

Learning with digital technologies in prison: a scoping review

Rita Barros

rita.barros@ipiaget.pt
[https://orcid.org/ 0000-0002-3596-9992](https://orcid.org/0000-0002-3596-9992)
University of Porto, Portugal
Piaget Institute, RECI, Portugal

Angélica Monteiro

armonteiro@fpce.up.pt
[https://orcid.org/ 0000-0002-1369-3462](https://orcid.org/0000-0002-1369-3462)
University of Porto, Portugal

Carlinda Leite

carlinda@fpce.up.pt
[https://orcid.org/ 0000-0001-9960-2519](https://orcid.org/0000-0001-9960-2519)
University of Porto, Portugal

Abstract

The challenges of a knowledge-based society require the development of digital skills recognizing the potential of learning supported by technologies. Within this scope, and based on research published over the last decade, a scoping review of 66 articles was performed to create a framework derived from existing literature to analyse approaches to identify views about learning supported by digital technologies in prison environments. The results allowed both the presentation of an evolutionary perspective of the state of art regarding digital technologies in prison education and to identify four views: Technical, Humanistic, Regulatory, and Organizational and Community. These views and the critical recognition of the approach that underpins them can contribute to understanding complementary roads to reach the political goals recommended for contemporary prison education, putting the focus on the promotion of conditions of lifelong learning in line with the challenges of the 21st century.

Keywords

Prison education; Digital inclusion; Digital technologies; Online learning; Scoping review

I. Introduction

The 2030 Agenda established by the United Nations (2015), which clearly aims to leave no one behind, defines in its objective 4 (Quality Education) to ensure inclusive and quality education for all and to promote lifelong learning (LL) opportunities. In this sense, it is important to know the main themes that have been prioritised in the field of education in prison settings (Ubah & Robinson, 2003; Zajenkowska, et al., 2021). Considering that Digital Technologies (DT) skills is a prerequisite to participate in 21st-century social life, it is also important to identify to what extent it is visible (Dias-Trindade & Moreira, 2019). Published studies allow creating a framework to analyse practices and approaches toward learning in prison settings with DT. Digital learning environments can contribute to social inclusion, depending on the technical conditions of access, the pedagogical conditions for using and participating considering the learners' characteristics and the levels of interaction, action, and reflection that guide the learning process (Monteiro & Leite, 2016).

In the specific prison context, and according to King (2019), policies must invest in technology and secure Internet services or alternative "Intranet" systems. These measures ensure equity in the access to learning activities, as well as the promotion of digital skills, understood as being one of the transversal competencies/transferable skills, essential for jobs and occupations, such as communication and critical thinking. Within the scope of the knowledge society, digital skills allow one to communicate effectively and offer the opportunity to understand and critically evaluate digital media and media content. In addition, Internet access is crucial in contemporary educational practices and social life. However, internet access in prisons remains an issue in many jurisdictions, and some initiatives focused on digital literacy are restricted, shaped, and limited by the criminal justice system (Gosling & Burke, 2019).

Sustained on these ideas, a study was developed aiming to create a framework derived from existing literature to analyse approaches toward digital learning in prison settings and to identify views about learning supported by DT in prison environments. The research question is: What are the main views conveyed by the studies focused on learning in prison supported by DT?

After explaining the study's theoretical framework, the methodology is described, followed by the presentation and discussion of the results.

a. About Learning with Digital Technologies in Prison

In general, prison settings jeopardize the right to access, use and participate in digital learning environments. This situation excludes the majority of inmates from social environments. Themes such as LL, educational offer, availability of DT or internet access become relevant to inmates' future social reintegration (Czerniawski, 2016; Hopkins & Farley, 2014; Mertanen & Brunila, 2018) and this happens regardless of the restraints or justice and educational policies underlying the guidelines for educational services in prisons. Nevertheless, prisons are generally restrictive about ICT and internet access, considering the obvious safety issues (Brown & Rios, 2014; Hawley, et al., 2013; Monteiro, Leite & Barros, 2018; Sellers, 2016). Official documents, such as the "Survey on Prison Education and Training in Europe-Final Report" (Hawley, et al., 2012), provide data about online learning which is worth reflecting about. A great number of inmates have low education levels and lack LL key-competences. Most inmates do not participate in training programs and reveal low motivation. Moreover, the dropout rates are high. In prison, learning supported by DT includes proper spaces and timings (Farley & Hopkins, 2017) that must not conflict with established routines. Learning spaces and timings depend on the level of the prison's restrictive culture, on how inmates operate their State's educational policies, on the staff's attitudes about learning and DT (directors, prison managers and prison guards), and the communities' social

representations about inmates and their right to learn (Hopkins, 2015; Sellers, 2016). The prison setting usually discourages learning, because of its noisy spaces, lack of material and human resources, as well as its poor organization for focused, autonomous and self-regulated learning (Farley & Hopkins, 2017; Hopkins & Farley, 2014; Hopkins, 2015; Moreira, et al., 2017b; Pike and Adams, 2012).

Aiming to revert these situations that enhance inmates' social exclusion, some education experiences and projects (Barros, Monteiro & Leite, 2021; Moreira, et al., 2017b) provide access to digital learning environments to develop digital skills, demonstrating that it is possible to create online learning in prison experiences. These digital education interventions are in line with the assumptions provided by Adult Education models (Knowles, 1984), namely the student's centered flexible model (Demiray, et al., 2016), aiming to promote, among inmates, collaborative learning, an active role in their apprenticeship and autonomy, in addition to self-confidence and motivation (Barros, Monteiro & Leite, 2022; Moreira, et al., 2017a). Prison learning environments must respect different types of learning and paces, as well as encourage participation and engagement in critical reflection, regardless of digital support. Some studies (Gray, et al., 2019) pointed out the potential of prison for transformation and highlight the transformative effect of learning based on pedagogical practices. Therefore, the promotion of adult learning processes through appropriate interventions is emphasized, taking into account adult learning specificities (Arghode & Brieger, 2017). Inmates are not a homogeneous group; however, the diversity of learning needs is not usually taken into account in most prisons (Czerniawski, 2016; Hopkins & Farley, 2014). Online learning experiences and research-action projects, developed in different countries, provide ground information to analyse congruencies or discrepancies between the discourses and practices of prisons. In this scope, it becomes important to provide an overview of how learning supported by DT in prisons has been referred on publication with this focus.

II. Methodology

A scoping review of literature was developed following procedures to answer the research question: search database; articles selection; searching, screening, and extracting data from the selected articles. According to Grant and Booth (2009) this type of review "provides a preliminary assessment of the potential size and scope of available research literature, aiming to identify the nature and extent of research evidence (usually including ongoing research)" (p. 101).

a. Information Sources and Search

The first step was to identify scientific articles, with peer review, published in indexed journals, over the last decade. Based on their relevance, the search was conducted in the Web of Science Core Collection and EBSCOhost databases (Education Source and ERIC). The Web of Science Core Collection, which allows us to explore the deep citation connections in the sciences, social sciences, arts and humanities, is the world's original citation index for scientific and scholarly research. It is a guarantee for high-quality scholarly journals published worldwide, in over 250 sciences, social sciences, as well as arts and humanities subjects. In turn, EBSCOhost is an intuitive online research platform used by thousands of institutions and users worldwide. With quality databases and search features, EBSCOhost offers high-quality articles, licensed from reputable publishers recognized by professionals. Two databases were chosen: Education Source and ERIC. Education Source contains indexes and abstracts for more than 2,850 academic journals and includes full text for more than 1,800 journals, covering all levels of education. Subject matters include Adult Education, Continuing Education and Distance Learning. ERIC, the Education Resource Information

Centre, sponsored by the Institute of Education Sciences of the U.S. Department of Education, is an online resource for education literature and research. The database provides access to information from journals included in the Current Index of Journals in Education and the Resources in Education Index.

The combinations of the search keywords were ranked as follows:

Prison AND

Education OR Learning AND

Technology OR Digital OR e-learning OR online OR computer

It was required that the article's title, abstract or keywords contain at least one of the keywords of each level in order to be included in the study.

b. Definition of Inclusion/Exclusion Criteria

The articles' eligibility for this study followed these inclusion criteria:

- articles in which education and learning were a central goal and DT was a considered factor;
- studies in which the focus was the prison population;
- all types of study design were considered (e.g. literature review/empirical studies, cross-sectional/longitudinal, descriptive, analytic, observational or experimental /quasi-experimental);
- only articles published from January 1st, 2010 to January 31st, 2020;
- only articles written in English were included;
- only articles published in full text;
- interview articles, editorials or articles published in Conference Proceedings format were not considered.

c. Articles Selection

A total of 66 articles were selected from the two databases. Table 1 presents the distribution of publications per year.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Nº of Articles	3	3	2	5	5	6	12	15	5	9	1	66

Table 1: Distribution of first selected articles by year of publication

Source: Authors

After removing all duplicates from the two databases (8 articles), 58 articles were submitted to a careful and strict abstract reading. The exclusion criteria defined were applied, so there were no articles that:

- focused on other areas of activity (for example, clinical and therapeutic areas);
- used the word "prison" for other semantic purposes (for example, "society as a prison" or "the school experienced as a prison");

- although they referred to the terms "Technology", "Digital", "e-learning", "Online" or "Computer", these were used outside of the context and meaning of the research;
- focused on juvenile populations, namely juvenile delinquency, in a prison context, considering that this study is restricted to the adult prison population;
- focused on professionals who work in prisons or students who do internships in a prison context and not the inmates themselves.

After applying the aforementioned criteria, 38 articles were eliminated, so the research focused on the remaining 20, which were submitted to a full reading. Their distribution by year of publication is presented in table 2.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Nº of Articles	2	1	1	0	4	3	3	4	0	2	0	20

Table 2: Distribution of final selected articles by year of publication
Source: Authors

The process of screening and removing articles is shown in the flow of the article selection (Figure 1).

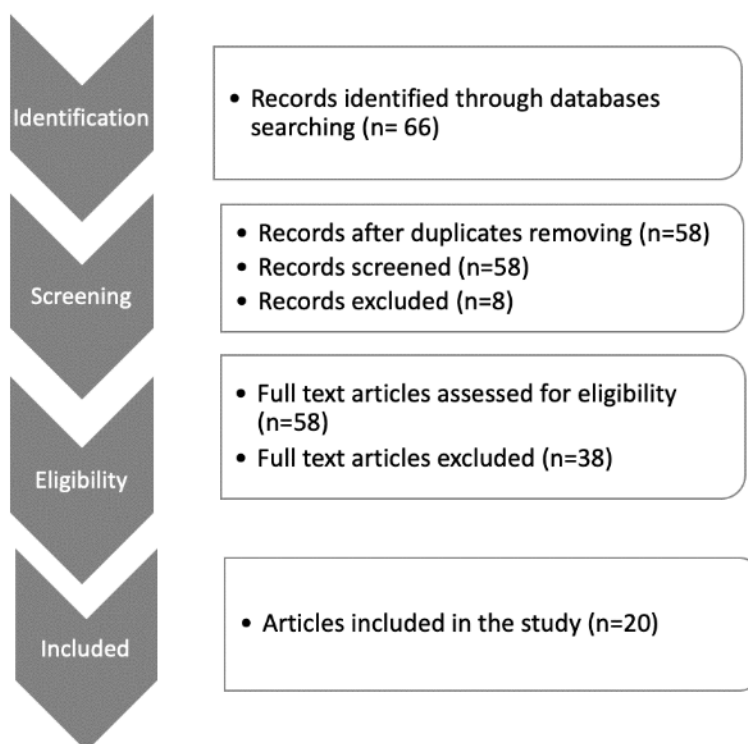


Figure 1. Flow of article selection
Source: Authors

d. Searching, Screening and Extracting Data from the Selected Articles

All the articles were submitted to careful reading. Article files were imported and managed using Nvivo 12 software, followed by the selection and coding of excerpts to group them into nodes. The

rule of mutual exclusivity of categories was not charted, following L'Écuyer (1990). The categorization process was based on the thematic analysis method. Classification and conducting thematic analysis allowed the identification of which categories deserved researchers' attention over the last decade and puts into evidence relevant research gaps that could be investigated in the future.

Each article was analysed through the content analysis process (Krippendorff, 2004; Bardin, 2011).

III. Results

Through the content analysis, a set of categories was identified and grouped into three levels: individual level, organizational/institutional and community level, and political level. The indicators for each category are described in table 3, 4 and 5, and in graphic 1.

I n d i v i d u a l l e v e l	dispositional barriers (14 files, 40 ref.)	attitudes and perceptions about oneself as a learner, e.g. lack of maturity, confidence, motivation and qualifications, poor family backgrounds, psychological distress, low social, economic, and cultural status, substance abuse, older age or digital handicaps.
	educational needs (12 files, 37 ref.)	poor educational background, low levels of formal education, lack of basic education (numeracy and literacy skills), need of LL or limited computer and internet use skills.
	learning experiences (12 files, 39 ref.)	subjective experiences (negative and positive) about the learning process, both prior and after incarceration.
	learning skills (9 files, 30 ref.)	skills achievement in different domains, increases in literacy rates, including digital literacy, learning gains, achievements in self-regulation learning, concentration to learn, collaborative team work or problem-solving skills.
	motivations and expectations (17 files, 41 ref.)	learning process engagement and demotivation factors, both intrinsic and extrinsic, including external incentives to learning (such as to escape the prison routine or to obtain a certificate/diploma) or personal gains (such as self-efficacy or personal satisfaction in the use of DT).
	self-development (12 files, 34 ref.)	improvements in self-transformation arising from learning processes inside the prison, such as feelings of pride and success, hope, awareness, self-esteem, human questions of identity, including student identity, self-presentation and performance of selfhood or LL commitment.

Table 3. Individual level

Source: Authors

As can be seen in table 3, the individual level contains internal and external aspects of the inmates' personal and learning characteristics and experiences. The content analysis of the selected articles allowed to realise that the "motivation and expectations" is the aspect most referred, including engagement factors, incentives to learning and gains. These considerations are evidenced in the following statements:

"Their perceived students' identity also provided them with hope, a lifeline, enabling them to see beyond the confines of their criminal past and potentially provide a route out" (Pike & Adams, 2012, p. 370).

"Prisoners' primary motivations for engaging in education are to prepare for life after release, to make prison life easier and less boring, and/or to acquire knowledge and skills" (Manger, Eikeland & Asbjørnsen, 2019, p. 713).

o r g a n i z a t i o n a l l e v e l	educational offer (14 files, 42 ref.)	different types of courses and levels of education, supported or not by DT, in the scope of formal and non-formal education (higher education, basic literacy, and numeracy courses, professional training, personal and civic development programs).
	learning conditions (18 files, 70 ref.)	conditions provided (or not) by prisons to learn under similar community conditions.
	learning processes and pedagogical approach (13 files, 68 ref.)	educational paradigms, learning environments, curricular design, organization and implementation of study plans, pedagogical models, methods and tools (including DT), teaching/training strategies, and learning styles.
	prison services and system activity (15 files, 40 ref.)	educational prison services or other services that support learning processes, as well prison management and implementation of governmental requirements (restrictiveness and punishment/flexibility and rehabilitation).
	resources (20 files, 103 ref.)	equipment, facilities, technical solutions, virtual environments, DT and educational resources.
	institutional barriers (12 files, 42 ref.)	prison procedures or exclusion criteria that systematically disadvantage inmates; barriers that emerge from one's life situation in prison.
	security issues (17 files, 42 ref.)	security threats, security control/restrictions/constraints, security environments, the prison's security regulations and routines.
	staff support (17 files, 78 ref.)	teachers and other prison professionals involved in educational activities regarding their preparation, availability, assistance, responsiveness, competencies to monitor students' progress, competencies in conflict management skills and empathy.
	community influence and social representations (9 files, 20 ref.)	opinions, perceptions and misconceptions shared in the community towards inmates, incarceration, learning inside prison and technology use, including stereotypes and stigmatization.

Table 4. Organizational level

Source: Authors

As can be seen in table 4, the organizational level covers several aspects related to the education/training offer, such as staff support and outside people involved, resources and learning conditions. The content analysis of the selected articles allowed to realise that the "resources" is the aspect most referred, including digital equipment, online environments and other educational resources. These ideas are evidenced in the following statements:

"A number of students complained that they would have preferred personal lap top computers loaded with their course content" (Hopkins & Farley, 2014, p. 47).

"(...) limited availability of places for learners (e.g., classroom space, ratio of learners to teachers); a limited curriculum offers of education and training in terms of both the level and content and a shortage of human and material teaching and learning resources (e.g. appropriately qualified staff and the availability of computer facilities" (Czerniawski, 2016, p. 206).

p o l i t i c a l l e v e l	polices (19 files, 108 ref.)	justice and education public policies and political agendas about incarceration and learning supported by DT in prison; legal and governance issues of prison education involving technology; policy decision making regarding prison education, including State funding; international organizations' social-political and cultural-discursive positions which impact inmates' digital inclusion/exclusion.
	competition and privatization (4 files, 12 ref.)	prison privatization process and marketization of education; incarceration as a business within the scope of neoliberal ideology, as opposed to public sector education services; competitive tendering and funding-by-results.
	world events and media attention (3 files, 11 ref.)	global events focused on prison education supported by DT; media opinion, tabloids media, news, and reports about the role of education in prison settings, namely with the use of DT.

Table 5. Political level

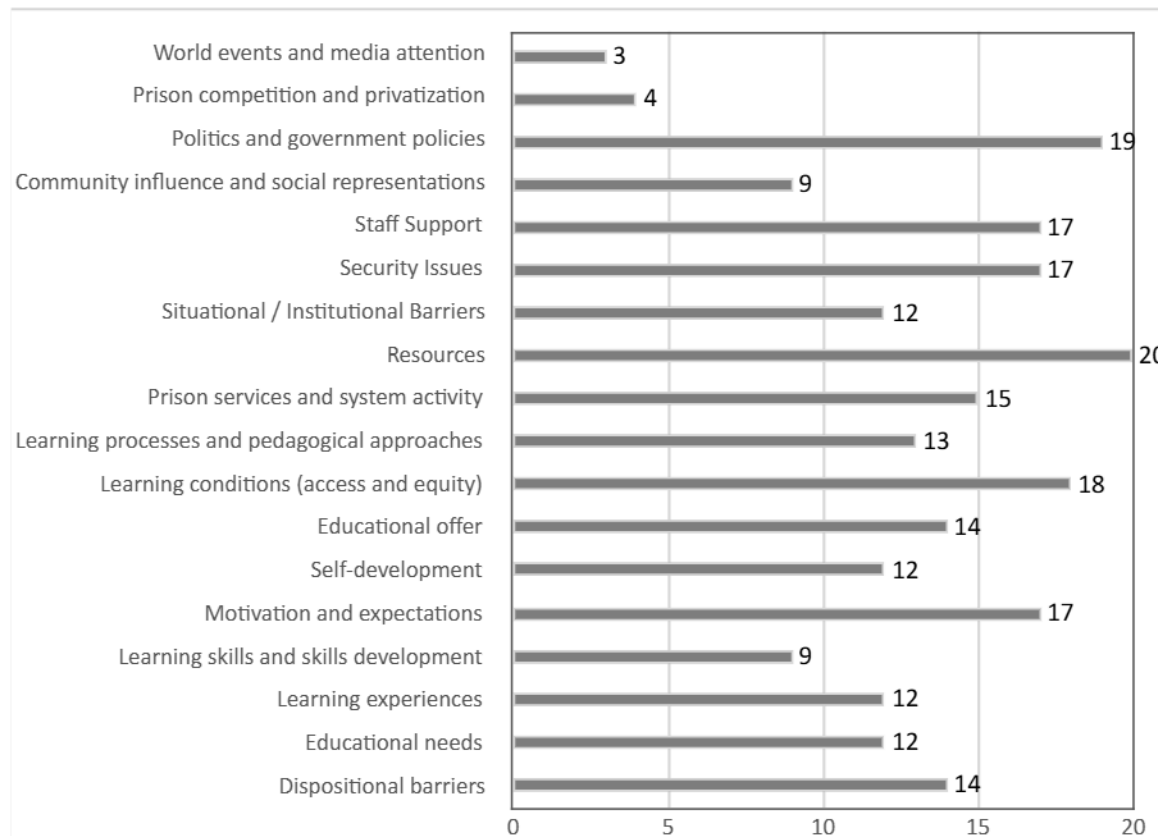
Source: Authors

Table 5 shows that, at political level, the legislation is the main focus, besides other aspects related to official documents, political agenda related both to prison education and digital technologies in this context. These ideas are evidenced in the following statements:

"There is a lack of research on policies that could bridge the gap of digital divide" (Barreiro-Gen & Novo-Conti, 2015, p. 1173).

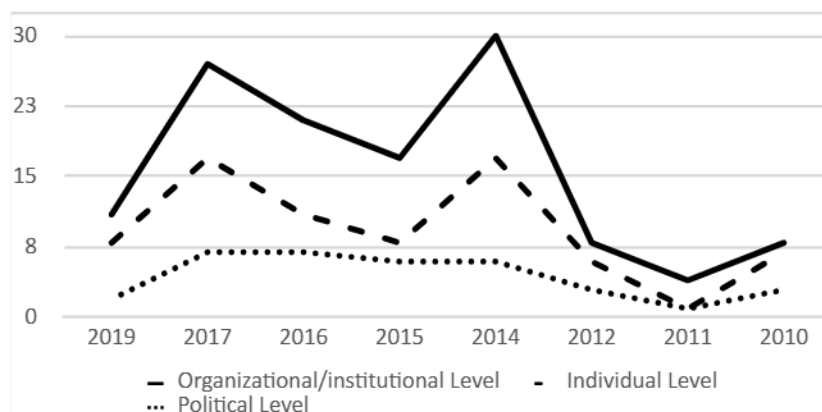
"Media and public agitation for longer sentences and less parole, both reflects and reproduces neoliberal punitive policy. It also supports the neoliberal agenda not just by discrediting the Welfare state, but the dehumanising those who depend upon it" (Hopkins, 2016. p. 48).

To summarize, graphic 1 systematises the number of articles identified in their relationship with the categories described.



Graphic 1: Distribution of selected articles in each category
Source: Authors

Taking as reference the categories clustered in each level and the number of articles identified in each category, it is possible to deduce that organizational/institutional level issues are the focus of scientific attention, since they are mentioned in more articles, considering each year. These issues are in line with a meso level analysis. The articles' distribution by year can be observed in graphic 2.



Graphic 2: Articles' distribution by year
Source: Authors

At all levels, the number of publications is higher between 2014 and 2017, particularly in these two years.

An interpretation of the content analysed in the previous phase, allowed to achieve four views regarding DT in prison education, as presented below.

- (1) Technical View: an instrumental perspective focused on DT that support learning. Some papers related to this view refer to: online and mobile learning experiences in a prison education setting (Farley, Murphy & Bedford, 2014); distance e-learning solutions and resources (Moreira, et al., 2017b);
- (2) Humanistic View: focused on personal development, emphasizing the impact of education on the promotion of individuals' well-being; according to this perspective, learning is understood in a holistic way, in line with what is advocated by the LL paradigm. The papers related to this view refer, for example, to prisoners' academic self-efficacy and participation in education (Roth, et al., 2016); the relationships between literacy, numeracy, and problem-solving ability with characteristics of individuals within the US prison system (Renbarger, et al., 2019) and also the effectiveness of an online educational training program (DiLoreto, et al., 2017);
- (3) Regulatory View: focused on the educational and justice policies implemented in different countries. This perspective encompasses sociological and economic contributions with direct implications in those policies. The papers are related, for example, to: the value institutions and individuals place on the role of further and higher distance education in a prison, and how it can affect technology-enhanced learning in that context (Pike & Adams, 2012); good governance of education in prisons (Crabbe, 2016) and key issues which should be the focus of policymakers to avoid digital divide among the prison population (Barreiro-Gen & Novo-Corti, 2015);
- (4) Organizational and Community View: focused on functioning, management, and administrative services, practices and routines of the prison institution, operationalizing prison policies "on the ground", which include security issues, control of spaces and times in their relationship with learning conditions, attitudes and staff's behaviours, the services available and the learning offers. This view also integrates community support and influence, including social representations, stereotypes or, even, stigma, which may indirectly interfere with the mentioned practices. Some examples related to this view are: the developments and trends in prison libraries (Bowe, 2011); the disjuncture between the discourses and legislation surrounding the rights of all inmates to education in Europe and English and Welsh prisons situation (Czerniawski, 2016) and a critical approach to the institutional practices regarding the use of modified DT in prisons, space and time, demands for security, discipline and economic efficiency (Farley & Hopkins, 2017).

These four views about learning supported by DT in prison are presented in Figure 3.

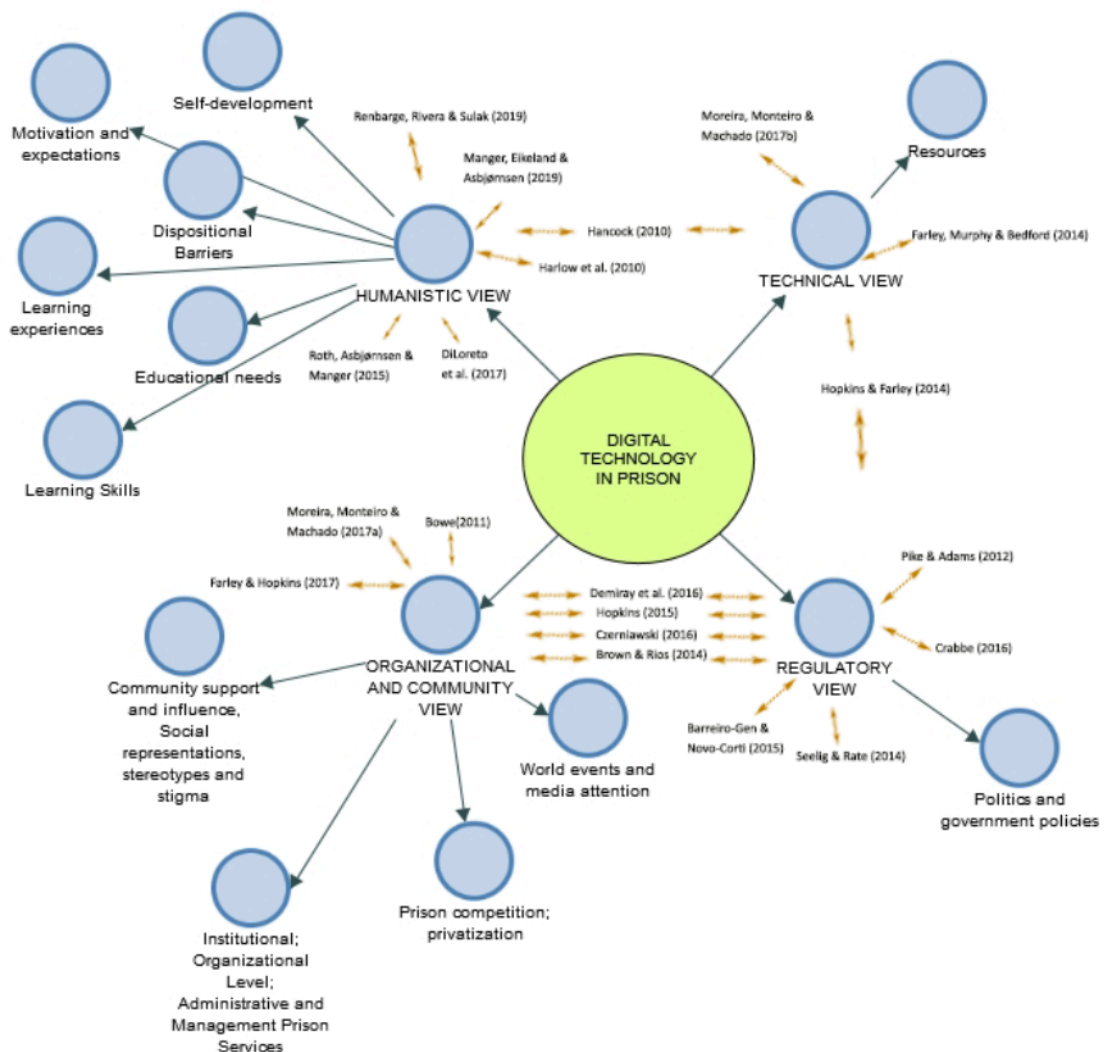
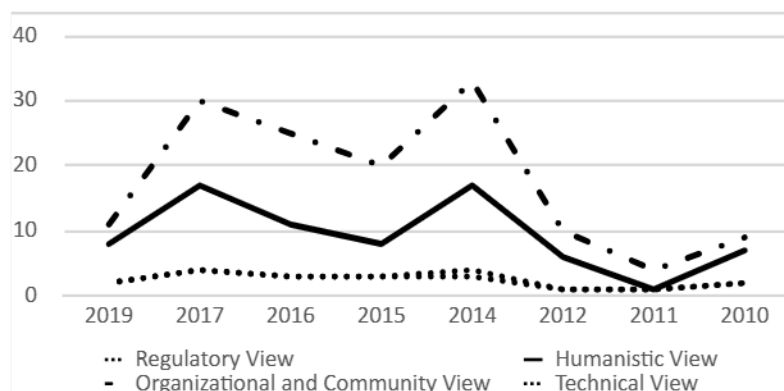


Figure 3: Views about learning supported by digital resources in prison
Source: Authors

The files clustered in the categories that sustain the views are much more frequent in the Organizational, and Community View than in the other views, as can be seen in graphic 3.



Graphic 3: Articles' distribution by year in each view (considering the categories integrated in each view)

Source: Authors

As graphic 3 evidence, the distribution of publications throughout the decade is not so different from the level and view analysis: the number of publications increased between 2014 and 2017, especially in these two years.

IV. Discussion and Conclusion

An overview of how learning supported by DT in prisons has been developed in scientific publications undertakes a comparison of number of publications in each year. This comparison allowed us to conclude that, after 2017, there was a reduction, which contrasts with the 2014-2017 period. Before 2014, the "Survey on Prison Education and Training in Europe – Final Report", published in July 2012, produced a set of recommendations for European policymakers on e-learning in prisons.

Other relevant documents, such as the "Prison education and training in Europe – a review and commentary of existing literature, analysis and evaluation" (authored for the European Commission by GHK Consulting and published in May 2011) and the "Prison Education and Training in Europe Current State-of-Play and Challenges" (Hawley, et al., 2013), highlighted the limited access to ICT and the Internet, by inmates in Europe. This last report stressed that the use of ICT can be a cost-effective solution to promote learning, thus meeting the different learning needs of inmates. An example of the interest in this solution is the number of Prison Education Projects, within the scope of Erasmus +, between 2014 and 2018. This number increased progressively, as well as the amount of the projects' funding, according to the former Grundtvig Coordinator and Acting Head of Adult Learning Unit of the European Commission. These projects include digital competence, e-platforms, gaming and coding. The associated dissemination of activities, such as multiplier events, the European tools and networks (EPEA, Europris, EBSN, EPALE, IJJO...) and the reports to the Ministry/authorities (e.g., Policy recommendations), seems to have contributed to capturing the scientific community's attention. More recently, the European Parliament resolution of 5 October 2017, on prison systems and conditions (2015/2062(INI)) (2018/C 346/14), highlighted educational reforms aiming to promote reintegration and encourage Member States to share best practices regarding education, rehabilitation, and reintegration, but it does not specifically mention the modernization of prison digital technology. In contrast, the Final Report on the Review of European Prison Education Policy and update of the Council of Europe Recommendations on Prison Education (King, 1989) gave new wording to recommendations 1 and

6, to include the access to information technology. There is a clear proposal to invest in modern digital technology, in the scope of Prison Education, such as supervised or secure Internet services or alternative "Intranet" systems. The trend is to promote inmates' abilities to access, understand and critically evaluate digital media and media contents. These digital skills are transferable competences, with relevance for future social and labour integration. This is in line with the previous EU Key Competencies for LL, as described in Recommendation 2006/962/EC of the European Parliament and of the Council.

Besides the trends of scientific community interest, evaluated by the number of publications over the decade, the interpretative analysis carried out in this study provided a categorical structure incorporated in the four identified views. Each view provides particular meanings about learning with DT in prison.

Returning to the research question "What are the main views conveyed by the studies focused on learning in prison supported by DT?", considering the analysis, it is clear that research focuses mainly on organizational and community issues. This is not surprising, if we consider that a considerable number of articles are the result of research-action studies and projects. Researchers are aware of the dynamics, organization and difficulties associated with the use of DT in prison settings. Prison resources for learning, namely the DT mentioned in studies, are not at the heart of researchers' concerns, because there are solutions that can be successfully implemented. In fact, the issues of resources are often linked to security worries, which are attached to prison organization. Prison is a closed, punitive and regulatory context (Goffman, 1961), and the social representations of the community and prison staff towards the prison population are reflected in organizational dynamics (Hopkins, 2015). Contents identified in the regulatory view are not as frequently covered by researchers. However, these issues have a direct impact on the activities and routines of prisons. In general, macro-political discourses have an important regulatory role that impacts organizational and community views about the use of DT in prison education. A punitive orientation or a rehabilitative logic of incarceration determines whether and how to learn in prison, despite its specificity (Torrijo & De Maeyer, 2019). Some authors (e.g., Crabbe, 2016; Moreira, et al., 2017b; Roth, et al., 2016), to face situations that enhance the social exclusion of inmates, reinforced the need for political decisions regarding prison education, including education supported by DT. The socio-political perspectives on LL (instrumental versus humanistic) underlie the difference between education and training in prison (Hopkins, 2015; Hopkins & Farley, 2014; Mertanen & Brunila, 2018; Torrijo & De Maeyer, 2019). According to Costelloe and Warner (2014, p. 23), "Education in prison across much of Europe is often far less than it can be, as a result of two related over-simplifications: rather than seeing 'the whole person in the prisoner, we see only the criminal; and rather than offer adult education in all its challenging richness, we offer only a limited range of 'skills'" (Costelloe & Warner, 2014, p. 23). Skills training is intrinsically connected to employability and the utilitarian trends of education. In this scope, technical concerns are highly relevant. Humanistic education comprises a broader approach, focused on personal and community development. The promotion of the "being" dimension is based on critical reflection, as well as individual and environment transformation (Gray, et al., 2019; Hopkins, 2015).

Keeping in mind different meanings assigned to learning supported by DT in prison settings, this study allowed the identification of four views regarding the topic, namely, a technical view, a humanistic view, a regulatory view, as well as an organizational and community view. These views may overlap but are never mutually exclusive. It is possible to frame all these views in a transversal, critical and emancipatory approach, in which both the effects of education supported by DT in prison contexts and the quality of educational activities provided are the focus. Thus, the four views about learning supported by DT in prison articulate with each other to promote educational inclusion or exclusion, depending on how they operate on the ground and the intention behind them.

The views identified in the study supporting this article contribute to understanding complementary roads to reach the political goals recommended for prison education in the 21st century, putting the focus on the use of DT in the promotion of learning.

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References

- Arghode, V., & Brieger, E. W. (2017). Adult Learning Theories: Implications for Online Instruction. *European Journal of Training and Development*, 41(7), 593-609. <https://www.emerald.com/insight/content/doi/10.1108/EJTD-02-2017-0014/full/html>
- Barreiro-Gen, M., & Novo-Corti I. (2015). Collaborative learning in environments with restricted access to the internet: Policies to bridge the digital divide and exclusion in prisons through the development of the skills of inmates. *Computers in Human Behavior*, 51, 1172-1176. <https://doi.org/10.1016/j.chb.2015.01.076>
- Barros, R., Monteiro, A., & Leite, C. (2022). Autoestima e motivação para aprender online: o caso de mulheres reclusas. *Ensaio Avaliação e Políticas Públicas em Educação*, 30(7), 1-20. <https://doi.org/10.1590/S0104-40362022003003035>
- Barros, R., Monteiro, A., & Leite, C. (2021). An overall picture about academic literature focused on online learning in prison. *Revista Conhecimento Online*, 1, 127-152. <https://doi.org/10.25112/RCO.V1I0.2392>
- Bardin, L. (2011). *Análise de Conteúdo* (4th ed.). Edições 70.
- Bowe, C. (2011). Recent Trends in UK Prison Libraries. *Library Trends*, 59(3), 427-445. <https://core.ac.uk/download/pdf/4827167.pdf>
- Brown, M. A., & Rios, S. J. (2014). Can a Workplace Credentialing Program Improve Inmate Literacy? *The Journal of Correctional Education*, 65(2), 59-83. <https://www.jstor.org/stable/26508030>
- Costelloe, A., & Warner, K. (2014). Prison Education Across Europe: Policy, Practice, Politics. *London Review of Education*, 12(2), 17-25. <https://files.eric.ed.gov/fulltext/EJ1160356.pdf>
- Crabbe, M. J. (2016). Education for Offenders in Prison. *Journal of Pedagogic Development*, 6(3), 3-7. <https://uobrep.openrepository.com/bitstream/handle/10547/621824/341-877-1-SM.pdf?sequence=1&isAllowed=y>
- Czerniawski, G. (2016). A race to the bottom – prison education and the English and Welsh policy context. *Journal of Education Policy*, 31(2), 198-212. <https://doi.org/10.1080/02680939.2015.1062146>
- DiLoreto, M., Ash, G., Johnson, J., Shope, S., & Kokiko, C. (2017). A Collaborative Model for Innovative Facility-Based Educational Programming: The Jcsc-Eocc Oil and Gas Certification Training Program. *The Journal of Correctional Education*, 68(3), 3-18. <http://www.jstor.org/stable/26508030>
- Demiray, U., Unlu, S., Sugur, S., Cangoz, I., & Gunes, E.P. (2016). Usage of Technology for Prisoner Distance Learners: Anadolu University OEF Case. *International Journal on New Trends in Education and Their Implications*, 7(2), 61-75. http://www.ijonte.org/FileUpload/ks63207/File/07.ugur_demiray.pdf
- Dias-Trindade, S., & Moreira, J. A. (2019). Pedagogical scenarios enriched with audiovisual technologies and their impact on the promotion of the learning skills of inmate students in Portugal. *Digital Education Review*, 35, 97-110. https://revistes.ub.edu/index.php/der/article/view/27302/pdf_1

- Farley, H., & Hopkins, S. (2017). The prison is another country: incarcerated students and (im)mobility in Australian prisons. *Critical Studies in Education*, 58(2), 150-167. <https://doi.org/10.1080/17508487.2016.1255240>
- Farley, H., Murphy, A., & Bedford, T. (2014). Providing Simulated Online and Mobile Learning Experiences in a Prison Education Setting: Lessons Learned from the PLEIADES Pilot Project. *International Journal of Mobile and Blended Learning* 6(1), 17-32. <https://doi.org/10.4018/ijmbl.2014010102>
- Gosling, H.J., & Burke, L. (2019). People Like Me Don't Belong in Places Like This: Creating and Developing a Community of Learners Beyond the Prison Gates. *Journal of Prison Education and Reentry*, 6(1), 46-61. <https://doi.org/10.25771/c5qj-fh19>
- Grant, M. G., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26, 91-108. <http://dx.doi.org/10.1111/j.1471-1842.2009.00848.x>
- Gray, N., Ward, J., & Fogarty, J. (2019). Transformative Learning Through University and Prison Partnerships: Reflections from Learning Together Pedagogical Practice. *Journal of Prison Education and Reentry*, 6(1), 7-24. <https://files.eric.ed.gov/fulltext/EJ1226701.pdf>
- Hancock, V. (2010). Essential, desirable or optional? Making distance e-learning courses available to those without internet access. *European Journal of Open, Distance and E-Learning*. <https://files.eric.ed.gov/fulltext/EJ914968.pdf>
- Harlow, C., Jenkins, H. D., & Steurer, S. (2010). GED Holders in Prison Read Better than Those in the Household Population: Why?. *Journal of Correctional Education*, 61(1), 68-92. <https://www.jstor.org/stable/23282814>
- Hawley, J., Murphy, I., & Souto-Otero, M. (2013). Prison education and training in Europe: Current state-of-play and challenges. http://ec.europa.eu/education/library/study/2013/prison_en.pdf
- Hawley, J., Murphy, I., & Souto-Otero, M. (2012). Survey on Prison Education and Training in Europe - Final Report. <https://op.europa.eu/en/publication-detail/-/publication/6480d344-75e7-4573-b860-1f62f1edc6c3>
- Hopkins, S. (2015). Ghosts in the Machine. Incarcerated Students and the Digital University. *Australian Universities' Review*, 57(2), 46-53. https://eprints.usq.edu.au/27732/1/Hopkins_AUR_v57n2_PV.pdf
- Hopkins, S., & Farley, H. (2014). A Prisoners' Island: Teaching Australian Incarcerated Students in the Digital Age. *Journal of Prison Education and Reentry*, 1(1), 42-51. <https://files.eric.ed.gov/fulltext/EJ1148796.pdf>
- King, J. (2019). Review of European Prison Education Policy and Council of Europe Recommendation (89) 12 on Education in Prison. <https://www.europris.org/file/report-review-of-european-prison-education-policy-and-council-of-europe-recommendation-89-12-on-education-in-prison/>
- Knowles, M. S. (1984). *Andragogy in Action: applying modern principles of adult learning* (1st ed.). Jossey-Bass.
- Krippendorff, K. (2004). *Content Analysis. An Introduction to Its Methodology* (2nd ed.). SAGE Publications.
- L'Écuyer, R. (1990). *Méthodologie De L'analyse Développementale De Contenu* (1st ed.). Presses De l'Université du Québec.
- Manger, T., Eikeland, O. J., & Asbjørnsen, A. (2019). Why do not more prisoners participate in adult education? An analysis of barriers to education in Norwegian prisons. *International Review of Education*, 65, 711-733. <https://doi.org/10.1007/s11159-018-9724-z>
- Mertanen, K., & Brunila, K. (2018). Prison Break. Education of young adults in closed prisons—building a bridge from prison to civil society? *Education Inquiry*, 9(2), 155-171. <https://doi.org/10.1080/20004508.2017.1380478>
- Monteiro, A., Leite, C., & Barros, R. (2016). "Eu ganhei mais o gosto de estudar": o e-learning como um meio de aprendizagem ao longo da vida de reclusas de um estabelecimento prisional português. *Educação e Sociedade*, 39(142), p.129-150. <https://www.scielo.br/j/es/a/rHvkPNghNK8G8fP7QKGn7JH/?lang=pt&format=pdf>
- Monteiro, A., & Leite, C. (2016). Inclusive digital online environments as a device for pedagogic differentiation: a taxonomy proposal. *Journal of E-Learning and Knowledge Society*, 12(4). <https://doi.org/10.20368/1971-8829/1115>
- Moreira, J. A., Monteiro, A., & Machado, A. (2017a). Adult Higher Education in a Portuguese Prison" *European Journal for Research on the Education and Learning of Adults*, 8(1), 37-53. https://www.pedocs.de/volltexte/2017/13994/pdf/RELA_2017_1_Moreira_Monteiro_Machado_Adult_higher_education.pdf

- Moreira, J. A., Monteiro, A., & Machado, A. (2017b). Higher Education Distance Learning and e-Learning in Prisons in Portugal. *Comunicar, Media Education Research Journal*, 25(51), 39-49. <https://doi.org/10.3916/C51-2017-04>
- Pike, A., & Adams, A. (2012). Digital exclusion or learning exclusion? An ethnographic study of adult male distance learners in English prisons. *Research in Learning Technology*, 20, 363-376. <https://doi.org/10.3402/rlt.v20i0.18620>
- Renbarger, R., Rivera, G., & Sulak, T. (2019). What predicts literacy, numeracy, and problem solving for incarcerated individuals? A PIAAC examination. *Journal of Offender Rehabilitation*, 58(3), 199-219. <https://doi.org/10.1080/10509674.2019.1582575>
- Roth, B. B., Asbjørnsen, A., & Manger, T. (2016). The relationship between prisoners' academic self-efficacy and participation in education, previous convictions, sentence length, and portion of sentence served. <https://scholarscompass.vcu.edu/cgi/viewcontent.cgi?article=1050&context=jper>
- Seelig, C., & Rate, L. (2014). The Role Distance Learning has to Play in Offender Education. *Journal of Learning for Development*, 1(1). <https://files.eric.ed.gov/fulltext/EJ1106110.pdf>
- Sellers, M. P. (2016). Online Learning and Recidivism Rates. *International Journal of Leadership in Education*, 19(5), 632-636. <https://doi.org/10.1080/13603124.2015.1028462>
- Torrijo, H. R., & De Maeyer, M. (2019). Education in prison: A basic right and an essential tool. *International Review of Education*, 65, 671-685. <https://doi.org/10.1007/s11159-019-09809-x>
- Ubah, C., & Robison, R. (2003). A Grounded Look at the Debate Over Prison-Based Education: Optimistic Theory Versus Pessimistic Worldview. *The Prison Journal*, 83(2), 115-129. <https://doi.org/10.1177/0032885503083002001>
- United Nations (2015). Resolution adopted by the General Assembly on 25 September 2015. https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E
- Zajenkowska, A., Jasielska, D., Rajchert, J., Nawrocka, K., Macianowicz, O., Smolen, M., & Bodecka, M. (2021). Wellbeing and sense of coherence among female offenders and non-offenders: The importance of education. *The prison journal*, 101(1), 41-59. <https://doi.org/10.1177/0032885520978474>

Aprentatge amb tecnologies digitals a la presó: una revisió sistemàtica

Resum

Els reptes d'una societat basada en el coneixement requereixen el desenvolupament d'habilitats digitals, reconeixent el potencial de l'aprenentatge recolzat en tecnologies. Dins d'aquest abast, i a partir de les investigacions publicades durant l'última dècada, s'ha realitzat una revisió que inclou 66 articles que ha permès crear un marc derivat de la literatura existent per analitzar enfocaments per identificar punts de vista sobre l'aprenentatge recolzat per tecnologies digitals en entorns penitenciaris. Els resultats han permès presentar una perspectiva evolutiva de l'estat de l'art de les tecnologies digitals en l'educació penitenciària i identificar quatre mirades: Tècnica, Humanística, Normativa i Organitzacional i Comunitària. Aquestes visions i el reconeixement crític de l'enfocament que les sustenta poden contribuir a comprendre camins complementaris per assolir les metes polítiques recomanades per a l'educació penitenciària contemporània, posant el focus en la promoció de condicions d'aprenentatge al llarg de la vida d'acord amb els reptes del segle XXI.

Paraules clau

Educació penitenciària; inclusió digital; tecnologies digitals; aprendre en línia; revisió sistemàtica

Aprendizaje con tecnologías digitales en prisión: una revisión sistemática

Resumen

Los desafíos de una sociedad basada en el conocimiento requieren el desarrollo de habilidades digitales reconociendo el potencial del aprendizaje apoyado en tecnologías. Dentro de este alcance, y con base en investigaciones publicadas durante la última década, se realizó una revisión de alcance de 66 artículos para crear un marco derivado de la literatura existente para analizar enfoques para identificar puntos de vista sobre el aprendizaje apoyado por tecnologías digitales en entornos penitenciarios. Los resultados permitieron tanto presentar una perspectiva evolutiva del estado del arte de las tecnologías digitales en la educación penitenciaria como identificar cuatro miradas: Técnica, Humanística, Normativa y Organizacional y Comunitaria. Estas visiones y el reconocimiento crítico del enfoque que las sustenta pueden contribuir a comprender caminos complementarios para alcanzar las metas políticas recomendadas para la educación penitenciaria contemporánea, poniendo el foco en la promoción de condiciones de aprendizaje a lo largo de la vida acordes con los desafíos del siglo XXI.

Palabras clave

Educación penitenciaria; inclusión digital; tecnologías digitales; Aprender en línea; Revisión sistemática

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