RESEARCH ARTICLE

TEACHER COMMUNICATION THROUGH DIGITAL SOCIAL NETWORKS AND STUDENT PROBLEMS DURING COVID-19 PANDEMIC

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ABSTRACT

The paper studies teachers' digital communication channels, records the problems they encountered with parents and students, and evaluates the problems students faced. The results of the study showed that teachers found both formal and informal communication channels to cope with distance learning processes. One of the main problems teachers pointed out is the lack of digital infrastructure and digital literacy of parents and students. Finally, most students experienced negative feelings during their lessons. The study concludes to the need of addressing students' mental health issues during a pandemic and the digital support of schools to address emergencies in the future.

INTRODUCTION

In March 2020, the World Health Organization (WHO) declared Covid-19 a global pandemic and warned of its extremely rapid contagion. As a precaution to slow its spread, countries around the world followed strict protocols (WHO, 2020a). In May 2020, the measures included traffic restrictions, partial closure or closure of schools and businesses, quarantine in specific geographical areas and international travel restrictions with social distance regulations and traffic ban (WHO, 2020b). The planet experienced an interruption of education that accounts for almost 90% of the world's student population (UNESCO, 2020; UNICEF, 2020). The Coronavirus pandemic (Covid-19) disrupted school routine. This disruption of education was experienced emotionally by teachers and students worldwide (Williamson, Eynon, & Potter, 2020). Within days the pandemic overturned the data, creating a new landscape, a different reality, to which the educational community had to adapt. Educational organizations adapted to the new data with the introduction of distance education. The term Distance Education, to most primary school teachers, was unknown or indifferent and referred to only a small percentage of highly qualified teachers who had completed a postgraduate or doctoral degree in the relevant field.

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Education policy, pedagogy, and education practices in 2020 amid the pandemic required an approach to learning through technology (Williamson et al., 2020). Education was in a state of emergency and educational technologies were put at its service to contribute more directly to knowledge and practice during the COVID-19 pandemic. The use of distance education was one way. American universities explored and introduced the term Emergency Remote Teaching (Hodges, Moore, Lockee, Trust, & Bond, 2020), separating it from Distance Learning, as it concerns an alternative way of teaching due to crisis circumstances (Tsinakos, 2020), which was formed by the appearance of Covid-19 and was urgently called upon by the educational community. To date, in the context of formal education in primary education, the approach and production of new knowledge, the cultivation and development of skills and abilities, the transfer of knowledge, and the change of attitude and behavior, which can be received and acquired by students (Chatzidímou & Chatzidímou, 2014) took place in person with the provision of favorable conditions on the part of many factors. Could the same be said for distance education, especially in primary education?

Digital Communities-Features: In the fields of formal education and distance education, the concepts of community, community of practice, and learning community have been appearing since the 1990s and aim to create a collaborative environment, through which its members

communicate, process data, share, and gain new knowledge and professional development (Kourkouli, 2018). With the spread of the use of New Technologies in our time, the term community has been redefined to include the digital, electronic, virtual community, ie a community that relies on digitally mediated communication, synchronous or asynchronous. The teachers of classrooms, the designers of the new learning experience, the teachers of other support groups, created the new practice communities which through the interaction of their members were transformed into learning communities and were called to utilize the online ways and highlighted the need for supportive structures for their conversion into digital communities (Donaldson, 2020). The key characteristics of the community participating in online platforms to provide convenience and efficiency are communication, common community goals, easy adaptation to change, organic development, community autonomy (Kezar, Gehrke, & Bernstein-Sierra, 2017), collaborative effort, good personal relationships, different levels of involvement that characterize the flexibility of communities but also the different learning outcomes they can have for each member (Novakovich, Miah, & Shaw, 2017), as well as the competent leader who takes responsibility and cultivates collaborative efforts with a strategic goal of community development (Tarmizi, Vreede, & Zigurs, 2007).

Communication is one of the key components of a successful natural community (Goleman, 2009), while collective effectiveness represents an important factor in dealing with stress by reducing exhaustion and adequately understanding the dynamics of the social identity of stress (Avanzi, Schuh, Fraccaroli, & Dick, 2015). Given the relevance of all the above, the present study aims to assess teacher communication using digital communities, record teachers' problems with parents and students and how they dealt with them, and evaluate problems faced by students.

METHODS

For the needs of the study, the descriptive approach (observational approach) of the statistics was used, which presented the research data concisely and comprehensively. The analysis of the collected data will lead to new knowledge, which in turn will help to make appropriate decisions to improve the educational system and the learning process in the possible compulsory distance education due to the COVID-19 pandemic. Cronbach's internal consistency reliability index (alpha) is one of the most popular reliability calculation techniques (Cohen, Manion, & Keith, 2008). The reliability coefficient of the sample for the variables of the questionnaire of the present study (Cronbach's) was .860. A pilot study in a sample of the population of interest helped to select the topics/questions to ensure the validity of the content.

RESULTS AND DISCUSSION

Among the 510 teachers who answered the questionnaire, 378 (74.12%) were women, 132 (25.88%) were men. Most teachers belong to the age group from 46 to 55 years (218 or 42.75%). Most of the teachers in the sample serve in the Regional Directorate of Education of Eastern Macedonia and Thrace (164 or 32.16%) and in the Regional Directorate of Education of Attica (102 or 20%). In addition, a very large

percentage hold a master's degree (232 or 45.49%). The research showed that the subjects of the discussion of teachers with colleagues on social digital networks had the topic with parents at a moderate rate of 68.24% (348 teachers), to a very large extent the issues related to the production of educational material for distance learning with a percentage of 66.67% (340 teachers), to a small extent the issues related to the problems in the material and technical infrastructure of the students with a percentage of 67.06% (342 teachers) (Table 1).

Table 1. How do you assess the subjects of debate with your fellow teachers

What are the topics of discussion with your colleagues?	YES	%
Problems in communicating with parents	278	54.51%
Problems in communicating with students	282	55.29%
Problems in the material and technical infrastructure of students	342	67.06%
Problems of technical issues regarding the use of the platform by students	348	68.24%
Problems of technical issues regarding the use of the platform by yourself	280	54.90%
Issues related to the production of educational material for distance learning	340	66.67%
Other	10	1.96%

The study confirmed as a goal of the community the creation of a collaborative environment highlighted by previous studies, through which its members communicate, process data, share and gain new knowledge and professional development (Kourkouli, 2018) and confirmed the need for support structures for their conversion into digital communities (Donaldson, 2020). Regarding the type of problems they encountered in their communication with parents and students after school closure, 360 teachers (70.45%) reported to a very small extent that parents and students did not have the necessary knowledge to communicate with the use of new technologies, 312 teachers (61.06%), reported to a small extent that parents and students did not have the necessary means of communication (e.g. email), 306 teachers (59.88%), reported to a small extent that the family did not have a computer or other appropriate means, while the 296 teachers (57.93%) reported to a large extent that the family computers were not sufficient for all children (Table 2).

Table 2. How do you assess the problems you faced with parents and students

What problems did you face in communicating with parents and students after school closed?	YES	%
There was no contact information registered in My school (the information system of primary and secondary education)	132	25.88%
Parents and students did not have the necessary means of communication (e.g. email)	312	61.18%
Parents and students did not have the necessary knowledge to communicate with the use of new technologies	360	70.59%
There was no internet connection in the family	216	42.35%
Internet connection was not good	234	45.88%
The family did not have a computer or other suitable media	306	60.00%
The family computers were not enough for all the children	296	58.04%
The parents and the child had difficulty using the platform	278	54.51%
Communication with parents and students was not possible	84	16.47%
Other	14	2.75%

Regarding the way in which the teachers dealt with the problems that occurred in their communication with the parents and the students after the closing of the schools, 304 teachers (59.61%) stated that they managed to deal with them on their own. It should be mentioned here that the professional development of teachers is high, since232 or 45,49% are holders of a postgraduate degree, 184 teachers (30.08%) reported that they addressed the Principal / Head of a school unit, while 176 teachers (34.51%) reported contacting another colleague (Table 3).

Table 3. How do you assess the problems you encountered with parents and students?

How did you deal with them?	YES	%
I addressed the Principal/Head of the school unit	184	36.08%
I addressed the Educational Project Coordinator	36	7.06%
I addressed the three-member committee of distance education of the School	84	16.47%
I addressed the three-member committee of distance education of the Directorate	22	4.31%
I turned to another colleague	176	34.51%
I managed to deal with them alone	304	59.61%
I could not deal with them successfully	90	17.65%
Other	8	1.57%

The present study confirmed China's education policy, which focused on building cooperation between family and school, turning the crisis into an important incentive to promote the transformation of the education model (Xue, Li, Li, & Shang, 2020) with collaborative procedures. In addition, it confirmed the fact that education practices in 2020 in the midst of a pandemic required an approach to learning through technology (Williamson et al., 2020) concerning an alternative way of teaching due to crisis situations (Tsinakos, 2020) and highlighted the need for support structures to transform them into digital communities (Donaldson, 2020) both internally and externally. The research confirmed that the school is an open system that operates in a wider environment and is in constant interaction with it (Pasiardis, 2004). Regarding the problems faced by the students, the 258 teachers (50.59%) reported to a very small extent that the students expressed grief and sorrow for the forced interruption of the lessons, the 244 teachers (47.75%) reported in moderately that students complained, boredom or irritability, 180 teachers (35.23%) moderately reported students lacked interest in activities, 172 teachers (33.66%) reported that students did not show any lack of concentration, while the 176 teachers (34.44%) reported that the students showed a moderate degree of refusal to participate in activities (Table 4).

Table 4: How do you assess the problems your students were facing?

The problems your students encountered are related to:	YES	%
Lack of concentration	172	33.73%
Lack of interest in activities	180	35.29%
Refusal to participate in activities	176	34.51%
Manifestation of whining, boredom or irritability	244	47.84%
Manifestation of sadness, grief for the forced interruption of classes	258	50.59%
Other	26	5.10%

A previous study showed that students had a reluctance to take the online learning approach (Baloran, 2020), while delays in academic activities were positively correlated with students' anxiety symptoms (P <.001) (Liu et al., 2020).

Conclusion and Recommendation

The COVID-19 pandemic has raised significant concerns for teachers, especially Primary school teachers. In this study, teachers shared with colleagues on social digital networks the topics with parents, the production of educational material for distance learning, the problems in the material and technical infrastructure of students. Teachers realized that students did not have the necessary knowledge to communicate using new technologies, that parents and students did not have the necessary means of communication (e.g. email), and reported to a large extent that family computers were not enough for all the children of the family. Teachers with high professional development faced the problems that occurred in their communication with parents and students alone, while many addressed the Principal/Headmaster of the school, or another colleague. Students expressed distress, sadness, whining, boredom or irritability for the forced interruption of classes and lack of interest, concentration and refusal to participate in distance activities.

The present study highlighted the need to develop an innovative and useful approach to promoting and addressing students' mental health issues during a pandemic. In addition, the educational organizations of Greece are still in the stage of changing the model of the educational organization and leadership of the school units and the need for training of students and teachers in the application of online learning approach and improvement of information and communication technology (ICT) is highlighted. Supporting schools in the future should include making it easier for students to use online tools to engage in digital communities and address educational emergencies in the future.

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