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Technology as an Actor in Communication between Teachers and Parents: the Case of Electronic Diaries

Abstract

The paper focuses on the influence of technology on communication between teachers and parents through electronic diaries. Theoretically, the paper is based on action-network theory and its understanding that non-human and human actors build a network of relationships. By using a qualitative research approach, including interviews with principals, teachers, and creators of the e-diaries, as well as focus groups with parents and students in several Bulgarian schools, opinions of the different stakeholders are explored in depth. The results show that communication is lacking or is really rare through electronic diaries or it can be one-sided, without the parents' possibility to reply to teachers. It is argued that the level of participation of parents in the educational process is low. Most parents and teachers do not really see the need to be more involved or to communicate through the diaries. If educational reforms and especially measures to increase parents' level of involvement are to be undertaken, they should take into consideration parents' understanding of the educational process and their views on how they could be more actively involved and how they could contribute to the overall change in the educational system and a more effective teaching and learning process.

Keywords: education, electronic dairies, parents, teachers, communication, schools

Introduction and justification of the topic

The influence of ICT on education is a key topic, as is evident from the large body of research on it during the last 40 years. Due to the rapid development of technologies, this field is changing constantly (Voogt & Knezek, 2008). It is of key importance to understand the role of digital technologies in education and how they are integrated and used in an effective way. Also, it should be analysed how ICT can serve to overcome (instead of reproducing) social inequalities and to prevent their transformation into educational inequalities. This field has still not been researched systematically (Lonka, 2015). The topic has also become especially relevant in view of the worldwide pandemic of COVID-19 and the need for adaptation of education to the new situation and for usage of alternative electronic forms from a distance. More concretely, the paper focuses on the influence of electronic diaries on communication between teachers and parents.

Through electronic diaries, students, teachers, parents, principals, and other social actors in the educational process can make use of shared information and see grades, remarks, absences, and weekly programme. The use of a telecommunication application (similar to Zoom, MS Teams, etc.) allows to understand better the teaching and learning process, as well as seemingly, to establish communication between parents, teachers, students, principals, etc. on the information in the electronic diaries and all other matters concerning students.

Theoretical considerations: technology at school and communication between teachers and parents

Digital technologies are inextricably linked with everyday lives of students, so the issue on their possible applications in formal education is of key importance. Initially, computer technologies were used for processing information, but when a communication function was added, this increased their potential for application in education. Communication gives the possibility of constructing logical arguments, based on different sources and supposes a sensitivity towards the audience. Communication is established in many ways through internet and technologies – emails, voice messages, chat platforms, etc. (Mattila & Silander, 2015). In the educational process, students can communicate mainly with each other and with their teachers, as well as with anyone else, with whom it is necessary.

Electronic diaries and their role in education could be understood through the actor-network theory of Bruno Latour. Actor-network theory (ANT) first appeared in the field of science and technologies, through the work of Latour, as well as John Law and Michel Callon, while currently many other authors use it in their work (Rowan & Bigum, 2003). The theory is interesting with its idea that human and non-human elements are intertwined into objects. The theory follows the specific links and translations, which connect all these objects, processes, concepts, and institutions, as well as the movements of these objects that assemble and arrange the everyday practices in certain ways. Most studies, that apply ANT, perceive all things as actions, which result from continuously produced networks of relationships.

According to ANT, there are no 'social explanations' for every phenomenon (similarly to laws in natural sciences). The focus on relationships, which makes up the network, not the network in its entirety, allows for a different type of understanding of the process of creating this network and the variability of its connecting elements. The actors in the network change the initially set goals; the active forces, taking part in interactions, can also change (Latour & Akrich, 1992; Latour, 2007). 'The word 'actor' means that the social role is important, and it is never clear who or what acts, since the actor is never alone' (Latour, 2007, p. 32). The actors can be non-humans as well (objects, technologies, anything outside of human social actors), to whom is attributed active force. Having in mind that actors are never alone, non-humans for sure do not have the ability to act alone, they are always in a network with other actors, among which are humans as well.

The approach of the 'sociology of associations' is applicable in research within sociology of education and, more specifically, when it comes to other social actors, included in some way in the educational process (Tummons, 2014). This author has conducted an ethnographic research on a training programme for teachers in a network of colleges in England. By using ANT and relying on the principle of symmetry between humans and non-humans, it is demonstrated how the educational process can be viewed when we take into account both human and non-human actors who are in the network. Every artificial distinction between them would be fake, since what is achieved in the network is a result of joint activity of inseparable actors, humans, and non-humans alike (ibid, p. 162). The understanding that students, viewed as actors, are a part of a network, including their relationships with other students and teachers, as well as with technological and non-technological components in a certain classroom and school, is key. Electronic diaries are a

technological component or a non-human actor in this network of relationships, and they can change communication since they are mediators. This means that they add something from themselves in the process of interaction with human actors; they are not just passive intermediaries in the educational process, but rather they act as a tool, which, when well used and organized, aids communication between all participants.

Electronic diaries in Bulgarian schools

Electronic diaries have been used in the Bulgarian educational system since 2017, with 'Shkolo' as the most used platform, although there are more possibilities on the Bulgarian market. The idea for an electronic diary, which would replace the paper version and facilitate the process of compiling school documentation, was born in 2010. Two friends created a version of an electronic diary as students in the 12th grade and, consequently, together with two more friends in 2016, they created the start-up and software platform 'Shkolo'.

Initially, in 2016 the regulatory framework of the country for the usage of electronic dairies was set, in an ordinance of the Ministry of Education and Science. According to the ordinance a school can start using an electronic dairy exclusively if the details in its electronic sections are compatible with the National Electronic Information System for Preschool and School Education. The Ministry of Education and Science has ensured the creation and introduction of electronic sections from the module 'Documents on the activity of the institution', necessary for keeping diaries in electronic form since the school year 2018/2019 and 67 schools started using the platform in that year. The budget for this activity was 2 million BGN (about 1024028 euro). All the schools that applied through the platform of the Ministry in order to use an electronic dairy in the consecutive 2019/2020 school year, received funding, differentiated according to the number of students studying in them.

Right before the transition to distance learning (in an electronic environment or other form) the schools were supported in different degrees with the proper virtual environment and 73% of schools had an electronic diary (Institute for Research in Education, 2020). In 2020/2021, 96% of schools had an electronic diary (Institute for Research in Education, 2021). At the moment, 1700 schools use Shkolo's electronic diary (Institute for Research in Education, 2020). There are around 8 types of electronic diaries in the country. Apart from Shkolo, other diaries are of 'Admin plus', 'Siela', 'E-diary', 'Phoenix', etc.

With the e-diary that the team of Shkolo has developed, Bulgaria has become one of the four countries in the EU which uses electronic diaries and one of the few countries worldwide, together with the UK, Estonia, and the US, which uses software systems for school management (Ivanova, 2021).

Methodology of the empirical study

The empirical study focuses on the influence of electronic diaries on the communication between teachers and parents. The research approach and methodology are based on qualitative methods for data collection. The reason for choosing these methods is to be able to understand in depth the opinions of the different stakeholders.

Two schools took part in the research, including principals, teachers, students from 9th, 10th and 11th grade and parents of students. These grades were chosen so that students would have enough experience in the school system and with electronic diaries, which were introduced gradually at schools in Bulgaria a couple of years ago. The two schools were selected according to the following criteria: average grades from the state matriculation exam after the 12th grade for the school year 2019/2020; location of the school; type of school; usage of an electronic diary; socio-economic profile of the students in the school. Seven in-depth individual and dual interviews were conducted as follows: 2 with principals, 5 with teachers and one with a representative of a company, which has created the electronic diary. Four focus groups were conducted with students and parents as follows: one with students in the first school, two with students in the second school, as well as one with parents in the second school. Six parents from the first school filled out questionnaires with open questions.

Some of the interviews and focus groups were conducted face-to-face and others online, depending on the COVID-19 pandemic situation. The interviews and focus groups were audio-taped and transcribed. The methodology for data analysis includes coding and analysing interviews (Glaser & Strauss, 1967). The present paper refers only to some preliminary results.

Some of the limitations of the study in this paper that should be noted are related to the COVID-19 pandemic. The restrictions due to the new virus partially obstructed the fieldwork or made it necessary to conduct interviews and focus groups online, which had an influence on the study results. Also, results are not generalisable to the whole country or any other context outside of the scope of the study and the two chosen schools.

Communication between teachers and parents: the case of electronic diaries

The key research question in the paper, as pointed out above, is whether and how communication is established between parents and teachers through the usage of electronic diaries, having in mind that they have such a communication function and that one of the goals of their introduction is to make parents more engaged with the educational process. Data from interviews and focus groups show that communication through the diaries is often lacking, or it is one-sided and most of the interviewees take this as something normal. However, there are different points of view and aspects of this.

Principals and teachers sometimes publish messages for all parents and students, but they turn off the possibility to receive replies from them, which makes communication one-sided. They explain this through examples in which they publish an announcement for a certain event and every parent replies 'Thank you' on the platform, which creates unnecessary spam. In other cases, replies are not serious. One principal shares:

I limit the possibility for communication, when I decide, for parents and students alike, because they are not serious, and no communication is achieved.

Some teachers explain that they publish messages, but they don't really know if parents read them, so it is apparent that communication is not achieved:

In general, there is a possibility for communication, to publish messages, also everybody has an opportunity to mark when class tests are, other kinds of tests, things like this, to make announcements on the schedule or on events. We have put messages, especially when we studied from a distance. I don't know and can't say if parents read them and use them, of course… The method of communication here is one-sided as in other schools, so we publish messages and that's it, there is no possibility for them to answer and write.

Teachers also point out that parents are more engaged now than before and, seemingly, communication with them is more effective. However, they call communication simply the access to information they have placed regarding grades, absences, remarks, etc. instead of the actual communicating process where they exchange messages. Other teachers define communication as two-sided since it actually reaches their audience, although they cannot reply:

Shkolo is the main way of fast communication, it can be one-sided or two-sided… Shkolo is two-sided communication, especially the application for the phone alerts parents. So, we are using mostly this, the most convenient way for our students.

Representatives of one of the widely used platforms for electronic diaries believe that it is not necessary for communication to take place in the platform:

You don't usually comment on grades, absences, and remarks, this is the system, you don't have anything to write on the platform. There are no limitations, but there are formal things, which are normative, there is nothing to add. Students can do only what they need to do in the electronic diary.

It seems that there is a rather hierarchical, normative way of understanding the usage of the platform, which probably explains why there are several different types of profiles (for the students, parents, teachers, principals, and admin), each of them restricted in what could be seen and done. For instance, students and parents can mostly read information, while teachers can publish and change it. This reflects on the possibility for communication between the different social actors.

Most teachers share that communication is established, but mostly through Viber or phone calls, while the electronic platform is used mainly for access to information. Parents also say that they rarely communicate with teachers through the platform, they rather use other ways of communication or don't communicate at all.

It is notable that most of the parents who took part in the study, as well as most of the teachers answer that they do not communicate with each other through the electronic diary. Students also say that they use the platform for accessing and knowing their grades, absences, and remarks at all times, but other than that, the platform cannot increase their level of participation. They believe it is normal for them not to be able to communicate through the diary, which is also a shared opinion between teachers and parents.

Discussion and conclusion

The electronic diaries used in secondary schools across the country are one of the important but under-researched 'non-human' social actors in education. Communication between teachers and parents should, supposedly, be one of the functions of the platforms and one of the goals of the electronic diaries is to increase the level of engagement of parents in the educational process. However, in the two studied Bulgarian schools such communication is lacking and teachers and parents,

principals and the creators of the electronic diary take this as something normal. This finding suggests that in these schools the network between the electronic diaries as a non-human actor and the human actors is very loose. The revealed lack of communication could be regarded as indicative of some problems in the entire educational system and for the overall lack of a systematic communication with parents through other mediums as well. Parents are not an integral part of the educational process, and they are not really involved, apart from receiving information, which is also true for students. This means that the level of participation of parents in the educational process is low. It is important that this refers to two different types of schools (one of them is professional, the other is a language school) in different locations, so it could vary from school to school in general, but it could also be more of a systematic problem, related to the attitudes of different social actors across the educational system as a whole. It is also important, that most parents and teachers do not really see the need to be more actively involved or to communicate through the diaries. However, if educational reforms and especially measures to increase parents' level of participation are to be undertaken, they should take into consideration parents' understanding of the educational process and their views on how they could be more involved and how they could contribute to an overall change in the educational system and a more effective teaching and learning process.

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