so large that they may not be solved during the 2021/2022 school-year. Most of these students are located in Ustecky kraj, followed by Liberecky, Karlovarsky and Kralovehradecky Regions.

The studies mentioned so far dealt with the impact of the pandemic on the whole sector of education, while paying relatively low attention to socially disadvantaged students. Although, most scholars agree that the impact on this group of students will be more severe compared to the general student population, empirical evidence is rather scarce or anecdotic. One exception is a rapid survey organized by Člověk v tísni (NGO working with socially disadvantaged groups) and data collected in the field directly from 801 socially disadvantaged families at the end of 2020. Though not strictly representative of the target group, the results provide a good overview of the problems encountered by these disadvantaged families:

- Despite improvements over time, for about 20 % of families, communication with the school was not established;
- As synchronous (live) instruction occurred more frequently, so did the participation of disadvantaged students;
- More than 25 % of students did not understand the school curriculum, and about 20 % encountered technical problems with ICT;
- 80 % of teachers checked the assigned tasks on a regular basis, but only half of them provided specific and targeted feedback;
- About one third of parents had a problem with homework due to the complexity of the subject matter (Kovalčík, 2021).

Some qualitative evidence is already available through completed theses. For example, Brixiová (2021) queried several teachers about their experience in remotely educating socially disadvantaged students. They reported that the loss of a regular routine in a known environment has led to demotivation and frequent absenteeism. Very often the students lacked an appropriate learning environment at home and sometimes were even ashamed of their home environment which led them to turn-off their cameras and passivity. More positively, teachers felt that parents of these students were more involved in their child's school learning, school issues, and in the communication with teachers compared to the "normal" state of things. They also perceived that parents (and students) improved their ICT

skills during school closures. Also, thanks to remote instruction, teachers became more aware of the unfavorable home environments of their students, and led them to better understand their situations.

4 Characteristics of Ústecký region

The Czech Republic is divided into fourteen administrative units – regions (in Czech: *kraje*). The regions differ in terms of their economic and social situation, with Prague (the capital) being the region with highest average socioeconomic status of its inhabitants. On the other hand, there are also socioeconomically disadvantaged regions such as Moravskoslezský region, Karlovarský region and Ústecký region (red color in the **Error! Reference source not found.**), which is the focus of this Visegrad project.

Figure 6. Regions of the Czech Republic (source: rajmineralu.cz)

4.1 Economic situation

The Ústecký region lies in the North-western part of Czech Republic and belongs to the group of fundamentally disadvantaged regions with a marked history. After World War II, the German speaking inhabitants were forced to leave and were displaced by Czechoslovak inhabitants. However, rural and more remote areas of the region, unlike larger cities, were and still remain relatively abandoned. The relative prosperity of the region in the second half of 20th century can be attributed to the intensive (heavy) industry and intensive (brown) coal mining. The breakpoint came in the 1990s with profound social and economic changes after the fall of the communist regime (e.g., introduction of market mechanisms, a shift towards a more service-oriented economy, the stress on the ecology), which led to the fall or stagnation of many industrial sectors, and also to the attenuation of brown coal mining. Thus, many industrial objects in the region remained abandoned and are not in use anymore, and other ecological burdens (traces of brown coal mining) prevailed. With the closure of many factories and production firms, many people previously working in these areas became unemployed. Despite numerous state initiatives to support the region by bettering the infrastructure and providing additional funds, economic problems prevail. Although, the region could potentially profit from bordering with Germany, the geographical barriers (Ore Mountains at the border) and insufficient infrastructure (roads, railways) hinders the cooperation. Besides other implications, COVID-19 pandemic also struck hard the tourism in the region (e.g., despite the growing trend in the preceding years, the number of visits to the The Bohemian Switzerland National Park decreased in 2020 following the pandemic, see Salov, 2021). The poor economic situation of the region is reflected in many socioeconomic indicators, as elaborated below with a help of the figures from the Czech Statistics Bureau (2021).

Error! Reference source not found. shows that the difference in GDP per capita between Ustecky region and the overall GDP per capita in the Czech Republic is growing over time, with a 17 % difference in 2000 up to 28 % in 2019.

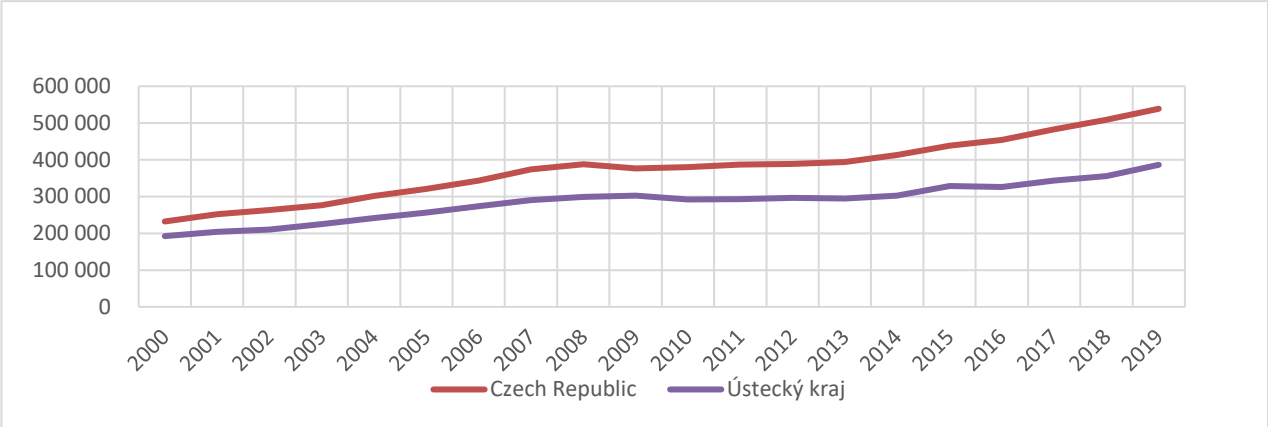

Figure 7. GDP per capita (in CZK), source: Czech Statistics Bureau (2021)

Despite the relatively low GDP per capita, the wages in Ustecky kraj are relatively high (**Error! Reference source not found.**).

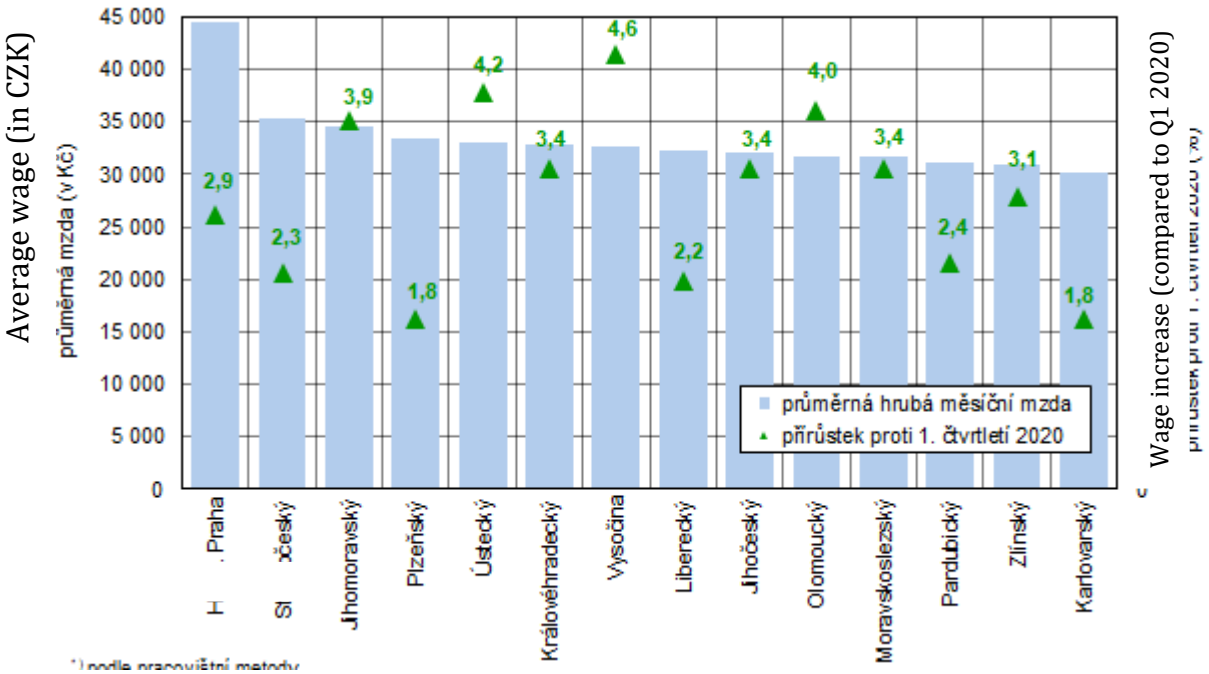

Figure 8. Average wages in Czech Regions (Q1 2021), source: Czech Statistics Bureau (2021)

Unemployment rates (**Error! Reference source not found.**) as well as their differences between Ustecky kraj and the Czech Republic have decreased over time between 2000 and 2019 (the available data has not yet captured the effects of the COVID-19).

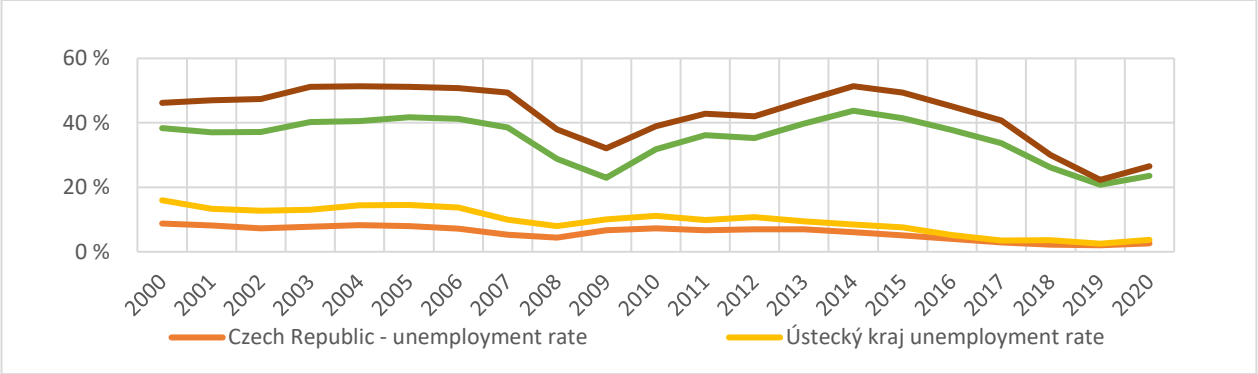

Figure 9. Unemployment statistics (source: Czech Statistics Bureau, 2021)

Note: Long-term unemployment shows a share of job-seekers registered by the labor office for more than one year in relation to the total number of job-seekers registered by the labor office in the respective region

An indirect indicator of poverty and economic problems is also the share of the regional population in distrain (seizure of property due to unpaid debt), which is the highest in Ustecky region. The share of people aged 15+ in distrain is almost 17 % (compared to national average of 8,6 %), with the sub-region Most having every fifth 15+ person in distrain (Mapa exekucí, 2021).

The share of households with available access to the internet in the Ustecky region is under the republic average. Whilst in the CR, 81,1 % of households possess an internet connection, in the Ustecky region, only 74,8 % of households had access to the internet in 2019 (Czech Statistics Bureau, 2021).

4.2 Educational situation

The educational situation of the region (compared to other regions in the Czech Republic) is very poor, and again, this can be shown using multiple indicators. The Czech School Inspectorate summarized the regional situation in a special publication (Česká školní inspekce, 2019) from which most of the information presented in the consequent text is drawn.

Results and outcomes of the education

Student results in an international large scale assessment display a significant gap between the Ustecky region and most other regions in the Czech Republic. For example, in PISA 2015, the Ustecky region had **the highest share of students who did not achieve the second level of the numeracy skill**, which is believed to be the required minimum for effective functioning in the society. Whilst in Ustecky kraj, there are about 37 % of such 15-year old students, in Prague there are only about 13 %. Consequently, these low levels of numeracy (closely related to financial literacy) explain the high prevalence of negative social phenomena such as a very high number of distrain (see the section 4.1). Low levels of literacy mean that graduates have further problems in finding and analyzing information in media on their own, they have very poor orientation in the various contemporary situations and cannot meaningfully make use of the information they receive (p. 10). In national testing of 9th graders by the Czech School Inspectorate in Mathematics, Czech and English language (core subjects), students in Ustecky kraj scored the worst or second worst in the inter-regional

comparisons. Similarly, students in Ustecky kraj achieved the worst results in the centralized state examination for upper secondary education (p. 16), and also the worst results in the centralized state upper secondary school leaving examination (p. 18). Further, Ustecky region has the highest share of students who do not further continue their studies (at upper secondary education) after finishing the compulsory education, i.e., lower secondary education level (5,5 % compared to 2,7 % of the national average) (p. 27).

Also, the educational structure of the region leans towards higher shares of formally low educated people compared to the national average. In the group of people aged 15+, only basic education (i.e., at most lower-secondary) was attained by 22 %, but the average in the republic is 17 %; similarly, tertiary educated people represented 7,6 % of the population in the region, but 12,5 % nationally (KAP-Ústecký kraj, 2019, p. 12).

Educational infrastructure and environments for teaching and learning

The report of the Czech school inspectorate states that about 50 % of the unfavorable educational results (see previous section) can be explained by the socioeconomic status (p. 44). Students in the Ustecky region have on average one of the lowest socioeconomic statuses of all fourteen Czech regions (p. 21) and this structural factor is very difficult to influence with regional policies. However, several other factors related to student outcomes are unfavorable in the Ustecky region. These factors also contribute to explanation of the low student achievements and other educational outcomes.

Above all, **the share of unqualified teachers** working in schools in the Ustecky region is **one of the highest** in the Czech Republic. In 2018, over 8 % of teachers did not possess a teaching qualification[6] (compared to 5 % average in the Czech Republic), only two regions displayed higher shares of unqualified teacher workforce; and since 2016 there is a rising trend in the share of unqualified teachers in the region. Another problem is the specialization of teachers. The Ustecky region shows **one of the highest shares of lessons** in 2019 in secondary education that were **taught by teachers who were not trained to teach the specific subject** (39 % of the total number of lessons compared to 27 % nationally in lower secondary education).

Further, the **student absenteeism is one of the highest in the republic**. On national average, students are absent 91 hours per year in lower secondary education and 160 in upper secondary education, but in Ustecky region, the numbers are 104 hours, and 201 hours respectively. Much higher are also the unexcused absences in the Ustecky region (in lower secondary education, on average 2,2 hours per student each year compared to 0,9 hours per student nationally; in upper secondary education, 15 hours compared to 8 hours nationally).

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[6] *I.e., they did not comply with the legal requirements of formal training in a university program for teacher preparation, nor did not participate in shortened teacher training programs that would lead to getting such a qualification.*

4.3 Description of the region's peripheral areas

Socially excluded areas

According to a study advocated by the Ministry of Labour and Social Affairs (Čada et al., 2015), 89 socially excluded areas were located in Ustecky region in 2014.[7] This is an increase of 41 % compared to the year 2006 and the highest number of such localities among all Czech regions. The report estimates that 36 – 38,5 thousand people lived in these socially excluded areas in the Ustecky region, i.e., one third of the total estimated number of people living in such areas in the Czech Republic (Čada et al., 2015, p. 35).

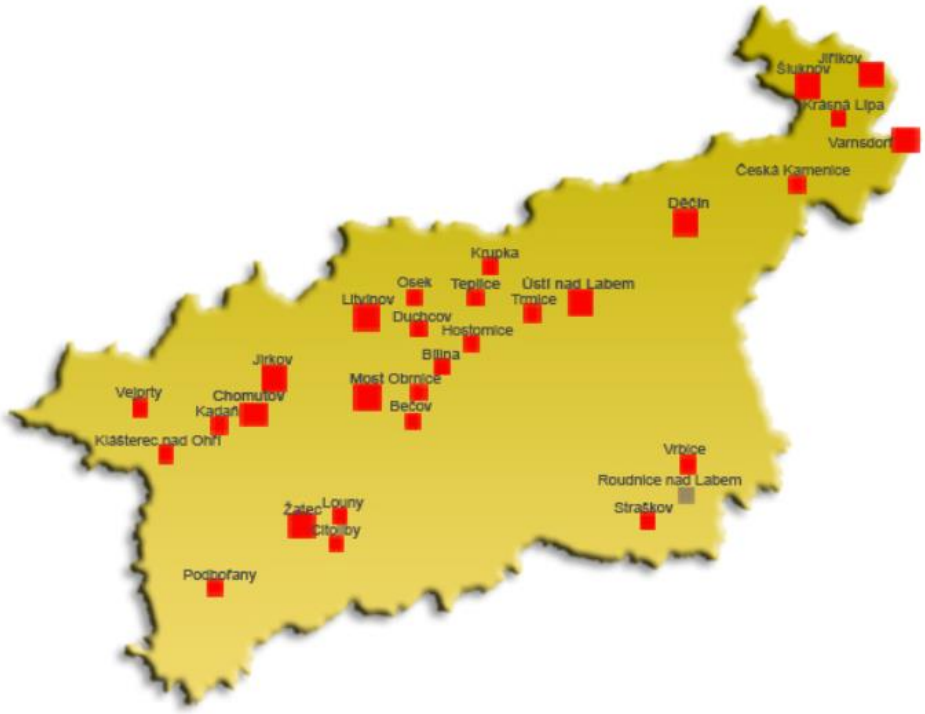

Figure 10. The map of socially excluded areas in the Ustecky Region (source: Mapa sociálně vyloučených lokalit, 2021)

Among the most infamous localities are settlements in Janov (town of Litvínov), Chanov (town of Most), and Šluknov hook (Šluknovský výběžek) in the northern part of the region. Majority of inhabitants in these socially excluded locations are Roma. Janov and Chanov are blocks of flats built in 1970s, and since then almost no renovation works were done and the living conditions are poor, some households do not even have access to drinking water or electricity. Recently, a part of the blocks of flats was demolished and a new community center

[7] *A socially excluded area is defined by Čada et al. (2015, p. 14) as "a locality concentrating more than 20 people who live in inappropriate living conditions (indicated by the number of state minimum living subventions), who live in a space with physical or symbolical boundaries (indicated by external identification)."*

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was built in the place, and local inhabitants help with renovations of the remaining blocks of flats (Němec, 2021).

Figure 11. Inhabitants of the Chanov locality participate in repair works of their settlements (source: the archive of Michal Němec, 2021)

In 2011, Šluknov hook (and the towns of Varnsdorf, Rumburk or Šluknov in particular) was the center of intense riots. Protesters demanded that the government acts against the "poverty business"[8], which brought many Roma immigrants from other parts of the republic to the area and increased criminality and insecurity among the majority, by adding more policemen. Currently, the situation calmed down, but the core of the problems in the region remain. Many state, church-related or non-profit organizations such as church charities, the low-threshold service providers, afterschool clubs and play-centers and other organization that offer interest-based education and that focus on the prevention of risk behavior work in the area to help improve the situation.

Okresy (districts) chosen for sampling

There is also a significant variation of the poor economic, social and educational situation within the Ústecký region. Thus, further analysis was conducted to provide a more detailed analysis of districts (administratively one level below the regional level) in the Ustecky region (see **Error! Reference source not found.** for a map) to identify the most disadvantaged and most peripheral areas within the Ustecky region.

[8]*At the time, the number of Roma immigrants in these areas rose. According to some accounts, some house estate agencies were buying the houses inhabited by Roma in other parts of the republic (to renovate them and re-sell with profit) and consequently relocate them to areas in Šluknov hook (tyden.cz, 1 September 2011).*

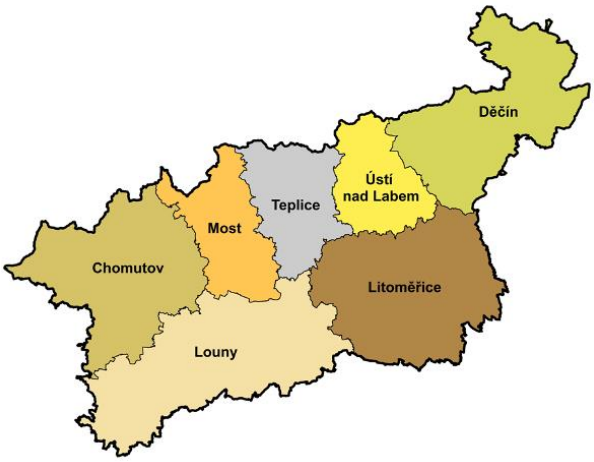

Figure 12. Districts of the Ustecky Region (source: Czech Bureau of Statistics of the Ustecky region, 2021)

Table 1 shows the general indicators used to identify the peripheral areas (districts) within the Ustecky region. As can be seen, the districts do not differ too much in these indicators. However, the indicators point mainly to three districts, the **Louny, Most** and **Chomutov** districts, as those with the worst socioeconomic situation within the Ustecky region.

Table 1. Comparison of districts within Ustecky Region

		Region total	**Děčín**	**Chomutov**	**Litoměřice**	**Louny**	**Most**	**Teplice**	**Ústí nad Labem**
Demographics and geography	Number of inhabitants	**817 004**	128 449	124 600	119 177	86 364	110 933	128 830	118 651
	Surface area (km²)	**5 339**	909	936	1 032	1 121	467	469	405
	Infant mortality rate (%)	**4,0**	3,9	3,8	1,7	**8,4**	3,8	**5,6**	1,7
	Male life expectancy (years)	**74,3**	**73,7**	74,9	73,8	**73,1**	**73,7**	75,0	74,3
	Female life expectancy (years)	**80,4**	79,5	80,5	79,9	**78,9**	**79,2**	80,9	80,4
	Urban population (%)	**79,3**	85,0	83,7	**60,1**	**61,9**	90,3	82,5	86,3
Economic and labour situation	Unemployed persons (%)	**3,90**	4,12	**4,85**	2,92	4,32	**4,58**	2,64	4,02
	Number of candidates for one advertised vacancy	**2,2**	**4,2**	1,0	2,1	2,5	3,6	1,8	**5,9**
	Average percentage of temporary incapacity for work	**5,089**	5,290	4,700	5,260	**5,943**	4,236	**6,046**	4,768
Healthcare	Population per physician	**267**	**354**	313	262	**394**	295	300	146
Social security	Average monthly elderly pension (single pension)	**13 299**	**12 883**	13 295	13 326	**13 178**	13 615	13 368	13 491

		Region total	Děčín	Chomutov	Litoměřice	Louny	Most	Teplice	Ústí nad Labem
Safety	Registered criminal offences per 1 000 population	**20,8**	21,0	**23,7**	14,7	15,2	**26,7**	19,9	23,5
	Traffic accidents per 1 000 population	**13,8**	12,3	11,8	14,3	**18,5**	11,0	11,5	**18,4**
Politics and policy	Participation in elections to the National assembly (2017)* in %	52,38	52,77	**49,3**	59,14	54,45	**47,56**	51	52,87
	Presidential elections participation (round 2) in %	57,75	57,96	**54,61**	64,34	60,36	**53,73**	55,92	58,01
Educational composi-tion of the population	Population 15+ with tertiary education (%)	8	**6**	**6**	8	8	7	7	10
	Population 15+ with below upper-secondary education (%)	22	22	**23**	20	22	**23**	22	19

Source: Czech Bureau of Statistics of the Ustecky Region (2021), most recent data are presented (mainly years 2019, 2020 or 2021)

* the national rate of participation was 60,84 %.

5 Recommendations concerning the support of regional institutions in counteracting the phenomenon of exclusion during any pandemic

5.1 Characteristics of potential institutional recipients

Table 2. A list of potential institutional recipients

Name and type of institution (public / NGO / commercial)	**Registered office address, including region**	**Brief description of the institution (areas of activity, history, etc.)**
The Agency for Social Inclusion / Agentura pro sociální začleňování (public entity)	Ministerstvo pro místní rozvoj ČR – Odbor pro sociální začleňování (Agentura) 4D CENTER – Kodaňská Business Centrum Kodaňská 1441/46 Praha 10 Prague Region	The Agency for Social Inclusion has been established by the Ministry of the Regional Development of the Czech Republic to provide support to local Governments in the process of improving social inclusion. It supports local Governments to pursue their role and to ensure or help to ensure equal access to education, housing, healthcare, employment, social services and security for all citizens. The Agency supports measures that help local administrations in the process of social integration of people at risk of social exclusion and in the development of socially excluded areas on an individual basis (in a tailor – made manner) which benefits all those involved. The Agency's mission is to bring together local actors to work together on social inclusion. The Agency supports an interdepartmental approach and connection between the public administration and the non-profit sector.
The Ministry of Education, Youth and Sports (MEYS, MŠMT in Czech) (public entity)	Ministry of Education, Youth and Sports Karmelitska 529/5 118 12 Prague 1 Prague Region	The Ministry of Education, Youth and Sports (MEYS, MŠMT in Czech) is responsible for the public administration in education, for developing educational, youth and sport policies and international cooperation in these fields.
Department of Education, Youth and Sports, Regional office of Ustecky Region (public entity)	Odbor školství, mládeže a tělovýchovy Ústecký kraj Velká Hradební 3118/48 400 02 Ústí nad Labem Ustecky Region	The department of the local (regional) government responsible for matters of education (e.g., educational finance allocations and subventions, the running of upper-secondary schools etc.)

Name and type of institution (public / NGO / commercial)	Registered office address, including region	Brief description of the institution (areas of activity, history, etc.)
Ústí regional inspectorate, Czech school inspectorate (public entity)	Ústecký inspektorát České školní inspekce W. Churchilla 6/1348, 400 01 Ústí nad Labem Ústecký Region	The Czech School Inspectorate is an administrative body of the Czech Republic and an organizational component of the state. It controls, evaluates, and analyses operation of nursery, primary, secondary and vocational schools, as well as school facilities. It consists of 14 regional inspectorates (one in each region), with one of them located in the Ustecky region.
EDUin, o.p.s. (NGO)	EDUin, o. p. s., Bucharova 2928/14a 158 00 Praha 5 – Stodůlky Prague Region	EDUin is an NGO that provides the public with an overview of everything that is happening in education, focusing on education issues of all sorts, namely the quality of education system, equity in education, educational reforms, inclusive education, etc.
Člověk v tísni / A human in need (NGO)	Člověk v tísni, o.p.s., Šafaříkova 635/24, 120 00 Praha 2 Prague region	NGO aimed at combatting poverty (local initiatives) and providing humanitarian and developmental aid (initiatives outside of the Czech Republic).
Semiramis, z. ú. (NGO)	SEMIRAMIS z.ú., Dlabačova 2208, 288 02 Nymburk Central Bohemia Region	An organization with a long tradition in the field of risk behavior prevention and education. It organizes seminars in schools focused on primary prevention of risk behavior (e.g., taking drugs, gambling), but also acts "in the terrain" by organizing activities for socially excluded children.
Nová škola, o. p. s. (NGO)	Křižíkova 344/6, Karlín 186 00 Praha 8 Prague region	The organization supports the inclusive education of minorities (above all the Roma children). Its four main activities are 1) support for teaching assistants and the introduction of the concept of school (Roma) assistants; 2) support for reading and mathematical literacy; 3) support for Romani as a living language; 4) direct support for children
META, o. p. s. (NGO)	Ječná 2127/17 120 00 Praha 2 Prague Region	A non-governmental, non-profit association that has been supporting foreigners in equal access to education and labor integration since 2004. In the form of social services, it helps immigrant families to navigate the Czech educational system, it

Name and type of institution (public / NGO / commercial)	Registered office address, including region	Brief description of the institution (areas of activity, history, etc.)
		implements Czech language courses of various formats, specializations, and levels. It provides pedagogical staff with methodological support and counselling in the area of education and inclusion of children and pupils with a different first language than Czech.
Primary and lower secondary schools in the region, especially in the socially excluded areas (public bodies)	• Základní škola Most, Zlatnická 186 Ústecký region • ZŠ a MŠ Litvínov – Janov, Přátelství 160, okres Most Ústecký Region • Základní škola, Školní nám. 100/5, 400 01 Ústí nad Labem-město-Předlice Ústecký Region	Examples of schools that are located in socially excluded areas. In most cases, they educate Roma children.
Municipal governments of (public bodies)	• Městský úřad Hora Svaté Kateřiny Dlouhá 261, Hora Svaté Kateřiny, 435 46 Ústecký region • Městský úřad Petrovice 5, 40337 Petrovice, Ústecký region • Obecní úřad Jetřichovice 24, 407 16 Ústecký Region	Municipalities are responsible for establishing, financing, and maintaining basic schools (i.e., primary and lower-secondary schools for compulsory education). These are some examples of municipalities that run and finance primary/lower-secondary schools in the region.
National Pedagogical Institute of the Czech Republic (public entity)	Local regional centre of NPI ČR Winstona Churchilla 1348/6, 400 01 Ústí nad Labem Ústecký region	NPI CR is a school educational, methodological, research, professional and counselling facility (under the auspices of the Ministry of Education, Youth and Sports) for addressing issues of pre-school, basic, secondary, and higher vocational education. It is responsible for creating curricular documents, accreditation of

Name and type of institution (public / NGO / commercial)	Registered office address, including region	Brief description of the institution (areas of activity, history, etc.)
		organizations for further teacher education, etc.
Centrum celoživotního vzdělávání PF UJEP v Ústí nad Labem (public entity)	Pedagogická fakulta UJEP České mládeže 8 400 01 Ústí and Labem Ústecký Region	A part of the Jan Evangelista Purkyně University, this center provides further training courses for servicing teachers.
Poradna pro integraci, z. ú. / The Counselling Centre for Integration (NGO)	Velká Hradební 33, 400 01 Ústí nad Labem Ústecký Region	It provides legal, social and psychosocial support and help in the area of education. It also provides Czech language courses for children and adults and also offers tutoring for standard school subjects.
Educational psychology counseling centre of Ustecky Region (Public entity)	Pedagogicko–psychologická poradna Ústeckého kraje a Zařízení pro další vzdělávání pedagogických pracovníků, Teplice, příspěvková organizace, Lípová 651/9, 415 01 Teplice Ústecký region (headquarters)	School counselling facilities that provide pedagogical-psychological and special pedagogical counselling and assistance. For example, they diagnose talented children as well as disadvantaged children, and issue recommendations for parents and for schools on how to work with the specific child and how to address their educational needs.

Source: own research data.

5.2 Good practices during the SARS-COV-2 pandemic

The summer tutoring camps

This initiative was organized by the Ministry of Education, Youth and Sports and was dedicated to students of basic schools (primary & lower secondary education). The funds were granted to organizations that would organize a summer "tutoring" camp for children endangered by academic failure and by social exclusion. Attendance in summer camps is expected to improve mental health of children, strengthen or renew children's work and study habits, support children's interest in education, etc. When organizing a summer camp, cooperation with schools and sports organizations working with children and youth was recommended by the ministry. Summer camps are subsidized, and thus are completely free of charge for participants. In July 2021, there were 398 organizations that received funds (about 260 billion CZK / 10,2 billion EUR) from the Ministry for this activity. The final evaluation (e.g., number of supported students, academic outcomes and achievements) were not yet published by the Ministry at the time of the preparation of this report. In June 2021, another initiative called Together against covid (MEYS, 2021) was launched by the Ministry, which will offer financial support to first and second year upper secondary school students. More specifically, the initiative is meant to organize three-day events (trips) for whole

classrooms that would provide more opportunities to re-socialize after one year of distance education.

"I want to provide tutoring": Volunteering help to parents and students

The Faculty of Education at the Charles University supported a free of charge tutoring initiative for schoolchildren (especially for disadvantaged ones), that would be provided by the university students. The university has established a website (pomocskolam.pedf.cuni.cz) for matching schools that identified a need for additional tutors with students of the faculty, who were willing to provide free of charge tutoring. To compensate the volunteering students for their activities (at least somehow, when not financially), a special course awarded with 4 ECTS was established at the faculty and open for every student involved in volunteering during the pandemic. In addition, students were volunteering in one of the largest hospitals in Prague, accompanying the children of doctors and nurses during the time of distance learning at school. As their parents were needed at work and could not take care of their children, this form of help was appreciated because the volunteers were caring for children and made them follow the school instruction. As a plus, this practice took place in the hospital itself, so it was very convenient for the parents (medical staff).

Various initiatives to share and donate ICT equipment and to make internet access available to students in need

When the anti-pandemic measures were first implemented in early 2020, many schools encountered problems with students lacking ICT equipment or an internet connection at home. Thus, several initiatives aimed at providing needy students with necessary ICT equipment emerged. Besides schools and municipalities, that found additional funds to buy the equipment and lend it to students, there were also web portals that facilitated the matching of those who were willing to share or give away (donate) their PCs and other ICT, and schools that needed it. E.g., the Czech Red Cross organized the initiative "Give a notebook" (https://www.darujnotebook.cz/). Similarly, the NGO Česko.Digital ran a project "We teach online" (https://www.ucimeonline.cz/), in which more than 500 volunteers helped schools with online distance teaching, getting feedback from schools and also organizing a collection of available ICT that would be lent to disadvantaged students.

5.3 Recommendations for changes to the national legislation to facilitate the implementation of remote education requirements in peripheral areas during a pandemic

Legislative changes that were made during the pandemic reflected mainly the status of distance education, which has not been anticipated in the legislation from pre-COVID times. Thus, after the first wave of COVID-19 in spring 2020, the Education act was amended on the 25th of August 2020, with special rules for limiting the personal presence of children, pupils and students in schools. This novelization also made distance education obligatory (during the first wave, it was legislatively unclear whether students must attend online lessons or not) and also made schools responsible for assuring and running distance education in case the standard presence of students in schools is forbidden. Schools are responsible for setting formal rules of distance education (e.g., evaluation and assessment of students, rules for

excusing student absences) in their internal regulatory frameworks available to parents and other stakeholders.

Possible legislative amendments to improve the situation in education during crises such as pandemics may be oriented to:

- Legislatively make schools and their founders (municipalities, regions) responsible for assuring that each student has the possibility to participate in remote instruction (e. g., by borrowing technological devices, by providing appropriate places in their facilities to learn etc.);
- A legislative introduction of a career ladder for teachers has been discussed in the past, but the idea was abandoned, but perhaps should be revived in the light of the new situation related to pandemics. One of the important aspects of the career ladder, and also an important way for teachers to progress up these levels, is the possibility to gain „points" by teaching in schools located in remote, peripheral and disadvantaged areas. Another important focus could be on professional development in areas of remote teaching, student-teacher relationships in a virtual space, etc.
- The currently informal positions of „inducing teachers" (experienced teachers that serve as mentors during the induction phase for novice teachers) should be legalized and these teachers should be able to get a formal status that would be associated with further advantages.
- Establish middle layer (or middle tier) organizations at the district level that would mediate the communication between schools and the „center", i.e., MEYS, CSI and other state bodies. This middle layer organization would provide administrative and legal support to schools, help share innovations and good practices, support schools in using information technologies and inform the „center" about the issues of education within the district (this proposal is actually currently piloted by the MEYS, see Seifert, n.d.).
- Legislatively anchor the collection of more important indicators of schools and their quality. Currently, schools report some basic indicators (e.g., number of students, number of teachers, number of PCs), but more detailed information would be needed to effectively monitor and evaluate the effectiveness and equity in the education system. Under the current legislation, MEYS is not allowed to collect population data e.g., detailed teacher professional profiles in schools, socioeconomic composition of students, etc., which would help to better identify weak points of the education system. Alternatively, it could be made legal and possible for school to grant access to their internal information systems (with the necessary level of anonymization and protection of student and teacher personal data) for the MEYS (or other state organizations). This would allow for a decrease in the administrative burden of schools and provide useful information to policymakers.

5.4 Recommendations for the implementation of good practices aimed at counteracting social and educational exclusion of pupils and students (and their families) without, or with limited access to, the Internet and digital equipment

In September 2020, the Ministry of Education, Youth and Sports issued recommendations (MEYS, 2020b) to schools in relation to the implementation of distance education in schools. However, the document does not systematically address the specific situation of socially disadvantaged students that are endangered by exclusion and/or have a limited access to necessary technologies. For this purpose, a specific set of recommendations to work with the

target group of this V4 project was provided by the Czech Society for Inclusive Education (ČOSIV, 2020).[9] These include:

1) **Provide students with technical equipment necessary for online teaching** (schools may work with NGOs or with local governments or even with business entities to provide the necessary equipment and an internet connection, e.g., by borrowing SIM cards, laptops etc.).
2) **Respect student's privacy when teaching online** (many students with social disadvantages do not have suitable conditions for learning at home, so it is necessary to respect that they prefer to work with the cameras turned off or that they sometimes cannot attend classes).
3) **Instruct teachers, students, and parents on how to participate in online teaching** (not only during the time of school closures, but also at the time of ongoing full-time stationary teaching, it is necessary to support teachers, students and parents in their ability to use online learning technologies).
4) **Consider a temporary curriculum adjustment** (it is appropriate to focus on those topics that have use in everyday life. Supporting motivation of students by including project activities, art and music activities, and games is appropriate).
5) **Additional individual tutoring of students can be also organized online** (teachers, assistants, and school educators can collaborate on the organization of online tutoring and invite e.g., students of pedagogical disciplines or other volunteers to tutor the disadvantaged students).
6) **Arrange teaching materials in the printed form** (printed teaching materials can be distributed to pupils and parents at school, e.g., from the window, using boxes in the gatehouse or even at the place of residence – delivery can be completed, for example, by teaching assistants).
7) **Ensure one-on-one support** (if the student's teaching cannot be realized remotely, it is desirable to create conditions for a teacher / assistant to personally work with a pupil – at school, at the pupil's home, outdoors, or in another suitable environment).
8) **Preserve school lunches** (if organizationally possible, maintain school lunches for pupils who normally have them available free of charge, or assure an appropriate alternative, e.g., taking lunches from social service providers).
9) **Provide psychological support for students** (ensure students' contact with school psychologists and educational counselors, ideally both online and in person. Students' psychological support should be provided also during online classes).
10) **Collaborate with non-profits and social services** (use the support of non-governmental non-profit organizations and social services in finding equipment for pupils, in ensuring contact with pupils' families, etc.).
11) **Cooperate with local government** (ask municipal authorities for help with social work in pupils' families, with assuring an internet connection, or negotiate a possibility of printing materials in the municipal office).

[9] *The Czech Society for Inclusive Education (ČOSIV) is a platform connecting academics, non-profit organizations, teachers and headmasters, parents of children with special needs and young people with special needs.*

Glossary of abbreviations and terms used

CSI	Czech School Inspectorate
CR	Czech Republic
MEYS	Ministry of Education, Youth and Sports
ICT	Information and communication technology
NGO	Non-governmental organization
ISCED	International standard classification of education
PISA	Program for International Student Assessment
OECD	The Organization for Economic Co-operation and Development
GDP	gross domestic product
EUR	Euro (currency)
ECTS	European Credit Transfer System
CZK	Czech koruna (currency)

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