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# Digital platforms in educational contexts: a scoping review of uses, perceptions and attitudes among educational communities

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**Abstract**
Digital platforms have become central to contemporary schooling, often introduced with promises of innovation, efficiency, and connectivity. However, beneath this optimistic narrative lies a complex and contested terrain. This study critically analyses how the educational community perceives and negotiates the growing platformisation of schools. To this end, a scoping review was conducted following the PRISMA protocol, with searches in the SCOPUS and Web of Science databases, initially identifying 1693 studies. After a rigorous selection process, a final sample of 34 articles was analyzed in depth and organized into two key analytical dimensions. The review identifies two core dimensions: the practical integration of platforms and the attitudes, concerns, and positions of the educational community. While platforms are often praised for facilitating communication and personalized learning, they also introduce new forms of dependency, surveillance, and inequality. This review reveals the underlying tensions between digital enthusiasm and critical awareness within educational institutions, questioning the extent to which platformisation genuinely serves pedagogical and democratic aims.

**Keywords** Digital platforms, Schools, Attitudes, Opinions, Scoping review

## 1 Introduction

The digitisation of schooling has become a defining feature of contemporary educational systems, particularly since the Covid-19 pandemic accelerated the adoption of digital technologies to sustain teaching and learning [51]. Among these technologies, digital platforms—whether proprietary or publicly developed—now play a central role in both the administrative and pedagogical dimensions of schooling. Their incorporation, however, is often discussed in terms of innovation and inevitability, which several authors note that obscure the broader socio-technical and political-economic logics shaping their diffusion [19, 65, 71].

To critically engage with this development, it is necessary to delineate what is meant by digital platforms and how their integration reconfigures the educational field. As De Pablos et al. [18] explain, these are not merely neutral tools for instructional delivery, but

digitally mediated environments designed to structure user interactions, data flows, and institutional processes. In education, their progressive integration has given rise to what van Dijck et al. [69] and Schenone [64] describe as the "platformisation of education," a socio-technical process through which platforms become infrastructural to schooling, mediating pedagogical practices, organisational routines, and decision-making processes while reshaping power relations among educational actors [19, 54]. Rather than referring simply to the presence of digital technologies in schools, platformisation captures how platforms organise educational activity through specific logics of data extraction, standardisation, and coordination.

Analytically, platformisation operates through a set of interconnected mechanisms that provide a coherent framework for examining empirical research on digital platforms in education. A first key mechanism is the "datafication" of educational practices, understood as the conversion of educational interactions into data objects that can be stored, analysed and acted upon [56, 68]. Through datafication, everyday practices such as communication, assessment, and behavioural regulation are rendered visible and actionable within platform environments, shaping pedagogical priorities and institutional responsibilities [66]. Empirical studies illustrate this process through platforms such as ClassDojo, which reconfigure classroom management and parent–teacher relationships by rendering student behaviour visible and governable through quantified indicators [42].

A second mechanism concerns the reconfiguration of educational governance through the delegation of organisational, communicative, and evaluative functions to platform-based infrastructures, frequently developed and maintained by commercial actors. As Williamson [72] and Selwyn et al. [66] note, this delegation embeds data-driven and managerial logics into pedagogical and organisational routines, influencing institutional priorities, norms, and accountability structures. Originally introduced as supports for learning, digital platforms have increasingly been reconfigured as infrastructures of control and governance, often shaped by the strategic interests of global technology firms [31, 32, 67]. Research on the adoption of corporate ecosystems such as Microsoft Teams for Education, for example, shows how pedagogical communication and collaboration become standardised within proprietary environments, aligning schooling practices with corporate design logics and metrics [66].

These platform-mediated mechanisms also have significant implications for professional autonomy and educational relationships. As teachers' work becomes increasingly shaped by standardised workflows and data-based interfaces, professional judgement may be constrained, while students and families are positioned as data-generating participants within platform ecosystems [50]. In this sense, the educational community—understood as teachers, students, families, school management teams, and public administrations—is not a passive recipient of platforms, but a constellation of actors whose practices, perceptions, and positions are reconfigured through processes of platformisation and datafication documented in empirical research [19, 66].

In this review, platformisation is not treated as merely descriptive concept, but as an analytical process that enables the identification of concrete transformations in school life as reported in empirical studies. Specifically, platformisation is operationalised through the ways in which digital platforms reconfigure: (a) educational practices, by routinising communication, assessment, and behavioural monitoring; (b) governance structures, through the delegation of organisational and evaluative functions to

commercial digital infrastructures; (c) professional autonomy, by embedding managerial and data-driven logics into teaching work; and (d) relationships among educational actors, particularly between teachers, students, families, and school administrations. These dimensions provide the analytical lens through which the selected studies are examined and synthesised, and they directly inform the two main analytical dimensions and categories developed in the Results section.

Empirical research has documented diverse and sometimes contradictory implications of these transformations for educational communities. On the one hand, studies report positive expectations regarding the use of digital platforms, including their potential to foster student autonomy [9, 57] and to strengthen communication between schools and families [8]. On the other hand, critical research highlights concerns related to the opacity of platform governance—understood as the mechanisms through which platforms define, regulate, and algorithmically manage educational interactions and data flows [69]—the lack of pedagogical deliberation in platform implementation, and the risks associated with data exploitation, particularly in relation to children [4, 44].

Despite the growing volume of research on these issues, there remains a lack of systematic synthesis regarding how the educational community perceives and positions itself in relation to digital platforms in educational contexts. While individual studies have provided insights into specific contexts or actors, there is limited comparative analysis of the range of educational community perspectives and their underlying tensions. This article addresses that gap by conducting a scoping review of empirical studies published in peer-reviewed journals between 2019 and 2023.

This review examines the use of digital platforms in educational contexts and explores the opinions, concerns, and positions articulated by different members of the educational community in relation to these platforms. While the core focus is on platforms deployed within school settings, the review also attends to how students understand and interpret the platform-based systems that increasingly shape their educational experiences. In this sense, the object of study is not limited to institutional adoption or governance structures alone, but includes students' reflexive engagement with platform logics such as datafication, algorithmic mediation, and commercialisation, insofar as these are connected to educational aims, practices, or learning processes.

The review is guided by four research questions:

- How are digital platforms used in educational contexts?
- What benefits and challenges do different members of the educational community perceive?
- What are the main opinions and concerns regarding the use of digital platforms in educational contexts?
- What positions and attitudes shape the responses of educational communities?

For analytical purposes, the first two questions are associated with a dimension focused on the uses and functions attributed to digital platforms, while the latter two address the knowledge, discourses, and positions articulated by the educational community.

In this study, the concept of "educational community" encompasses teachers, students, families, school leadership teams, and public administrations. Although other agents—such as policymakers, regulators, and technology companies—also influence educational systems, this review focuses on actors directly engaged in the daily life of schools. As

Cermeño [12] notes, schools cannot meet educational demands in isolation,they operate within a broader institutional and relational ecosystem. Families are central to this ecosystem, as are public administrations, which establish guidelines and influence educational practices and evaluation processes [11].

By attending to the perceptions and responses of educational communities, this review contributes to a more grounded and critical understanding of digital platforms in educational contexts, including uses, practices and the way in which they reshape the cultural, pedagogical and institutional conditions of contemporary education.

### 1.1 Previous reviews: what has been systematised—and what remains conveniently ignored?

A growing number of systematic reviews have examined the integration of digital technologies in education. Fernández-Sánchez et al. [28] and Zhang and Tur [74] investigate the use of digital platforms in schools, focusing on how teachers and students engage with these tools in classroom and administrative activities. In contrast, Almalawi et al. [2] and Hase and Kuhl [30] examine how data generated through platform use is analyzed and leveraged to personalize learning experiences, for instance by recommending tailored learning materials or adjusting task difficulty according to individual student profiles. In addition, Salas-Pilco et al. [62] provide reviews that address artificial intelligence in education. While these contributions are valuable, they often frame digital platforms as pedagogical tools or technical artefacts, omitting the broader sociotechnical processes that accompany their adoption—particularly platformisation and datafication.

Most reviews focus on teacher-related aspects, especially digital competences [27, 70]. These works provide useful insights into professional development, but do not explore how digital platforms mediate educational relationships or shift institutional priorities. As such, they leave unexamined the increasing entanglement between pedagogical decisions and commercial infrastructures.

Other studies assess the effectiveness of specific platforms or technologies across educational levels. Estrada-Molina et al. [25] and Hidayat and Firmanti [33] focus on subject-specific applications, particularly in mathematics education, while [49] examine tools designed for mobile or self-regulated learning. Although these studies offer relevant findings, they typically remain within instrumentalist frameworks, measuring what platforms achieve without questioning what they represent or how they reorganise educational power.

While the use of data in education has been widely examined under various labels such as learning analytics, data-driven education, etc., only a small subset of literature reviews explicitly addresses the implications of datafication as a conceptual framework. For example, Marín and Tur [43] provide a conceptual synthesis of the term, while Salomão-Filho et al. [63] explore the notion of data literacy for citizenship and propose directions for public policy. These exceptions highlight critical dimensions often sidelined in broader reviews.

In short, while systematic reviews have contributed to mapping the use of digital platforms in education, few have questioned the underlying logics that drive platformisation or its impact on pedagogical autonomy, governance, and the everyday experiences of educational actors. This review addresses that gap by shifting the focus from technical functionality to critical engagement. It synthesizes how the educational community

perceives and negotiates platformisation in schools—situating platforms not as neutral instruments, but as sites of tension, control, and contestation.

## 2 Method: design and procedures

To address the research questions outlined above, a scoping review was conducted using empirical studies indexed in the SCOPUS and Web of Science (JCR) databases. Scoping reviews are especially appropriate for exploring emerging fields of research, as they facilitate the identification of key concepts, knowledge gaps, and the current state of empirical literature without the constraints of a narrow research focus [47]. This methodological approach has been used in educational research, as evidenced by the study of Dennen et al. [20].

The review process followed the framework proposed by Arksey and O'Malley [5] and adhered to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines [48]. Furthermore, the overall structure of the review was informed by the phases suggested by Zawacki-Richter et al. [60], which allowed for a systematic and replicable research process.

### 2.1 Phase I. Eligibility criteria and information sources

The first step involved the selection of descriptors to conduct the database searches. These descriptors were established following a preliminary review of the scientific literature on the use of digital platforms in education and the associated data management practices in school contexts. The final search string used was as follows:

digital* AND (platform* OR datafication) AND teach* AND ("Primary education" OR "Basic education" OR "Primary school" OR "Elementary school" OR "Elementary education" OR "K12" OR "Preparatory" OR "School").

This search was applied to the title, abstract, and keyword fields in both databases. The selection of search terms was guided by the conceptual focus of the study rather than by a broad mapping of educational technologies. The term "digital platforms" was deliberately prioritised to capture studies that conceptualise platforms as socio-technical infrastructures mediating educational practices, data flows, and governance processes, rather than as isolated digital tools. However, in the specific case of primary education, similar terms were included to capture diverse contexts and ensure a more comprehensive representation of this educational level.

### 2.2 Phase II. Search strategy and selection process

The search was conducted in two databases: SCOPUS and the Core Collection of Web of Science (WoS), specifically within the Science Citation Index Expanded (SCI-EXPANDED) and the Social Sciences Citation Index (SSCI). Access to these databases was granted through the portal of the Spanish Foundation for Science and Technology (FECYT).

The initial search yielded a total of 1421 records in SCOPUS and 272 in WoS (JCR), resulting in a preliminary pool of 1693 publications. The inclusion and exclusion criteria applied to refine this pool are summarised in Table 1.

After applying these criteria, a total of 34 empirical studies were selected as the final sample. This substantial reduction can be explained by several factors. First, a significant number of duplicate records appeared due to the simultaneous search in two databases.

**Table 1** Inclusion and exclusion criteria

| Inclusion criteria | Exclusion criteria |
|---|---|
| CI1. Language: English or Spanish | |
| CI2. Documents published in journals | CE2. Documents from conference proceedings or scientific meetings |
| | CE3. Duplicate records |
| CI4. Articles published between 2019 and 2023 | |
| | CE5. No access to the study |
| CI6. Empirical studies | |
| | CE7. Not related to the object of study[a] |
| | CE8. Retracted articles |

[a]As mentioned on the introduction of this article, this study aims to synthesize empirical evidence on how digital platforms are used in educational contexts and how the educational community perceive and position themselves in relation to these platforms, including their engagement with platform logics such as datafication and algorithmic mediation

Second, many retrieved publications were theorical or conceptual papers without empirical data and therefore did not meet the inclusion criteria. Third, several studies addressed digital platforms from a technical or functional perspective, focusing on software development, usability or system design, rather than on their educational use or implications in school contexts. Fourth, only articles written in English or Spanish were included, as these are the working languages of the authors. Finally, many documents corresponded to conference papers, book chapters, etc., which were excluded according to the established criteria. The selection process is illustrated in Fig. 1 following the PRISMA 2020 model.

### 2.3 Phase III. coding and synthesis.

First of all, it is necessary to explain that given the bilingual nature of the corpus, which included articles published in English and Spanish, specific measures were taken to ensure analytical consistency across languages. Codes and categories were defined conceptually rather than linguistically, allowing them to be applied consistently across texts regardless of the language of publication. To support this process, the coding framework, code definitions, and analytical memos were developed and discussed in a shared working language within the research team. When ambiguities arose in the interpretation of excerpts across languages, these were discussed collaboratively to reach a shared analytical understanding.

After the first search, an Excel document was created with information on all the articles found [46]. Once the final sample of studies was selected, as shown in Fig. 1, the documents were coded and analyzed. In order to do that, an exhaustive reading of all the articles was carried out. In this first reading process, the intention was to identify the following data: (1) Country and year in which the study takes place, (2) Type of methodology used in the article, (3) Group with which the research was conducted. All this information is detailed in Table 2 below.

Later, a second reading was carried out to analyse content in relation to the research questions of the study. In this phase, all of the articles were introduced into the Atlas.ti analysis software, with the intention of carrying out a content analysis which consists of studying the manifest content of the material based on categories established by the researcher.

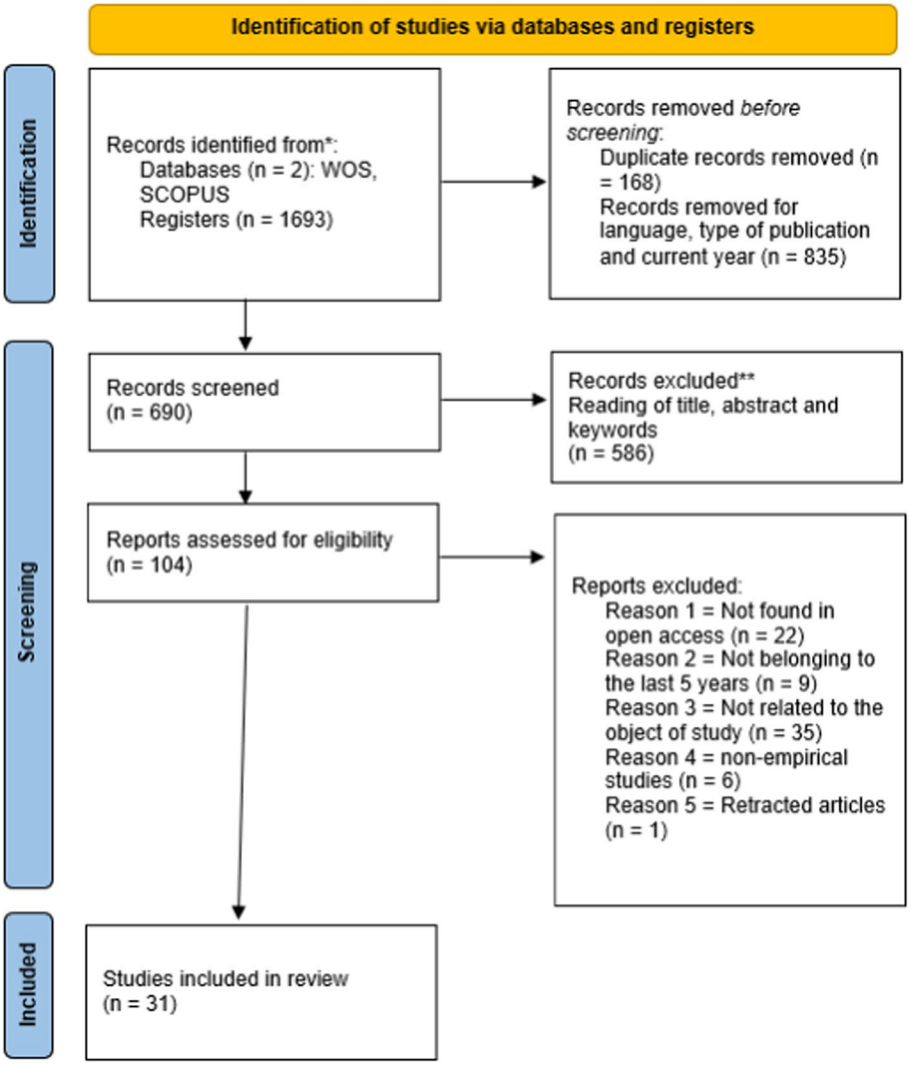


**Fig. 1** PRISMA 2020 flow chart

The coding process was explicitly guided by the research questions and followed a combination of deductive and inductive strategies. In a first stage, a set of deductive codes was developed directly from the four research questions: (1) uses of digital platforms in schools; (2) perceived benefits and challenges of using digital platforms; (3) opinions and concerns expressed by members of the educational community; and (4) positions and attitudes adopted towards digital platforms. During successive readings of the articles, inductive subcodes were added to capture recurrent themes and issues emerging from the documents. These included, for example, references to data privacy, student autonomy, teachers' workload, forms of surveillance or perceptions of platforms governance. The coding framework was iteratively revised throughout this process, with subcodes being refined, merged, or redefined to ensure conceptual consistency.

Accordingly, a small number of studies were included because they provide empirical insight into students' awareness and critical understanding of digital platforms, even when their primary analytical lens is situated within the field of critical digital or data literacies. For example, Pangrazio and Cardozo-Gaibisso [50] analyse how students develop critical data literacy by reflecting on the data practices, algorithms, and business

**Table 2** Specification table of articles

| Article | Country | Year | Methodology | Study group |
|---|---|---|---|---|
| Ahmad et al. [1] | Malaysia | 2023 | Quantitative | Secondary teachers |
| Area-Moreira et al. [3] | Spain | 2023 | Qualitative | Industry specialists and representatives of educational institutions |
| Balaban & Sobodić, [6] | Croatia | 2022 | Quantitative | Primary and secondary teachers |
| Balaganesh et al. [7] | India | 2021 | Quantitative | Secondary teachers |
| Calderón-Garrido et al. [10] | Spain | 2023 | Quantitative | Families |
| Chacón et al. [13] | Spain | 2022 | Qualitative | Families |
| Çimen & Hangül [14] | Turkey | 2021 | Qualitative | Teachers |
| Courtney et al. [15] | United States | 2022 | Quantitative | Teachers and teaching specialists |
| Cuskelly et al. [16] | Australia | 2023 | Qualitative | Management teams of educational institutions |
| Dadhe & Patil [17] | India | 2021 | Quantitative | Primary and secondary teachers |
| Díaz-Ronceros et al. [21] | Peru | 2021 | Quantitative | Students |
| DiGiacomo et al. [22] | United States | 2022 | Quantitative | Students and management teams |
| Escola et al. [23] | Portugal | 2022 | Quantitative | Teachers and students |
| Escola et al. [24] | Portugal | 2022 | Mixed | Teachers |
| Feldman & Czerniewicz [26] | South Africa | 2023 | Qualitative | Teachers, management teams, Department of Education and higher education graduates |
| Hase et al. [29] | Germany | 2022 | Quantitative | Primary teachers |
| Hsu & Chen [34] | Taiwan, China | 2023 | Quantitative | Families |
| Ideland [35] | Sweden | 2021 | Qualitative | School administrators, education-related companies, and NGOs |
| Jacovkis et al. [37] | Spain | 2022 | Qualitative | Policymakers, expert activists, technology companies and stakeholders |
| Jacovkis et al. [36] | Spain | 2023 | Qualitative | Management teams, teachers, students and families |
| Kansal et al. [39] | India | 2021 | Analysis of Google Trends | Schools |
| Lai et al. [40] | Denmark | 2023 | Platform analysis | Primary education digital tools and services |
| Lupton [41] | Australia | 2021 | Qualitative | Management teams, teachers and other school staff |
| Michos et al. [45] | Switzerland | 2023 | Quantitative | Teachers |
| Pangrazio & Cardozo-Gaibisso [50] | Australia and Uruguay | 2020 | Mixed | Students |
| Pavić et al. [52] | Croatia, Poland, Serbia and Germany | 2022 | Quantitative | Students and teachers |
| Jarquín & Díez-Gutiérrez [38] | Spain and Mexico | 2023 | Website analysis | Benchmark schools |
| Rennie et al. [58] | Australia | 2019 | Computational, qualitative and interpretive methods | Students and teachers |
| Rodríguez & Area-Moreira [61] | Spain | 2022 | Mixed | Teachers and families |
| Peraza & Jarquín [53] | Mexico | 2023 | Mixed | Management teams, teachers and families |
| Yazici & Özerbaş [73] | Turkey | 2021 | Quantitative | Primary teachers |

models of digital platforms. Although this work does not focus on platform adoption at the institutional level, it is relevant to this review because it illuminates students' opinions, concerns, and positioning in relation to platform-based systems that increasingly intersect with educational practices and school-related learning processes.

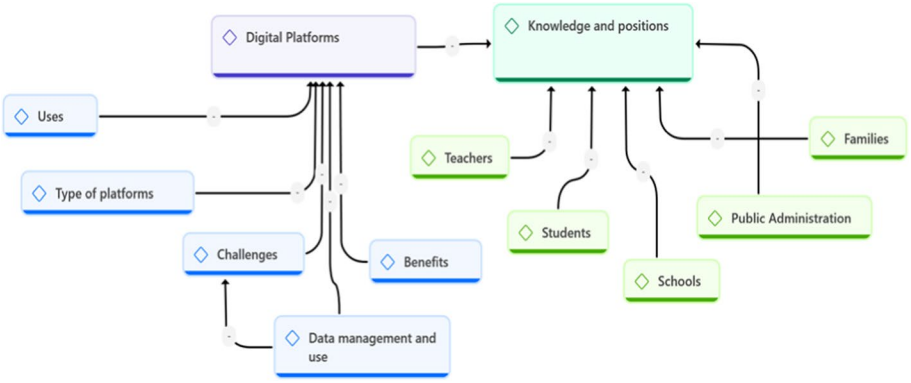


**Fig. 2** Network of dimensions and categories created through Atlas.ti

Each article was coded independently by two members of the research team. Rather than calculating inter-coder reliability metrics, coder agreement was ensured through a reflexive and consensus-based procedure, consistent with the exploratory aims of a scoping review. After independent coding, coding outputs were compared and discussed in regular analytic meetings. Discrepancies were examined in relation to the research questions and the definitions of the codes, leading either to agreement on the most appropriate coding or to the refinement of code definitions. Once all data were coded, code frequency and co-occurrence analysis were conducted in Atlas.ti to identify thematic connections between categories.

After this process of categorizing the information, two study dimensions, each composed of five categories, were defined. These dimensions and categories synthesise the ways in which digital platforms are used in schools and how members of the educational community perceive, interpret, and position themselves in relation to these technologies. Figure 2 below details the dimension and categories analyzed in this study and the relationships between them.

Figure 2 shows two major dimensions (digital platforms and knowledge and positioning) that are related to each other, and to which the rest of the categories are linked. On the one hand, five categories were found related to the "Digital platforms" dimension, which are: types of platforms; uses; benefits; challenges; and data management and use. On the other hand, the categories found for the "Knowledge and positioning" dimension were a total of five: public administration; schools; teachers; students; and families.

The results found in each of the dimensions are presented separately below and then linked in the discussion.

## 3 Results

As noted in the methodological section, the results of this scoping review are structured into two core analytical dimensions. The first, "Digital Platforms", focuses on the types of platforms adopted in schools, their everyday functions, the perceived benefits and challenges associated with their use, and the governance of the data they generate. The second, "Knowledge and Positioning", explores how various members of the educational community interpret, evaluate, and respond to the processes of platformisation. These two dimensions were developed inductively through thematic coding and reflect both converging trends and areas of tension across diverse educational contexts.

### 3.1 Digital platforms

This analytical dimension addresses the infrastructural, pedagogical and governance roles that digital platforms play in schools. Drawing from the reviewed studies, five categories were identified: types of platforms, uses, benefits, challenges, and data management and use. Together, these categories offer insight into how platforms are not merely added tools but structural agents that mediate educational practices, redistribute authority, and shape the very conditions of schooling.

### 3.2 Types of platforms

This category refers to the digital tools implemented in schools and analysed in the reviewed studies. Cuskelly et al. [16, 23, 24, 36, 52, 53, 58] consistently identify Google for Education and Microsoft 365 Education as the most frequently cited platforms across the literature. According to these studies, such platforms have become infrastructural standards, central to organising both administrative and instructional activities, often without pedagogical deliberation or contextual adaptation.

Complementary tools such as Kahoot, Canva, Zoom, and Innovamat are also documented by Balaganesh et al. [7], Pavić et al. [52], and Peraza and Jarquín [53], who note that they are usually integrated as plug-ins within larger commercial ecosystems. However, these studies indicate that their inclusion reinforces a platform logic of modular consumption, where schools rely on externally designed tools that reflect global corporate priorities rather than local educational values.

As Escola et al. [23] and Jacovkis et al. [36] warn, platform selection is often driven by administrative decisions with little teacher input. Moreover, Rennie et al. [58] argue that the internal workings of these platforms—algorithms, data flows, and decision-making protocols—remain largely opaque, which limits schools' capacity to assess their ethical and pedagogical impact.

### 3.3 Uses

The reviewed studies show that digital platforms are primarily used for organisational, evaluative, and communicative purposes, rather than for transformative pedagogical innovation. Courtney et al. [15] observe that teachers commonly use them to share content, assign tasks, manage grades, and maintain contact with families. According to Chacón et al. [13], students initially engage with platforms through gamified or recreational functions, gradually shifting toward communication and academic submission tools—particularly via social media and integrated chat systems. Meanwhile, Hsu and Chen [34], and Peraza and Jarquín [53] report that families use platforms to monitor attendance, progress, and updates from school administrations.

This suggests that these uses reflect a broader trend: the functional normalisation of platforms as infrastructural tools that shape everyday educational routines. However, studies like those of Lai et al. [40] and Ahmad et al. [1] highlight how such uses rarely involve reflection on the pedagogical implications of digital mediation. Instead, platforms are adopted pragmatically, reinforcing task-based logic, procedural compliance, and unidirectional communication—often without fostering collaborative inquiry, critical digital literacies, or culturally responsive teaching.

### 3.4 Benefits

The reviewed articles highlight several perceived benefits of digital platforms DiGiacomo et al. [21, 22] and Hsu and Chen [34] emphasise their role in enhancing communication between schools and families, while Ahmad et al. [1] and Peraza and Jarquín [53] point to their potential for promoting student autonomy through flexible, asynchronous learning environments. Additionally, Pangrazio and Cardozo-Gaibisso [50] credit platforms with facilitating faster information access and increasing student motivation, particularly when social media and interactive tools are involved.

However, in the reviewed articles, these benefits are often framed in individualistic and operational terms, without addressing the deeper pedagogical or institutional conditions that make such outcomes possible—or uneven. For instance, Balaganesh et al. [7] and Chacón et al. [13] reveal how the promise of autonomy depends heavily on students' age, socio-digital support, and prior familiarity with platform logic. This underscores the fact that rather than fostering inclusive pedagogies, platforms may reinforce pre-existing digital divides by rewarding those already equipped to navigate them.

### 3.5 Challenges

The reviewed literature highlights a wide range of challenges linked to the incorporation of digital platforms in schools. Cuskelly et al. [16], Díaz-Ronceros et al. [21], Lai et al. [40], and Peraza and Jarquín [53] emphasise that a central concern is the reproduction of socioeconomic inequalities, particularly regarding connectivity, access to devices, and the availability of digital resources in under-resourced school contexts. According to these studies, such disparities limit not only students' ability to participate on equal footing, but also schools' capacity to implement platforms meaningfully.

For teachers, challenges are particularly acute. Dadhe and Patil [17], Escola et al. [24], Ideland [35], and Jacovkis et al. [36] point to the lack of time, insufficient professional development, and the absence of institutional support for integrating platforms into pedagogical practice. In parallel, these studies note that the shift toward platform-centred instruction has led to a redefinition of the teaching role, often framed in terms of managerial functions rather than pedagogical agency. The deprofessionalisation of teaching emerges as a recurring theme, with Lupton [41] and Calderón-Garrido et al. [10] emphasising that this trend is exacerbated by the widespread perception that educators are not adequately prepared to handle the data these platforms generate.

Students face another set of challenges that go beyond access. The literature points to risks of addiction, cybersecurity threats, and negative impacts on mental and emotional well-being, particularly in relation to surveillance practices and reduced opportunities for genuine digital socialisation [13, 36, 50]. While platforms are often framed as tools of empowerment, these studies reveal that for many students, they function instead as mechanisms of visibility, control, and exclusion.

### 3.6 Data management and use

This category addresses the pervasive yet often invisible process of datafication, which DiGiacomo et al. [22] and Peraza and Jarquín [53] describe as the transformation of user behaviour and interaction into data points subject to analysis and prediction. Far from a neutral shift, Lai et al. [40] and Peraza and Jarquín [53] argue that datafication in education is inseparable from commercial surveillance infrastructures that extract, store,

and monetise educational data—often without informed consent and under regulatory vacuums. While Hase et al. [29] and Rennie et al. [58] report that some institutions claim to use data for personalising learning or optimising administration, these justifications often mask a deeper absence of critical interrogation regarding who controls the data and for what purposes.

Across the literature, there is consistent evidence of institutional unpreparedness and discursive disempowerment. Feldman and Czerniewicz [26, 38] show that while schools acknowledge the use of commercial platforms, they remain either unaware—or deliberately disengaged—from the implications of the embedded data practices. According to these studies, this dynamic fosters an environment of delegated responsibility, where data governance is outsourced to external actors, while educators and administrators operate under conditions of informed ignorance. This highlights that in this context, the data infrastructure becomes a black box: indispensable yet inaccessible, powerful yet unaccountable.

For students, this dynamic translates into a heightened sense of vulnerability and constraint. Cuskelly et al. [16], Kansal et al. [39], Lai et al. [40], Pangrazio and Cardozo-Gaibisso [50], and Rennie et al. [58] reveal growing concern about privacy, behavioural prediction, and algorithmic classification. According to these studies, such concerns are not only technical but epistemic, since the ways in which data circulates shape how students are known, categorised, and acted upon within digital educational systems. In this sense, this suggests that platforms are not neutral mediators but active agents of subjectivation and control, conditioning students' educational trajectories while rendering their resistance practically invisible.

### 3.7 Knowledge and positions

The "Knowledge and Positions" dimension examines how members of the educational community understand, interpret, and position themselves in relation to digital platforms. These perspectives are analytically relevant because platformisation operates not only through the technical deployment of platforms, but also through the ways in which these infrastructures are made sense of, normalised, or contested by educational actors. In this sense, actors' knowledge, concerns, and positions constitute a key mechanism through which platformisation becomes embedded as a structural feature of educational contexts. The content was grouped into five categories that represent the main actors of the educational community identified in the study: teachers, students, families, school management teams, and the public administration.

### 3.8 Teachers

The reviewed studies reveal that teachers generally adopt a pragmatic view of digital platforms, with Courtney et al. [15] and Rodríguez and Area-Moreira [61] noting that educators value them as useful supports to sustain their work, particularly during times of educational uncertainty. However, this instrumental acceptance coexists with a spectrum of positionalities shaped by age, motivation, confidence, and perceived digital competence. Chacón et al. [13] and Yazici and Özerbaş [73] observe that younger teachers tend to exhibit more favourable attitudes toward technology integration, while Ahmad et al. [1] and Escola et al. [23, 24] report that those with greater self-perceived competence experience higher levels of satisfaction and openness.

Yet beneath these factors lies a more complex terrain of professional vulnerability. Lupton [41] and Pavić et al. [52] report that teachers frequently express concern over the use and governance of student data, acknowledging both their limited knowledge and the absence of institutional training on digital privacy and security. Feldman and Czerniewicz [26] and Lupton [41] further note that these anxieties extend to personal risks—cyberbullying, data leaks, and unauthorised access to digital records. In addition, Hase et al. [29] and Michos et al. [45] emphasise that ethical dilemmas also arise regarding the collection of student data without pedagogical mediation.

Importantly, many teachers recognise a growing pedagogical asymmetry: students often possess higher levels of digital fluency, which creates tension around authority and control in the classroom [14, 38]. At the same time, teachers fear that their own lack of digital competence may unintentionally reproduce forms of digital exclusion, especially when they adopt either uncritical enthusiasm or excessive scepticism toward platform use. In sum, this indicates that teachers' positionings reflect not just attitudes toward technology, but deeper concerns about their role, legitimacy, and agency in increasingly datafied school environments.

### 3.9 Students

Across the reviewed studies, students appear far less frequently as central informants than other members of the educational community. While several studies report on students' use of school-based platforms—such as learning management systems or communication tools—only a limited number explicitly explore how students experience or interpret the broader process of platformisation in schooling.

Students generally express a positive or neutral stance toward the use of digital platforms in school, with DiGiacomo et al. [22] and Yazici and Özerbaş [73] noting that this position is often shaped by students' familiarity and daily immersion in technology from an early age. This suggests that their self-perception reveals confidence in managing digital environments, particularly regarding everyday online issues. However, there is a lack of understanding about how platforms store, profile, or exploit their data—an issue also highlighted by Pangrazio & Cardozo-Gaibisso [50]. This highlights that these tensions reflect a critical gap: while students are expected to be "digitally native", they are often digitally disempowered when it comes to understanding and contesting platform logics.

### 3.10 Families

The reviewed studies reveal that families adopt diverse positions regarding the use of digital platforms in schools, reflecting both expectations of improvement and concerns about ethical and pedagogical implications.

First, many families express a positive view of digital technologies in education. Chacón et al. [13], Hsu and Chen [34], Jacovkis et al. [37], and Rodríguez and Area-Moreira [61] emphasise that this acceptance is grounded primarily in the practical benefits of strengthening communication with schools and teachers, as well as in the belief that such tools help motivate students in their academic tasks. In this discourse, these studies suggest that platforms are perceived as functional extensions of the school–family relationship, enabling more continuous oversight of the educational process and facilitating parental engagement that would otherwise be limited.

A second position reflects a more protective and risk-oriented stance, particularly when families perceive digital technologies as exposing their children to potential harm. Kansal et al. [39], Jacovkis et al. [37], and Calderón-Garrido et al. [10] identify concerns that include data privacy, excessive online exposure, and access to inappropriate content or unsafe social interactions.

A third, less common but significant position expresses structural distrust toward teachers and educational institutions. Peraza and Jarquín [53] note that in such cases, families do not necessarily question the platforms themselves but rather suspect that their use serves to offload teaching responsibilities or reduce professional effort. This critical perspective is also evident in Burbat [9], who shows that parents perceive digital platforms as transferring educational tasks to the household without fostering shared responsibility. Similarly, Michos et al. [45] identify growing frustration among families who view digital tools as one-way communication devices, with limited space for feedback or genuine dialogue. In this view, technology becomes a symbolic interface for latent tensions around task distribution, transparency, and institutional trust within digital schooling.

### 3.11 School management teams

The reviewed literature suggests that school management teams have generally adopted a pragmatic and instrumental approach to platform adoption, especially in the context of the COVID-19 pandemic. Cuskelly et al. [16] and Feldman and Czerniewicz [26] explain that, faced with the need to ensure pedagogical continuity, many schools turned to commercial solutions offered by major technology corporations, embedding them into daily school operations with limited time for critical deliberation. While these studies acknowledge that some concerns emerged regarding privacy and surveillance in digital environments, they also show that such issues were often subordinated to managerial efficiency.

In most cases, digital platforms were not perceived as educational threats but rather as practical aids to improve organisation, streamline communication, and support classroom logistics. DiGiacomo et al. [22] and Jacovkis et al. [37] emphasise that this managerial framing contributes to the naturalisation of platform use, as if its implementation were a neutral process devoid of structural implications.

However, this apparent neutrality masks a deeper tension between digital convenience and institutional autonomy. As Feldman & Czerniewicz [26] argue, outsourcing core functions to commercial platforms may result in subtle forms of governance displacement, where key decisions about school practices become dependent on external infrastructures, proprietary logics, and technical constraints. This underscores that in this scenario, school management teams—intentionally or not—become agents of platform entrenchment, facilitating the diffusion of corporate norms within public education without fully questioning their pedagogical or ethical consequences.

### 3.12 Public administration

The literature highlights the central role of public administration in the digitisation and platformisation of schools, primarily through the implementation of digital education policies, funding mechanisms, and the establishment of public–private partnerships. Feldman and Czerniewicz [26], Jacovkis et al. [36], and Pangrazio and Cardozo-Gaibisso

[50] emphasise that far from being passive enablers, public authorities act as active mediators between educational institutions and technology providers, often legitimising the widespread integration of platforms as part of broader modernisation agendas. Jacovkis et al. [36] further underlines that this legitimisation reinforces the structural embedding of platforms in school systems.

However, this involvement reveals an ambivalent positioning. On one hand, administrations have shown flexibility and adaptability in enabling schools to respond to the pressures of digital transition, especially during and after the COVID-19 pandemic [16]. On the other hand, several studies draw attention to the dependencies created between governments and global technology corporations, particularly in the absence of strong public alternatives or robust regulatory frameworks [36]. This reveals that rather than leading platform adoption through pedagogical reflection or democratic debate, public authorities often operate within a logic of technological inevitability, endorsing tools whose implications for autonomy, equity, and privacy remain insufficiently addressed.

## 4 Discussion and conclusions

This scoping review set out to examine how digital platforms are used in educational contexts and how different members of the educational community perceive and position themselves in relation to these technologies. Rather than evaluating platforms in normative terms, the discussion synthesises recurring patterns identified across the reviewed studies and interprets them through the analytical lens of platformisation as a structural process.

The findings indicate that digital platforms operate not merely as tools for content delivery but as infrastructures that reorganize relationships, data flows, and institutional processes as mentioned before by De Pablos et al. [18], van Dijck et al. [69] and Poell et al. [54]. For instance, Jacovkis et al. (2023), Rennie et al. [58] and Pangrazio and Cardozo-Gaibisso [50] emphasise that these platforms also have profound implications for governance, pedagogical autonomy, and the production of subjectivities, while Feldman and Czerniewicz [26] and Peraza and Jarquín [53] show how their implementation often occurs without sufficient pedagogical deliberation, shifting decision-making power toward commercial and opaque structures. These examples underscore the dual role of platforms: facilitating certain tasks while simultaneously reconfiguring governance and power dynamics in schools.

From this perspective, the following section addresses the four research questions that guided the development of this review, as formulated in the introduction. The discussion is structured around each of them, connecting the findings extracted from the literature with current debates on the uses, benefits, challenges, and tensions posed by platformisation in educational contexts.

### 4.1 How are digital platforms used in schools?

The studies reviewed show that digital platforms are mainly used for three purposes: institutional and pedagogical communication among teachers, students, and families; academic performance monitoring through assessments, homework, and grades; and student socialisation or entertainment activities. Courtney et al. [15], and Chacón et al. [13] document these uses as recurrent practices across schools. This multifaceted functionality aligns with what van Dijck et al. [69] and Decuypere et al. [19] define as

"platform infrastructures", capable of reshaping school practices, flows, and timeframes. In many studies, platform use is normalized as part of daily school routines, with little reflection on its structural implications.

In this sense, the findings resonate with authors such as Williamson [71] who argue that the expansion of platforms cannot be understood solely through the lens of operational efficiency but must be analysed as part of a broader logic of digital governmentality. These infrastructures promote a pedagogy oriented towards traceability, performance, and standardisation, which, as noted by Selwyn [65] and Peraza & Jarquín [53], quietly transforms school culture.

### 4.2 What benefits and challenges do different educational actors perceive regarding the use of digital platforms in schools?

The identified benefits include improved home–school communication [34, 53], greater student autonomy in managing their learning (DiGiacomo et al., 2022 [1, 22]) and increased organisational efficiency within schools [8]. These perceptions align with earlier work by Ramírez-Ramírez et al. [57] and Burbat [9], where platforms are seen as facilitators of administrative and pedagogical tasks. Briones et al. [8] also highlight how this functional efficiency can foster greater coordination among school actors.

However, these benefits are offset by significant challenges. Socioeconomic inequalities limit access to platforms [16, 21, 40], exacerbating existing digital divides. Additional challenges include insufficient teacher training, lack of time for tool adaptation, and a shortage of institutional support [17, 24]. Ethically, several studies such as Pangrazio & Cardozo-Gaibisso [50], Selwyn et al. [66] and Massó-Guijarro et al. [44] warn of opaque data management practices, the extensive use of algorithmic surveillance, and the commercialization of educational interactions.

These concerns echo what Van Dijck [68] and Raffaghelli [55] describe as the risk of structural datafication—a process through which pedagogical interactions are transformed into quantifiable data for third-party exploitation. As such, functional benefits must not be assessed in isolation, as the challenges identified point to a profound reconfiguration of the educational ecosystem.

### 4.3 What are the main concerns expressed by different educational agents regarding the use of digital platforms in schools?

The concerns identified in the reviewed literature are multiple and unequally distributed among educational agents. From teachers' perspectives, a key issue is the loss of autonomy in planning and guiding teaching processes, as platforms impose rigid frameworks and predefined formats (Jacovkis et al., 2023; [24]). This phenomenon, also documented by Selwyn [65], aligns with the concept of "digital deprofessionalisation", where pedagogical expertise becomes subordinated to technocratic logics.

Families, in turn, express concerns about information overload, the pressure to respond across multiple channels, and the difficulty of supporting their children's schooling [34]. This concern is heightened in contexts of inequality, where digital literacy and technological resources are not guaranteed, as Díaz-Ronceros et al. [21] pointed out.

Students' voices tend to be marginal in literature. Their concerns often relate to the control platforms exert over their time and behaviour, and the lack of agency in decisions regarding the digital tools that structure their schooling [13, 58]. The absence

of participatory mechanisms reinforces what Van Dijck et al. [69] and Feldman and Czerniewicz [26] describe as a loss of educational sovereignty.

More broadly, one of the most consistent concerns is the opaque management of educational data. The inability to determine who accesses the data, for what purposes, and under which regulations, generates institutional vulnerability according to Raffaghelli [56] and Pangrazio & Cardozo-Gaibisso [50]. This tension is particularly visible in how public administrations frame platformisation, often presenting it as a neutral and technical response to organisational challenges rather than a political or pedagogical issue. Such framing aligns educational governance with corporate infrastructures and depoliticises decision-making, leaving schools to manage the ethical and practical implications of digital transformation. In this regard, platformisation seems to appear less as a pedagogical tool and more as a surveillance and commercial infrastructure that shapes educational practice.

### 4.4 What are the main alignments and misalignments among educational agents regarding the use of digital platforms in education?

Alignments are primarily found around the perception of platforms as tools that facilitate communication and management. Hsu and Chen [34], Peraza and Jarquín [53], and Briones et al. [8] note that teachers, families, and school leaders alike acknowledge that platforms enable more efficient student monitoring, smoother communication between actors, and more agile organisation of school tasks. This shared functional perspective aligns with what Poell et al. [54] term a logic of technological convenience, where platforms are introduced as practical solutions to daily operational challenges without necessarily altering deep institutional structures.

However, beyond these surface-level agreements, the studies reviewed reveal significant misalignments that highlight platformisation as a non-neutral process that asymmetrically redistributes educational power. One of the most consistent findings is the systematic exclusion of teachers, families, and students from decision-making processes regarding platform adoption [50, 58], Jacovkis et al., 2023). This exclusion challenges discourses of participatory innovation and supports critiques by Van Dijck et al. [69] and Feldman & Czerniewicz [26], who argue that platforms restructure institutional relations by shifting educational sovereignty toward opaque, commercial, and transnational logics.

Tensions also emerge between school leaders and teachers regarding the pedagogical use of platforms. While the former often adopt a managerial approach that promotes platforms as tools for control and assessment, many teachers resist their impact on professional autonomy and pedagogical practices [24]. These divergences reflect a clash between technocratic management models and pedagogical approaches that demand more contextualisation and educational deliberation, as highlighted by Ideland [35].

Further disagreements exist around the risks of datafication. While some actors—especially teachers and families—express concern about intensive data use and lack of transparency [50], other actors—such as school leaders or platform providers—tend to downplay these risks by prioritising organisational efficiency. This tension reproduces what Raffaghelli [56] calls a "structural informational asymmetry", in which those who generate data (teachers and students) lack control over its use and exploitation. This concern resonates with Van Dijck [68] and Raffaghelli [56], who argue that datafication—the

transformation of educational interactions into quantifiable data—is a central mechanism through which platforms exert power.

Finally, students remain the most absent agent in terms of agency and representation. Their perspectives are typically marginalised, often limited to analyses of consumption patterns or academic performance, without recognition of their capacity to influence the digital environments that mediate their schooling. This epistemic omission, as critiqued by Livingstone et al. [75], underscores a deep misalignment with discourses that promote student-centred learning and reveals a unilateral governance logic in which students are objects rather than subjects of platformisation.

In sum, the findings show that while alignments centre on shared operational functions, the misalignments reveal deeper tensions related to governance, participation, and the production of subjectivities in platform-mediated school contexts. As Van Dijck et al. [69] and Poell et al. [54] caution, platforms not only mediate education but also reconfigure the very rules of participation and educational agency, reinforcing new regimes of control and exclusion. These findings reaffirm the need to approach platformisation not solely through its functional effectiveness, but as a political-pedagogical phenomenon that demands critical analysis and democratic deliberation.

Ultimately, this review highlights the importance of conducting scoping studies that systematically map and organise existing knowledge in order to clarify, in this case, how educational platformisation is being problematised within academic research. While it is never possible to include all available publications across languages, countries, and disciplinary traditions, this type of review aims to offer a structured yet open-ended approach—one that seeks to expand rather than narrow the analytical lens. Rather than providing definitive conclusions, it seeks to open new lines of inquiry and identify conceptual, methodological, and political gaps in the literature. In this sense, the review does not represent a final word on the subject, but a critical contribution to ongoing debates about the role of digital platforms in the reconfiguration of contemporary schooling.

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**Data availability**
The dataset generated and analysed during the current study (coding database of all texts included in the scoping review) is openly available in Zenodo: Moreno-González, A., Calderón-Garrido, D., Rivera-Vargas, P., & Blanco-Navarro, M. (2024). *Dataset Scoping review digital platforms and data management in Education* [Data set]. Zenodo. https://doi.org/10.5281/zenodo.14230525.

## Declarations

**Ethics approval and consent to participate**
Not applicable. This study is based on a scoping review of published literature and did not involve human participants, animals, or primary data collection. In the preparation of this manuscript, the authors used the AI-based software Copilot, provided by the University of Barcelona, to assist in reducing the overall length of the article. The software was employed solely as a tool to improve conciseness and readability; all content, interpretations, and analyses presented in the manuscript were developed and verified by the authors. No substantive scientific or analytical decisions were made by the AI. Not applicable. This article does not involve human participants.

**Consent for publication**
Not applicable. This article does not include any individual person's data in any form (including individual details, images, or videos).

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