

DEVELOPING DIGITAL COMPETENCE. AN ESSENTIAL SKILL IN REMOTE LEARNING

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Abstract: The paper brings into discussion the importance of digital competence in education. Since the pandemic caused by the virus SARS-CoV-2, the need of doing online education has become essential for remote learning. It is widely known that online education provides opportunities for children, and it allows them to have access to more information. Within this new context, the situation shows us obvious gaps in education. Many children without appropriate devices weren't able to participate on lessons, parents were overwhelmed, and a lot of teachers faced different challenges: how to adapt the curriculum, how to create interactive interactions and ensuring daily wellness, how to motivate children to participate, how to keep in touch with vulnerable children. The paper presents the results of four in-depth interviews with students from Iasi County, conducted in September 2020. Finally, the paper emphasizes the importance of developing digital competence, taking into consideration some actions to improve the remote learning experience, including families, children and school staff, providing thus a quality inclusive education.

Keywords: digital competence, remote learning, inclusive education

Introduction

This paper presents the importance of developing digital competence, as essential skill in remote learning. Since the situation generated by Covid-19 many schools were forced to move all classes in online system. This new context led to many worries, stress and uncertainty, emphasizing the fragility of the educational system (UNICEF, 2020a). The teachers had to rethink their teaching methods, learning how to work on online platforms, testing the appropriate tools that can convey the real meaning of the information and also how to get a way to influence the students to get involved. Many teachers are used with the traditional methods for teaching and learning and the online education wasn't considered an option (World Vision, 2020). In addition to online challenges we need to be aware that online school doesn't provide equal access for all children, each child has the right to participate (Lansdown, 2010), schools are dealing with children without devices, caused by the socio-economic status (World Vision, 2020), with parents that are overwhelmed, some of them working from home, disrupting children's learning environment (Mountney, 2009). Taking these facts into consideration, the paper brings into discussion the importance of digital competence in order to facilitate the remote learning (North, Hickam & Santen, 2020). The question that arises doesn't take into consideration how to survive in this period, but how teachers can thrive from these experiences (Lemov, 2020; McArthur-Blair & Cockell, 2018), how to develop more their resilient abilities (Hunter, 2001; Masten, 2014), connecting with children (Serravallo, 2020). Finally, the paper ends with some actions

that teachers can take into consideration regarding the developing of digital competence aiming for a quality inclusive education.

Digital Competence and the Remote Learning Implications

Digital competence has various definitions and it reflects a multi-faceted concept that exists at the convergence of multiple disciplines as media studies, education, information sciences, information systems and communication studies (Vieru, 2015). In the educational system, digital competence can be defined as the teachers' experience in using the "information and communication technology in a professional context with good pedagogical-didactical judgment and the awareness of its implications for learning strategies" (Krumsvik, 2011, pp. 44-45). Also, digital competence refers to "the ability to explore and face new technological situations in a flexible way, to analyze, select and critically evaluate data and information, to exploit technological potentials to represent and solve problems and build shared and collaborative knowledge, while fostering awareness of one's own personal responsibilities and respect of reciprocal rights/obligations" (Calvani et al., 2008). In this digitized society, digital competence may also represent "a set of knowledge, skills, attitudes (thus including abilities, strategies, values and awareness) that are required when using IT and digital media to perform tasks, solve problems, communicate, manage information, collaborate, create and share content, and build knowledge effectively, efficiently, appropriately, critically, creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socializing, consuming, and empowerment" (Ferrari, 2012, p.3). This complex definition covers more than it seems, including a critical way of thinking as well (Vieru, 2015). The dimensions of digital competence may be understood easier, analyzing the image below.

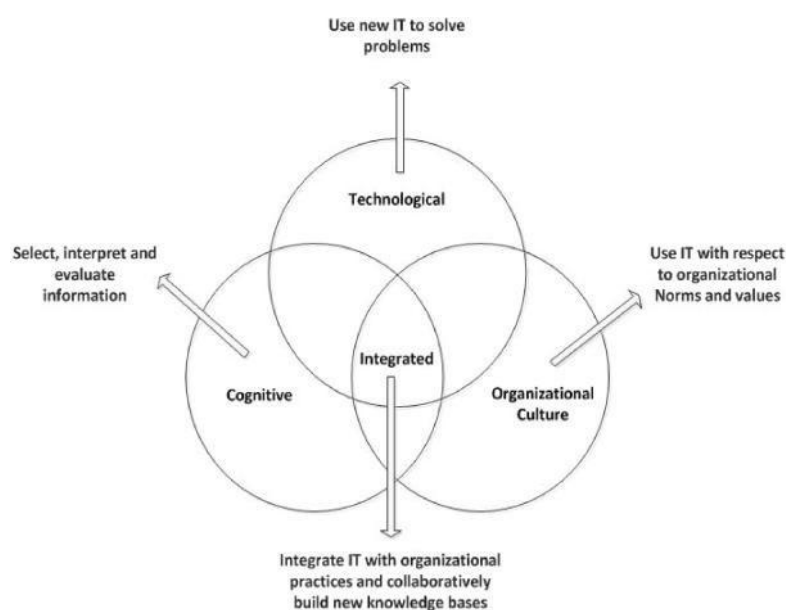


Fig. 1 Digital competence key dimensions (Vieru, 2015, adapted from Calvani et al., 2008)

Based on Calvani et al.'s (2008) digital competence framework, Vieru (2015) proposes a theoretical model for assessing the digital competence in the organizational context. "The model (fig.1) is based on three dimensions and on their integration (the fourth dimension). The first dimension, the technological dimension is the capacity to deal with work-related tasks by using new or existing IT in an effective and efficient manner, the cognitive dimension refers to be able to read, select, interpret and evaluation information, the organizational culture dimension is being able to interact with other individuals collaboratively, using available IT in compliance with organizational norms and values" (Vieru, 2015, p. 6718). Finally, the fourth dimension represents integration between the three dimensions and invites to a new knowledge bases. Further, the definition of the digital competence proposed "consists in the ability to adopt and use new or existing information technology to analyze, select and critically evaluate digital information in order to investigate and solve work-related problems and develop a collaborative knowledge body while engaging in organizational practices within a specific organizational context" (Vieru, 2015, p. 6718). Taking into account this conceptual model (fig.1) the term competence is performance-based, includes knowledge, skills, attitudes that can be improved with other experiences (Vieru, 2015). In this line, how digital competence can be developed in order to improve the remote learning?

As we known the remote learning is defined as the distance education offered to students without the usual face-to-face contact with a teacher in the classroom (UNICEF, 2020a). The remote learning experience brings out several advantages but also disadvantages. It depends of course on the perspective from which we look at things. Taking into account the online classes, teachers have the opportunity to develop more their digital competences, a change to put some new skills in their basket. For many teachers, teaching completely online is the first time, so teachers need support, guidance, encouragement as well (Morgan, 2020). Besides this, the classes are so different, for each one the teacher needs to know how to apply the information, how to deliver the message, how to motivate the children to get involved. There is a lack of technological skills, insufficiently developed, especially for teachers who didn't use the online resources before pandemic (Lynch, 2020). These facts represent some of the obstacles in the remote learning of the students. Certainly, this is a challenge for teachers in order to create virtual classrooms that allow children to feel supported, understood in this process of collaborative learning (Duncan & Young, 2009). Creating interesting virtual classrooms requests a very good organization, time management, flexibility, openness for feedback, but most important planning the curriculum and the resources (Serravallo, 2020). The role of teachers is essential in this process. The attitude regarding the online teaching and learning is reflecting in students' motivation and interest to study. The question derived from these challenges is how teachers can help students, considering the fact that teachers themselves are dealing with stress, anxiety and uncertainty (Lemov, 2020).

Challenges of doing online education in Romania

The pandemic has amplified the factors of social exclusion: low income, unemployment, poor health, social capital, housing and education (UNICEF, 2020a). According to a study conducted in Romania by UNICEF (2020a) regarding the impact of Covid-19, in order to reduce the consequences, in this period the most affected are children that: are living in poverty, children at risk of neglect, violence, abuse, children that are living in overcrowded housing, and their parents are living abroad. Another study organized by World Vision Romania (2020), regarding the well-being of children from rural area, present us the children participation to education in the emergency period: 59% participated in online classes, 30% didn't participated, but send their homework, 16% did they homework, but they didn't succeeded to send it, 4% didn't participated in any way, 1% didn't wanted to connect. Also, 7,4 % didn't have a device to participate in online lessons, 46,1% used their smartphome, 9, 5% used their laptop, 6,4% used computer, 5,2 % used their iPad, 30% communicated on WhatsApp and messenger. The participants of this quantitative study were 1769 parents with children between 6-18 years old, from 7 counties of Romania. Regarding the beginning of the 2020-2021 school year the teachers and the students faced with uncertainty, with unclear actions and activities. In September 2020, the Order 5487/1494/2020 regarding the approval of the measures for organizing the activity within the educational units/ institutions in conditions of epidemiological safety for the prevention of diseases with SARS-CoV-2 virus, elaborated there scenarios for reopening the schools in compliance with and application of all health protection rules. The first scenario took into consideration the daily participation (face to face) of all preschoolers and students in schools. The second involved the daily participation (face to face) of all preschoolers and students in primary education, the students from VIII and XII grades respectively partial return (by rotation at one, two weeks) of the students from other middle and high school classes. The third scenario considered the participation of all preschoolers and students in online activities lessons. So, at the beginning of the 2020-2021 school year a number of 12610 public schools opted for the first scenario, 4892 for the second scenario, and 238 units for the third scenario. There were also, seven units that carried out the activities in mixed scenarios, the second and the third scenario (Order 5487/1494/2020). This way of doing activities lasted around two months. In November 2020, all the schools transferred their activities in online system, due to the increased of number of cases (Order 5972/2020). As we can see from these facts, there was a need to accelerate the transfer of information in online system and many teachers were unprepared (World Vision, 2020).

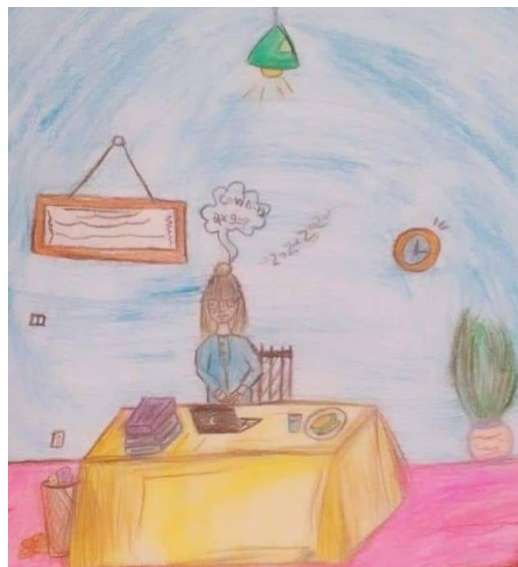
Strategies for developing digital competence

Taking into account the micro research conducted in September 2020 with four students (aged between 13 and 14 years old) from Iasi County, their perspectives regarding the remote learning bring out anxiety, stress, and a lot of misunderstandings. There is a call for improving digital competences, fact that will contribute to the

student's motivation, their self-esteem and of course to the change of their perspective. Almost all the students use a negative language regarding remote learning. The interviews took place face to face, respecting the safety measures. All participants drew on a sheet their vision regarding online school, and the discussions were conducted around their representations. Rethinking the curriculum, practicing appreciative language, and support the students to practice independent learning, constitutes strategies for improving digital competence.

Rethinking the curriculum

How curriculum is organized and exposed to children influence a lot their understanding, the capacity to reflect, but also their state of mind. Presenting information in online environment to classes it is a real challenge. Children are different, with different needs, with different capacities to understand and to put into practice the information received (Mountney, 2009). There are so different subjects to learn and here the teacher needs a lot of imagination and creativity, but also flexibility. As Valentina says below, topics that require more rational thinking aren't easy to put into an attractive context. Teacher needs to adapt the information according to each level of the students.



"In this imagine is our teacher, she is preparing to explain us the lessons. She is alone in our class. The maths isn't easy to explain online, especially because we are at different levels. We don't really understand it's hard to stay focused all the time". Valentina, 14 years old

The first step for teachers according to Serravallo (2020) is to choose the platform. Children need clear guidance, rules, and information that are easy to be followed and understood. The platform used help teachers to stay into connect with students, to figure it out how to organize and how to store the materials. Also, teachers can split into groups the class, to present more videos, to make themselves videos with materials, to present more the information using games. In this process inviting students to give feedback is relevant. Feedbacks always direct the need of improving or develop

that positive culture is correlated with successfully moving their classrooms online (Hoffman, Brackett & Levy, 2020; Greenberg, 2020). Using an appreciative language leads to inclusion “online learning is most effective when everyone belongs” (Krause, 2020), and transmits empathy. The teachers as leaders have the capacity to influence the wellbeing of the students. Taking into account the appreciative approach and its principles, appreciative language is correlated with the appreciative beliefs of the leaders. The appreciative beliefs impact how teachers lead (McArthur-Blair & Cockell, 2018). “Believing in an appreciative approach as a way of being and doing influences people to focus on what is working well” (McArthur-Blair & Cockell, 2018, p. 35). From my point of view, this practice represents a strategy that has a significant power on digital competence of the teachers, reflecting also in the results of remote learning. Using an appreciative language in their work, teachers can bring closer students in order to have more success in online context.

Supporting students to practice independent learning

Doing online education emphasizes of course inequality; many children aren't able to participate due the fact that they are missing resources and they are coming from vulnerable families where education isn't promoted as a value.

“Children are stressed doing online school, some of them are getting involved, others not, and unfortunately some children don't have deceives and they aren't able to participate. Besides this, we weren't used to learning on our own; we need more support from parents...” Denis, 13 years old

Remote learning generates stress on children's lives and the way teacher manages the reaction of children influence their wellbeing. In this process, the role of the parents stands out even more. Teachers need the involvement of parents, to support and encourage children to practice independent learning (Mountney, 2009). As a practice, teachers can invite students to remind of their individual goals and right it on a paper and then present is to the whole group (Serravallo, 2020). “The key is to ensure that every student has what they need to be successful” and teachers need “to be flexible and nimble with supporting student work at home” (Serravallo, 2020, p.87). Taking into account the fourth dimension of digital competence model (Vieru, 2015) that invites to new knowledge bases, supporting students to practice independent learning can lead to develop more their capacity of resilience and their autonomy.

Conclusions and discussion

Remote learning isn't a thriving experience from students' perspective. Students are dealing with anxiety, with fear regarding their future, with misunderstandings. Students are aware about the important role of the teachers. In many cases, teachers don't have all the instruments useful for teaching, to motivate children to participate, or to give a chance for each child to participate (UNICEF, 2020b). This paper set out to emphasize the importance of developing digital competence, in order to impact the remote learning (Krumsvik, 2008; Krumsvik, 2014). Rethinking the curriculum, using an

appreciative language, supporting children to practice independent learning with a more parental engagement are presented as strategies that teachers could use to improve their digital competence. The paper has of course limits, and opens further research that can explore more the perspective of children, involving also teachers and parents to express their experiences and challenges regarding the online education.

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