

- Dean, G. J., Eriksen, J. P., & Lindamood, S. A. (1987). Adults in mid-career change: Case studies for advisors. *NACADA Journal*, 7(1), 16-26.
- Hyrnsalmi, S., & Hyrnsalmi, S. (2019, June). What motivates adult age women to make a career change to the software industry?. In *2019 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC)* (pp. 1-8). IEEE.
- Lawrence, G., & Martin, C. (2001). *Building People, Building Programs* by Gordon and Charles Martin. CAPT.
- Mann, A., Denis, V., Schleicher, A., et al. (2020). "Dream Jobs: Teenagers' Career Aspirations and the Future of Work". OECD.
- Dishman, L. (2021, February 23). Is now a good time to change careers? More workers are feeling good about it. Fast Company.

KOLAK Ante

*Ph. D. University of Zagreb, Faculty of Humanities and Social Sciences,
Department of pedagogy, Croatia*

MARKIĆ Ivan

*Ph. D. University of Zagreb, Faculty of Humanities and Social Sciences
Department of pedagogy, Croatia*

REPRESENTATION OF EDUCATIONAL CHALLENGES DURING THE COVID-19 PANDEMIC IN CROATIAN RESEARCH ON EDUCATION

Abstract: The crisis caused by the COVID-19 pandemic has posed numerous challenges in various fields and areas of life. This research paper is focused exclusively on the field of education. The aim of this research is to determine how much the topic of education in the COVID-19 pandemic is represented in Croatian research on education and which guidelines the researched sources provide in response to pedagogical challenges.

The research was conducted within the quantitative paradigm by the documentation analysis process. The analysis of all available original scientific papers published in scientific journals in the field of pedagogy in the Republic of Croatia is focused on the time period from the beginning of the pandemic to the time of the research. Apart from the analysis of the representation of analyzed researches, which is one of the research questions, all sources are categorized according to the criteria of the subject of the educational process to which the papers are directed (parent, teacher, student). From all available scientific research papers, a synthesis of results was made, presented by selected categories. The concluding part of the paper discusses the results of the analyzed sources and their reflection on the field of crisis pedagogy.

Keywords: Pandemic, Educational challenges, Crisis

Introductory Remarks

The year 2020 brought the global pandemic to the world caused by the SARS-CoV-2 corona virus. The arrival of the virus rapidly changed the form and function of all social subsystems, as well as the established everyday life of most of the world's population. What was initially a health crisis soon began to have a significant effect on the realms of trade, tourism and the economy, and the educational system was also not spared the consequences of the global reach of this disease. This was also how it was in the Republic of Croatia, where by means of various *decisions, recommendations* and *models* adopted by the Government, attempts were made to prevent or limit the harmful effects of the pandemic on education. In so doing the Government tried to

find a way to respect the requirements of the various disciplines, professions and groups in organizing classes, and children's right to education on the one hand, but in this situation also the much more important right, the right to health, on the other. In order to respect both these rights, remote learning was found to be the most appropriate form of education. On 16th March 2020, the *Decision to halt teaching at institutions of higher education, high and elementary schools, and the regular work of pre-school educational establishments and establish remote learning* (Government of the RC, 2020) was adopted, and remained in force until May. During this period of time, and later, as support to teachers and students, teaching was organized by means of television broadcasts³³. In September of the following school year (2020/2021) the Ministry of Science and Education offered three models of teaching to which individual elements of the school system or schools were to align their work according to the current epidemiological situation on a local level. The models offered were: Model A – in which educational work and classes were conducted in the school, Model B – which was a mixed form of education work/classes (some in the school, some remote – two days in school, three days at home, or one week in school, one week at home), and Model C – which related to remote education work and classes. The Decision on the application of and move to a specific model was left to each school principal, in cooperation with the founder and the competent local crisis office (MSE, 2020). Later procedures were regulated by various documents, primarily *Models and recommendations for work in conditions related to COVID-19 in the 2021/2022 school year* (MSE, 2021).

However, alongside the Government of the RC and the MSE, other stakeholders in society also tried to respond to this crisis situation. Members of the academic community were certainly amongst them, coming from various scientific perspectives, and often using a multidisciplinary approach, to study the various ways, features, directions and consequences which the pandemic was placing before us. In this paper, which is pedagogic in nature, we focus exclusively on the field of education in order to establish the representation and focus of scientific articles published in the Republic of Croatia since the beginning of the pandemic.

The Methodology of the Empirical Part

The aim of this paper is to establish how far the subject of education during the COVID-19 pandemic is present in Croatian educational research, and which pointers the sources researched provide in response to the educational challenges.

The first task of the research was to establish the presence of studies on the subject of the COVID-19 pandemic, especially singling out the scientific field, the type of study and the journal. The second task was aimed at establishing the branch of pedagogy to which the analyzed studies belong. The third task aimed at establishing a perspective in relation to the subjects of the educational process:

- students (grades 1-4, grades 5-8, and high school and university students),
- education workers (teachers of grades 1-4, subject teachers (grades 5-8), high school teachers, pre-school teachers, educational staff in pupils' hostels and children's homes, principals),
- parents
- adults and/or third age persons.

The fourth task was aimed at singling out and categorizing challenges in the field of education, from the content of the selected sources.

On the basis of the aim set and the tasks of the research, the following hypotheses were defined:

³³ This is not the first time that this form of classes has been organized in the Republic of Croatia. In 1991. a special educational programme was organized entitled *Wartime TV School* and *Wartime Radio School*.

- H1: There is a visibly varied selection of studies on topics arising from the COVID-19 pandemic
- H1.1: The social sciences make a visible contribution
- H1.2: Scientific papers make a greater contribution than professional studies
- H1.3: The analyzed topic is evenly distributed through all educational journals
- H2: Didactics and school pedagogy as branches of pedagogy are most common in research papers
- H3: All subjects are equally represented in research
- H4: The contents of studies indicate the many challenges in education during the COVID-19 pandemic.

As the sample for this research we primarily chose all journals with published papers related to the subject of the COVID-19 pandemic with a published ID number on the portal for scientific journals of the Republic of Croatia – Hrčak (Table 1). From the chosen scientific fields, we targeted the category of social sciences, and the field of education. Within the social field of education, we focused exclusively on scientific papers (original scientific articles, prior communications and review papers), whilst professional and all other studies were not the subject of analysis (Table 2). Further selection was conducted according to the criterion of pedagogic orientation, that is, the journals were selected whose titles and content in terms of papers indicated that they deal primarily with educational matters. For example, journals that state that one of their fields of interest is pedagogy, but the titles and Abstracts of the papers do not indicate a clear primary orientation towards education were not included in the analysis (e.g. *Turizam: međunarodni znanstveno-stručni časopis, Jah; Educatio Biologiae, Eho* etc.). Further, only those journals with published papers dealing with the subject of the COVID-19 pandemic were included in the analyzed journals, along with those which had papers published after 11th March 2020 when the World Health Organization declared the previous epidemic a pandemic. Using these criteria, we selected the following fifteen journals: *Hrvatski časopis za odgoj i obrazovanje; Metodički ozori; Napredak; Metodički ogledi; Školski vjesnik; Život i škola; Acta Iadertina; Obrazovanje za poduzetništvo; Andragoški glasnik; Politehnika; Magistra Iadertina; Hrvatska revija za rehabilitacijska istraživanja; Mostariensia; Inetrdisciplinary Description of Complex Systems and Odgojno – obrazovne teme* (Table 3). The units of analysis in this research are scientific papers published in one of the issues of the analyzed journals in Hrčak. All the analyzed journals had their own classification of papers, which we respected in our analysis. Of the total of 1617 scientific papers published, by selective analysis we singled out a total of 31 papers that comprised a unit of analysis in the empirical part of this study.

The instrument we used was created for the needs of this research, and consists of a protocol with a coded plan for analysis of scientific papers, where the protocol corresponds to the research questions set. The research was conducted in May 2022. The intention was to classify papers by multiple readings, responding to the hypotheses set. In the search for answers, it was sometimes sufficient to use the Abstracts of the papers (H1 and H2), but in the search for answers to the other hypotheses studious, multiple readings of the entire papers was necessary. To confirm or refute the last hypothesis, H4, each paper was analyzed by singling out the key challenges in the field of the paper, detected by both researchers separately, followed by the joint constructive alignment of the challenges detected.

For categorization of the papers according to the chosen criteria, we were guided by the *Regulations on Scientific and Artistic Areas, Fields and Branches* (2009). When a paper was categorized in the appropriate scientific area, we would categorize the paper in the branch of pedagogy to which it belonged in terms of content. We categorized some papers in several branches of pedagogy due to the nature of the content and the subject of research (e.g. didactics and school pedagogy). Data from the protocol were aligned manually, in a way that made quantification possible.

The categories relating to the replies to the hypotheses stemmed from the expressions the authors used when listing the aims of their research, therefore there are visible terminological inaccuracies, especially in relation to didactic and pedagogic topics which were especially relevant to the pandemic. This problem was researched separately by the authors Nemeth-Jajić and Jukić (2021), who pointed out the existence of different terminological definitions, such as: remote teaching, on-line classes, distance learning, e-classes, on-line learning, e-learning etc. The processing of the data with the separate variable of the representation of educational challenges in the age of the COVID-19 pandemic in Croatian research on education included manual alignment, categorization and establishing of frequencies.

Analysis of the Results and Discussion

In the search for an answer to the first hypothesis, we analyzed the available sources that were pointed out in the selected sample. The analyzed data are shown in Table 1.

Table 1

The number of papers in relation to scientific field

| No. | SCIENTIFIC FIELD | N |
|-----|-------------------------------------|-------------|
| 1. | Biomedicine and Health Sciences | 560 |
| 2. | Social Sciences | 479 |
| 3. | The Humanities | 211 |
| 4. | Technical Sciences | 131 |
| 5. | Interdisciplinary scientific fields | 98 |
| 6. | Natural sciences | 77 |
| 7. | Biotechnology | 41 |
| 8. | The Arts | 21 |
| | TOTAL | 1617 |

Table 1. shows that the presumption was confirmed that the subject of the pandemic and its effect on various subsystems of society has been dealt with by scientists from various scientific areas. This confirms hypothesis H1. From all the scientific areas selected, Biomedicine and Health were most prominent, which is to be expected in view of the nature of the pandemic. From the same table it may also be seen that social research made a visible contribution, whereby sub-hypothesis H1.1. was also confirmed.

Since the subject of this paper focuses on the social area, in this paper we targeted the sources belonging to the social area of pedagogy, and divided them up according to the type of study. The results are shown in Table 2.

Table 2

The number and type of papers published in the social field of pedagogy

| No. | Social field of pedagogy | N |
|-----|--------------------------|------------|
| 1. | Scientific papers | 55 |
| 2. | Professional papers | 35 |
| 3. | Others | 12 |
| | TOTAL | 102 |

The analysis confirmed that the number of total sources for analysis in the field of pedagogy was 102 of which 55 papers were in the category of scientific papers, 35 professional and 12 others (brief statement, presentations, introductions etc.). Table 2. shows that we also accepted the sub-hypothesis H1.2 because the leading place amongst these papers was held by scientific papers. Further, in our analysis of the sources, we focused exclusively on scientific papers published in journals with dominantly pedagogic topics, because they were appropriate for the aim of the research. The results are shown in Table 3.

Table 3

The number of scientific articles published in journals with dominantly pedagogic topics

| No. | Scientific journals | N |
|-----|--|-----------|
| | Interdisciplinary Description of Complex Systems | 1 |
| | Acta Iadertina | 3 |
| | Obrazovanje za poduzetništvo – E4E | 1 |
| | Andragoški glasnik | 3 |
| | Croatian Journal of Education | 2 |
| | Školski vjesnik | 2 |
| | Politehnika | 1 |
| | Magistra Iadertina | 1 |
| | Metodički obzori | 1 |
| | Metodički ogledi | 3 |
| | Život i škola | 2 |
| | Hrvatska revija za rehabilitacijska istraživanja | 1 |
| | Moštariensia | 1 |
| | Napredak | 8 |
| | Odgojno – obrazovne teme | 1 |
| | TOTAL | 31 |

Table 3. gives us the opportunity to confirm sub-hypothesis H1.3 because it shows the representation of papers in different journals dealing with the area of pedagogy.

The content of the second hypothesis of the research, H2, led us to an analysis of the selected papers related to a specific field or branch of pedagogy. Our analysis of the papers confirmed that some studies touched on several branches of pedagogy, such as for example special education, school pedagogy and didactics.

Table 4

The number of scientific papers published in journals in relation to the branch of pedagogy

| No. | Branch | N |
|-----|--|----|
| | 5.07.01 general pedagogy | 1 |
| | 5.07.02 didactics | 20 |
| | 5.07.03 general and the national history of pedagogy | 0 |
| | 5.07.04 pedagogy of early and pre-school education | 3 |

| | | |
|--|--------------------------------------|---|
| | 5.07.05 school pedagogy | 9 |
| | 5.07.06 pedagogy of higher education | 5 |
| | 5.07.07 adult education (andragogy) | 2 |
| | 5.07.08 social pedagogy | 0 |
| | 5.07.09 family pedagogy | 2 |
| | 5.07.10 special education | 2 |

The highest number of papers is clearly in the field of didactics, meaning we were able to accept the second hypothesis set, H2.

The third hypothesis, H3, focused research on the subjects of the research. The categorization of papers in relation to this particular element may be seen in Table 5.

Table 5

The number of scientific papers published in relation to the representation of subjects of education in the research

| Subjects | Field | N | |
|-------------------|-------------------------------|---|----|
| Students | Grades 1-4 | 0 | 17 |
| | Grades 5-8 (subject teaching) | 3 | |
| | High School | 4 | |
| | University Students | 9 | |
| | Students with disabilities | 1 | |
| Education Workers | Grade 1-4 Teachers | 4 | 13 |
| | Subject Teachers | 5 | |
| | High School Teachers | 1 | |
| | Principals | 1 | |
| | Pre-school Teachers | 1 | |
| | Educators in Homes | 1 | |
| Parents | | 5 | 5 |
| Third Age | | 1 | 1 |
| Other | | 3 | 3 |

From the analysis of the results of the research, we disproved hypothesis H3. It is clear that not all subjects were equally represented. It is clear that students were in the center of attention of the research, and only after them education workers, with the emphasis on teachers employed in elementary schools. Parents were significantly less represented in the research, and adults, especially the elderly and infirm, minimally. Even if the paper was focused on students, it is clear that not all students were equally represented. The research showed that education workers and parents had the greatest problems in the field of didactics and school pedagogy, especially relating to an early school age. Specifically, these are students in grades 1-4, but their representation according to separate criteria is not visible. It may be concluded that the authors from the research sample were mainly focused on students whose developmental age, in terms of the possibility of self-regulation in studying, made the highest level of satisfaction with remote learning possible, and whose life experience and maturity made it easier to respond to the challenges in the field of

crisis pedagogy. We presume that those participants were most accessible for research in the age of the pandemic, and that the reason for this distribution of studies on the basis of subjects stems from the principle of accessibility. This question also opens up a topic for further research, because the most vulnerable group was also the least represented in this research.

The fourth hypothesis, H4, focuses on the challenges mentioned in the research sample.

In the area of early and pre-school education, the quality was researched of the partnership cooperation between teachers and parents during the time of exceptional life circumstances caused by the COVID-19 pandemic. A correlation was found between their self-assessment of the partnership cooperation and the length of their work experience and the professional qualifications of the teacher. The results of the research show how teachers assessed the partnership cooperation with parents during the pandemic as good and see themselves as competent to build a partnership relationship with parents and to provide support to parents of children with disabilities. Teachers with more years of work experience see themselves as less competent in using digital technology and believe that in that regard they need more practical experience and additional theoretical training (Jurčević Lozančić and Kudek Mirošević, 2021).

Physical activity and movement were pointed out as a particular challenge in education during the pandemic. The analysis of the studies found empirical findings from a comparison of the physical activities of students and pupils, which differ in relation to gender. Statistically significant differences were found between female and male students and pupils, where male students and pupils are more involved in physical activities (Šunda, Babić and Andrijašević, 2020; Lovrinčević, 2021). In remote learning, the greatest challenge was the lack of physical contact, and the reduced autonomy and independence of students. The research into physical activity and health and physical education lessons during the pandemic was aimed at students from vocational high schools, for whom a significantly higher level of participation in recreational activities was found before lockdown than during it. In order to increase physical activity during remote learning, the authors Vrbik, Vrbik and Miholić (2021) proposed some possible solutions related to student movement and motivation for physical exercise. Some research, conducted exclusively in music schools, emphasized how it was vital to implement classes in real time during remote learning (Mičija Palić, 2021). As a particular challenge from the students' perspective (lack of) singing during the pandemic was mentioned, where it was demonstrated that members of choirs and ensembles felt more intense dissatisfaction, and that restricting singing by 5th to 8th grade students in elementary schools caused negative emotional reactions (Jurkić Sviben, and Jambrošić, 2021). A particular challenge relating to technical culture classes was mentioned in connection with remote learning. According to the authors Purković, Lapov Padovan and Delač (2021) who conducted qualitative research from the point of view of technical culture, through a semi-structured interview, it is clear that remote learning in technical culture classes was not able to develop the targeted competences in students, and cannot be an equivalent alternative to in-person classes due to the impossibility of systematic development of technical competences and the lack of social interaction (verbal, physical and emotional). In Croatian language classes, the authors Sunara Jozek and Franjo (2021) saw remote learning as the last-choice solution because in that form quality is lost which is achieved through inter-personal communication, both verbally and non-verbally, whilst the author Marčius Logožar (2021) opens up the possibility of cooperative learning in a virtual classroom. Some authors mention e-assessment as a particular challenge, pointing out the problems of student independence and the level of mastering teaching content, and thereby bring into question the purposefulness and relevance of e-assessment (Matijašević and Maras, 2022), whilst Čurković, Krašić and Katavić (2020) mention that in remote learning the teachers' personal equation changed, and they became less strict.

In the field of education of children with special needs, mainly work relating to children with disabilities was mentioned, whilst gifted children were completely overlooked. In the case study

by Alić and Kolega (2021) it was clear that their physical activity was reduced in the categories of coordination and explosive power.

Terminological differences, especially relating to didactic and pedagogic terms, which particularly came to the fore with the arrival of the pandemic, such as: remote learning, on-line classes, distance education, e-learning, e-teaching, e-classes, internet classes, virtual classes, and distance learning, were dealt with by the authors Nemeth-Jajić and Jukić (2021). Further, the results of empirical findings indicate different views of remote learning from the point of view of grade 1-4 teachers and students of education (Kostović-Vranješ, Bulić and Periša, 2021). The students' perspective can be seen in research showing the level of satisfaction of students with remote learning during the pandemic, at the Faculty of Education of the University of Zagreb. Students' satisfaction was tested in relation to four aspects: the organization and implementation of classes, the quality of the teaching content, assessment and feedback, and support and the accessibility of information. The results indicate that students were more satisfied with on-line classes, but differences were also found in their assessment of satisfaction in relation to their status (regular or part-time students). The results also indicate the need for additional education for teachers, but also a more detailed insight into students' characteristics and predispositions for successful participation in on-line classes (Šenjug Golub, Rajič and Dumančić, 2020). The results of another piece of empirical research from the students' perspective show that most students were satisfied with remote classes. Participants in the research gave the highest scores to the aspect of the structure and planning of classes, emphasizing the goals of learning and the clarity of teaching, and they gave the highest scores for the encouraging environment in the virtual classroom. The qualitative part of the research showed that participants differed in terms of their degree of adjustment to remote learning, where their personal affinities came to the fore. The research especially emphasized the importance of the role of university teachers in the teaching process, whether in in-person or on-line classes (Bušljeta Kardum, R. and Jurić Vukelić, 2021). In the research by Odak, Sesar and Vasilj (2021) the research sample comprised students, and the results of the research demonstrated that in the second semester of on-line classes they showed a higher self-assessment of their skills in the use of technology, while no differences were found between the two semesters in the level of motivation for following classes and completing tasks, or in their skill in organizing their time. Regarding satisfaction with remote learning, students in both semesters assessed the classes conducted with an average grade of "very good". As part of research into students' satisfaction with classes, the level of students' satisfaction with on-line classes in a foreign language was tested (Bačić and Krstinić, 2021). Students' attitudes were surveyed within the categories of satisfaction with the teaching, and the materials and tools available for conduct of on-line classes. In all categories, they expressed a very high degree of satisfaction, which leads to the conclusion that self-regulation is an important factor in the conduct of remote classes in the category of success and satisfaction, and this is proportional to the age of the subjects. This was also confirmed by the results of the research by Kolak, Markić and Horvat (2020a). In the challenges related to education in the conditions of a pandemic, the experiences of education workers are also an important indicator. On behalf of the Agency for Vocational Education and Training and Adult Education, Anđelić, Vučić and Buić (2020) conducted research into the experience, attitudes and needs of education workers related to conducting remote classes. The conclusions of the research show that education workers, according to their own self-assessment, demonstrated a high level of competence in the IT field, and the authors of the paper particularly emphasize digital pedagogy in work with students and other participants. The authors Ivić and Blagojević (2022) conducted comparative research into the use of IT technology by school and university students, and found that both were open to using it, and expressed a positive attitude towards the implementation of that technology in the teaching process. Some authors focused on the perception of learning from the perspective of students of two-subject courses, and in the results of their research they pointed out the factor of the excessive burden they bear (Miletić

and Radoš, 2021). The research by Šijaković and Miljković Krečar (2022) on a sample of students showed that remote learning suits part-time students significantly more than regular students. Further, the opinion of principals of special education institutions about the quality of the effectiveness of on-line classes showed their somewhat lower satisfaction with the support from the authorities. They expressed the need for additional education of students, parents and teachers, and pointed out that various needs arose related to the specific digital teaching materials intended for on-line lessons (Bakota, Pavičić-Dokoza and Punjek, 2021).

Challenges in educational work in children's homes were categorized in three groups: organizational, technological and pedagogic. From the point of view of teachers/educators in children's homes, the greatest challenge was the new, dual function of the home's educator as a substitute teacher and a substitute parent (Sovar, 2021). The parents' perspective in extraordinary distance learning was researched by the authors Drvodelić, Domović and Pažur (2021) whose aim was to establish the perception of extraordinary remote education of parents of 1st to 4th grade students. According to other research (Kolak, Markić and Horvat, 2020a) in this paper too categories were mentioned in particular indicating the high level of parental involvement in children's learning process, which increases parental stress and disturbs the everyday conduct of their own business and family obligations. One third of the participants in the research stated that remote learning was too demanding and the extent of the burden on them was related to their own level of education, employment status and their children's level of independence. The experience and opinions of 5th to 8th grade elementary school students relating to remote learning indicate that students mentioned twice as many weaknesses than advantages, which the authors Runtić and Kavelj (2020) explain by the well-developed critical attitude of students, and the difficulties with the new form of learning. The advantages mentioned most often by students were the interesting and fun classes, the use of digital quizzes and games, and the possibility of sleeping in, and the weaknesses they mention, similar to the research conducted in 2020 by Kolak, Markić and Horvat, 2020, were being given too much homework, the impossibility of socializing with their friends, difficulties understanding the class content, and the lack of explanations and teaching given by some teachers. This research indicates that only 1/3 of the participants in the research demonstrated complete independence in following and participating in on-line classes. It is positive that the results of this research prove that one quarter of parents assessed that they talked with their children, studied and showed love more often than before the pandemic, and almost half the parents assessed that they played more with their children than before lockdown, which is also in line with the research by Višnjić-Jevtić and Visković (2021), who stated that family relationships were pointed out as one of the most important dimensions of parenthood. In addition, the author Bistrić (2021) states that the level of the parents' education affects their attitudes towards the influence of television content on pre-school children during the pandemic, and Ivančević and Igić (2021) showed, from the point of view of parents of elementary school pupils, that the parents' level of education, their active employment status, and older age correlated with more positive attitudes towards the use of IT technology in remote classes during the pandemic.

The author Žiljak (2020) analyzed the obstacles and new opportunities in the field of adult education for participant management in cultural centers and institutions of adult education. The analysis was based on data on the implementation of projects in eight organizations from various parts of the RC. The significant obstacles mentioned were the impossibility of participating in educational and cultural activities by people with a lower level of education and lower social and economic status, elderly people, the disabled, the long-term unemployed, and people who live outside the main urban centers. In the field of gerontology, the challenge was mentioned of communication with elderly and infirm people, which affects their psychological state and quality of life (Stanić, Hinek and Perkušić, 2021). This source was the only one analyzed in this research, indicating the lack of research in the area of education aimed at people in the third age of life in the new circumstances.

Concluding Remarks

The analysis of these sources using a central data portal, which brings Croatian scientific journals together in one place, offering open access to its papers, showed that the entire scientific community became actively involved in the search for answers to the questions and offering solutions to the problems caused to the entire world community by the virus. The analysis of published papers showed the dominance of the scientific field of medicine, and immediately after medicine, the field of social sciences. The field of pedagogy (education) had a visible contribution, but not all the disciplines within pedagogy were equally represented. The greatest focus was on the area of teaching, especially on-line forms of teaching, which were marginalized before the crisis caused by the pandemic. In reference to the question of the subjects of the educational process, the whole subject area is dominated by a child-centered approach, which is to be expected in a situation in education that can be called a crisis. There are no scientific papers that cover the entire school system systematically and comprehensively (although there are some scientific monographs, studies and reports), but there are numerous partial studies that cover individual parts of school subsystems or specific areas. For instance, as part of the didactics of teaching, the field of teaching methodologies appears in individual areas, that is, the methodology of individual subject areas, such as the teaching methodologies of health and physical education, music and technical culture. The sources indicate the importance of movement and physical activity for students, which may be reflected in the school system regardless of the pandemic crisis and with consideration for the sedentary style of teaching. The power of music and its connection with students' emotional reactions underlines in particular the importance and influence of students' emotions during learning activities and achieving the learning outcomes set. The analysis demonstrated that, within the field of special education, gifted students remain marginalized even in a crisis situation. The age of education workers was shown to be an important factor in responding to challenges, especially in terms of their IT competence. Taking on the role of substitute teacher and parent, and integrating the roles of parents, teachers and educators raised awareness of the importance of a joint, student-centered approach, with respect for their welfare. As expected, an excessive burden on all subjects was detected as a particular challenge, and in the field of didactics, the independence and self-regulation of students stand out as crucial factors. The parents' perspective, which was slightly less represented in the research, indicates an examination of life values and establishing priorities. The lack of any focus in educational research on the field of adult education, and especially gerontology, is an alarm to which an urgent response is needed in educational research in Croatia.

Finally, we conclude that most of the analyzed sources focus on an examination of the state and satisfaction of the subjects, which in education in a crisis situation corresponds to one of its main pillars – awareness and the process of enlightenment (Amini, 2004). Within these challenges, it can be seen that most authors find a link between awareness and meaning, and indicate that the current crisis offers an opportunity for successful transformation into potential for development.

Literature

- Alić, J. & Kolega, D. (2021). Physical activity in individuals with Down syndrome – a case study. *Magistra Iadertina*, 16 (1), 9-23. Retrieved from: <https://hrcak.srce.hr/270518>
- Amini, B. (2004). The Pedagogy of Crisis — Short Review. *Pedagogijska istraživanja*, 1 (2), 195-205. Retrieved from: <https://hrcak.srce.hr/139355>
- Anđelić, V., Vučić, M. & Buić, N. (2020). Experiences of educational workers in the implementation of distance teaching in the system of vocational and adult education of the Republic of Croatia in the conditions of the COVID-19 pandemic. *Andragoški glasnik*, 24 (39), 19-33. Retrieved from: <https://hrcak.srce.hr/272380>

- Bačić, L. & Krstinić, M. (2020). Satisfaction with the conduct of online classes among the students of Zagreb University of Applied Sciences. *Obrazovanje za poduzetništvo – E4E*, 10 (2), 41-42. <https://doi.org/10.38190/ope.10.2.6>
- Bakota, K., Pavičić Dokoza, K. & Punjek, L. (2021). Attitudes of the Principals of Special Educational Institutions on the Quality and Efficiency of Online Teaching. *Acta Iadertina*, 18 (2), 185-206. <https://doi.org/10.15291/ai.3406>
- Bistrić, M. (2021). Television in the lives of preschool children and their families before and during the first phase of the covid-19 virus. *Napredak*, 162 (3-4), 267-294. Retrieved from: <https://hrcak.srce.hr/267617>
- Bušljeta Kardum, R. & Jurić Vukelić, D. (2021). The Challenges and Issues on the University of Zagreb during COVID-19 Crisis. *Interdisciplinary Description of Complex Systems*, 19 (3), 357-365. <https://doi.org/10.7906/indecs.19.3.1>
- Čurković, N., Krašić, S. & Katavić, I. (2020). Attitudes of Teachers and Parents of Primary School Students towards Distance Education. *Odgovorno-obrazovne teme*, 3 (5), 5-24. Retrieved from: <https://hrcak.srce.hr/249112>
- Drvodelić, M., Domović, V. & Pažur, M. (2021). Emergency Remote Education during the COVID-19 Pandemic in Spring 2020: Parents' Perspective. *Croatian Journal of Education*, 23. (3), 675-707. <https://doi.org/10.15516/cje.v23i3.4511>
- Government of the Republic of Croatia. (2020). *Decision to Halt the Provision of Classes in Institutions of Higher Education, High and Elementary Schools and the Regular Work of Pre-school Institutions, and to Establish Remote Learning.* Narodne novine 29/2020. Retrieved from: https://narodne-novine.nn.hr/clanci/sluzbeni/2020_03_29_670.html
- Ivanković, I. & Igić, I. (2021). Attitudes of parents of primary school students of the City of Zagreb on the use of ICT in distance learning during the COVID-19 pandemic. *Metodički ogledi*, 28 (1), 39-62. <https://doi.org/10.21464/mo.28.1.5>
- Ivić, V. & Blagojević, L. (2022). Use of information and communication technology by students before and during the Covid 19 pandemic. *Napredak*, 163 (1-2), 93-113. Retrieved from: <https://hrcak.srce.hr/279087>
- Jurčević Lozančić, A. & Kudek Mirošević, J. (2021). Challenges of partnerships in early childhood and pre-school education institutions during the COVID-19 pandemic. *Hrvatska revija za rehabilitacijska istraživanja*, 57 (1), 128-144. <https://doi.org/10.31299/hrri.57.1.7>
- Jurkić Sviben, T. & Jambrošić, N.S. (2021). (Non) Singing During The COVID-19 Pandemic – Opinions and Emotional Experience of Students From 5th to 8th Grade of Primary Schools in The Republic of Croatia. *Školski vjesnik*, 70 (2), 269-292. <https://doi.org/10.38003/sv.70.2.12>
- Kolak, A., Markić, I. & Horvat, Z. (2020a). When Home Becomes School – teachers' and students' perspective. In: (V. Strugar, A. Kolak, I. Markić eds.), *Distance learning from home during HR-COVID-19*, 47-86., Zagreb – Bjelovar, Croatian Academy of Sciences and Arts; HPD; Element d.o.o.
- Kolak, A., Markić, I. & Horvat, Z. (2020b). The (excessive) burden on students due to the coronavirus. In: (V. Strugar, A. Kolak, I. Markić eds.), *Distance learning from home during HR-COVID-19*, 108-146., Zagreb – Bjelovar, Croatian Academy of Sciences and Arts; HPD; Element d.o.o.
- Kostović-Vranješ, V., Bulić, M. & Periša, V. (2021). Attitudes of Teacher Education Students and Class Teachers to Distance Education. *Školski vjesnik*, 70 (2), 135-158. <https://doi.org/10.38003/sv.70.2.6>
- Lovrinčević, J. (2020). Physical Activity Level of Students of the Faculty of Education During the Covid-19 Virus Epidemic. *Život i škola*, LXVI (1), 105-110. <https://doi.org/10.32903/zs.66.1.9>
- Marcuš Logožar, K. (2021). Learner-centered distance learning (online teaching). *Napredak*, 162 (3-4), 345-369. Retrieved from: <https://hrcak.srce.hr/267621>
- Mičija Palić, M. (2021). The impact of the COVID-19 pandemic on music education in the Republic of Croatia: Problems of conducting virtual distance learning. *Napredak*, 162 (3-4), 295-312. Retrieved from: <https://hrcak.srce.hr/267618>
- Miletić, N. & Radoš, Ž. (2021). Perception of Distance Teaching as a Result of the COVID-19 Epidemic. *Acta Iadertina*, 18 (2), 241-254. <https://doi.org/10.15291/ai.3606>
- Ministry of Science and Education (2020). *Modeli i preporuke za rad u uvjetima povezanima s bolesti Covid-19 u pedagoškoj/školskoj godini 2021./2022.* Retrieved from: <https://mzo.gov.hr/vijesti/modeli-i-preporuke-za-rad-u-uvjetima-povezanim-s-bolesti-covid-19-u-pedagoškoj-skolskoj-godini-2021-2022/4511>

- NACIONALNO VIJEĆE ZA ZNANOST (2009). *Pravilnik o znanstvenim i umjetničkim područjima, poljima i granama*. Narodne novine NN 118/2009. Retrieved from: https://narodne-novine.nn.hr/clanci/sluzbeni/2009_09_118_2929.html
- Nemeth-Jajić, J. & Jukić, T. (2021). Defining and Using Terms for E-Teaching Modalities. *Metodički ogle-di*, 28 (1), 89-114. <https://doi.org/10.21464/mo.28.1.7>
- Odak, M., Sesar, K. & Vasilj, V. (2021). Remote teaching during the sars-cov-2 pandemic: what do the students say? *Mostariensia*, 25 (1-2), 73-99. Retrieved from: <https://hrcak.srce.hr/278762>
- Purković, D., Lapov Padovan, Z. & Delač, D. (2021). Perspectives of distance learning and teaching from the point of view of technical culture teaching: Teachers' experiences during the COVID-19 pandemic and perspectives for the future. *Politehnika*, 5 (2), 29-37. <https://doi.org/10.36978/cte.5.2.3>
- Runtić, B. & Kavelj, N. (2020). Opinions and experiences of higher grade primary school students about distance learning during the COVID-19 pandemic. *Acta Iadertina*, 17 (2), 149-174. Retrieved from: <https://hrcak.srce.hr/252881>
- Sovar, I. (2021). Competencies of educators in children's homes. *Metodički obzori*, 16 (2 (31)), 71-89. <https://doi.org/10.32728/mo.16.2.2021.04>
- Stanić, I., Hinek, S. & Perkušić, M. (2021). Effects of Communication during the COVID-19 Pandemic on Employees of Homes for the Elderly and Infirm. *Život i škola*, LXVII (2), 9-20. <https://doi.org/10.32903/zs.67.2.1>
- Sunara-Jozek, D. & Franjo, K. (2021). Croatian language classes in primary education. *Napredak*, 162 (3-4), 325-344. Retrieved from: <https://hrcak.srce.hr/267620>
- Šenjug Golub, A., Rajić, V. & Dumančić, M. (2020). Student satisfaction with distance learning during the COVID-19 pandemic at the Faculty of Teacher Education, University of Zagreb. *Andragoški glasnik*, 24 (39), 48-62. Retrieved from: <https://hrcak.srce.hr/272382>
- Šijaković, J. & Miljković Krečar, I. (2022). Students' perception of online classes on the example of VERN' University. *Napredak*, 163 (1-2), 51-71. Retrieved from: <https://hrcak.srce.hr/279085>
- Šunda, M., Babić, V. & Andrijašević, M. (2020). Online Physical Education lessons for students of the Antun Gustav Matoš High School during the COVID-19 pandemic. *Napredak*, 161 (3-4), 315-323. Retrieved from: <https://hrcak.srce.hr/249641>
- Vanek, K., Maras, A. & Matijašević, B. (2022). E-assessment in online teaching during the COVID-19 pandemic from the perspective of teachers. *Napredak*, 163 (1-2), 161-179. Retrieved from: <https://hrcak.srce.hr/279090>
- Višnjic-Jevtić, A. & Visković, I. (2021). Parenthood in the time of a pandemic COVID-19: A perspective of the parents of early and preschool age children. *Metodički ogle-di*, 28 (1), 11-38. <https://doi.org/10.21464/mo.28.1.4>
- Vrbik, A., Vrbik, I. & Jenko Miholić, S. (2021). PE Class Attendance and Engagement in Recreational Activities during the COVID-19 Pandemic. *Croatian Journal of Education*, 23. (1), 133-152. <https://doi.org/10.15516/cje.v23i1.4245>
- Žiljak, T. (2020). Participatory governance in adult education organizations in the circumstances of the COVID-19 epidemic. *Andragoški glasnik*, 24 (39), 11-18. Retrieved from: <https://hrcak.srce.hr/272379>

KOTEVA-MOJSOVSKA Tatjana

“Ss. Cyril and Methodious” Skopje

Pedagogical Faculty “St. Climent Ohridski”, Skopje, Republic of North Macedonia

HOLISTIC DIMENSION OF CHILD ORIENTED PEDAGOGY – CONTEMPORARY APPROACHES IN EARLY LEARNING

Abstract: Modern discourses indicate that the child learns and develops in his specific way that means it participates in own development. It uses original ideas thus offering challenges for pedagogical creations and influences on its individual development. Hence, we can talk about child oriented/centered pedagogy. The other side of the modern pedagogical discourses refers to the holistic approach in organizing the educational influences. It means the child is an eco- system