MINORITY EDUCATION DURING THE PANDEMIC: THE CASE OF THE SLOVENE MINORITY IN ITALY

Daniel DOZ
ORCID: 0000-0002-6942-6937
Faculty of Education
University of Primorska
Koper, SLOVENIA

Dr. Tina STEMBERGER
ORCID: 0000-0003-1101-4064
Faculty of Education
University of Primorska
Koper, SLOVENIA

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ABSTRACT

Much research has been done on the first quarantine period in 2020, however little is known for what it concerns remote emergency teaching and learning in Italian schools with Slovene as language of instruction. No extensive research explored teachers' and students' perceptions of this remote learning period, nor analyzed their opinion about positive and negative aspects of online learning, especially those related to the teaching material in Slovene language, which should address the Italian program. The present article presents the analysis of online semi-structured interviews that involved 15 high school teachers and 15 students who teach or attend Italian high schools with Slovene as teaching language, and it aims to answer these questions. We found that teachers and students preferred face-to-face classes, since they faced several issues connected with remote learning, such as a lack of interaction during remote learning, technology and connection problem, health issues and psychological distress. High school teachers and students faced less problems than those reported by primary schools' pupils and teachers, since they are older and more independent than primary school pupils. High school students also communicated through several social applications and peers might have helped them to overcome the language obstacles.

Keywords: Remote teaching and learning, quarantine, COVID-19, Italy, Slovenian minority education, qualitative research.

INTRODUCTION

In Italy, high school students experienced two quarantines because of the national sanitary emergency connected to the spread of the COVID-19 infection. The first one started at the end of February 2020 (DPCM, 2020a; 2020b) and lasted until the end of the school year, i.e. June 2020. During that time, when emergency plans have been adopted by the government, elementary, middle, and high schools, as well as universities, had to close; students and teachers needed to adopt the so-called remote teaching and learning (Quattrone et al., 2020). Teachers used different learning and teaching approaches, among which online lessons were the most popular (Tejedor et al., 2020; Pellegrini & Maltinti, 2020). The Decrees of the Italian Prime Minister (DPCM, 2020a; 2020b) stated that teachers had to adapt their teaching method to remote learning, as well as their assessing methods.

The second lockdown, this time only for high schools, started at the end of October 2020 (DPCM, 2020c). The Ordinance from the Ministry of Health from the 24th December 2020 stated that high school might open at the end of the winter vacations (MS, 2020). Hence, high school students carried out remote teaching and learning for two months.

Italian researchers reported an increase in mental health issues, such as depression and anxiety, among the adult population (Rossi et al., 2020). Giovannella and colleagues (2020) are one of the first to have studied the effects of the COVID-19 pandemic on teachers' feelings, reporting that most teachers involved in their study would prefer face-to-face classes. Little research has however focused on psychological distress, increased anxiety, and stress levels both among teachers and students, nor has considered students' opinions about remote teaching. Furthermore, current studies have generally covered undergraduate and graduate level university students and teachers, but little focus has been put on high school students (cf. Hebebci et al., 2020).

In addition to common rapid changes and challenges within the European context and the specific Italian contest, the Slovenian minority in Italy was also faced with additional challenges and difficulties regarding education. In particular, due to the specificity of the education in Slovene language in Italy, teachers and students faced some fundamental issues with the availability of the teaching and learning material in Slovene language.

This is why we address the question about how teachers and students from Italian high schools with Slovene as teaching language perceived remote teaching during the second quarantine period because of the COVID-19 pandemic, with a particular focus on positive and negative issues that were exposed by teachers and students.

TEACHING AND LEARNING DURING THE COVID-19 PANDEMIC

During the COVID-19 pandemic, the learning process shifted from face-to-face to online instruction, which had different impacts on the quality of teaching and learning (Sahu, 2020; Adnan & Anwar, 2020; Alhumaid et al., 2020). The term "(emergency) remote teaching and learning" indicates a temprorary solution to an immediate problem, such as the COVID-19 pandemic (Bozkurt & Sharma, 2020; Hodges et al., 2020).

In general, remote teaching and learning meant a greater change in the way lessons were organized. Students reported they have had clarification sessions, videolessons, materials in text format, group work, individual work, group discussion and other (Goncalves et al., 2020). Also, different evaluation models were used, such as face-to-face assessing, online individual work, online group work, online tests, and others. (Pellegrini & Maltinti, 2020; cf. Basilaia & Kvavadze, 2020; Upoalkpajor & Upoalkpajor, 2020; Kim, 2020).

Also, students (Goncalves et al., 2020; Giatman et al., 2020) felt that their institutions and teachers were not prepared to organize online lessons or did not adapt their teaching methods fast enough. Students faced several problems with internet connection and technological equipment issues, (Adnan & Anwar, 2020) as well as with digital communication (Adnan & Anwar, 2020; Coman et al., 2020). Overall, research shows students were not satisfied remote teaching and learming (Goncalves et al., 2020; Coman et al., 2020) and their learning has worsened (Chen et al., 2020).

Higher level of anxiety among teachers and students was detected (Ardan et al., 2020; Husky et al., 2020; Cao et al., 2020; Gritsenko et al., 2020), as well as other physical distress (Huseyin, 2020; Bhattacharya et al., 2020; Leiros-Rodriguez et al., 2020; Majumdar et al., 2020; North et al., 2020; Karvounides et al., 2021).

Students argued that there was a lack of concentration (Goncalves et al., 2020), a lack of students' interaction (Coman et al., 2020; Goncalves et al., 2020), difficulties in time management (Goncalves et al., 2020) and lack of motivation and effort (Adnan & Anwar, 2020; Goncalves et al., 2020), they reported that processing information in remote teaching was harder and they indicated that the online environment is not suitable for learning (Coman et al., 2020). Moreover, an increased workload has also been reported as a limitation of remote teaching and learning (Wang et al., 2020).

On the other hand, students reported a higher time and location flexibility (Goncalves et al., 2020) and better academic results (Gonzales et al. 2020; Goncalves et al., 2020). Some students reported that working from home was more flexible and comfortable and there was no need to have cameras and microphones on (Serhan, 2020) and that perceived that remote teaching and learning benefits them (Surani & Hamidah, 2020).

During the COVID-19 pandemic, many teachers experienced higher levels of anxiety and psychological distress (Li et al., 2020; Akour et al., 2020), also due to a higher workload (Lepp et al., 2021) and bureaucracy work. The latter is one of the factors that led some teachers to burnout during the COVID-19 pandemic (Sokal et al., 2020a; Sokal et al., 2020b; Pressley, 2021). The teachers believe that online are less effective,

however more convenient than face-to-face classes, and were unsatisfied with the online teaching (Fauzi & Khsuma, 2020).

Thy also felt there was a lack of teacher-student interaction in online classes and engaging students in online activities was more difficult than in class. Teachers did not find online teaching as motivating for them as face-to-face classes. Moreover, teachers felt that students did not take online classes seriously and make lot more excuses for not attending online classes. Teachers also felt that there was a lack of interest and involvement during online classes. (Nambiar 2020; Rasmitadila et al., 2020).

Also, teachers (Fauzi & Khsuma, 2020) reported a poor facilities availability, while more than a third of the teachers reported internet connection problems or too expensive internet quota fees. Internet and infrastructure problems were also reported in other studies (Hebebci et al. 2020)

Some research (Alea et al., 2020; Mailizar et al., 2020; Cuder et al., 2020), point to the teachers' lack of knowledge and skills in e-learning use, the usage of technology for educational purposes. Teachers were not ready to transit from face-to-face to online teaching, since they did not have enough experience and skills.

Concerning Italy, some researchers found that the majority of the teachers still prefer face-to-face instruction, while some of them would prefer a blended education (Giovannella et al., 2020). Only a minority of the teachers prefer online lessons. Moreover, some teachers reported they did not have enough knowledge and skills to deliver online lessons and to prepare the digital learning material (Cuder et al., 2020).

THE SLOVENE MINORITY IN ITALY AND THE COVID-19 PANDEMIC

All these abovementioned issues proved to be common in the way how the educational institutions, teachers and students were faced with the situation of organizing and delivering remote teaching. However, minorities were generally more affected by the coronavirus pandemic in social and economic aspects of their life, including health and schooling (Eurac, 2020). In this paper we focus on one of the numerous minorities in Europe, the Slovenian minority in Italy.

The Slovene community in Friuli-Venezia Giulia is one of the national minorities living along the Slovene-Italian border. The Slovene community in Italy represents a well-integrated community, both from a social and economic point of view (Brezigar, 2020).

The Italian Republic recognizes the rights of Italian citizens that are part of the Slovene minority in the Trieste, Gorizia and Udine provinces, in particular those rights are guaranteed by the 2nd, 3rd and 6th article of the Italian Constitution, as well as by the 3rd article of the Constitutional law of the 31st January 1963 number 1 (Legge 38/2001). Those citizens, as well as other Italian citizens that are not part of the Slovene minority, have the right of attending schools in Slovene language (Legge 1012/1961), which are recognized as equivalent to Italian schools. Moreover, the school programs are the same as those present in Italian schools, where the subject of Slovenian language is added, as well as some topics in history and geography (Bogatec, 2015). Nevertheless, schools with Slovene as teaching language or bilingual instruction have some specificities and thus require a specific consideration, since they face specific issues (Baloh, 2012; Brezigar & Zver, 2019; Strani, 2011). For instance, in those schools, students would need textbooks in Slovene language, but still including the topics from the Italian curriculum. Furthermore, students would need specific didactical materials for the teaching of Slovene in Slovene language (Grgic, 2017; 2019). Students attending schools with Slovene teaching language have different language competencies and knowledge of the Slovene language, thus teachers need to adapt their strategies to the students' language skills (Brezigar & Zver, 2019; Baloh, 2004). Among those, there are also some students that use the Slovene language exclusively at school (Bogatec, 2015), since in at home they use mainly Italian language or other language.

Italian schools with Slovene as language of instruction have some specifics that distinguish them from the majoritarian Italian schools, consequently being both more flexible and fragile. The specificity of those schools is the teaching language, the linguistic competencies and knowledge of the students and their families, the peculiarity of the program and the learning material (Brezigar & Zver, 2019; Brezigar, 2020; Grgic, 2017; Melinc Mlekuz, 2019). The differences between majority and minority schools also concern the instruction and training of prospective teachers, which is required by the reform of the educational system "Buona Scuola" from the year 2015 (Sternad, 2016). The Republic of Slovenia has organized some

summer and autumn seminars, consultations with principals and other kind of seminars, which are specifically designed for teachers of minority schools (Sternad, 2016). Moreover, the teaching and learning material, also the digital one, in the minority language represents a non-neglectable issue (Grgic, 2019). Thus, on one hand, the online material that can be used by students and teachers from Italian schools, might not fit the interests of minority schools because of the language differences. On the other hand, online material produced by teachers and institutions in Slovenia, does not perfectly fit the request of the similarity of the teaching programs.

In addition to common rapid changes and challenges due to the COVID-19 pandemic, the Slovenian minority in Italy was also faced with additional challenges and difficulties. Concerning primary schools, sissues such as lack of teaching and learning material, textbooks and digital material in Slovene language, as well as the problem of communicating with students from families that do not speak Slovene, were present even before the national sanitary emergency and they presented even a greater obstacle during remote teaching and learning. Remote teaching represented an impediment for teachers to reinforce the knowledge of Slovene language in those students, who struggle with it. Also to some students, remote teaching and learning represented the only time when they heard and could use the Slovene language. However, such contact with the Slovene language was possible exclusively through videolessons, registered material and written digital material. Some parents were, due to the lack of knowledge of the teaching language, unable to help their children to overcome some possible difficulties (Bogatec, Brezigar & Mezgec, 2021).

For the Slovene minority in Italy, the pandemic initiated a process towards a life devoid of community interaction, including cultural and sports events and other activities that have been crucial for the maintenance and reproduction of the community itself for decades. Such activities, combined with schooling in Slovene, represent the cornerstone of the linguistic reproduction of the minority. For a considerable number of children, home schooling curtailed the opportunities to hear and speak the minority language, therefore weakening their linguistic skills and rendering the minority more vulnerable to processes of linguistic assimilation (Bogatec, Brezigar & Mezgec, 2021). The media of the Slovene minority in Italy provided additional educational materials and programs as did other media in Italy and abroad (Bogatec, Brezigar & Mezgec, 2021). The outbreak revealed in its crudest form the challenges of the educational system of the Slovene community in Italy and exposed its structural failings to a greater degree than ever before. This experience should serve as a final call to rethink the role of schools with Slovene as language of instruction and to invest a major effort into diminishing their marginalization and strengthening their added-value in this environment (Brezigar, 2020).

In the present paper, we aim to examine the perceptions of Slovenian students and teachers about remote teaching and learning during the second COVID-19 lockdown in Italy. We extend previous knowledge by investigating students' and teachers' opinions about the second quarantine period via an online semi-structured interviews.

PURPOSE OF THE STUDY

The literature review highlighted students' and teachers' aspects concernng remote teaching and learning. Moreover, little research has been done to verify the quality of remote teaching during the COVID-19 in the context of Slovenian minority in Italy or the specifity ot the Italian high schools. Hence, the questions about how these specific groups of students and teachers felt about remote teachign in that period remains unanswered by previous research. In the present study, we aimed to determine the perceptions of students and teachers in Slovenian schools in Italy on remote education during the second emergency remote teaching and learning period due to the COVID-19 pandemic. Specifically, we addressed the following aims:

RQ1: Which are the positive aspects of remote teaching and learning?

RQ2: Which are the negative aspects of remote teaching and learning?

METHOD

As we were interested in exploring and understanding the individual's perspectives on remote teaching and learning during the COVID-19 period, we decided to use a qualitative approach, which derives form the idea

that individuals can help to understand the world in which they live and work (Creswell, 2014). In particular, we used the semi-structured online interview method (Janghorban et al., 2014; Qu & Dumay, 2011).

Participants

Participants were students and teachers from 5 Italian high schools with Slovene as language of instruction in the Trieste and Gorizia provinces in North-Eastern Italy. The inclusion criteria for participation in the study were: (1) being a teacher or a student of an Italian high school with Slovene as language of instruction; (2) voluntary participation in the study.

From the population, we took a purposive sampling, which is common in qualitative research, and allowed us to produce maximum variation within the sample (Anderson, 2010). Teachers and students that fit the inclusion criteria, were contacted via email. Participants of the research were 15 high school students and 15 high school teachers.

Among students' participants, 7 were females (46.7%) and 8 were males (53.3%). Two students (13.3%) were 1st year students, 4 were 2nd year students (26.7%), 3 were 3rd year students (20.0%), 4 were 4th year students (26.6%) and 2 (13.3%) 5th year high school students. The average age of students was 16.1 (min=14, max=18) years.

Among teachers' participants, 3 were males (20.0%), while 12 were females (80.0%). Five teachers (33.3%) taught only to 1st and 2nd year students, 5 teachers (33.3%) taught solely to 3rd, 4th and 5th year students, while 5 teachers (33.3%) taught students from the 1st to 5th year. The average age of teachers was 38.8 (min=25, max=56) years. There were 3 mathematics and physics teachers (20.0%), 2 history and philosophy teachers (13.3%), 1 science teacher (6.7%), 1 art teacher (6.7%), 1 physical education teacher (6.7%), 2 English teachers (13.3%), 2 Italian teachers (13.3%) and 3 Slovenian, Latin, history and geography teachers (20.0%).

Data Collection and Analysis

Data was collected through semi-structured online interview forms. This form allowed fast coding and analysis of data, easy measurement, and comparison with the scope of the research. Two different interview forms were designed for teachers and for students. The first part of the interview consisted of collecting demographic data, such as gender and age. The second part of the interview included 4 open-ended questions. The initial draft of 6 questions, related to the literature review, was reviewed by two experts. The final edits were made in line with the experts' reviews of the draft and two questions were consequently removed.

Semi-structured interviews were prepared and, after obtaining the participants' (or their parents', if participants were minors) informed consent, an invitation to Google Meet was sent to them. Participants were informed that the interviews would be anonymous, and their data would have been protected. Moreover, the fact that there were no correct answers was stressed. Also, participants were informed that their answers would have only be used for scientific purposes. In the present paper, we identify students with S1, S2, …, S15, while teachers with T1, T2, …, T15. All interviews were recorded after having obtained participants' (or their parents', if participants were minors) written content; the average length of interview was M=41.2 minutes (min=12.3; max=73.5) for students and M=48.6 minutes (min=15.0; max=85.8) for teachers. Access to research data was guaranteed only to the researchers.

The collected data were analyzed with the content analysis method. Participants' answers were transcribed and analyzed in detail by the researcher. Codes reflecting participants' opinions were created. Such codes were grouped, and themes and sub-themes were introduced. The process was concluded by interpretating themes and codes associated with each other (Linneberg & Korsgaard, 2019). Data were analyzed with the aid of ATLAS.ti 9 (Friese et al., 2018).

Member checking (i.e. respondents' validation) has been done to ensure the reliability and validity of the presented results (Noble & Smith, 2015; Liao & Hitchcock, 2018). Member check of synthesized analyzed data a month after the data collection event was applied (Birt et al., 2016). Direct opinions of the participants were used to support the findings.

FINDINGS

Students' Perception of Positive Aspects of Remote Teaching and Learning

The content analysis showed that two students felt relaxed during remote education, since they could work at the comfort of their homes, there was no need to take the bus in the early morning, they sometimes had breakfast during online lessons or listened to the first hour of lessons from their beds. They had more free time, could eat lunch before and start writing their assignments even two hours earlier Students felt that waking up later in the morning and aking tests from home helped to reduce their stress and their concentration was higher. They also reported that tests are easier because they could cheat without being caught. As quoted by two students:

> *I feel more relaxed at home, I'm here, in my bedroom, I don't need to wake up so early […] I wake up just few minutes before the lesson and I eat my breakfast during the first lesson […] I keep my camera closed, so teachers can't see me […] also during tests, so I can look up in the book or text my friends, who will eventually help me (S6).*
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> *When I finish classes, I exit the online lesson and go to the kitchen, where I can start eating lunch that my mother prepared. This means I get rid of almost an hour to come back home from school, and I have more free time (S12).*

In addition, one student (S6), who has experienced hihg anxiety level during face-to-face lessons, reported that working from home reduced high anxiety to meet his classmates and teachers, moreover he worked in a domestic, friendly, and protected environment and that working from home reduced the probabilities of getting the novel coronavirus infection.

Additionally, four students added that they enjoyed the usage of computers for education purposes. Teachers used virtual classrooms, where all the material was uploaded, so they were a click away from course notes. Moreover, all homework was uploaded on these platforms, which automatically created a "due-to" calendar, which is seen as useful from the students. For instance:

> *Teachers put all homework on Google Classroom, I check it every day, to know which are the upcoming assignments and which have the priority. I think it is very useful and I would like to use it also the next year, because I can organize my time more efficiently (S1).*

Students added that they like spending time on the computer, especially playing games, thus they are comfortable with technology. They also liked that teachers shared several YouTube videos, so they could enjoy a different lesson format, where technology was involved. Moreover, students reported that they have learnt to use the computer much better. Before the quarantine, they only had a basic knowledge of the computer, while especially during the second quarantine, students learnt how to convert a Word document in PDF, scan documents (to send them to their teachers), properly write an email etc.

Students' Perception of Negative Aspects of Remote Teaching and Learning

Most of the students also detected negative aspects of remote teaching and learning. They reported they had excesive workload and spent a lot of time, they even worked for school after midnight. They felt they had more homework during remote learning than when at school. Linked to spedning a lot of time working on computer they felt tired and under a lot of pressure and the fact that they could not have any social interaction with classmates and friends additionally stressed them additionaly. Student S4 and S3 stated:

> *When we were at school, we knew that at 1:30 PM everything was over, we went home. Yes, we did our homework, but that was it. Now, I'm working for school the whole day. I don't have a personal life anymore. I start school when I wake up and finish it when I go to bed. […] Yesterday, a teacher gave us homework at 10:30 PM […] When we were at school, if a teacher forgot to give homework during our class, that was it, no homework. But now, they send us materials and homework also by night (S4).*
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> *During this period, I'm super stressed. I have a lot of homework to do, I need to study for tests, because I want to do well, despite the fact we are at home. I sometimes feel anxious, but I never felt this way before. It is a new kind of anxiety […] I'm anxious because I don't know if I will manage to do everything I need to (S3).*

Nine students reported an increase in their anxiety levels. The uncertainty about the pandemic and the government restrictions caused higher anxiety in students, which was furthermore worsened by the excessive working load, tiredness, and stress. Furthermore, some students thought their families were also causing them higher stress. For instance:

> *Having my mother around the whole day makes me really stressed. She observes me, comments the lessons […] When I was at school, I could finally change the environment (S11).*

Some students reported to feel sadness, since they realized they cannot see their friends and classmates. The lack of socialization led one student to feel depressed and needs to take specific medication. Socialization was also mentioned as something students missed from face-to-face lessons. Students missed seeing their classmates, chatting with them, exchanging opinions, and having fun. Similarly, some students missed also seeing their teachers and debating with them about several topics. Student S15 stated:

> *I really miss seeing my classmates and friends. Going to school was also interesting because of the bus drive, where I saw my friends. I also miss teachers, because we have some very interesting debates in class and, of course, face-to-face explanations are better (S15).*

Two students also reported that they missed interatction with their classmates during lessons. They stated that during online lessons their classmates mostly have closed cameras and microphones, thus their participation in class is low or absent. These two students felt that an active involvement of all students was important, both socially and educationally. Students also missed communication with teachers. The communication between teacehers and students was reduced, which resulted in lower level of interaction and exchaning opinions with their classmates and friends, whichh would make learning more efficient, relaxed, and active. Furthermore, students felt they learn better from school, because the teaching quality is better, the teaching methodologies are more adequate (e.g. using the blackboard, solving exercises in front of the blackboard, watching a clip on YouTube) are the environment permits them to be more focused, concentrated on the studied topics. As it has been expressed by a student:

> *At home I can't fully concentrate. I'm distracted by my little brothers, who also have online lessons. Sometimes my parents are home, so they are watching me, which makes me anxious. I prefer going to school […] I feel I learn better and more; I need to be concentrated on the studied topics and the overall quality is better […] Teachers are also more relaxed […] when we are online I feel teachers are uncomfortable, hence their explanations are worse, more confused and less efficient (S7).*

Students noticed that teachers are not prepared to teach online, and they are lacking technological competencies. Teachers struggled with sending material, and explanations without the aid of the blackboard. Students also felt that explanations in class were better. Most of the students thought that lessons online are lacking proper explanations and there are too many PDFs being showed, or PowerPoints. Moreover, students stated they miss the exercises done in class, for instance with the aid of the blackboard. For example, we present the statement of student S10:

> *Our math teacher always used the blackboard and asked for volunteers to solve an exercise. I miss that a lot, because I think it is useful to try to practice by ourselves (S10).*

Students also missed taking excursions. They used to visit a lot of museums, art expositions, listen to several scientific symposia. Moreover, once a year, students went to a foreign European country and visit it. Most students missed those excursions, both because they represented a good opportunity for bonding and a good educational activity. Similarly, practical exercises and project works are less common during remote teaching and learning. Students stated they miss working on a project for a longer time, especially with a classmate. Student S7 stated:

> *Usually, we went to the school laboratory to make some chemistry and physics experiments. Now it is impossible to go to school. Once the teacher showed us a virtual experiment, and a video of a demonstration, but it is not the same. I miss when we had projects and experiments to do, I think I've learnt more through project work than in class (S7).*

A student (S9) added that remote learning permitted them to close their cameras and microphones, so they could do something else. For instance, he admitted he did other homework and assignments during other lessons. He added that during online tests, he and other schoolmates started a parallel online videocall, where

they could exchange information and help each other. He said that WhatsApp online was used by most of his schoolmates to cheat during online tests, alongside with some Skype chat groups or meetings. Moreover, the student added that sometimes he does not listen to lessons, because he is playing online with his friends and classmates. Regarding the question whether the lack of attentiton during on-line lessons impacted the grades, students reported that the grades did not change, mainly due to the that tests were easier and they had more opportunites to cheat.

> *Sometimes when teachers ask a question, we don't hear it, because we are playing online, and we are connected through Discord. […] Discord is like WhatsApp, but for gamers. I get an invitation to join a game, so I just mute my microphone and close the camera, then I start playing. The problem is when the teachers ask us to interact. We need to pause the game and answer to the question. Sometimes my friends tell me the teacher is asking me something on our Discord chat. […] Yes, sometimes I feel bad for the teacher, but it is inevitable that when boys are left alone, we do something else (S9).*

All but one student also stated they experienced more or less severe technical problems. Instable internet connection was reported by all 14 participants. Sometimes students had a misfunctioning microphone or camera. Students added that they had the possibility to borrow some pieces of technology from the school, however most of them did not ask for help.

For what it concerns physical changes experienced during remote teaching, five students reported no changes. Two students affirmed they had sleeping difficulties, since they had to stay up late to finish their homework and complete their assignments. Computer fatigue was identified as one of the greatest physical problems they experienced. Students reported to have sight problems; thus, they need more little pauses between one online lesson and the next one. Students reported to have some back pains and an incorrect posture, due to prolonged hours in front of the screen. Headaches also represented a greater issue; students were unable to listen to the lessons.

Teachers' Perception of Positive Aspects of Remote Teaching and Learning

Concerning positive feelings, some teachers felt remote teaching and learning as more relaxing than face-to-face learning. Working from home has been mentioned by some teachers as a positive factor, since a calm and domestic environment make them work better:

> *I can work from a more relaxed environment, such as my bedroom, there is no need to wake up early and drive to school. I'm particularly stressed when I need to change classroom every single school hour, while at home I feel more […] relaxed, and if I need anything, I can just go to the kitchen, take a glass of water. I have all my books on my desk, I work quietly, I have less distractions. Also, I'm less stressed by the city traffic, parking the car. (T4)*

Two teachers also felt hopeful and think of the quarantine as a strengthening opportunity. In particular, not only they believe that remote teaching is a challenge, which requires creativity, since every lesson needs to be different, appealing for students and of high quality, but they also feel that the COVID-19 remote education will eventually lead to a change in education. Some teachers mentioned that the COVID-19 pandemic will and has already increased the usage of technology in education. New programs have been used, teachers experimented new teaching methods and platforms.

> *[T]he COVID-19 will finish, sooner or later, and I feel that remote teaching will make me stronger. Yes, I believe I will be stronger after this period. I will consider [this period] as a chance of personal growth […] I hope that all the troubles we are facing now will eventually lead to a reconsideration of education. [S]tudents often feel school as something negative, while during the COVID students are willing to go back to school. So, the situation has changed. Now students and parents do not feel school as a 'hell' and I hope they will start to appreciate more our job […] and value education (T1).*
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> *I have never used GeoGebra before, but the COVID made me try to use it, to show students some geometry construction. I feel students were very motivated and liked using it (T12),*

Teacher T5 stated that using some technological tools might be useful also during regular lessons, for instance:

> *We use Google Classroom and I think it is amazing. Last year we didn't have it […] I will use it even when we go back to school. I can assign homework, correct it online, no need to make photocopies, or take students' notebooks home (T5).*

Some teachers felt that remote education has also changed parents' views on school and understood that teaching is not an easy job. Since some parents were also working from home, they realized how hard are teachers working.

For what it concerns students' wellbeing, some teacher remarked that they feel that students are less stressed, since they are home, in a more relaxing and comfortable environment. Teacher also felt that students had less homework than when they were at school. For instance:

> *[…] they [the students] told me that they feel more relaxed now. They don't need to take the bus in early morning, they can arrange their schedule consequently […] I mean, if they don't need to spend one hour on the bus, this means that they can do something else during that time (T15).*

Teachers' Perception of Negative Aspects of Remote Teaching and Learning

Most teachers' opinions and feelings are negative. Many teachers felt bored, due to the daily routine. Since teachers spent the whole morning in front of a computer, with limited human contact, they felt that remote education has led them to a standardization of daily routine. Furthermore, spending a lot of time in front of a computer or other technological device has increased the stress levels in teachers and some of them felt they had too much work. Preparing lessons in a format they are not used to, took them a lot of time, which they do not spend with their families anymore, but rather invest in correcting assignments and preparing future lessons. Furthermore, some teachers felt an increase of stress levels also because the school principal used to send them several e-mail communications every day, which required additional bureaucracy, such as writing reports, programs, and assessment of the quality of remote teaching. As illustrated by teacher T13:

> *I have too much work. I work in the morning, in the afternoon, in the evening. I have no more schedule, I need to work, correct homework, prepare the lessons. We [the teachers] don't have any free time, because when we do not work, we must correct homework. I feel I can't manage my time anymore. Before the quarantine I had time for my children, but now […] I need to work late. […] Furthermore, sometimes I get three, four or even five emails every day from our principal, who wants us to write extensive reports about the quality of the internet connection of our students, and how are they learning now. This is so stressful (T13).*

Along with stress and boredom, an overall feeling of sadness and depression was also reported from the teachers. Teachers felt that the lack of social interactions with students and colleagues made them unhappy and they felt alone. A teacher stated:

> *I am home alone, since my husband is working, I'm feeling lonely, […] no colleagues to interact with […] I'm all by myself, nobody to talk to, no students. I feel alone (T11).*

A feeling of resignation has also been found among some participants, who have felt unable to control the situation. Some teachers also felt they had been left alone, abandoned by their principals and other school authorities. Three teachers emphasized that principals do not understand their and students' pain and, conversely, require more work and bureaucracy. With some teachers the feeling of being abandoned is linked to an overall feeling of anger:

> *The principal does not understand our struggles, the concrete problems we are facing right now. There is no support from him, but only additional work, such as writing reports. He completely abandoned us and is in his ivory tower, writing regulations that […] nobody cares about. The Ministry is writing some laws and decrees that are impossible to follow. For instance, the Matura [Final State Exam]: they gave us blurry information about how it is going to be. How can we prepare our students for something that we don't know? They don't care about us. I'm furious that our principal cares more about following every single rule that the Ministry sends him, than about our wellbeing. The situation is falling apart. Schools need to reopen, because if they don't do, the whole population will start a revolution. And I will be in the very front line (T12).*

When participants were asked to identify which aspects of face-to-face learning they missed the most, two major issues have emerged. On one hand, many teachers missed a physical and intellectual contact with the students. Greetings, eye contact, visual expressions and communication have been mentioned as important factors of the face-to-face learning, which have almost disappeared with remote teaching. Teachers felt that with no eye-contact or other communication, lessons are becoming boring and less effective than in-class lessons. At this point, many teachers mentioned that they are facing greater problems with students having their cameras and microphones constantly closed. Not seeing the students lead teachers to think that they are doing something else and are not focused on the topics that are presented. Furthermore, when teachers call their students, some of them do not even answer, hence the lessons are overall slower and assessing, whether did students understand the covered material, becomes harder:

> *Eye contact, seeing my students, is what I miss the most. Now almost everybody has a closed camera. I don't even recognize my students. I can't see my students now because some of them don't want to open their cameras. I miss their physical presence, when I could see them in class […] When we were in class, we [the teacher and the students] always talked, had interesting conversations about several topics, like politics, ethics. Now this is gone, because nobody wants to open their microphones and talk to me […] I miss talking to my students, having a real conversation with them. Now everything seems so mechanic, so dehumanized (T7).*

On the other hand, issues with teaching methodologies have been highlighted. Teachers missed regular, in-class lessons mainly because online students are not as collaborative and participative as they were during face-to-face instruction. Teachers noticed that students do not ask as many questions as they did in class, thus active participation during online lessons is seen as an additional greater deal that needs to be clarified by principals and authorities. We present the following statement:

> *When I taught in class, students were very active, they participated a lot. They asked questions if they didn't understand something […] they asked. I could tell if students understood the material. Now I can't say it anymore. There are few students that have their microphone constantly active, so they are answering me, if I ask something […] but most of the students are quiet. They don't say anything. So, I don't get if they understand [the lesson] or not. I miss when my students were actively involved during my lessons. Now everybody has a closed microphone, so the conversation is absent (T10).*

Closed microphones and a lack of communication with students eventually led teachers to miss traditional evaluation and test-taking. Teachers feel that many students lie about the actual working of their electronic devices, for example by saying that their microphone is not working, or their camera is broken. Teachers feel impotent in front of such affirmations since they cannot check whether students really face some technological issues. Thus, teachers feel that online lessons cannot lead to an objective measuring of students' real competencies, abilities, and knowledge, since many of them have been caught cheating with the aid of parents, WhatsApp groups with friends and classmates, books and notebooks. As an example, we present the following statement:

> *We all know students' grades are now unobjective. They cheat, I'm aware of that. So, I must say that I miss a concrete, real evaluation of their knowledge. I feel that they get false information about their real knowledge […] I miss when students came in front of the blackboard and did some exercises on it, and so I could assess if he or she understood the covered material. […] Now parents are solving their homework […] During an online test I distinctly heard a mother dictating a whole exercise to her daughter. You can also hear their phones vibrating all the time during tests and assignments, I can hear the sound of the WhatsApp Web application (T2).*

Most of the teachers report that they work better at school. Teachers feel that having face-to-face lessons is better and more efficient. They stated that they feel more distracted at home, because the domestic environment leads them to concentrate on other things, such as preparing lunch, cleaning the house etc. The scholastic environment, on the other hand, helps teacher to maintain their concentration high and the quality of their teaching is better. Teaching online meant for many teachers a transition from the blackboard to other programs, such as Paint or Inkodo, which are used to show students how to solve exercises. Teachers also shared their screen, used PowerPoint presentations or other PDFs:

> *At home I'm very distracted, maybe because I have other thoughts, while at school I'm more concentrated […] I know I'm at work, so I need to be prepared, I teach better […] I concentrate more at school, so teaching at school is of course better […] At school I can write on the blackboard, while at home I need to use Paint on the computer […] my handwriting on Paint is terrible, I can't teach well online (T11).*

Teachers found socialization as another important factor that needs to be considered. Working at school meant a continuous exchange of information, both regarding students, teaching methods, projects and other learning activities. Moreover, a social component plays an important role, since many teachers mentioned that remote teaching meant an impossibility of gathering with other teachers, socialize and discuss teaching ideas. Teacher T3 stated:

> *When we are in the [teachers'] lounge, I exchange my opinions with my colleagues: this is very important, and now I can't do it anymore […] Taking a coffee with my colleagues is also an important part of my day, since some of them are my close friends (T3).*

Not only did teachers feel that they their teaching was better at school, but it also was highlighted that students learn better from school, making it better to work at school. Teachers perceived that face-to-face lessons were more efficient than online ones since students are more concentrated and consequently learn more. Also, teachers found that they covered more material at school than online. This fact is also connected to the teachers' levels of concentration. For instance, some teachers highlighted that working from home make them more easily distracted. Teacher T2 affirmed:

> *At home I cannot concentrate. I have a young daughter [who was then also learning online] and it is impossible to work if she's around. I then need to stop the lesson, go to fix her connection [problems] and then go back to work. I need to be at school, otherwise I cannot do anything (T2).*

Teachers identified some other disadvantages of remote teaching. Technical problems have been reported to be the one of the biggest difficulties of remote teaching, since slow internet connection, old or slow computers, and malfunctioning electronic equipment lead to lower quality teaching and, consequently, learning. Many teachers reported major difficulties with their internet provider, or living in some areas, where there is no optical fiber, thus their internet is slower. Some teachers added that they cannot afford better internet or new computer, nor better microphones and cameras. Additionally, some teachers stated they bought by their own graphical tablets, to make it easier to write formulas and draw pictures. A lack of technical assistance has also been reported by several teachers, who faced greater issues with connection, computers, and online learning platforms. For instance, teacher T11 reported:

> *I don't have a good internet connection at my home, since where I live […] there is very bad internet […] Our school does not have a technician, so I don't know who to call. Sometimes my husband helps me, sometimes my older son. But it is impossible to work is such conditions (T11).*

Besides having some problems with technology, some teachers stated that they have an excessive working load. Teachers are convinced that remote teaching and learning requires long lessons planning, preparations of the material, selection of the material they are going to show or send students, as well as correcting assignments online. The working load is furthermore increased, since many parents and students contact their educator in the afternoon or evening hours, that is after lessons. Some teachers reported that they have been contacted by several parents that wanted an online teacher-parents meeting. Parents also requested teachers' telephone numbers to contact them, thus invading teachers' privacy. Teacher T1 affirmed:

> *Some parents wanted a teacher-parent meeting in the afternoon. In normal conditions, I ask them to come by at school in the morning hours, however now I need to be ready, 24 hours a day, to answer to an email […] Sometimes students contact me through WhatsApp in the evenings, to ask me how a certain exercise should be done (T1).*

The already mentioned topic of students' unobjective assessment has also been emphasized by several teachers, who think assessing students' knowledge in remote learning conditions is impossible. Teachers stated they do not get feedback information from students, mainly because of a lack of communication and interaction during online lessons; moreover, several students cheat on assignments and other written tests. A teacher affirmed to use a specific online plagiarism-detector, to avoid unnecessary correcting of copy-pasted assignments. In particular:

It is impossible to assess students' knowledge. I don't know if my students understand the covered material. I believe they don't, but they all have splendid homework and perfect tests. Sure, they just copy-past some Wikipedia entries and that's all. I decided to use an online plagiarism detector, to avoid correcting Wikipedia (T12),

and:

Remote teaching doesn't allow me to verify, whether my students understood the lesson. I ask them: 'Did you understand? Do you have any question?', but they don't answer me. In class it would be different, since I could see the expressions on their faces, now they just say 'yes' or don't answer (T3).

Some teachers experienced some physical changes, alongside with physiological distress. Two teachers experienced sleeping problems and disturbed sleep. Those teachers could not get asleep due to the stress related to remote teaching. A teacher reported that before sleeping she thinks about the next day and, since the quarantine began, could not get asleep before 1 AM. Computer fatigue represented the most common topic of physical consequences of remote teaching. The majority of teacher reported to have sight problems or eye soreness. Teachers feel that a prolongated usage of the computer caused some sigh issues. One teacher mentioned that her sight dropped from 1.25 diopters to 2.0 diopters. Several teachers mentioned to have an incorrect posture, which eventually leads to pains in their necks and backs. Headaches are also seen as a major byproduct of remote teaching, since unusually long periods in front of the computer cause hemicrania, which consequently lowers the productivity and efficacy of the teacher.

DISCUSSIONS AND CONCLUSION

The COVID-19 pandemic caused a transition from traditional face-to-face education to remote teaching and learning. Some studies proved that both students and teachers felt that remote teaching and learning was less effective than traditional face-to-face instruction. Both, positive and negative aspects of remote teaching and learning have been identified in previous research, however little effort has been made to understand better the situation during the second COVID-19 emergency remote education period, particularly for minority students and teachers. Our research aimed to explore students' and teachers' perceptions about remote teaching and learning learning in Italian schools with Slovene as language of instruction.

Findings showed both teachers and students pointed positive as well as negative aspects of remote teacning and learning during Covid. Students reported feeling more anxious and stressed than while at school, confirming results from previous quantitative studies (Ardan et al.2020; Husky et al., 2020; Cao et al., 2020; Gritsenko et al., 2020). The main reported contributors to increased feelings of anxiety and stress were excessive working load and a lack of socialization. Moreover, students felt more tired, which was the result of working for prolonged hours in front of the computer screen, but also being awake until late hours to finish their homework. Students and teachers also faced with saddnes as a consequence of the uncertainty of the situation and social distancing. The feeling of sadness due to social distancing has also been reported in research concerning the general population (Cerbara et al., 2020). On the other hand, two students reported feeling more relaxed, since they were working from home, a more comfortable and domestic environment (Goncalves et al., 2020). Literature reported cases of some students working better from home, due to the flexibility of remote learning, such as more flexible scheduling of the activities, the comfort of one's home, the possibility of having their cameras closed etc. (Serhan, 2020; Surani & Hamidah, 2020).

Three teachers felt they had more energy, since they were working from a less stressful environment. On the other hand, some teachers expressed that working from home was more boring, since every day they did the same things. These results are in concordance with those found for the general population (cf. Chao et al., 2020; Liang et al., 2020). Boredom could eventually cause other psychological distress, such as sadness, stress, anxiety, and depression (cf. Droit-Volet et al., 2020; Chao et al., 2020). Indeed, the majority of teachers reported to feel more stressed than before, confirming the findings of Li and colleagues (2020), and Akour and colleagues (2020). The participants argued that an increased working load was making them struggle with higher anxiety and stress, as well as more bureaucratic work and prolonged usage of computers made them more stressed than before the quarantine. Thus, increased stress levels were present both among teachers and students are mostly the consequence of social distancing, isolation and feeling of uncertainty,

however they are moreover related to an overall feeling of resignation and anger (cf. MacIntyre et al., 2020). We address the problem of increased stress and sadness levels among teachers as a greater issue that needs immediate attention from legislators, who could decide to provide additional professional psychological help.

Both, teachers and students missed a more active involvement of students and classmates during online lessons, which confirms the results of some previously mentioned researches (Nasution & Ahmad, 2020; Adnan & Anwar, 2020; Goncalves et al., 2020; Rasmitadila et al., 2020; Nambiar, 2020; Alea et al., 2020). They reported that many students had their cameras and microphones off: teacher-student interaction was thus negatively impacted. Moreover, some students reported that they were not listening to the teachers' explanations, since they were playing online videogames with their friends and classmates. A lack of communication was considered to lower the learning and teaching efficacy, since less questions are made and assessing students is more difficult. Teachers reported that they struggled to understand whether students mastered the program also due to the presence of cheating. Teachers' worries have been confirmed by students stating that during tests they communicate through the class' WhatsApp groups. Our findings are thus coherent with some earlier studies (Bilen & Matros, 2020; Nguyen et al., 2020).

Moreover, students missed teachers' face-to-face explanations and solving exercises on the blackboard, which was partially confirmed also by teachers, who felt the lesson format significatively changed. Students missed also project works and excursions, both learning activities that also involved socialization. Furthermore, seeing classmates and teachers was also seen as an important part of the face-to-face instruction (cf. Putri et al., 2020; Adnan & Anwar, 2020).

The minority of the participants reported they worked better from home, since the environment was more relaxed and comfortable. On the other hand, most of the participants feels the opposite. Teachers and students preferred working and learning at school, because of socialization, that is confronting and exchanging information with their friends, colleagues, and classmates, but also because learning and teaching were of higher quality. Concentration was mentioned as a greater issue both by teachers and students. Participants reported that their concentration levels during remote teaching and learning are lower than during face-to-face classes, thus confirming earlier findings (Goncalves et al., 2020). Teachers and students felt that the environment represented a limitation to their concentration levels. Working from home represented bigger distractions, such as dealing with families. Surprisingly, teachers nor students mentioned motivation, which literature identified as one of the leading factors that was impacted by the COVID-19 remote teaching and learning, and lower levels of motivation have been reported (Adnan & Anwar; 2020; Goncalves et al., 2020; Coman et al., 2020; Nambiar, 2020).

For what it concerns the positive aspects of COVID-19 remote teaching and learning, contrarty to findings about hihger level of stress, in some situations students reported they felt less stressed. Waking up just before the lessons, no need to take the bus or drive to school, as well as no need to spend a lot of time to return back home has all been seen as a positive consequence of remote learning. For what we know, at the moment no extensive research has been made to explore the abovementioned facts, thus making our research one of the first to report these factors. Additional research is thus needed to deeply understand the described results. As a second positive aspect of remote teaching and learning, both teachers and students mentioned the using technology in education. Some tools for virtual classes have been mentioned to greatly help both students and teachers to organize assignments. Students and teachers expressed the opinion they wanted to continue using such online tools even after the quarantine (cf. Goh & Sandars, 2020).

As for what it concerns the negative aspects of remote teaching and learning, some similarities among teachers' and students' answers have been found. Both categories of participants agreed that technical problems represented a major issue. Instable internet connections and technical difficulties with electronic devices have been mentioned as a big limitation of remote teaching and learning, which furthermore negatively impacted the quality of teaching and learning. Our research support previous findings, which identified internet and technical problems as non-neglectable issues of remote education (Adnan & Anwar, 2020; Coman et al., 2020; Surani & Hamidah, 2020; Giatman et al., 2020; Fauzi & Khusuma, 2020; Hebebci et al., 2020; Alea et al., 2020) Thus, policymakers need to consider such issue when planning future actions in remote teaching and learning, more stable and cheaper internet connections need to be provided (Rasmitadila et al., 2020; Fauzi & Khusuma, 2020), as well as technical support to students and

teachers (Putri et al., 2020). Secondly, working load has been mentioned as a greater impediment caused by remote teaching and learning. Students feel they have too many assignments, which are delivered also during afternoons and evenings. Findings are supported by the research of Wang and colleagues (2020), who detected that students' class workload increased. During face-to-face learning, teachers could assign homework only during their lessons, while students noticed that during remote learning the situation has changed. Teachers also complained about excessive work, indeed they faced an increased bureaucratic load and needed to prepare lessons or adapt materials for online classes. Such work increased their stress levels, confirming the findings of Lepp and colleagues (2021). We suggest school administrators and policymakers to consider teachers' wellbeing and possible burnout during COVID-19 (Sokal et al., 2020a; Sokal et al., 2020b; Pressley, 2021) as additional risk factors, thus decreasing the overall workload.

Both teachers and students reported a lack of communication: due to social distancing, technical problems and other issues related to online learning, student-teacher communication has drastically changed, which negatively impacted students' learning and teachers' work (cf. Nambiar, 2020; Coman et al., 2020; Hebebci et al., 2020; Alea et al., 2020). Furthermore, the quality of teaching and learning decreased. Students felt their teachers were not teaching as well as they did in class (cf. Goncalves et al., 2020); this fact was confirmed by teachers themselves, who felt that remote teaching and learning is overall worse than face-to-face instruction. Hence, our results support the existing literature (Goncalves et al., 2020; Chen et al., 2020; Coman et al., 2020).

We also found that the majority of the participants stated that they experienced some physical distress. Both teachers and students said they had some difficulties related to sleeping. Late night hours to finish assignments and preparing lessons, jointly with higher stress levels, caused sleeping disturbs, such as difficulties to get asleep or disturbed sleep. The problem has been investigated also by some other works, who analyzed the problem from a medical point of view and concluded that several factors, among which higher levels of stress, impacted sleeping and, consequently, people's wellbeing (Casagrande et al., 2020; Huang & Zhao, 2020; Marelli et al., 2020). For instance, lack of sleep due to stress caused by remote teaching and learning could eventually lead to more severe psychological problems. Thus, we recommend policymakers to address the question about students' and teachers' wellbeing connected to sleep as soon as possible, since both individual health and learning process might be negatively impacted by sleeping issues. Additionally, both teachers and students mentioned sight problems, due to a prolongated exposure of the computer-screen light. The problem of eye soreness and sight problems has been already addressed by ophthalmologists, who found deteriorating eye-health (Huseyin, 2020) and suggested immediate action to avoid major conditions (Bhattacharya et al., 2020). An additional problem represents the incorrect teachers' and students' posture in front of the computer, since prolongated hours in unhealthy sitting conditions might lead to neck and back pains. Our research confirms the findings of several other researches (Leiros-Rodriguez et al., 2020; Majumdar et al., 2020; North et al., 2020). Furthermore, we found that many teachers and students stated they had headaches, which caused them several issues with their work and studying, thus affecting both the quality and efficacy of teaching and learning. The results are supported also by earlier research (Karvounides et al., 2021).

An additional important result regards the teachers' and students' perception that educators were not ready to shift from face-to-face classes to remote teaching and learning. Teachers did not get any specific training on how to deliver lessons in an online format, thus making their teaching less efficient. Moreover, teachers had several problems with technology and received little or no technical assistance, which is in line with previous research (Alea et al., 2020; Mailizar et al., 2020; Cuder et al., 2020).

With the present research we have shown that students and teachers from the Slovene minority in Italy faced similar problems as the majority students' and teachers' population and our findings are in agreement with some previously found results. On the contrary of what it was expected, high school students and teachers faced less language-related issues than primary school pupils and teachers (Bogatec, Brezigar & Mezgec, 2021). Such results might be the related to students' age. In primary schools' pupils, especially those who face some troubles with the Slovene language, need more help from their parents and teachers. Parents, however, might have been busy with their work, thus making it hard to help their sons to overcome the language difficulties and help them with their homework or other assignments. On the other hand, high school students, who were involved in the present study, are older and presumably more independent, thus decreasing their language obstacles. Furthermore, as we have shown in this work, students were sometimes

communicating through several social applications, where they have received help from peers, thus limiting even further their difficulties with communication in Slovene language.

Our work confirmed many students and teachers are unsatisfied with remote education (Goncalves et al., 2020; Giatman et al., 2020; Fauzi & Khusuma, 2020; Hebebci et al., 2020; Giovannella et al., 2020), especially for what it concerns various internet problems, stress and anxiety. Our research identified some novel threats that were not previously mentioned by other literature, such as students playing video games during online lectures, and cheating through the class' WhatsApp group. We gathered information not only about students' and teachers' issues with remote teaching and learning, but also about their psychological and physical distress. We thus suggest legislators and other school authorities to act as soon as possible to protect teachers' and students' health and wellbeing, as well as preserving the overall teaching and learning quality.

We suggest school principals and other school authorities to reduce the duration of online lessons, to allow both teachers and students to take frequent shorter pauses, relax eyes, and do stretching (cf. Shariat et al., 2020). We also suggest educators not to underestimate the role that anxiety and stress play in the learning process. We emphasize the importance of lowering students' stress levels by reducing the working load and make lessons even more entertaining and joyful (Aliyyah et al., 2020) and, whenever possible, provide professional psychological help (Irawan et al., 2020).

Regarding teachers' lack of technological knowledge and skills, we suggest policymakers to rapidly evaluate the possibility of introducing specific courses about remote teaching for pre-service and prospective teachers, in order to be prepared for a possible new sanitary or other emergency. We suggest introducing basic information and communication technologies courses, as well as specific remote-learning-oriented courses, in order to maximize the efficiency of remote teaching formats.

BIODATA and CONTACT ADDRESSES of AUTHORS

Daniel DOZ is a researcher of Mathematics Education at the Faculty of Education, University of Primorska, Slovenia. After his summa cum laude degree in Mathematics (University of Trieste, Italy), he became a high school mathematics and physics teacher in Trieste. He is currently a last-year Ph.D. student. His academic interest areas are fuzzy logic, numerical methods for tensor decomposition, mathematics education, e-learning, statistical literacy, and the use of information-communication technology in mathematics education. He has more than 10 journal articles published in international indexes.

Daniel DOZ
Faculty of Education
Address: University of Primorska, Cakarjeva ulica 5, 6000 Koper, Slovenia.
E-mail: daniel.doz@upr.si

Dr. Tina STEMBERGER, Ph.D. is an Associate Professor of Educational Research. She has participated in several projects aiming at empowering teachers with digital competence. She has led an important national project titled "Innovative and flexible teaching and learning in initial teacher education programmes", which was issued by the Ministry of Education, Science and Sports. The project aimed at empowering prospective teachers and teacher educators with the competence of didactic use of ICT. She has published several scientific and professional articles and books in which they presented the results of research as well as the practical experience in implementing didactic use of ICT.

Tina STEMBERGER
Faculty of Education
Address: University of Primorska, Cakarjeva ulica 5, 6000 Koper, Slovenia.
E-mail: tina.stemberger@pef.upr.si

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