

Under what conditions can schools contribute to digital equality and the construction of active citizenship? Results from an action research project in a Spanish school

Mar Beneyto-Seoane^{1,*}, Jordi Collet-Sabé²

¹ University of Vic - University Central of Catalonia, Spain, mar.beneyto@uvic.cat, <https://orcid.org/0000-0001-5946-2670>

² University of Vic - University Central of Catalonia, jordi.collet@uvic.cat, <https://orcid.org/0000-0001-8526-9997>

ABSTRACT

Various studies point out that, in the school digital sphere, the same inequalities are (re)produced as in offline spaces. Given this reality, the article explains the results of an action research project for the building of active digital citizenship, which seeks to overcome these gaps through a democratic digital perspective. The field work was carried out in a school situated in a disadvantaged area of a large town (50,000 inhabitants), near Barcelona (Spain). The results were obtained through questionnaires, interviews and discussion groups with 236 families, 30 teachers and 97 pupils. These results indicate that, in order to reduce inequalities, it is important to: a) recognise the diversity of needs, skills and digital access of the teachers, families and pupils in the decision-making process; b) design and articulate different participatory school spaces: formal and informal, physical and virtual; c) promote the participation of all school agents in the digital spheres and guarantee the acquisition of skills and digital access to the whole school community. The article concludes that in order to build an active digital citizenship, processes and actions that are explicitly designed towards this end and that are methodologically consistent with a democratic and inclusive perspective are required.

KEYWORDS: Digital inequalities; digital participation; school; digital citizenship; educational technology

1 I. INTRODUCTION

Social exclusions and inequalities shapes participation in the digital sphere. Proof of this are the various studies that correlates access, degree and type of participation of the population in the digital sphere to the socioeconomic characteristics and cultural capital of citizens (Bonal & González, 2021; Cabrera, Pérez, & Santana, 2020; Choudhary & Bansal, 2022; Van Dijk, 2012). Such inequalities have, according to Van Dijk (2005), at least four dimensions: a) inequality in the opportunities to acquire, learn and use digital technologies - motivational access; b) inequality in relation to digital devices and places/spaces of use - material access; c) inequality in training to use devices, programmes and applications - competence access; and d) inequality in how and for what digital technology is used – use access.

Facing these digital inequalities, for years, schools have been presented as one of the possible places where the most disadvantaged groups could have access to digital technology, acquire digital skills and become online active citizens (Head, 2011). But both previous research and that conducted during the Covid-19 pandemic tell us that, despite their equitable potential, digital gaps and inequalities are also reproduced in schools, especially of the most vulnerable population (Bonal & González, 2021).

The research presented in this article seeks to identify those conditions that enable schools to be places that fight effectively against digital inequalities and build active digital citizens. Until now, much of the research on the digital sphere in education generally has focused on the relationship between school and learning (Area & Adell, 2021; Area, Santana, & Sanabria, 2020), but there is little that focuses specifically on equity and active digital citizenship (Castro Rodríguez, Suelves, & Fernández, 2019;

Sanabria Mesa & Cepeda Romero, 2016). That is why our research seeks to examine the hypothesis that says that schools have the potential to generate the digital equality and learnings required for active digital citizenship. And, above all, it seeks to provide evidence regarding the specific conditions required for schools to become spaces of digital equity and the building of active (digital) citizens, in debate with other previous research (Beneyto-Seoane & Collet-Sabé, 2018; Bonal & González, 2021; Cabrera, et al., 2020; Van Deursen, Van Dijk, & Peters, 2017).

So, based on the still sparse research on what the educational perspectives, processes and conditions should be for schools to become places to fight against digital inequalities and build active digital citizenship, the research question is: How and in what conditions can schools be a real and effective space of participation and digital training for inclusion and active citizenship in a context of inequalities? To answer this question, the article presents the perspective of democratic education applied to the digital sphere that conceptually guided the research; the choice of action research as the most appropriate method to achieve the objectives set; the results of this action research based on the concept of democratic digital education; and our conclusions regarding the research question.

2 THEORETICAL WORK

To answer the research question, the chosen theoretical perspective is that of democracy applied to the digital sphere (Feu, Prieto, & Simó, 2016; Feu, Serra, Canimas, Lázaro, & Simó-Gil, 2017). From the conceptual point of view, the democratic school perspective entails questioning current spaces of participation, power relations and school inequalities, and thinking about how to

co-generate participatory dynamics to reorient all these elements towards inclusion, equity and active citizenship. Based on classical contributions that range from Dewey to Biesta, and passing through Apple and Beane, Feu et al. (2017) propose four dimensions of this democratic school perspective, which our action research project reorients and restructures in the digital school sphere as follows:

- Digital governance refers to the spaces of (and for) digital participation and their characteristics (Beneyto-Seoane & Collet-Sabé, 2020). For example, in schools there are different participation spaces, both formal and informal (school board, parents' association, management team, school entrances and exits and so on) in which digital technology can be used for participation (school website, Whatsapp groups, social media, etc.).
- Digital habitability refers to how the different spaces of digital participation are structured (Barrera, Corts, Fatsini, & Guitart, 2006) and the power relations that exist in these spaces (information, communication, participation and management). That is, who, when and how decisions are made regarding participation in the digital sphere (Álvarez, Torres, Rodríguez, Padilla & Rodrigo, 2013; Martínez, Cortés, Medrano & Apodaca, 2014).
- The dimension of digital alterity seeks to analyse how diversity and inequality are recognised and addressed. It refers to the consideration and assessment of the motivations that people have for (not) using the digital sphere, the resources that are (or are not) available, how they use them (skills) and what they use them for (Van Deursen et al., 2017; Van Deursen & Van Dijk, 2010, 2015; Van Dijk, 2005).
- The dimension of digital ethos analyses the ways of being and inhabiting the digital school sphere. That is, what values are promoted in the digital school sphere (Feu et al., 2016).

These four dimensions of the digital school sphere are what guided and organised the actions that, through participation, were agreed upon during the action research – since both equity and active citizenship are realities that can only occur if the organisational, relational, conceptual and digital conditions of possibility are co-constructed for their concrete and practical realisation. Or as Puig (2000) points out, “a democratic school will be one which organises itself in a way that stimulates the participation of all those involved and that recognises all its members as valid interlocuters” p.57).

3 METHODOLOGY

To achieve the objectives of the research – analysis and improvement of the school digital reality to move towards equity and active digital citizenship – we chose action research (Elliott, 1993; Ulvik, Riese, & Roness, 2017). This method, of both research and the co-construction of new realities, is based on the participation of members of the educational community (Kemmis & MacTaggart, 1988). In the research, the participants have been the educational community, both teachers, pupils, and families. In action research, researchers are critical companions of a process that the different groups of the educational community lead and decide what actions should be undertaken after a participatory diagnosis.

This research was organised into three phases over two academic years (2016-18):

- (1) Initial phase. Participatory diagnosis: initial data collection, identification and analysis of digital practices that occur in schools. It was noted that students were not present in digital school spaces despite showing great interest in participating. Some families presented significant needs related to digital competencies; and uncoordinated digital practices among teachers were identified.
- (2) Development phase. Co-construction and implementation of educational improvements jointly and shared with the educational community. This phase included working sessions with teachers, families, and students to review the initial results and design proposals, aiming to improve the digital situation of the educational community. Some of the strategies implemented during this phase included: for students, recommending reading materials via YouTube; for families, providing Catalan language training through the school's web platform; and for teachers, introducing changes in the school's digital organization.
- (3) Final phase. Data collection and analysis of the impact of the improvements implemented in active digital participation, as well as in the reduction of digital inequalities (equity). Interviews, discussion groups, and questionnaires were conducted again to understand the impact of the different digital strategies on the participating agents.

This research was conducted in a state-owned two-form preschool and primary school that is located in a peripheral neighbourhood of a municipality near Barcelona (Spain). It has a high percentage of working-class pupils and families, with a medium-low educational level and 34% are of immigrant origin. The study sample includes 236 families from preschool to primary school, the 30 teachers of the school and 97 pupils of the final stage of primary education (10 to 12 years old). The digital competence of the families was medium-low; the students exhibited needs in digital participation; and the teachers showed an interest in improving their digital skills regarding the school's digital organization.

To collect the data (Table 1), the techniques of documentary analysis of secondary sources (official documents and the school website and blogs used to understand the digital objectives of the institution) and semi-structured observation in the classroom were used (to identify educational digital practices), as well as semi-structured interviews (to explore into the digital situation of each participating agent), discussion groups (for discussing the situation and seeking improvement proposals) and questionnaires (to understand the digital capital of families and teachers). Both the interviews, discussion groups, and questionnaires were distributed before, in the participatory diagnosis, and after in the final impact assessment. The initial results allowed understanding the digital situation of the educational community (needs, interests, digital capital...), while the final results enabled an understanding of the impact of the action research on the participating agents. This addresses the question of how schools can become effective spaces for participation and digital training for inclusion and active citizenship in a context of inequalities. As it speaks to the digital needs and interests of the community and identifies the spaces, resources, and strategies to address them.

	Interviews	Discussion groups	Questionnaires	Total participants
Families	1	6	4	236
Pupils	0	16	0	97
Teachers	12	7	2	30
Total	13	29	6	363

Table 1. Total interviews, discussion groups and questionnaires. Source: Authors

In accordance with the theoretical perspective presented, the dimensions of analysis and actions of the action research were: a) digital school governance: understanding digital school spaces; b) digital habitability: related to digital competences; c) digital alterity: connected to digital inclusion; and d) digital school ethos: associated with democratic values. These categories, linked to the perspective of democratic school (Feu, Prieto, & Simó, 2016; Feu, Serra, Canimas, Lázaro, & Simó-Gil, 2017) and digital inequalities for (Van Deursen et al., 2017; Van Deursen & Van Dijk, 2010, 2015; Van Dijk, 2005), allowed understanding the digital situation of the school, identifying the digital needs, and establishing digital practices tailored to this reality.

The data obtained both in the initial diagnosis and in the impact assessment was processed using a mixed triangulation design, where the information from the analysis of official documents, school website and blogs, observation, semi-structured interviews, discussion groups and questionnaires. And the research's dimensions of analysis (digital governance, habitability, alterity and ethos) were contrasted, creating dialogue between the qualitative and quantitative components of the study. For the analysis of the quantitative information collected, SPSS was used for the statistical analysis (questionnaires) and Atlas TI for the qualitative content analysis (interviews, discussion groups, document analysis and observations).

4 RESULTS

In this section we show the results of the research structured around the dimensions of analysis presented (governance, habitability, alterity and ethos). We also briefly present: a) the data collected in the initial diagnosis of the research; b) the changes and practices introduced in the school from the diagnosis and participatory work on the use and incorporation of school digital technology; and c) the final evaluation where we contrast the initial and final results in order to show both the impact of participation and digital empowerment and, in relation to the research question, the conditions under which schools can become actors that promote digital equity and active digital citizenship (pre and post project contrast).

4.1 Digital governance: spaces of participation

The pre and post qualitative analysis of the interviews and discussion groups with families, teachers and pupils shows us that the action research, more than generating new spaces of digital participation, helped to rethink advantage of the spaces so that they could be places for dialogue and digital consensus (which before they were not). Regarding the pupils, in the initial analysis it was detected that, on the one hand, they were able to participate in different spaces (council of delegates, tutorials, the classroom and

playtime), but they could only give their opinion in some of them. For example, in the classroom they could choose who to do the tasks with, who to sit with and what to do in their free time, and in the break what to play and with whom. But on the other hand, there were no spaces for participation and making decisions about digital elements (when to use the classroom computers, what information to enter in the class blog, and so forth). After the work sessions with them, at the end of the research we observed that the voice of the pupils (their opinions, motivations and decisions) was taken more into account and in more spaces of participation. And this affects the type of activities that are carried out in the classroom, especially in the digital activities, such as requesting informative talks on the use of technology, or beginning an educational activity of book recommendations through the YouTube channel, among others. In this regard, we observed that the democratic perspective applied to school digital technology within the framework of action research can promote new forms of pupil participation and incorporate new digital practices in the classroom.

Regarding the families, the results show that they participated in different formal bodies (parents' association and school board) and informal spaces (open days, second-hand toy market, celebrations and festivals, among others). In both cases, the participation of the families was passive and they followed the instructions of the management team. Their participation in digital spaces was even less active, because they were only informed through emails or the school website, and there were no spaces for debate or for joint decision-making regarding the digital sphere. The action research involved the construction of new spaces for digital participation such as, for example: new WhatsApp groups managed by the families themselves, the incorporation of new sections on the school website in line with the interests of the families, digital competence training for families, and so forth. In this case, the introduction of the democratic digital perspective questions the institutional organisation and ensures that decisions are made in formal governance bodies, and also in informal digital spaces. Thus, the families, as well as being recipients of school information, also take on a more active and participatory role, and co-decide on digital participation spaces.

With regards to the teachers, the comparison between the initial and final results linked to digital governance shows that they have the same spaces of participation (management team, school board, teacher staff meetings, individual positions, WhatsApp groups, and so forth). The change we observed is that the teachers became aware of their participation in digital spaces and began to make decisions about them, whereas before they accepted them just as the management built them. For example, questioning how they should use the teachers' WhatsApp group or deciding to create a group for official information from the school, among others. This change shows us that the democratic digital perspective can help teachers participate in other digital spaces beyond formal structures and unidirectional digital channels.

4.2 Digital habitability: spaces and participation relationships

The contrast of pre-post data from the research on digital spaces and the relationships of the school community within these spaces shows us a similar result to the governance dimension: the incorporation of the democratic digital perspective through action research contributes to discreetly increasing the digital (virtual)

spaces and, above all, deepens participation in what happens in these spaces and how it happens.

With regards to the pupils, the results show a minimal impact on digital habitability. That is, the adoption of the democratic digital perspective did not expand the digital, physical or virtual spaces where the pupils can participate. This situation is mainly due to two elements: a) new spaces of participation were not built for the pupils; and b) despite small improvements in digital governance, the structure, power relations and school hierarchies linked to decision-making in the school digital sphere did not change much. The results show that, even though some actions undertaken were built from the motivations of the pupils, they did not experience these activities as their own but rather as participation activities proposed (or imposed) by the teachers of the school. In this regard, the action research, despite co-generating specific activities based on the motivations of the pupils, did not lead to activities there were interested in. This shows us that, while the project enabled the students to have a voice, there was a lack of will and strategies on the part of teachers to help them be aware of their role as school actors, of their importance as citizens of the school and of their capacity to co-decide and co-build digital initiatives.

For the families, their participation generated more concrete impacts than for the pupils. An example of this is that, based on their needs, new digital spaces of participation were created, such as the families' WhatsApp group and the introduction of improvements to the school website, among others. Similarly, the democratic digital perspective deployed in the action research modified some power relations in the digital spaces. For example, we observed that the activities proposed were conceived from a collective and inclusive perspective that sought to improve the participation of all families: the WhatsApp groups offer new access to school information that is being worked on to make it universal; online and offline language training create new relationships between families; and email offers another way of communicating between families and school, in which more mothers and fathers now have access to digital competence achieving also greater digital equity among families.

In relation to the digital habitability of the teachers, we observed two kinds of results. One shows us that the digital spaces of the teachers did not change after working with the democratic digital perspective: only a new virtual space was incorporated (the ludic WhatsApp group for teachers) and the same type of structure was maintained in all of the spaces for information, communication, collaboration and management. The other result shows us that the teachers continued to perpetuate power relations in the digital spaces over the pupils and families. They are the ones who make the decisions about how the participatory and digital spaces of the pupils and families should be organised. However, they do so to a lesser extent than at the beginning of the action research since this has achieved some progress in listening to pupils and families, their participation and their decision-making capacity, but without changing the underlying power relations or the initial inequalities.

4.3 Digital alterity: recognizing others

Regarding the socioeconomic characteristics of the families, after examining the results we observed that the profile of the families that participated at the beginning and end of the project was similar in terms of their educational level and job position but not place of birth. In the initial data collection, 36.6% of the families that took

part (n=134) were of foreign origin, while at the end of the research these families represented 50.1% of the participants (n=236). This increase in the participation of families of foreign origin was not due to a migratory movement during the period of the project but rather to a significant increase in their participation in the research. These families who before the project tended to participate less frequently, at the end of the research participated more in the study and also consulted the school website 11% more (measured in weekly visits) and increased by 5% their interest in managing a school digital space. In this regard, we can say that the incorporation of the democratic digital perspective of the action research can favour equity in the participation of families in schools, especially that of those who find themselves in a more socially disadvantaged situation, such as those from the working class, with a medium-low educational level and of immigrant origin.

With regards to the distribution of technological resources, based on the analysis of the qualitative results, we observed that the action research generated new school dynamics to respond to the school's digital shortcomings. And it did so by taking advantage of the school's technological resources and the school community's digital skills; that is, using the resources that the school already had. In the face of unequal educational and digital policies, where not all the members of the school community have the same digital resources, the school showed a certain ability to create and develop strategies to improve the digital situation of families and pupils based on participatory practices that consider the resources and accesses of the school community and promote digital inclusion based on them. Thus, the action research promoted the introduction of new digital practices in the school context, such as the creation of the WhatsApp groups and language training through the school website, among others. And, at the same time, these practices helped to improve the digital competence of the different agents, especially that of the families. However, the project was unable to address all the limitations stemming from material inequality since it lacked sufficient economic resources to guarantee that all the agents, especially the most disadvantaged families of the school, had the same technology and a good internet connection (although the project tried to use devices and applications that the pupils and their families already had at home). Neither did it explicitly improve the digital uses that the different members of the educational community carried out outside the school. In this sense, the results of the research show us some motivational and competence improvements of active participation in the digital sphere. But for full participation it is also necessary that material and use access be guaranteed in the school; and here the action research displayed clear limitations.

4.4 Digital ethos: values and ways of doing things

Regarding digital ethos, the qualitative results of the action research show us certain changes around values and ways of acting after introducing the democratic digital perspective into the school. Throughout the project, we observed that especially teachers and families carried out more digital activities than at the start of the research. This was not so for the pupils, who basically did the same activities, but with a little more listening on the part of the teachers and families and ability to carry out their proposals.

One example of how the ways of doing things changed was the information that the teachers posted on the digital platforms, or the use of email for communication with the families, which went from doing so physically to doing so digitally. In addition, the pupils,

especially, searched much more on the Internet for information that they were unable to obtain close by (to do homework, look for information about places to visit, and so on). And they carried out this search for digital information by using new cognitive schemas and new, more active and critical attitudes how: to carry out a refined search, to interpret the information that is found, to choose the most suitable information, to discard “bad” information, among others. The ways of sharing content online also changed. The teachers, pupils and families actively shared educational resources and information that they did not share at the beginning of the research online: recommended readings on YouTube, urgent school news via Whatsapp, and so forth. We also observed that the forms of digital communication intensified. The school opened, for example, through the creation of email and WhatsApp, more channels of communication between the different agents of the community. And not only that, but at the end of the project communications were more frequent between more diverse agents since the incorporated digital resources allows two-way communications. Finally, participation also changed in two ways. On the one hand, the school recognised and took into account the voice of all the members of the educational community, for the first time in many cases, in order to reflect, think, design and build new strategies and tools for digital school participation. And, on the other hand, many of the strategies and tools incorporated enabled, despite the limitations mentioned, the participation of different school agents (especially of the most disadvantaged ones), and gave the opportunity to express ideas and opinions, to critically analyse digital content, to generate and share information and to make decisions with new groups.

5 DISCUSSION

The action research question was: “how and under which conditions can schools become a real and effective space of participation and digital training for inclusion and active citizenship in a context of inequalities?”. The results indicate three main types of impact that stem from the implementation of the democratic digital perspective in schools as a path towards digital equity:

- Attend to the needs, interests, social and digital realities of the participants. What it means to identify the different school agents, recognise everything digital that concerns them, and formulate questions about what, how and why regarding: the digital devices they have, the type of internet connection, the uses, knowledge, competencies, interests, needs, spaces, times, frequencies, types of participation and relationships, among others. Starting from the particular digital realities allows us to specify appropriate improvement strategies where each member can be an active agent in the sphere of digital participation (Beneyto-Seoane & Collet-Sabé, 2020).
- Create more spaces for digital participation. Formal and physical spaces, also informal and virtual ones (Pereira, Fillol, & Moura, 2019). Before the advent of digital technologies in schools, school participation was limited to systematic spaces within the school walls. Family meetings in the multipurpose room, activities in the classroom and teachers’ meetings in the teachers’ room are examples of this. With the arrival of digital technology, these formal spaces are starting to become digital spaces too; for example, when teachers begin to use digital technology for school organisation and communication. And with the implementation of the democratic digital perspective, the Internet is used to create “new” spaces for school

participation that are neither structured nor defined by a specific organisational system - digital spaces with a great potential for participation since they become immediate channels for information, communication, and decision-making. Proof of this are the WhatsApp groups, where families have conversations, ask questions, communicate, clarify information and organise events.

- Articulate the digital school sphere as a potentially educational and efficient space for participation. What it means to think, organise, structure, and use the digital school space for participation and the improvement of (instrumental and methodological) digital skills, especially for people in a more disadvantaged situation. Digital spaces allow participation in different forms, for example through different platforms and applications people can provide information, set up a debate, create content, among many other actions. But in addition, and regardless of the form, through digital participation school agents constantly learn; and often without being aware of doing so. An example of this learning is when, through WhatsApp groups, the families, especially the most disadvantaged ones, learn to communicate, to search for information, to understand what is explained to them, to ask questions, to express their opinion, to reach agreements, to effectively know their way around in digital media. Among many other learnings, they acquire digital competence, a set of learnings and skills clearly transferable to other digital spheres, such as the personal, social, and work spheres. And this leads to a greater quality of active citizenship and participation in the digital sphere (Selwyn, 2011) and, consequently, an improvement also in their ability to accompany their children’s process of acquiring digital skills.

6 CONCLUSION

Regarding the results of the research, these are linked above all to two main conclusions. First, there are difficulties for transform power relations within the school, where the teachers continue to determine the (non) digital change of the school community. Second, the unequal distribution of digital resources has a global impact on the most disadvantaged families and pupils, making their digital opportunities difficult or even impossible due to the lack of resources, devices and skills. Undoubtedly, these limitations hinder equity and the building of active (digital) citizenship in the school. Thus, the provisional answer to the research question, which is the result of an action research project in a single school, proposes that there are probably five conditions for building schools as spaces for equity and active digital citizenship:

- The need for a theoretical perspective linked to democracy, participation and equity that allows us to question the school reality and imagine and propose new, more democratic realities.
- A work methodology, for example action research, that opens spaces for listening, debate, participation and co-decision-making; and that allows accompanying people outside the schools in this process.
- That the actions for equity and active citizenship are agreed upon, are implemented and are evaluated jointly by all the actors. Even though they are modest actions, it is essential that they are executed and evaluated.
- Given the difficulties in changing the structure of power relations in schools, we propose that the school

administrations and teaching staff gradually open up deeper participatory and democratic processes with more implications.

- Always take into account material, motivation and capacity inequalities in digital matters as a starting point to build equitable and digitally democratic and active schools.

Finally, from the limitations of the research itself, we propose two new challenges for research that wishes to analyse and promote digital equity and the democratisation of participation processes in the digital sphere:

- The first is the need to design more efficient research that guarantees greater equality of opportunities to participate in the digital sphere for all groups by modifying the structure of school power relations, so that they are more horizontal, with more voices, and that they contribute effectively to students and families being truly active agents of the digital participation processes that concern them (Pereira et al., 2019).
- The second challenge is related to the idea that “without schools it isn’t possible, but schools alone can’t”. Thus, the action research has confirmed that, on the one hand, schools can be very important actors in the construction of participation and active digital citizenship, a conclusion we share with other researchers (Beneyto-Seoane & Collet-Sabé, 2020). But it has also shown that ordinary schools do not have enough resources to guarantee material, competence and digital use access to all actors of the school community (Van Dijk, 2005). As a result, the second research challenge is how to involve and guide the community, non-formal and formal education of the region, diverse digital actors and educational policies to achieve resources, devices and digital training and so forth – resources and technology that are crucial for moving towards digital equity and active digital citizenship.

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REFERENCES

- Álvarez, M., Torres, A., Rodríguez, E., Padilla, S., & Rodrigo, M.J. (2013). Attitudes and parenting dimensions in parents' regulation of Internet use by primary and secondary school children. *Computers & Education*, 67, 69–78. <https://doi.org/10.1016/j.compedu.2013.03.005>
- Area, M., & Adell, J. (2021). Tecnologías Digitales y Cambio Educativo. Una Aproximación Crítica. REICE. Revista Iberoamericana Sobre Calidad, Eficacia Y Cambio En Educación, 19(4). <https://doi.org/10.15366/reice2021.19.4.005>
- Area, M., Santana, P., & Sanabria, A. L. (2020). La transformación digital de los centros escolares. Obstáculos y resistencias. *Digital Education Review*, 37, 15–31. <https://doi.org/10.1344/der.2020.37.15-31>
- Barrera, M., Corts, M., Fatsini, E., & Guitart, R. (2006). Els Espais. Guix: Elements d'Acció Educativa (325), 18–23.
- Beneyto-Seoane, M., & Collet-Sabé, J. (2018). Análisis de la actual formación docente en competencias TIC. Por una nueva perspectiva basada en las competencias, las experiencias y los conocimientos previos de los docentes. *Profesorado, Revista de Currículum y Formación del Profesorado*, 22(4), 91–110. <https://doi.org/10.30827/profesorado.v22i4.8396>
- Beneyto-Seoane, M., & Collet-Sabé, J. (2020). Democratizar la gobernanza digital escolar. *Obra Digital*, 0(19), 29–44. <https://doi.org/10.25029/od.2020.258.19>
- Bonal, X., & González, S. (2021). Educación formal e informal en confinamiento: Una creciente desigualdad de oportunidades de aprendizaje. *Revista de Sociología de la Educación-RASE*, 14(1), 44–62. <https://doi.org/10.7203/RASE.14.1.18177>
- Cabrera, L., Pérez, C.N., & Santana, F. (2020). ¿Se incrementa la desigualdad de oportunidades educativas en la Enseñanza Primaria con el cierre escolar por el coronavirus?. *International Journal of Sociology of Education, Special Issue: COVID-19 Crisis and Socioeducative Inequalities and Strategies to Overcome them*, 27–52. <https://doi.org/10.17583/ise.2020.5613>
- Castro Rodríguez, M.M., Suelves, D.M., & Fernández, H.S. (2019). Competencia digital e inclusión educativa. Visiones de profesorado, alumnado y familias. *Revista de Educación a Distancia*, 19(61), 1–37. <https://doi.org/10.6018/RED/61/06>
- Choudhary, H. & Bansal, N. (2022). Addressing Digital Divide through Digital Literacy Training Programs: A Systematic Literature Review. *Digital Education Review*, 41, 224–248. <https://doi.org/10.1344/der.2022.41.224-248>
- Elliott, J. (1993). El cambio educativo desde la investigación-acción. Ediciones Morata.
- Feu, J., Prieto, O., & Simó, N. (2016). ¿Qué es una escuela verdaderamente democrática? *Cuadernos de Pedagogía*, 465, 90–97.
- Feu, J., Serra, C., Canimas, J., Lázaro, L., & Simó-Gil, N. (2017). Democracy and education: A theoretical proposal for the analysis of democratic practices in schools. *Studies in Philosophy and Education*, 36, pp. 647–661. <https://doi.org/10.1007/s11217-017-9570-7>
- Head, B.W. (2011). Why not ask them? Mapping and promoting youth participation. *Children and Youth Services Review*, 33(4), 541–547. <https://doi.org/10.1016/j.childyouth.2010.05.015>
- Kemmis, S., & MacTaggart, R. (1988). *Cómo planificar la investigación-acción*. Laertes.
- Martínez, J.I., Cortés, A., Medrano, C., & Apodaca, P. (2014). Internet use and parental mediation. *Computers & Education*, 70, 212–221. <https://doi.org/10.1016/j.compedu.2013.07.036>
- Pereira, S., Fillol, J., & Moura, P. (2019). El aprendizaje de los jóvenes con medios digitales fuera de la escuela: De lo informal a lo formal. *Comunicar*, 27, 41–50. <https://doi.org/10.3916/C58-2019-04>
- Puig, J. M. (2000). ¿Cómo hacer escuelas democráticas? *Educação e Pesquisa*, 26(2), 55–69. <https://doi.org/10.1590/S1517-97022000000200005>
- Sanabria Mesa, A., & Cepeda Romero, O. (2016). La educación para la competencia digital en los centros escolares: La ciudadanía digital. *RELATEC: Revista Latinoamericana de Tecnología Educativa*, 15(2), 95–112. <https://doi.org/10.17398/1695-288X.15.2.95>
- Selwyn, N. (2011). *Schools and schooling in the digital age: A critical analysis*. Routledge.
- Ulvik, M., Riese, H., & Roness, D. (2017). Action research - connecting practice and theory. *Educational Action Research*, 26(8), 1–15. <https://doi.org/10.1080/09650792.2017.1323657>
- Van Deursen, A.J.A.M., & Van Dijk, J.A.G.M. (2010). Measuring Internet Skills. *International Journal of Human-Computer Interaction*, 26(10), 891–916. <https://doi.org/10.1080/10447318.2010.496338>
- Van Deursen, A.J.A.M., & Van Dijk, J.A.G.M. (2015). Toward a Multifaceted Model of Internet Access for Understanding Digital Divides: An Empirical Investigation. *The Information Society*, 31(5), 379–391. <https://doi.org/10.1080/01972243.2015.1069770>
- Van Deursen, A.J.A.M., Van Dijk, J.A.G.M., & Peters, O. (2017). Habilidades digitales relacionadas con el medio y el contenido: La importancia del nivel educativo. *Panorama SoCiaL*, 25, 137–152.
- Van Dijk, J.A.G.M. (2005). *The deepening divide: Inequality in the information society*. Sage Publications.
- Van Dijk, J.A.G.M. (2012). The Evolution of the Digital Divide. In J. Bus, M. Crompton, M. Hildebrandt y G. Metakides (Ed.), *Digital Enlightenment Yearbook* (pp. 57–78). <https://doi.org/10.3233/978-1-61499-057-4-57>

SOTA QUINES CONDICIONS L'ESCOLA POT CONTRIBUÏR A L'EQUITAT DIGITAL I A LA CONSTRUCCIÓ DE CIUTADANIA ACTIVA? RESULTATS D'UNA INVESTIGACIÓ-ACCIÓ EN UNA ESCOLA ESPANYOLA

Diversos estudis assenyalen que, a l'àmbit digital escolar, es (re)produeixen les mateixes desigualtats que als espais offline. Davant d'aquesta realitat, l'article explica els resultats d'un projecte d'investigació-acció per a la construcció d'una ciutadania digital activa, que vol superar aquestes bretxes a través d'una perspectiva digital democràtica. El treball de camp es va dur a terme a una escola situada en una zona desafavorida d'una gran ciutat (50.000 habitants), a prop de Barcelona (Espanya). Els resultats es van obtenir mitjançant qüestionaris, entrevistes i grups de discussió amb 236 famílies, 30 docents i 97 alumnes. Aquests resultats indiquen que, per reduir les desigualtats, és important: a) reconèixer la diversitat de necessitats, habilitats i accés digital dels docents, famílies i alumnes en el procés de presa de decisions; b) dissenyar i articular diferents espais escolars participatius: formals i informals, físics i virtuals; c) promoure la participació de tots els agents escolars en els àmbits digitals i garantir l'adquisició de competències i l'accés digital a tota la comunitat escolar. L'article conclou que per construir una ciutadania digital activa es requereixen processos i accions explícitament dissenyades amb aquesta finalitat i que siguin metodològicament coherents amb una perspectiva democràtica i inclusiva.

PARAULES CLAU: Desigualtat digital; participació digital; escola; ciutadania digital; tecnologia educativa

¿BAJO QUÉ CONDICIONES LA ESCUELA PUEDE CONTRIBUIR A LA EQUIDAD DIGITAL Y A LA CONSTRUCCIÓN DE CIUDADANÍA ACTIVA?

RESULTADOS DE UNA INVESTIGACIÓN-ACCIÓN EN UNA ESCUELA ESPAÑOLA.

Diversos estudios señalan que, en el ámbito digital escolar, se (re)producen las mismas desigualdades que en los espacios offline. Ante esta realidad, el artículo explica los resultados de un proyecto de investigación-acción para la construcción de una ciudadanía digital activa, que busca superar estas brechas a través de una perspectiva digital democrática. El trabajo de campo se llevó a cabo en una escuela situada en una zona desfavorecida de una gran ciudad (50.000 habitantes), cerca de Barcelona (España). Los resultados se obtuvieron a través de cuestionarios, entrevistas y grupos de discusión con 236 familias, 30 docentes y 97 alumnos. Estos resultados indican que, para reducir las desigualdades, es importante: a) reconocer la diversidad de necesidades, habilidades y acceso digital de los docentes, familias y alumnos en el proceso de toma de decisiones; b) diseñar y articular diferentes espacios escolares participativos: formales e informales, físicos y virtuales; c) promover la participación de todos los agentes escolares en los ámbitos digitales y garantizar la adquisición de competencias y el acceso digital a toda la comunidad escolar. El artículo concluye que para construir una ciudadanía digital activa se requieren procesos y acciones explícitamente diseñadas para este fin y que sean metodológicamente coherentes con una perspectiva democrática e inclusiva.

PALABRAS CLAVE: desigualdad digital; participación digital; escuela; ciudadanía digital; tecnología educativa