Mutual empathy of vulnerable students and teachers and its impact on students' personal well-being and academic performance through the online school operated by the Regional Directorate of Education of Attica, Greece during the Covid-19 pandemic.

Georgios Kosyvas

Regional Directorate for Primary and Secondary Education of Attica

ABSTRACT

Purpose: The rapid shift to full online synchronous and asynchronous learning in response to the global pandemic has led to experimenting innovative online learning practices at school level. The present research study summarises the experience gained from the implementation of the Online School of the Regional Directorate of Education of Attica during the academic year 2020-2021. It investigates the impact of mutual empathy on the students' academic performance and well-being through the Online school operation in Covid-19 period.

Methods: In the present research, fifteen (15) vulnerable teachers and six (6) students participating in the Online School were questioned through open interviews after the implementation of Online School during the Covid-19 pandemic in Greece.

Results: Vulnerable students and teachers shared empathy to a sufficient degree through the Online School operation which provided a safe and convenient learning environment. Empathy was positively correlated to academic performance of students through their participation in the Online School.

Conclusion: It appears that the Online School has provided a solution to the existing risk of isolation and marginalization of vulnerable students while reducing family anxiety for their cognitive and socio-emotional development. Finally, it has provided opportunities for teachers to work on their own pace according to individual needs and be able to cope with students' needs through implementing alternative teaching practices with the use of digital tools.

Key Words: *Online School, synchronous and asynchronous learning, vulnerable students and teachers, empathy, academic performance, well-being.*

Corresponding Author: Georgios Kosyvas email: **gkosyvas@gmail.com**

Introduction

The Covid-19 pandemic has affected all areas of personal and community life in Greece, leaving an imprint on education and training. The temporary school closure and the restrictive measures taken have resulted, within a short period of time, in a remarkable shift from face-to-face education to distance online education. Thus, the online educational approach, a combination of asynchronous and synchronous learning has revealed a great number of opportunities as well as challenges due to internet dysfunction among adolescents [1].

In addition, the integration of digital tools in school practice is gradually expanding, thus further supporting teaching and learning and allowing online access to a variety of school subjects from anywhere and at any time [2, 3].Students and teachers interact either at the same time or at different times and / or different places [4].

Studies on asynchronous online learning stress that students experience meaningful learning when engaged in participatory learning environments [5]. Learners have opportunities to actively participate in their own learning in a heterogeneous learning environment, to spontaneously interact with their classmates and to demonstrate their learning achievements [6]. Asynchronous online learning promotes interaction and collaboration among students through blogs, email, chat, discussion forums, quizzes, self-assessment tests with feedback, etc. [7]. Synchronous learning, on the other, is an educational communication mode where the student and the teacher, at the same time, co-exist in the same or in a different place, in order for the learning to take place [6, 7]. The students and the teacher are physically separated only in terms of place and not in terms of time, while teaching and communication are provided through technological tools [8]. Synchronous digital tools can enrich the essential interaction between student and teacher and among students and they allow multimodal communication [9]. In addition, synchronous learning provides a variety of multimedia tools and accessible online learning resources that help students develop interactive communication [8]. Mixed learning also helps to evaluate individualized tasks.

Blended learning is a flexible process that focuses on students' needs, develops social interactions by improving critical thinking skills, and makes learning and teaching meaningful and engaging [10, 11]. Student satisfaction attracts, motivates and engages them emotionally in online instruction influencing their achievement and the success of blended learning [3, 12].

The amount of combination of the two parts varies according to the type of activities involved [13]. According to research findings, the integration of peer-

to-peer discussions in an asynchronous lesson course leads to a significant improvement in students' performance and positively affects their perceptions and attitudes [14, 15].Mixing live interaction sessions with asynchronous online study provides students with flexibility and makes lessons attractive and effective [16]. It aims to interact, collaborate and engage teachers and students in digital environments by enhancing their involvement in authentic learning situations [13, 14].

Empathy is understood as "emotional" that refers to the existence of emotional response consistent with the other person's emotional state, and "cognitive" who refers to the understanding of someone's thinking [17, 18, 19]. Recent studies have found that the teacher's empathy is an integral part of her/ his role [20] and a component of her/his professional development [21]. It is associated with the effort to feel the positive and negative emotions of her/his students and empathize with them.

The teacher's empathy is mainly related to interpersonal and social empathy. Interpersonal empathy refers to the knowledge of the student's internal situation, his / her possible difficulties in the lessons and the teacher's response with sensitivity [22]. Social empathy is the teacher's ability to understand the family and social conditions of students [23] and is closely linked to students' academic success. Teachers with high empathy take the time to get to know their students' particular problems (e.g. students with serious health problems, low family socioeconomic status, or cultural diversity feel the fear of failure); they apply "active listening", show flexibility in the delivery of homework and help students develop their true potential, encouraging and supporting them to reach the highest possible level.

During the 2020-2021 academic year, the «Vulnerable Students and Teachers Online School of the Regional Directorate for Primary and Secondary Education of Attica» was organized and implemented. Vulnerable students, according to the relevant Greek legislation, are students who due to serious health problems belong to groups of increased risk (Joint Ministerial Decision, Government Gazette 3780/B/8-9-2020). Vulnerable teachers also belong to groups of increased risk, provided they have obtained a special leave of absence following a

reasoned medical opinion (Joint Ministerial Decision, Government Gazette 1856/B/ 15-5-2020, circular no. 136503/E3/ 8-10-2020). Because in both cases there is a risk for their health, they are unable to participate in face-to-face learning. Thus, in the Online School, vulnerable teachers deliver lessons and vulnerable students attend them. Based on the review of the literature, the present research investigates whether the Online School implementation had an impact on mutual empathy between students and teachers, as well as on students' academic performance.

Methods

During the academic year 2020-2021, the Online School enrolled 1096 students from schools in Attica and other parts of Greece and 560 teachers, offered distance learning. The sample consisted of fifteen (15) vulnerable teachers and six (6) vulnerable students through open interviews. The sample concerned students (female and male) and teachers from schools of all educational levels under the authority of the Regional Directorate for Primary and Secondary Education of Attica. All teachers and students were considered vulnerable due to health issues. There were no cultural landmark restrictions and any vulnerable student was free to attend the Online School. Vulnerable teachers were also selected according to the number of students that were enrolled in the Online School.

Regarding interviews, the basic research questions were:

•*What was the effect of mutual empathy on students' personal well-being?*

•*What was the effect of mutual empathy on students' academic performance?*

Indicative evidence reflecting perceptions, thoughts and feelings of teachers and students is reported as follows:

Teachers:

•*T1: "[…] I liked the flexibility in the planning of the courses […] we had degrees of freedom, we could make our choices, to combine the synchronous and asynchronous teaching [..]"*

•*T2: "[…] there must be continuity in order to support these vulnerable groups, the people who do not experience democratic equality in education because of remote or inaccessible areas […]"*

•*T3:«[…]the combination of synchronous and asynchronous learning was excellent. Students learned inboth ways. However, I believe that synchronous learning was more*

beneficial to students mainly due to the immediacy of the interaction […] "

•*T4: "[…] there was emotional contact with my students. "Our warm relationship has had a positive effect on students' learning and performance."*

•*T5: «[…] I applied the method of flipped classroom. The students studied the content at home on their own. They could watch an interactive video and be prepared for the lesson. They were pre-informed before participating. I answered their questions and they could perform demanding exercises. Sometimes they could collaborate in groups […] ".*

•*T6: "[…] We managed to make the children feel like in ordinary class. […]. Synchronous daily communication was effective, perhaps better than non- synchronous communication, as some forgot to upload the exercises and communication was more limited. All the students could study and most of them will succeed in the Panhellenic Examinations and will enter the university […]*

•*T7: «Personally, I hope that there will be no need in the future for the operation of such a school. […] It was indeed a titanic work that in my opinion was crowned with great success. "*

•*T8: "[…] The power of empathy between us triggered the children to greater effort and success"*

•*T9: "For me…. I felt I had one thing in common with the students … we all shared health issues …that's why we should "connect" in a different way"*

Students:

•*Maria (high school student): "[…] The Online School of the Regional Directorate of Attica supported me to graduate high school and attend all the subjects of the last grade […] I had perfect relationships with all the teachers, they understood my personal issues and the improvement in my performance during the year is due to them alone. Although our communication was done through digital tools, I felt that they were always by my side […] The digital school gave me the strength to complete my preparation for the Panhellenic Examinations and to achieve my dream […] " (the student showed remarkable success and was admitted to the university a little later).*

•*George (upper secondary student): "I'm excited about the digital school. I got a lot of knowledge. I did homework digitally and sent it to my teachers. Two of our teachers were preparing activities at home. They made us watch video lessons and answer questions. We learned the theory*

at home and the teachers answered our questions. We solved more difficult exercises in the classroom [...] " (the student entered to university).

•*Dimitris (High school student): "[...] In this different school I met new classmates who became online friends and we communicate. I also met new teachers who helped me with online learning. Our teachers and I used Webex and e-class. It was a wonderful combination [...]. ".*

•*Eleni (High school student): "[...] There was something in common with our teachers, there was compassion [...] We were motivated with love and that helped me greatly increase my performance [...]".*

•*Electra (primary school student): "This year I had a unique school experience. At first my feelings were strange, because we were all strangers to each other both the students and teachers. But very quickly I made friends with the children and we all became a very nice group [...] ".*

•*Costas (primary school student): "I really liked the Online School. [...] Many times, we learned by playing. This gave me great joy. My teacher was kind. She helped me with my personal health problem. I saw that other classmates have similar problems [...] We all became friends and we continue to talk to each other [...] ".*

Analysis of Results

Teachers commented on the use of synchronous versus asynchronous teaching and learning. They pointed out that the flipped classroom model proved a valuable tool under the COVID restrictions circumstances. Emphasis was placed on the importance of understanding the students' emotional status which underlies the benefits of building positive relationships. Additionally, the teachers pointed out that empathy has been associated with compassionate actions allowing for experiencing moral emotions. Regarding students, the majority stressed the importance of high-quality interpersonal relationships. They commented on the beneficial mutual empathy both with teachers as well as their classmates. Empathy triggered their motivation for learning, thus contributing to improved learning outcomes. Moreover, students pointed out the effectiveness of flipped classroom model, thus implying the impact of cooperation and collaboration.

Synchronous online learning seems to be more effective than asynchronous online learning in terms of performance, emotional exchanges and timing. The tea-

-chers used the e-classroom to send regular announcements, which served to keep the students committed. In addition, some used email platforms, instant messaging (e.g. Whatsapp) or social media platforms (e.g. Instagram). The existence of different communication channels seemed necessary to maintain communication among students and teachers. Webex "breakout rooms" highly contributed towards this direction. Teachers also used a variety of tools. They experimented with automatic grading quizzes for quick and frequent formative assessment. Some teachers applied the flipped classroom model and used synchronous distance learning for collaborative problem solving, practice, explaining concepts, and answering questions.

Both synchronous and asynchronous learning contributed to the cognitive development of students. In peer-to-peer discussions, students participated in more socio-emotional exchanges, while in asynchronous learning focused more on learning tasks with limited exchanges. Synchronous communication has had a positive effect on students' "sense of belonging", emotions and online collaboration, creating a balanced community of practice.

Discussion

The world pandemic called for a sharper focus on providing quality distance education to ensure quality learning outcomes and successful school attendance. The rationale behind the Online School of the Regional Directorate of Attica was satisfying the individual needs of both students and teachers. Thus, the initiative of the Online School highlights the humanistic perspective in education. Apart from being student-centred, the Online School similarly proved to be person-centred, with teachers at the core of the process. Empathy is the key quality in teachers' and students' relationships. It is the basis of interaction during the learning process and the factor affecting the students' motivation for learning. Empathy had had a positive effect on students' engagement and academic performance.

The Online School managed to create a safe and convenient learning environment for all engaged. *Empathy and compassion* were truly appreciated due to similar health issues and experiences among teachers and students. *Confidentiality* was a key factor by ensuring the students' personalized access protected privacy and personal data. *Individualized learning* was also achieved since priority was provided to the educational, psychological and social needs. *Flexibility* was also accomplished through working at the students' and

teachers own pace, on a schedule that worked best for all. Equally important was the *accessibility potential of material* through attending and reviewing content with no space and time constrains. *Skills' enhancement* and academic performance were achieved through students' time management, and teachers' feedback provision. Finally, the *participatory approach* was exploited through individual learning and group learning.

The Online School has had multiple benefits for vulnerable student groups and teachers. It has contributed to maintaining the students' emotional balance and interest in the learning process, considering the health, habits and lifestyle and empowering the resilience of students during the Covid-19 pandemic [24, 25].It has provided a solution to the existing risk of isolation of vulnerable students while reducing their family anxiety with regard to the cognitive and socio-emotional development of their children. Finally, it has provided opportunities for teachers to work on their own pace, be able to empathize with students' needs and implement alternative practices with the use of digital tools.

Conclusion

The findings of the present research study aim to stimulate discussion regarding the positive impact of the Online School practice for vulnerable students and teachers. It appears that the Online School has provided a solution to the existing risk of exclusion of vulnerable students from the educational process. It has provided opportunities for teachers to work on their own pace according to individual needs and be able to cope with students' needs and implement alternative teaching practices with the use of digital tools. The concerns and needs of vulnerable students do not differentiate fundamentally from those of the general student population; still, there is an additional need for the school to provide a normal school education process, which can respond to their individual needs. This is also an opportunity for teachers to enrich their distance learning practices through digital tools, thus enhancing their digital skills.

References

1. Assimogiorgos, G., Gryparis, A., Panagouli, E., Richardson, C., Bacopoulou, F., &Tsitsika, A. (2021). Dysfunctional Internet Use by Adolescents in an Urban Environment: A Case-Control Study. Developmental and Adolescent Health, 1(4), 42-47. https://dah-journal.com/index.php/dah/article/view/28/15

2. Hrastinski, S. (2019). What Do We Mean by Blended Learning? TechTrends, 63, 564–569.https://link.springer.com/content/pdf/10.1007/s11528-019-00375-5.pdf

3. Taghizadeh, M., &Yourdshahi, ZH (2019). Integrating technology into the young learners 'classes: Language teachers' perceptions. Computer Assisted Language Learning, 33 (8), 982–1006.https://www.tandfonline.com/doi/full/10.1080/09588221.2019.1618876

4. Vale, J, Oliver, M, Clemmer, RMC (2020) The influence of attendance, communication, and distractions on the student learning experience using blended synchronous learning. The Canadian Journal for the Scholarship of Teaching and Learning, 11(2). https://ojs.lib.uwo.ca/index.php/cjsotl_rcacea/article/view/11105

5. Palloff, RM, & Pratt, K. (2007). Building online learning communities: Effective strategies for the virtual classroom (2nd ed.). San Francisco: Jossey-Bass.

6. Simonson, M., Smaldino, SE, Albright, M., &Zvacek, S. (2012). Teaching and learning at a distance: Foundations of distance education. (5th ed.). Boston: Pearson.

7. Sana, S., Adhikary, C. & Chattopadhyay, KN (2018). Synchronous Vis-a-Vis Asynchronous Learning: A Blended Approach. Inquisitive teacher, 5 (2), 31-39.

8. Angelone, L., Warner, Z., &Zydney, JM (2020). Optimizing the technological design of a blended synchronous learning environment. Online Learning, 24 (3), 222-240.https://olj.onlinelearningconsortium.org/index.php/olj/article/view/2180

9. Martin, F., Sun, T., Turk, M. &Ritzhaupt, AD (2021). A Meta-Analysis on the Effects of Synchronous Online Learning on Cognitive and Affective Educational Outcomes. International Review of Research in Open and Distributed Learning, 22 (3), 205-242. DOI: https://doi.org/10.19173/irrodl.v22i3.5263

10. Innes, MC, & Wilton, D. (2018). Guide to blended learning. Burnaby: Commonwealth of Learning.

11. Woltering, V., Herrler, A., Spitzer, K., &Spreckelsen, C. (2009). Blended learning positively affects students' satisfaction and the role of the tutor in the problem-based learning process: Results of a mixed-method evaluation. Advances in Health Science Education, 14, 725–738.

12. Willging, PA, & Johnson, SD (2009). Factors that influence students' decision to drop-out of online courses. Journal of Asynchronous Learning Networks, 13 (3), 115–127.

13. Martin, F., Polly, D., &Rithzaupt, AD (2020). Bichronous Online Learning: Blending Asynchronous and Synchronous Online Learning. EDUCAUSE https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous-online-learning

14. Fowler, R. (2019). Effects of Synchronous Online Course Orientation on Student Attrition. PhD dissertation, University of South Carolina. https://scholarcommons.sc.edu/cgi/viewcontent.cgi?article=6375&context=etd

15. Peterson, A., Beymer P., & Putnam R. (2018). Synchronous and Asynchronous Discussions: Effects on Cooperation, Belonging, and Affect. Online Learning, 22 (4), 7–25. https://www.researchgate.net/publication/329358226_Synchronous_and_Asynchronous_Discussions_Effects_on_Cooperation_Belonging_and_Affect

16. Yamagata-Lynch, LC (2014). Blending Online Asynchronous and Synchronous Learning. International Review of Research in Open and Distributed Learning, 15 (2), 189–212.https://www.researchgate.net/publication/286329737_Blending_Online_Asynchronous_and_Synchronous_Learning

17. Davis, M. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. Journal of Personality and Social Psychology, 44, 113–126.

18. Eisenberg, N., & Strayer, J. (1987). Empathy and its Development. Cambridge, UK: Cambridge University Press.

19. Barbar, MG (2011). Empathy heals: Learn to walk a mile in their shoes ... International e-Journal of Science, Medicine & Education,5 (2), 1–2.

20. Meyers, S., Rowell, K., Wells, M., & Smith, BC (2019). Teacher Empathy: A Model of Empathy for Teaching for Student Success. College Teaching, 67 (3), 160–168.https://doi.org/10.1080/87567555.2019.1579699

21. Swan, P. & Riley, P. (2015). Social connection: Empathy and mentalization for teachers. Pastoral Care in Education, 33 (4), 220–233.

22. Batson, CD (2009). These things called empathy: Eight related but distinct phenomena. In J. Decety& W. Ickes (Eds.), The social neuroscience of empathy (pp. 3–15). MIT Press. https://doi.org/10.7551/mitpress/9780262012973.003.0002

23. Segal, EA (2011). Social Empathy: A Model Built on Empathy, Contextual Understanding, and Social Responsibility That Promotes Social Justice. Journal of Social Service Research,37 (3), 266–277.

24. Antoniou, A-S., Palivakou, E. &Polychroni, F. (2021). Resilience in Children and Adolescents during the Covid-19 pandemic. Developmental and Adolescent Health, 1(4), 34-41. https://dah-journal.com/index.php/dah/article/view/29

25. Solia, E., &Filippou, D. (2021). Changes in health quality, lifestyle and habits in adolescents that induced by COVID-19 pandemic. Developmental and Adolescent Health, 1(3), 11-22. https://dah-journal.com/index.php/dah/article/view/18/4