

ONLINE EDUCATION – REALITIES OF THE URBAN AND RURAL ENVIRONMENT OF BIHOR COUNTY DURING THE SARS COV 19 PANDEMIC

Anca Cristina POP

University of Oradea, Department of Physical Education, Sport and Physical Therapy, 1st University street, 410087, Oradea, Romania, e-mail: popancacristina@yahoo.com

Dana Ioana CRISTEA*

University of Oradea, Department of Physical Education, Sport and Physical Therapy, 1st University street, 410087, Oradea, Romania, e-mail: danacristea07@yahoo.com

Aurelian Andrei CRISTEA

Greek-Catholic High School Iuliu Maniu, 5th Iuliu Maniu street, 410104, Oradea, Romania, e-mail: andreicristea07@yahoo

Marius MARINĂU

University of Oradea, Department of Physical Education, Sport and Physical Therapy, 1st University street, 410087, Oradea, Romania, e-mail: marius_marinau@yahoo.com

Gheorghe LUCACIU

University of Oradea, Department of Physical Education, Sport and Physical Therapy, 1st University street, 410087, Oradea, Romania, e-mail: ghita_lucaciu@yahoo.com

Mirela ȘTEF

University of Oradea, Department of Physical Education, Sport and Physical Therapy, 1st University street, 410087, Oradea, Romania, e-mail: mirelastef80@gmail.com

Abstract: Covid-19 has been declared as a pandemic disease by the World Health Organization on March 11th, 2020. During that period clinical education, students receive both in-class theoretical lectures and seminars. In Romania before this period the era of COVID-19, distance e-learning was not adopted as a modality of teaching within schools. In this article, we intend to underline and address the situation of on-line teaching from institutions pertaining to Bihor county in pandemic context in both urban and rural areas. Romanian education in general and that of Bihor county in particular had certain shortcomings in terms of online teaching. First of all, access to the Internet was a generalized challenge for both urban and rural students; as anticipated, the higher percentage was recorded in rural areas. Students' possession of or access to devices for synchronous online education left much to be desired at the time, the data provided displaying a more difficult situation in rural areas.

Key words: Bihor county, education, urban and rural areas, Covid pandemia.

* Corresponding Author

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INTRODUCTION

Covid-19 has been declared a pandemic disease by the World Health Organization on March 11th, 2020. The disease started in the Wuhan province in China in late December, 2019. After that time, the global incidence of COVID-19 disease has increased dramatically on an international scale.

During that period, students attended both in-class theoretical lectures and seminars. In Romania before this period in the era of COVID-19, distance e-learning was not adopted as a modality of teaching within schools.

Distance E-Learning is a new concept for teachers but also for students and is defined as using computer technology to deliver training, including technology-supported learning either online, offline, or both. It is aimed at the effective construction of knowledge regarding individual experience, practice, and knowledge of the learners and students. The COVID-19 pandemic is, however, accelerating digital transformation in education (Kang, 2021). Internet-based learning, computer-based learning, virtual classrooms, and digital collaboration all represent different types of e-learning (Al-Balas et al., 2020). Moreover, children like to spend time watching educational TV programmes or playing educational screen-based games if their parent believed screen content had educational value (Egan & Beatty, 2021). Some researchers show us that web-conference instruction provided equivalent levels of students' understanding the learning objectives (Curran, 2006).

It was a difficult period because not all the teachers have a formal education qualification and, as a result, the pedagogical approaches typically adopted by many educators align with how they themselves were taught. Online teaching methods are less familiar to the many who have been taught (and typically, therefore, teach) in person, face-to-face. Traditional models of teaching are heavily synchronous, face-to-face and employ apprenticeship models of education, with core features of placement attendance, participation in ward rounds and being a part of the clinical team. Furthermore, current approaches to teaching in the large- or small-group setting require additional consideration when applied online. Indeed, utterances amongst professional educators echo 'we can't do that online', despite the imperative to do so (Seymour-Walsh et al., 2020).

As a newly developed mode of physical education, web-based physical education presents both challenges and opportunities. Because of the characteristics of physical education, suitable sports should be chosen while considering the restrictions of sports fields and related equipment. Also, the performance of network platforms and teaching resources for web-based physical education remains a question. Furthermore, the extended effects of web-based physical education on family members when the activities are performed at home is a concern, which may be related to the similar atmosphere to class learning (Deng et al., 2020).

Recently, some studies have suggested that COVID-19 pandemic may exacerbate physical inactivity and prolonged sedentary time in children, which may be attributed to the lack of equal opportunities to participate in PA and the unavailability of sports facilities caused by schools closing. It has been shown that students have lower levels of PA and more sedentary time during weekends than at school. If the closing of schools or physical education course cancellations as a result of the COVID-19 pandemic will cause physical inactivity in students just as in the case of weekends, the longer the period of shut-down, the more likely it is to bring about severe consequences for children's health. Therefore, several researchers inferred certain issues with regards to the situation of education during a pandemic: What impact has the COVID-19 pandemic had on PA levels in school-aged children and adolescents? Investigating changes in the locations of school-aged children's and adolescents' PA between the pre-COVID-19 period (January 2020) and the COVID-19 period (December 2020). Given the fact that long-term physical inactivity is

likely to increase children’s risk of obesity, diabetes, and other chronic diseases, the findings of this study regarding the impact of the COVID-19 pandemic on school-aged children’s and adolescents’ PA are expected to provide valuable information for government authorities and health professionals in guiding actions and allocating resources (Hu et al., 2021).

The COVID-19 pandemic has caused significant reductions in Physical Education requirements and in engagement time in physical activity and teachers had to face such challenges in both closed and open schools (Pavlovic et al., 2021).

In this article, we intend to underline and address the situation of on-line teaching from institutions pertaining to Bihor county in pandemic context in both urban and rural areas.

AIM

The aim of this paper is to highlight the situation of education in Bihor county in rural and urban regions during the pandemic, in the context of conducting online lessons. We also want to present the attendance situation in classes from the 26th of October, 2020 until the 15th of January, 2021.

MATERIALS AND METHODS

The study is based on the data provided by the Bihor County School Inspectorate regarding the existing situation in the educational system between the 26th of October, 2020 and the 11th of January, 2021, for a number of 88,218 students, from rural and urban areas. This data comes from school reports on the number of cases of illness, accounting the number of students who do not have access to devices or Internet in urban and rural areas to participate in online education. The reports were made weekly, so our study will have this time interval as a benchmark.

RESULTS

The statistical data to which we had access since October 26, 2020, showed a statistical rise in student participation in online classes. Thus, in the week of October 26 - 30, there was an increase from 11,749 students to 26,700 students. The figures continue to grow by the week, so that on 11.01.2021 we have a number of 81,886 online students.



Figure 1. On-line participation 26.10.2020 – 15.01.2022

If we discuss the number of absent students, compared to the same period, we notice that in the week of October 26-30, 9,518 students were absent from classes for various reasons; at the end of the period in the week of 11-15.01.2021, the number decreased to 5,883 students (figure 1).

Among the reports made by ISJ Bihor, the number of students infected with Sars-Cov 19 is also highlighted. Therefore, in the first week, 62 students were reported, and their number will increase to 104 in the week of 9-13.11.2020, followed by a decrease that continued until the week of 11-15.01.2021, when 6 students were registered with Sars-Cov 19. The same data informs us that a number of 770 students were isolated in the week of October 23-30 and 46 students in the last week of reporting, respectively 11-15.01.2021 (figure 2).

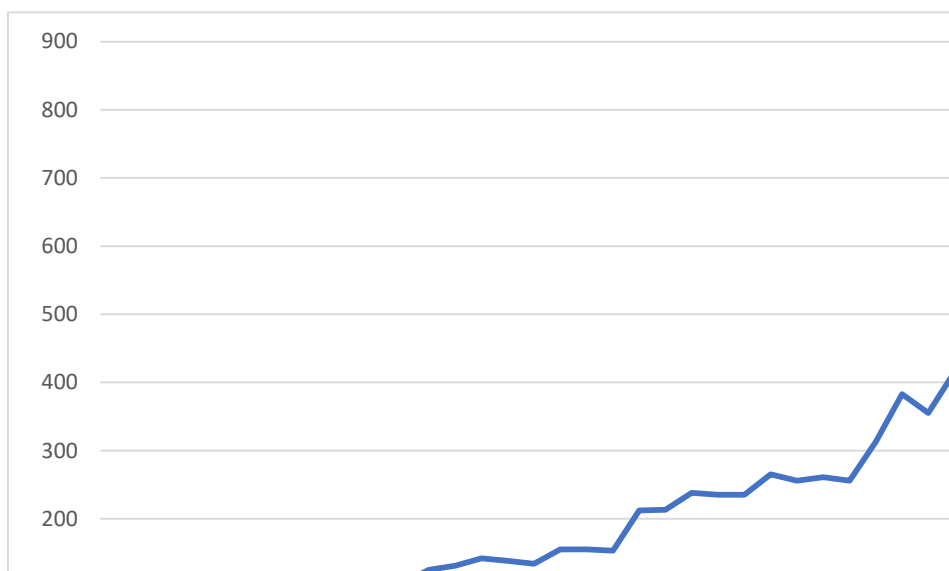


Figure 2. The number of isolated students during 26.10.2020 – 15.01.2022

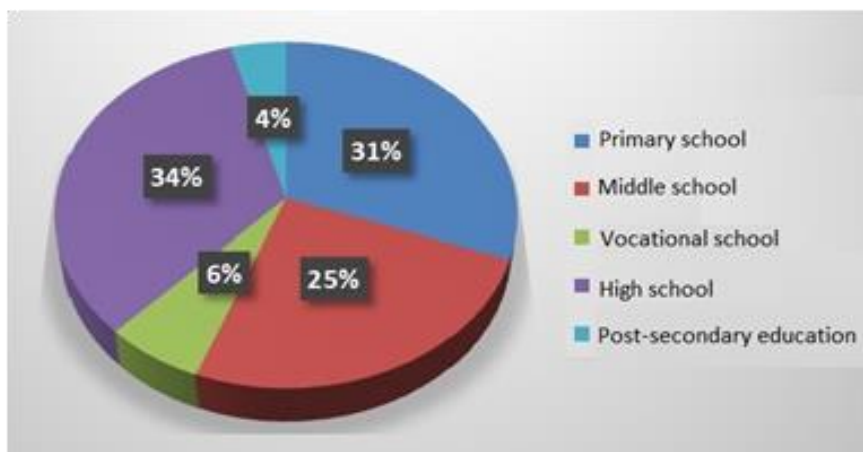


Figure 3. Repartition of students by course of studies in urban areas

As I mentioned above, our study examines the situation of online education in Bihor county, urban and rural environments. The breakdown by education cycle of students from the urban environment was as follows: 31% of students attend primary school, 25% attend middle school, 34% are in high school, 6% are in vocational education and 4% in post-secondary education (figure 3).

If we refer to students from rural areas, the percentage is as follows: 52% are primary school students, 39% are in middle school, 7% in high school and 2% in vocational education (figure 4).

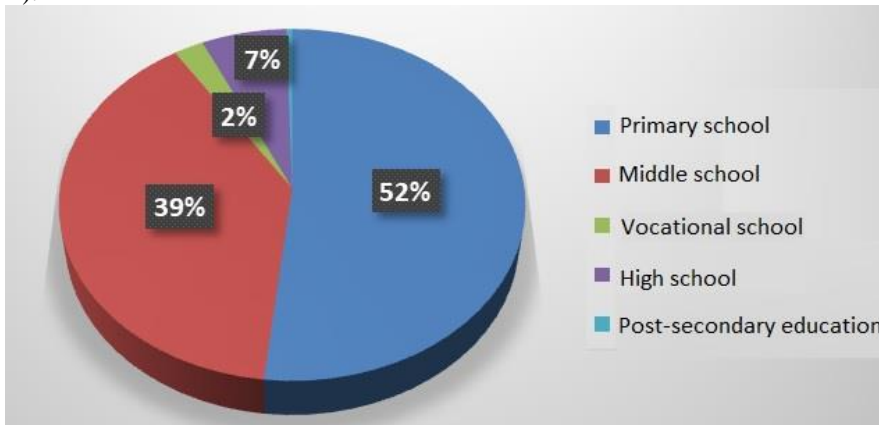


Figure 4. Repartition of students by course of studies in rural areas

The study also highlights the number of students who do not have access to devices to study online. When we say devices we mean computers, tablets, laptops, smartphones. From the graph below, which refers to the urban environment, we can see that 27% of students in primary education do not have access to devices, the percentage increases to 39% in secondary school, 14% in high school and 20% in vocational education (figure 5).

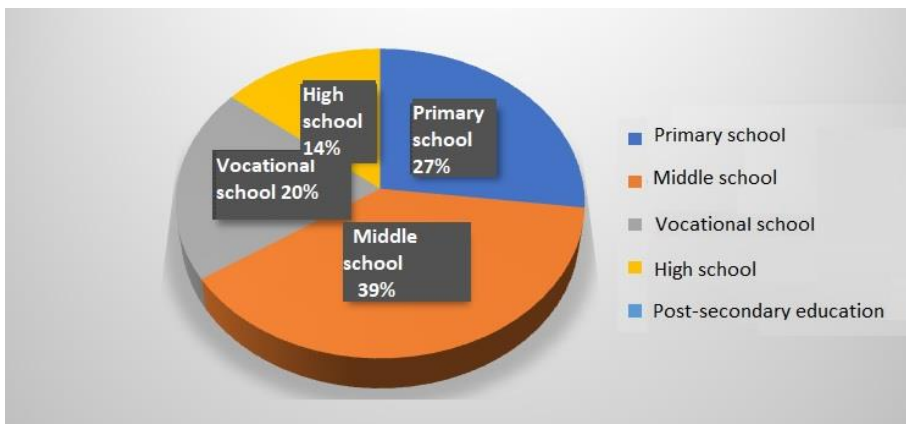


Figure 5. The number of students from urban areas which do not have access to devices

ISJ Bihor statistics show that 4% of students in urban primary school do not have access to the Internet, 37% in middle school, 16% in high school and 43% in vocational schools (figure 6).

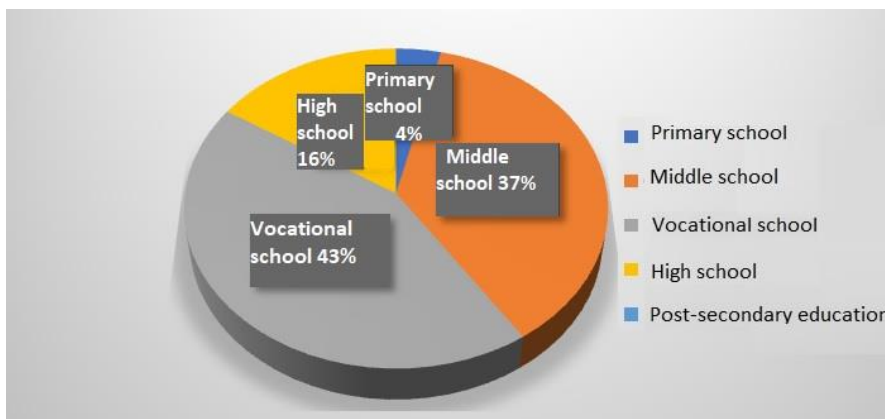


Figure 6. Number of students which do not have access to the Internet - urban areas

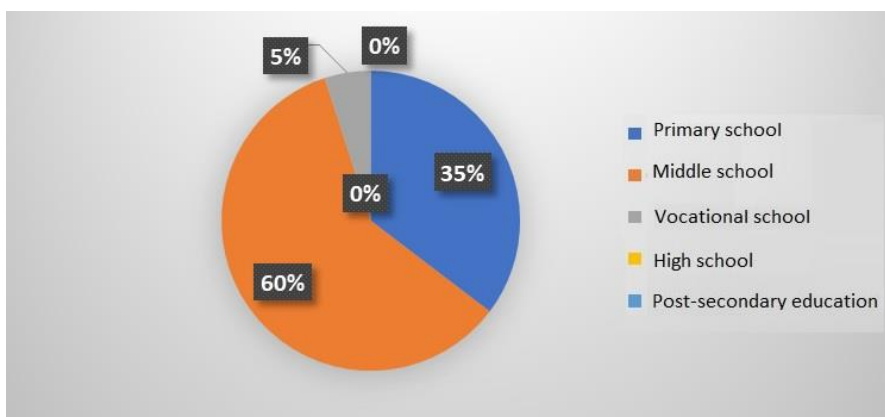


Figure 7. The number of students who do not have access to devices – rural

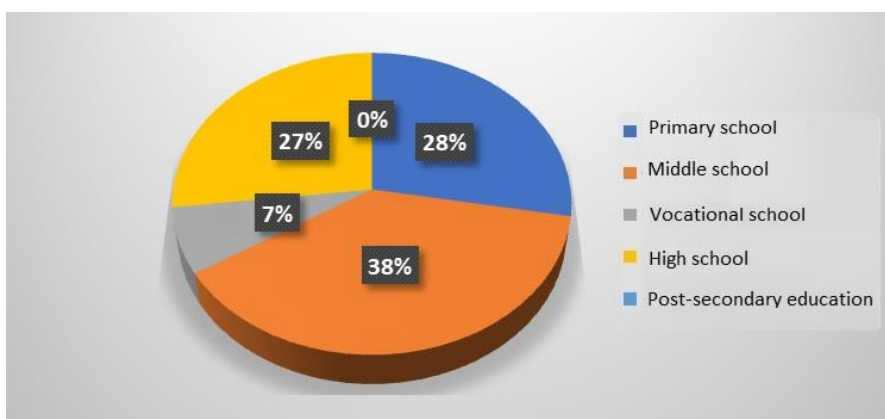


Figure 8. The number of students who do not have access to the Internet - rural areas

In rural areas, the numbers of students who do not have access to the Internet are as follows: 35% primary school, 60% secondary school and 5% vocational school (figure 7).

From figure 8 it can be seen that 28% of the students from the primary cycle, the rural environment, do not have access to the Internet, 38% of the students from the secondary cycle, 27% of the students from the high school and a percentage of 7% of the students who belong to vocational education find themselves in the same situation.

DISCUSSION

Considering the situation, the question arises: what happens to students who do not have access to devices and the Internet from the point of view of education in general and physical education in particular?

The data show us that both in urban and rural areas, a fairly large percentage did not have access to the Internet or work devices during the pandemic. Therefore, the students suffered from the point of view of education, being somewhat deprived of the mandatory services.

If we turn our attention to the physical education activity in institutions, the situation is even more complicated in its online transposition. First of all, work space, human and material resources must be taken into account. Concerning these, the problem of the methodical approach towards content and, not lastly, the parameters of the effort per se, must be debated. Surprisingly, physical education teachers adapted to the variant.

COVID-19 restrictions reduced physical activity, resulting in a significant decrease in skeletal muscle mass. This decrease may impact boys' ability to engage in sufficiently varied physical activity, which may lead to a further decline in physical activity and subsequent medical consequences in adulthood (Kutac, 2022). Data revealed a substantial decrease in PA and increase in screen time during the COVID-19 pandemic and schools, professionals for health and exercise, and parents need to be aware of the severe situation and implement more effective interventions for PA immediately to minimize the negative impact of the COVID-19 pandemic on children's and adolescents' health (Xiang et al., 2020). We are currently confronted with two pandemics occurring at the same time. The world will recover from the COVID-19 pandemic and so-called normal activities will resume. However, the physical inactivity and sedentary behavior pandemic will continue and, more troublingly, we may be at risk for this pandemic to worsen as a result of COVID-19 (Hall et al, 2020).

CONCLUSIONS

Romanian education in general and that of Bihor county in particular had certain shortcomings in terms of online teaching. First of all, access to the Internet was a generalized challenge for both urban and rural students; as anticipated, the higher percentage was recorded in rural areas. Students' possession of or access to devices for synchronous online education left much to be desired at the time, the data provided displaying a more difficult situation in rural areas.

However, we can say that during the 10 weeks of our study, an improvement in student participation in online classes is observed, from 11,749 students in the first week to 81,886 students in the last week. The same path was also highlighted in terms of the number of students isolated at home, from 770 students to 46 students in the last week. Despite all the shortcomings of the pandemic, education has discovered a new teaching alternative, the online one, to which it has adapted rather quickly. This alternative can be an important educational support in special situations, but we believe that the on-site version can produce the desired effects in education.

Aknowlegments: All authors have equal contribution.

REFERENCES

- Al-Balas, M., Al-Balas, H. I., Jaber, H. M., Obeidat, K., Al-Balas, H., Aborajoo, E. A., Al-Taher, R., & Al-Balas, B. (2020). Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: current situation, challenges, and perspectives. *BMC Med Educ*, 20(1), 341. <https://doi.org/10.1186/s12909-020-02257-4>
- Curran, V. R. (2006). Tele-Education. *Journal of Telemedicine and Telecare*, 12, 57-63. <http://dx.doi.org/10.1258/135763306776084400>
- Deng, C. H., Wang, J. Q., Zhu, L. M., Liu, H. W., Guo, Y., Peng, X. H., Shao, J. B., & Xia, W. (2020). Association of Web-Based Physical Education With Mental Health of College Students in Wuhan During the COVID-19 Outbreak: Cross-Sectional Survey Study. *J Med Internet Res*, 22(10), e21301. <https://doi.org/10.2196/21301>
- Egan M. S., Beatty C., (2021) To school through the screens: the use of screen devices to support young children's education and learning during the COVID-19 pandemic, *Irish Educational Studies*, 40:2, 275-283, DOI: 10.1080/03323315.2021.1932551
- Hall G, Laddu DR, Phillips SA, Lavie CJ, Arena R. (2020) A tale of two pandemics: How will COVID-19 and global trends in physical inactivity and sedentary behavior affect one another? *Prog Cardiovasc Dis*. 2021 Jan-Feb;64:108-110. doi: 10.1016/j.pcad.2020.04.005. Epub 2020 Apr 8. PMID: 32277997; PMCID: PMC7194897.
- Hu, D., Zhang, H., Sun, Y., & Li, Y. (2021). The effects of the measures against COVID-19 pandemic on physical activity among school-aged children and adolescents (6-17 years) in 2020: A protocol for systematic review. *PLoS One*, 16(7), e0255520. <https://doi.org/10.1371/journal.pone.0255520>
- Kang B., (2021). How the COVID-19 Pandemic Is Reshaping the Education Service, The Future of Service Post-COVID-19 Pandemic, Volume 1, 2021, ISBN : 978-981-33-4125-8
- Kutac P, Bunc V, Sigmund M, Buzga M, Krajcigr M. Changes in the body composition of boys aged 11-18 years due to COVID-19 measures in the Czech Republic. *BMC Public Health*. 2022 Dec 3;22(1):2254. doi: 10.1186/s12889-022-14605-8. PMID: 36463114; PMCID: PMC9719114.
- Pavlovic A, DeFina LF, Natale BL, Thiele SE, Walker TJ, Craig DW, Vint GR, Leonard D, Haskell WL, Kohl HW. Keeping children healthy during and after COVID-19 pandemic: meeting youth physical activity needs. *BMC Public Health*. 2021 Mar 11;21(1):485. doi: 10.1186/s12889-021-10545-x. PMID: 33706744; PMCID: PMC7948663.
- Seymour-Walsh, A. E., Bell, A., Weber, A., & Smith, T. (2020). Adapting to a new reality: COVID-19 coronavirus and online education in the health professions. *Rural Remote Health*, 20(2), 6000. <https://doi.org/10.22605/rrh600>
- Xiang M, Zhang Z, Kuwahara K. (2020) Impact of COVID-19 pandemic on children and adolescents' lifestyle behavior larger than expected. *Prog Cardiovasc Dis*. 2020 Jul-Aug;63(4):531-532. doi: 10.1016/j.pcad.2020.04.013. Epub 2020 Apr 30. PMID: 32360513; PMCID: PMC7190470.0

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