



Article

Who Teaches Digital Citizenship? Private Actors, Educational Resources and Individualising Discourses

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Abstract

Over the last few decades, private organisations involved in the development of educational resources for digital citizenship have proliferated: from Google to Disney, from MediaSmarts to Common Sense. There has been, however, little interrogation (and therefore, investigation) of the underlying discourses of digital citizenship education that these organisations seek to transmit. In this article, we analyse the discourses of digital citizenship education from teaching resources developed by multiple global actors, including Big Tech, philanthropies, international organisations and professional associations. The analysis draws on our previous analytical framework of digital citizenship education that distinguishes between safeguarding, equipping, empowering and resisting educational approaches. The study shows the dominance of equipping approaches that emphasise the role of individual behaviour in the development of safer and more democratic online spaces and have little discussion or criticality with the role of governments and Big Tech in the promotion of such spaces. This approach is partially explained by the key role played by Big Tech in the funding and/or design of these resources. The article concludes with a call for critical teachers and educational scholars to challenge these discourses and to take inspiration from the few resources found that embrace empowering and resisting approaches.

Keywords: digital citizenship education; privatisation; educational resources; non-profit organisations; Big Tech

1. Introduction

As challenges of living in a digital society have grown, the last few decades have witnessed a huge increase of educational resources being offered to teachers to promote digital citizenship education at schools. These resources, particularly those available open access, have been widely promoted by international organisations and educational authorities (Donoso 2019; ITU 2026; Nash et al. 2018) and various indicators suggest that they are being widely by used by teachers worldwide, especially in the context of poor teacher preparation in this ‘non-core’ curriculum area (see e.g., Choi et al. 2018; Vajen et al. 2023). These resources have often been funded and/or developed by private organisations, including Big Tech and non-profit organisations, with vested interests in the spread of particular discourses of digital citizenship education. There has been, however, little interrogation (and therefore, investigation) of the underlying discourses of digital

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citizenship education that these organisations seek to transmit through these resources. The few existing studies have found that, while often presented as benign skill-building materials, resources like Google's 'Be Internet Awesome' and Common Sense's Digital Citizenship Resources draw on ideas about citizenship, rights and responsibility in the digital world that are far from neutral and overemphasise the role of individuals in the construction of a participatory and ethical digital society (Mattison 2016; Seale and Schoenberger 2018). In this study, we analyse 408 resources adopted at a scale developed by 23 organisations, including non-profit organisations, governmental and intergovernmental organisations, industry and professional associations. In particular, the article investigates the discourses of digital citizenship education that these organisations promote.

The article is structured as follows. First, we locate debates about the rise of private actors in the development of digital citizenship education as part of a broader trend of privatisation of/in education that has become more intensified with the growth of digital demands. Then, we present the conceptual framework of digital citizenship education (Estellés and Doyle 2025b) that this study uses for the analysis of the educational resources, which distinguishes between safeguarding, equipping, empowering and resisting educational approaches. After describing the methodology and methods used, we present and discuss the findings of the study. Finally, the article concludes with a call for critical teachers and educational scholars to challenge these discourses and get inspiration from the few resources found that embrace empowering and resisting approaches.

2. Digital Citizenship Education and Privatisation

With the spread of digital technology use across society, schools and teachers have been increasingly expected to educate students for the so-called 'digital age' and, particularly, to face the challenges emerged, such as the spread of misinformation, polarisation, online harassment and abuse. As a result, the last two decades have witnessed a massive rise of educational policies, initiatives and research projects under labels, such as digital literacy, online safety education and digital citizenship education. While these proposals differ substantially in scope, nature and political orientation (Heath 2018; Third et al. 2019; Örtengren 2023), most research agrees that its enactment in schools has proved to be difficult with barriers ranging from overloaded school curricula and time constraints through to lack of teacher preparedness and clear school leadership (Ali et al. 2023; Webster 2026; Villar-Onrubia et al. 2022). The design and provision of educational resources have been promoted as a way to deal with these barriers, often encouraging the private sector to be involved in this provision (see e.g., Richardson and Milovidov 2019, 17). Indeed, the outsourcing of educational resources and programmes in 'non-core' curriculum areas in which teachers do not feel prepared has considerably increased over the last decade (see Hogan 2025). As scholars warn, however, this 'solution' can erode teacher autonomy (e.g., control over which curriculum aspects are prioritised, taught and evaluated), professionalisation (e.g., restricted scope for exercising professional judgements) and working conditions (e.g., intensified workloads, diminished professional status and reduced pay) (Williamson and Hogan 2020), as well as the production of educational resources non-critical with power structures (Apple 2012).

The outsourcing of curriculum resources for digital citizenship education as a potential solution to the complex challenges raised by digitalisation needs to be understood within a broader trend of privatisation of/in education (Ball and Youdell 2008) and the increasing influence of Big Tech and EdTech industry in the field (Williamson 2022; Ball et al. 2017). Particularly since the pandemic, there has been a sharp increase of private actors aiming to respond to digital demands at schools (Anderson 2022;

Williamson and Hogan 2020; Hogan 2025). As scholars have shown (Ball 2012; Hogan 2025, p. 201; Verger et al. 2016), the digital education industry, fuelled in large part by intermediaries such as non-governmental organisations and philanthropists, is highly dynamic, rapidly forging new markets to meet specific demands. This rise of privatisation has involved several areas, including school management and operations, interactions with parents and learning content (Pangrazio et al. 2023). In the space of digital citizenship and online safety, private actors have been particularly widespread in three areas: (1) the use of digital surveillance to dissuade and/or monitor ‘inappropriate’ behaviour from young people—see tools like Gaggly Safety Management for Microsoft Teams that have become increasingly normalised at schools (O’Daffer et al. 2025), (2) professional learning provision for schools, often through private edu-consultants selling strategies to prevent and manage cases of online abuse at schools (see Doyle et al. under review) and (3) the funding, design and/or provision of educational resources related to digital citizenship and online safety education. The Bordieuan distinction used by Apple (2012) between financial and symbolic capital in his research on textbook publishers is useful to understand the emergence of these new markets. While the first two areas (i.e., the selling of digital tools and professional development) are primarily focused on the short-term accumulation of financial capital, the third is primarily concerned—especially in the case of open access resources—with the accumulation of symbolic capital, in which immediate profit is less important than long-term accumulation. This symbolic capital not only refers to the prestige that private organisations might gain through the philanthropic funding/development of freely available resources for a ‘good cause’, but also to their ability to spread ideas favourable to their interests as legitimate and worthy of respect (Bourdieu 1984). The use of education policy by Big Tech as means to promote discourses favourable to their economic and political interests—often via ‘intermediary organisations’ (Chang 2020)—has been widely studied in the literature (see e.g., Selwyn 2015; Lempinen et al. 2024; Williamson 2016). In relation to online safety education, we have recently examined how Big Tech—together with/through non-profit organisations tightly connected to them—have been deeply involved in the spread of discourses of individual responsibility towards online risk through public campaigns and other education policies to avoid different forms of regulation (Estellés and Doyle 2025a).

While digital citizenship has been examined across a range of disciplines, this study focuses specifically on how the concept is represented within educational resources intended for teachers and schools. We view this as particularly important due to the rise in private organisations funding and/or developing educational resources aiming to keep young people safe and empower them to fully participate in the digital world: from Google to Disney, and from MediaSmarts to the 5RightsFoundation. Yet, the interrogation of which educational discourses are being spread through these resources has remained scarce. The few existing studies in the field have found that resources such as the popular Be Internet Awesome by Google and the Digital Citizenship resources by Common Sense Media tend to portray online harm as the result of user’s behaviours and promote acritical views of digital citizenship (Mattison 2016; Seale and Schoenberger 2018).

3. An Analytical Framework for Digital Citizenship Education

Over the last two decades, with the consolidation of the digital realm as the primary arena where power is contested and exercised (Castells 2011; Panarari 2022), digital education debates have increasingly turned their attention towards discussions about citizenship. This interest has sparked a rich body of scholarly work examining the meaning and constituent elements of what is now known as ‘digital citizenship education’ (see e.g., Choi 2016; Emejulu and McGregor 2019; Frau-Meigs et al. 2017). As an example, Choi argued that digital citizenship education should not only encompass the promotion

of ethical use of technology and awareness of digital responsibilities and rights, but also a “critique of the existing power structure and political activism” (Choi 2016, p. 584); more recently, Emejulu and McGregor have advocated for a radical notion of digital citizenship education that involves a commitment to “critically analyse the social, political and economic consequences of digital technologies in everyday life and collectively deliberate and take action to build alternative and emancipatory technologies and technological practices” (Emejulu and McGregor 2019, p. 140). Over time, the body of literature surrounding digital citizenship education has considerably increased and progressively widened its scope by drawing upon related educational concepts, such as media literacy and citizenship education (Cortesi et al. 2020).

The increase in the popularity of the term ‘digital citizenship education’, however, has not always implied a more politically informed debate about digital education and, therefore, has not necessarily fostered a more structural analysis of the forces shaping the digital landscape and its possibilities and limitations for civic participation and education. In fact, more often than not, digital citizenship education has been reduced to the promotion of ‘appropriate’, ‘safe’ and ‘responsible’ online conduct (Cortesi et al. 2020; Heath 2018). This narrow understanding of the term has permeated both education policy (see e.g., Webster 2024) and the literature (Heath 2018), which is highly problematic because this notion reduces young people’s citizenship to the individual realm and assumes that “good character will solve social ills” (Heath 2018, p. 5).

In our prior research (Estellés and Doyle 2025b), we introduced a framework (illustrated in Figure 1) that aimed to expand young people’s social and political participation by considering critical conceptions of digital citizenship and differing narratives of technology. The framework’s horizontal axis contrasts personally responsible citizenship with participatory and justice-oriented citizenship (see Krutka and Carpenter 2017; Westheimer and Kahne 2004), while the vertical axis maps narratives of technology along a spectrum from techno-optimism to techno-scepticism, as defined by Krutka et al. (2022). The juxtaposing of these two axes gives rise to four distinct educational approaches: safeguarding, equipping, empowering, and resisting. Each of these approaches relies on varying assumptions on what it means to be a good digital citizen, the value of digital tools, the nature of online risks and the aim of the digital education.

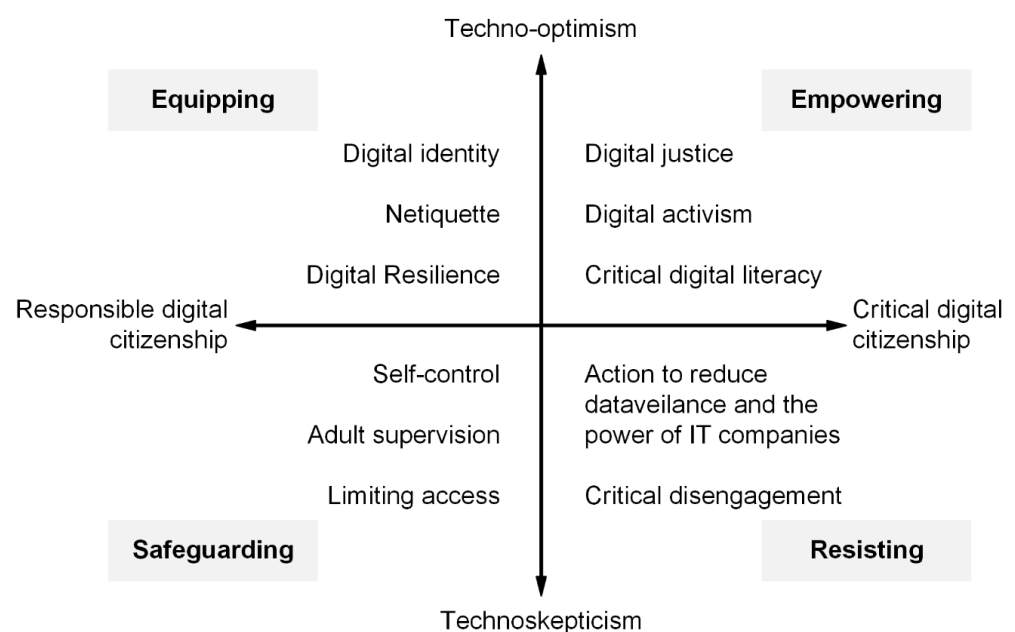


Figure 1. Educational approaches to the digital (Estellés and Doyle 2025b).

For the safeguarding approach, the ideal digital citizen is prudent and self-controlled, not only behaves ethically in the online world but also adopts cautionary attitudes and limits their exposure to digital technologies to protect themselves from risk. For this approach, the online world is full of risks, which are often related to the so-called ‘3-Cs’ risks: content, contact and conduct (Staksrud and Livingstone 2009). It advocates for the adoption of safeguarding mechanisms in educational institutions, such as content filtering, surveillance systems and restricted access, to shield young people from encountering harmful online content and interactions. Because of this, this educational approach is frequently referred to as the ‘control paradigm’ (Third et al. 2019). This approach has faced extensive criticism in academic literature for its deficit-oriented view of youth as inherently vulnerable and for relying on paternalistic measures to manage risk (Black et al. 2022; Harris and Johns 2021; Third et al. 2019).

For the equipping approach, the ideal digital citizen is an active user of technology who adheres to laws and ethical behaviour and contributes to the community (e.g., Ribble 2015; Ribble and Bailey 2007). This approach acknowledges the pervasiveness and potential advantages of digital technology, arguing that students should be prepared to engage with it responsibly rather than being isolated from it. Here, risk is redefined not as the presence of online dangers, but as the absence of access—either in technical or capability terms—that prevents individuals from achieving self-improvement and full societal inclusion. Consequently, the aim of digital education should be to prepare students to succeed in an increasingly digitised society, equipping them with the skills and ethical dispositions needed to make the most of the online world. This equipping model has frequently been championed by EdTech sectors and pro-technology advocates, exerting considerable influence on education policy debates (Selwyn 2015; Žmavc and Bezljaj 2026).

The empowering approach is grounded in a critical conception of digital citizenship that positions students as active agents capable of questioning and transforming the social, political and economic structures embedded within digital technologies. This approach recognises that digitally mediated societies simultaneously create new opportunities for civic and political participation while also producing new forms of surveillance, exclusion and inequality (Pangrazio and Sefton-Green 2021). Risk is therefore understood as the erosion of agency and democratic participation through unequal power relations embedded within digital systems. In educational terms, this approach draws heavily on critical pedagogies associated with scholars such as Freire, Giroux and Apple, seeking to develop learners’ capacity to critically analyse digital systems and participate in shaping more just digital futures.

Finally, for the resisting approach, the ideal citizen refuses to engage with digital technology based on strong critique of the fundamental architecture of current digital technologies that inherently commodify personal data and keep citizens under constant surveillance, undermining personal autonomy and democracy (see Han 2017; Zuboff 2020). This approach also rejects technological solutionism, arguing that many social and political problems cannot be resolved through digital technologies alone and instead require structural, political and societal change (Morozov 2013). In education, this approach encourages learners to critically examine the social, technical, and political-economic ecologies of digital technologies and to develop collective responses that resist unjust digital systems (see McQuillan 2022; Logan 2024).

We believe this framework provides a fruitful analytical tool to examine the educational approaches promoted by digital citizenship education resources and identify the main assumptions about citizenship and technology that underpin them. Our previous research, in alignment with prior studies (Heath 2018; Third et al. 2019), identified a clear dominance of safeguarding and equipping approaches in both academic

literature, education policy and teaching practice at schools (Doyle et al. under review; Estellés and Doyle 2025a, 2025b). As we argue in these works, one of the main problems associated with these two approaches is that they both place the burden of change squarely on individuals (either teachers, parents and/or students), rather than seeking to expand the responsibility to governments and the IT industry (Estellés and Doyle 2025a). Educational resources on digital citizenship education have the potential to engage students in this crucial public debate about responsibility in the digital world, but this possibility is highly conditioned—we assume—to who writes and funds these resources and under what agendas. As Stephen Ball clearly put it: “Discourses are about what can be said, and thought, but also about who can speak, when, where and with what authority” (Ball 1993, p. 14). Therefore, our study aims to explore the following questions:

- What are the main teaching resources for digital citizenship education?
- Which educational approaches to digital citizenship education do these resources promote?
- Who are the main actors developing and funding digital citizenship education resources?

4. Methodological Approach

4.1. Research Design

To identify the actors, funding and approaches to digital citizenship education resources, we employed a critical qualitative document analysis (Bowen 2009). The study was informed by discourse analytic traditions that seek to understand education resources not as neutral pedagogical tools, but as sites through which particular constructions of citizenship are produced and normalised (Ball 2012). In this sense, digital citizenship resources were approached as educational materials with political underpinnings—that communicate assumptions about responsibility, participation, risk and the role of Big Tech, governments, educators and young people within increasingly digitised societies.

Situated within the broader critical tradition of digital citizenship scholarship, in this research we set out to engage with questioning the increasing role of private actors, particularly, Big Tech, in shaping education responses to the digital (Williamson 2016). Therefore, particular attention was paid to organisational affiliations, funding relationships, and wider patterns of influences across the corpus of resources analysed in order to examine how dominant approaches to digital citizenship education may be connected to wider forms of platform governance and commercial power.

4.2. Resource Identification and Corpus Construction

To facilitate our qualitative analysis, we compiled a corpus of digital citizenship education resources. The corpus (see Supplementary Materials) was developed through an iterative web search, citation tracing, and searches across scholarly databases including Google Scholar, Scopus and ERIC. Resources were identified from a wide range of actors involved in the development of digital citizenship education materials, including IT companies, philanthropic organisations, non-governmental organisations, governmental agencies, international organisations and educational associations. In total, 408 resources meeting the inclusion criteria were included within the final corpus.

We focused specifically on educational resources designed for teachers, reflecting the important roles educators play in mediating and enacting digital citizenship education (Webster 2025). Further inclusion and exclusion criteria (Table 1) for the resources were developed after several trial searches. Particular attention was paid to resources that were freely accessible, widely circulated, and institutionally visible, as these materials are more likely to influence educational practice and public understandings of digital citizenship

education across diverse contexts. Overall inclusion criteria were selected so as to prioritise resources with significant visibility and in turn potential educational influence with the digital citizenship education discourse. The focus on freely accessible and widely circulating resources was particularly important given the increasing role such materials play in influencing classroom practice across diverse educational contexts.

Table 1. Criteria for inclusion and exclusion.

Inclusion Criteria	Exclusion Criteria
Available in English	Not available in English
Freely accessible online	Commercial resources requiring purchase
Adopted at scale	Resources with limited evidence of circulation or educational uptake
Cited in Google Scholar/Scopus/ERIC	Resources with no identifiable scholarly or educational referencing
Explicitly designed as educational resources for teachers	Resources designed exclusively for parents, caregivers, or young people

Inclusion decisions were informed by multiple complementary indicators rather than fixed quantitative thresholds. Resources were considered to have been adopted at scale where there was evidence of sustained educational use or endorsement by recognised educational organisations, government agencies, or internationally established initiatives. Educational reach and influence were further assessed through evidence of citation in scholarly literature and/or policy documents, inclusion within professional or curriculum resources and prominence within targeted web and database searches. For example, Netsafe New Zealand resources were included based on their national role in supporting schools and educators, while Common Sense Education resources were included due to their widespread use in schools and frequent citation within educational literature and policy reports. Final inclusion decisions were made iteratively by the authors to ensure consistency with the study's focus on freely accessible, teacher-facing digital citizenship education resources.

For each resource, detailed metadata and analytical notes were recorded within a spreadsheet. This included the type of resources, the organisation(s) that developed the resources, the type of organisation, resource topic, educational approach, publication year, country of origin and the intended age range. In addition, we in turn analysed any publicly available organisational affiliation and funding relationships to examine the extent to which dominant constructions of digital citizenship education may be connected to broader configurations of platform governance, philanthropy and commercial influence.

4.3. Data Analysis

All resources within the corpus were systematically analysed using the analytical framework presented previously (Figure 1). The analysis was conducted through an iterative close reading of the resources and the recording of analytical notes within the corpus. The framework was applied interpretatively through a series of guiding analytical questions including (1) how is digital technology portrayed within the resource? (2) What constitutes a 'good' digital citizen according to this resource? (3) What forms of behaviours, interaction or participation are represented as dangerous or risky? (4) What solutions are proposed for digital citizenship education? These questions facilitated a focus on the pedagogical framing of digital citizenship, constructions of responsibility and participation, representations of online risk and the roles attributed to young people, educators, governments and technology companies within digital spaces. The framework

was used interpretively rather than as a rigid classificatory tool. While resources were assigned a single educational approach, overlap between categories was common, with some resources reflecting multiple or hybrid discursive tendencies. Following an initial co-coding process to refine and calibrate the analytical framework, the remaining resources were coded primarily by the third author. Where resources reflected multiple approaches or coding decisions were less clear, these were discussed among the authors until consensus was reached. Each resource was ultimately assigned a single dominant approach to support the quantitative analysis. The analysis therefore focused on identifying dominant orientations and patterns across the corpus rather than treating categories as fixed or mutually exclusive. Representative quotations and examples were recorded to support the interpretation of each educational approach and to identify recurring discursive patterns across resources, and developers or resources.

Following the pedagogical analysis, we also examined organisational affiliations and funding relationships associated with the resources. Here, we focused on identifying connections between non-profit organisations, philanthropic actors, and Big Tech companies in order to explore how funding structures and institutional relations may shape dominant approaches to digital citizenship education. Comparisons across the corpus were used to identify recurring relationships between organisational type, funding structures, and in turn, the dominant educational approaches promoted within resources. Importantly, consistent with our critical qualitative orientation, our analysis did not seek objective or exhaustive classification but instead aimed to interpret how particular constructions of digital citizenship education were prioritised, disseminated and normalised through internationally visible educational resources.

4.4. Limitations

This study did not aim to provide an exhaustive systematic review of all digital citizenship education resources currently available. Instead, we adopted a qualitative scoping approach designed to identify widely visible resources across a range of organisational and national contexts. As a result, the corpus was necessarily selective and may not include less publicly visible resources. Additionally, the study was limited to English-language resources, meaning that locally situated resources developed in other linguistic and cultural contexts may not have been captured within the corpus. The prominence of particular organisations and resources within the corpus also reflects broader inequalities in organisations visibility, funding and capacity to circulate resources. In addition, while the analytical framework (Figure 1) provided a structured basis for both the quantitative and qualitative analysis, the process of categorising resources still involved researcher interpretation and judgment. Although some resources reflected multiple educational approaches simultaneously, a dominant approach was identified for each resource to support the quantitative analysis presented in the findings section. As a result, the categories should not be understood as fixed or mutually exclusive classifications, but rather as interpretive representations of the dominant educational tendencies identified across the corpus. Furthermore, the study did not explore how resources may be interpreted by teachers, or how they may be adapted and enacted in educational setting. This may be a useful avenue for future research. Finally, while our analysis identified a range of funding relationships, partnerships and organisational connections, these should not be interpreted as evidence of direct corporate control over individual educational resources.

5. Results

5.1. Overview of the Corpus

A total of 408 digital citizenship education resources were included within the final corpus. The resources were produced across a range of national and organisational contexts, with non-profit organisations representing the largest group of resource producers, followed by government initiatives, intergovernmental organisations, professional associations and industry. Collectively, these organisations included governmental agencies, educational organisations, philanthropic actors, online safety initiatives and technology-linked partnerships operating across multiple national contexts (see Supplementary Material for the full corpus). Given the inclusion criteria, it is unsurprising that the corpus was dominated by resources from Anglophone countries or regions (Figure 2).

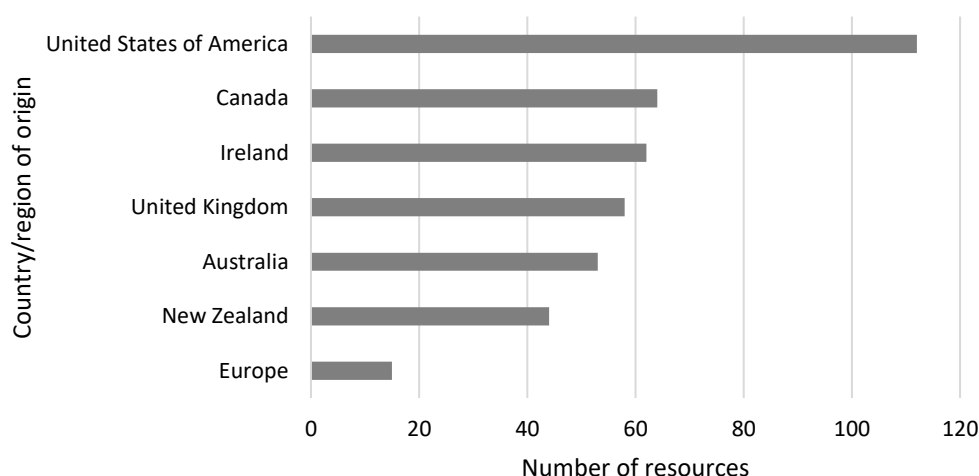


Figure 2. Country and regional origin of resources included in the corpus.

As shown in Figure 3, the publication of digital citizenship education resources increased substantially from the late 2010s onwards. While only a small number of resources were identified prior to 2015, resource development and dissemination accelerated rapidly between 2018 and 2021, reflecting growing institutional, educational, and policy attention directed towards young people's participation in digital environments and concerns surrounding online risk and safety.

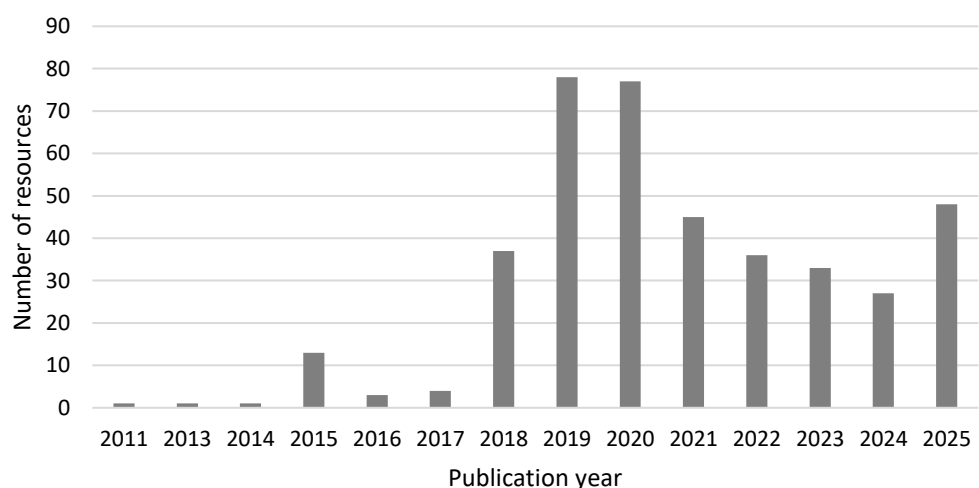


Figure 3. Publication year of digital citizenship education resources included in the corpus.

5.2. Dominant Approaches to Digital Citizenship Education

Our analysis of the resources revealed a strong emphasis on topics associated with online risk, safety, and individual digital behaviour. Privacy, wellbeing and health, cyberbullying, misinformation and online safety represented the most common thematic focuses across resources (Figure 4). In contrast, comparatively fewer resources engaged with broader structural or critical dimensions of digital life, including social justice, ethics, regulation and critical perspectives on technology. This distribution suggests that digital citizenship education resources continue to be shaped predominantly through protective and behavioural framings of digital participation.

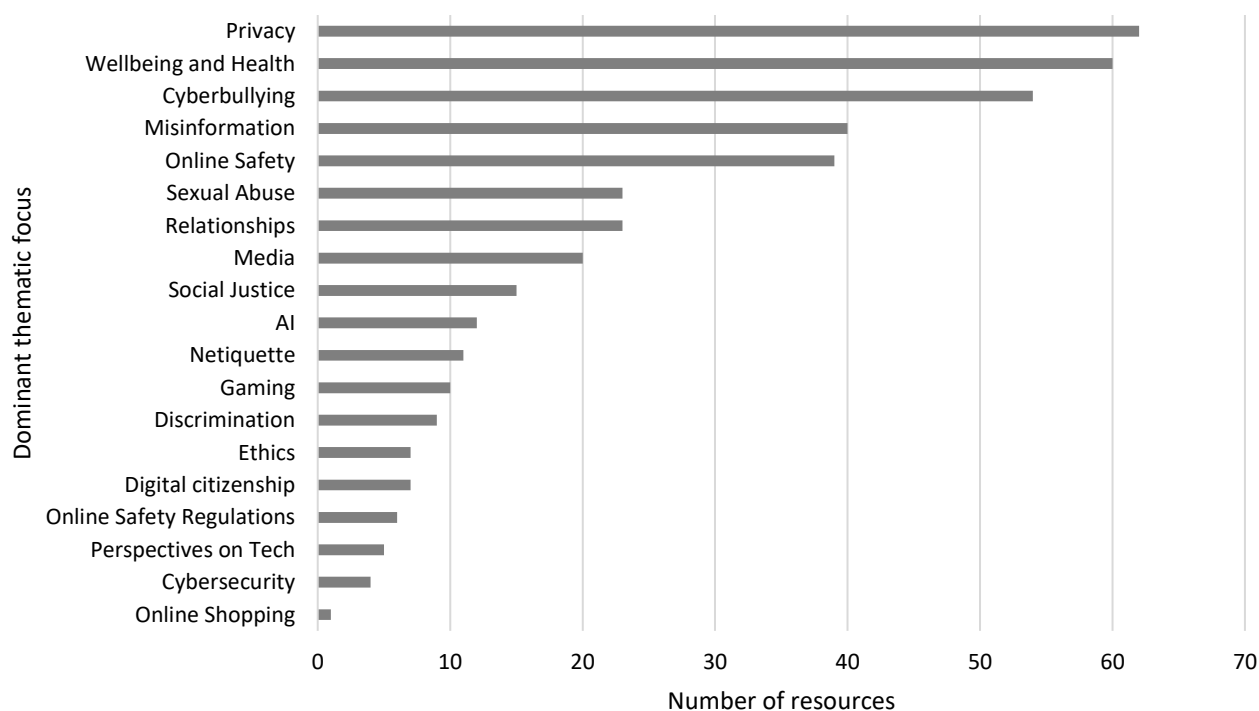


Figure 4. Topics of digital citizenship education resources included in the corpus.

This emphasis on individual digital behaviour was also reflected in the educational orientations identified across the corpus, with equipping approaches identified in over 80% of the resources analysed (Figure 5). The dominance of equipping approaches across the corpus was reflected in the strong emphasis placed on developing individual skills, competencies, and behaviours for navigating online environments safely and responsibly. Resources frequently framed digital citizenship as a matter of personal decision-making, self-regulation, and risk management. For example, one resource, ‘We, the Digital Citizens’ (Common Sense Education 2019) stated that “being a good digital citizen means being safe and responsible online”, while another emphasised that “good digital citizens learn to think before they click or buy” (Council of Europe 2023). Similarly, many resources focused on helping students manage their digital footprints, privacy and online reputation for example, in a resource focused on young people’s digital footprint, Netsafe (2025) noting that “learning to think before you post helps you keep that footprint positive”. Across the corpus, online harms such as misinformation, cyberbullying, privacy breaches and unsafe interactions were commonly positioned as challenges that could be mitigated through improved digital literacy, critical thinking, emotional regulation and responsible online behaviour. Consequently, the ‘good’ digital citizen was typically constructed as self-aware, resilient, informed and capable of safely managing their

participation within digital environments. However, the depth and criticality of equipping approaches varied considerably across the corpus, ranging from relatively narrow behavioural and safety-oriented guidance to more reflective forms of critical digital literacy.

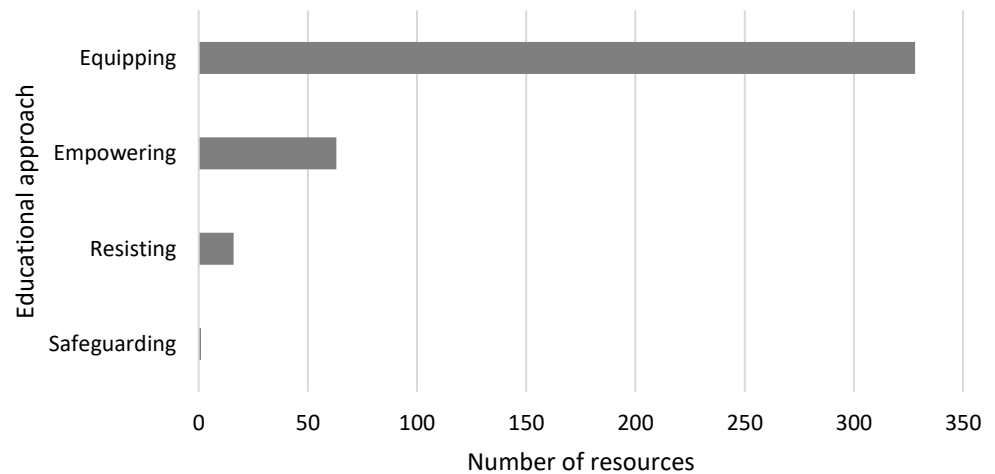


Figure 5. Educational approaches of digital citizenship education resources included in the corpus.

Beyond the dominance of equipping approaches, comparatively fewer (15%) resources reflected empowering orientations. Empowering resources were more likely to encourage critical engagement with digital participation, including questions of identity, relationships, inclusion, digital rights and social influence. For example, encouraging young people to critically examine how “website’s algorithms tend to feed us perspectives we already agree with” and to “escape the filter bubble” by challenging their existing views (Common Sense Education 2020). Another framed young people not simply as users to be protected, but as active participants capable of “using the internet in innovative and inspiring ways to enact change in their communities and celebrate difference” (Civics of Technology and Pleasants 2021). Collectively, these resources positioned digital citizenship less as a matter of risk avoidance and more as an opportunity for critical participation, civic engagement and social action.

Resisting (<4%) and safeguarding (<1%) approaches appeared only rarely across the corpus. Resisting approaches explicitly engaged with issues such as platform power, structural inequality, commercial influence or broader political dimensions of digital life. These resources moved beyond individual behaviour management and instead encouraged students to critically examine the social, political, and economic assumptions embedded within digital technologies themselves. For example, most resources by Civics of Technology (n.d.) challenge technologically deterministic understandings of progress by arguing that “all technological change is a trade-off” and that “every new technology benefits some and harms others”. These resources differed significantly from the dominant equipping orientation of the corpus by positioning digital technologies not as neutral tools requiring responsible use, but as socially and politically shaped systems that can reproduce unequal forms of power, influence, and control. The comparatively small number of safeguarding resources may be reflecting the focus of the corpus on digital citizenship education, which generally emphasises participation in digital environments, whereas safeguarding approaches are more commonly associated with restriction, prevention and protection from online engagement. In addition, the resources within the corpus were designed for teachers, so future research may consider how resources

designed for other stakeholders, such as parents, school leaders, wider community, etc., approach the digital.

Overall, the distribution of approaches suggests that digital citizenship education resources remain heavily oriented toward developing individual competencies and behaviours rather than fostering broader critical or political engagement with digital technologies. Less than 5% of the surveyed resources adopted techno-sceptical approaches to digital citizenship education.

5.3. Organisational Influence and Digital Citizenship Education Resources

Non-profit organisations constituted the largest group of digital citizenship education resource providers, followed by government initiatives, intergovernmental organisation, professional associations and industry (Figure 6). Collectively, these findings suggest that digital citizenship education resources are produced through a diverse but highly interconnected range of organisational actors spanning education, government, philanthropy, law enforcement, telecommunication and Big Tech.

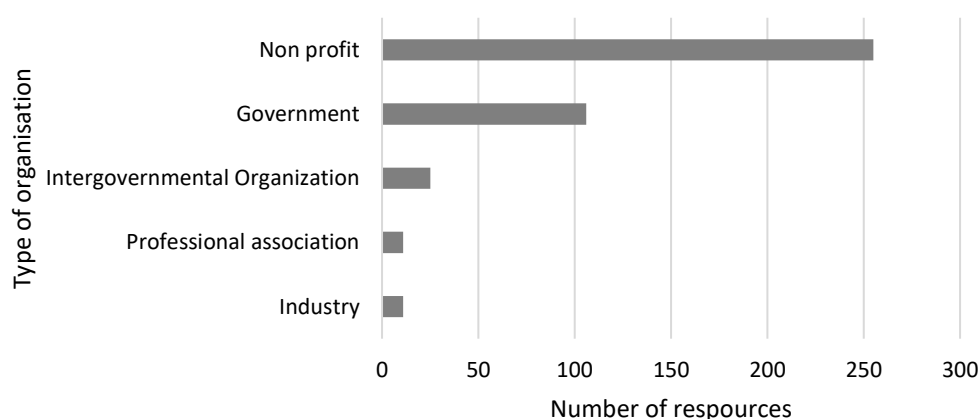


Figure 6. Number of resources developed by type of organisation.

While non-profit organisations represented the most common producers and developers of resources, many operated within broader governance networks involving Big Tech, philanthropic actors, governments and media organisations. Big Tech organisations frequently appeared as funding partners, collaborators, sponsors or co-designers of digital citizenship education initiatives. These relationships were often framed as collaborative efforts to promote online safety, digital literacy and responsible digital participation. For example, MediaSmarts explicitly noted that Google provided ‘financial support’ for resources developed ‘in collaboration between Google and MediaSmarts’ (MediaSmarts 2025), while also describing itself as receiving funding from ‘government and corporate partners’ (MediaSmarts 2026). It is important to note that the nature of these organisational relationships was not always explicit or straightforward. In many cases, partnerships were framed broadly through terms such as ‘industry’, ‘stakeholders’, or ‘supporters’, potentially obscuring the specific commercial and governance interests involved. For example, United Kingdom’s Safer Internet Centre, which formed Childnet, positions themselves as “a bridge between Government, industry, law enforcement and society” (Internet Watch Foundation 2025). Such framings often presented ‘industry’ as a broad and relatively undefined category, potentially obscuring the specific commercial, technological and platform interests involved within digital citizenship and online safety education initiatives.

Table 2 provides a more detailed overview of the major organisations represented within the corpus, including the organisational type, key funding and partnerships, and the distribution of educational approaches across resources. Consistent with the overwhelming majoring of equipping approaches identified previously (see Figure 5), the same pattern is observed here, while comparatively few organisations substantially engaged with resisting approaches centred on structural critiques of digital technologies. Notably, nine of the sixteen major organisations identified within Table 2 demonstrated direct partnerships, funding relationships, sponsorship arrangements or collaborative initiatives involving major technology companies such as Google, Meta, Microsoft, TikTok and YouTube.

Table 2. Networks and dominant education approaches across organisations.

Organisation*	No. of Resources	Type of Organisation	Country/Region of Origin	Key Funding/Partnership Relationships	Educational Approaches
Common Sense	80	Non-profit	United States	Donations; partnerships across major technology and media sectors	Equipping (58), Empowering (16), Resisting (6) and Safeguarding (0)
MediaSmarts	61	Non-profit	Canada	Google; Meta; TikTok; YouTube; TELUS; Bell	Equipping (41), Empowering (19), Resisting (1) and Safeguarding (0)
E safety Commissioner	46	Government initiative	Australia	Australian Government	Equipping (41), Empowering (5), Resisting (0) and Safeguarding (0)
Webwise	46	Government initiative	Ireland	Irish Department of Education; Connecting Europe Facility (EU); Professional Development Service for Teachers; An Garda Síochána	Equipping (41), Empowering (4), Resisting (1) and Safeguarding (0)
Netsafe	44	Non-profit	New Zealand	NZ Government agencies; Chorus; Microsoft; Meta; EPIT	Equipping (44), Empowering (0), Resisting (0) and Safeguarding (0)
Childnet (UK Safer Internet Centre)	33	Non-profit	United Kingdom	Disney; Google; Microsoft; Connecting Europe Facility (EU); Nominet; London Grid for Learning	Equipping (26), Empowering (6), Resisting (0) and Safeguarding (1)
Civics of Technology	12	Professional association	United States	Founder-supported; independent donations	Equipping (1), Empowering (3), Resisting (8) and Safeguarding (0)
Council of Europe	11	Intergovernmental organisation	Europe	Council of Europe; Google	Equipping (5), Empowering (5), Resisting (1) and Safeguarding (0)
National Centre for Missing and Exploited Children (NCMEC)	11	Non-profit	United States	Office of Juvenile Justice and Delinquency Prevention (OJJDP); grants; donations	Equipping (11), Empowering (0), Resisting (0) and Safeguarding (0)
Internet Matters	10	Non-profit	United Kingdom	Donations; Tesco Mobile	Equipping (10), Empowering (0), Resisting (0) and Safeguarding (0)
National Crime Agency UK	8	Government initiative	United Kingdom	UK Government; law enforcement partnerships	Equipping (8), Empowering (0), Resisting (0) and Safeguarding (0)
IKeepSafe	6	Non-profit	United States	Google; NICE; Michigan Department of Education; CETPA; Student Data Privacy Consortium; Stop.Think.Connect.	Equipping (6), Empowering (0), Resisting (0) and Safeguarding (0)
ThinkUKnow Australia	6	Industry	Australia	Australian Federal Police; Microsoft Australia; Commonwealth Bank of Australia; Australian Centre to Counter Child Exploitation; Datacom	Equipping (6), Empowering (0), Resisting (0) and Safeguarding (0)
UNESCO	5	Intergovernmental organisation	International/Ireland	Facebook; Rethink Ireland; Department of Education	Equipping (5), Empowering (0), Resisting (0) and Safeguarding (0)
UNICEF	5	Intergovernmental organisation	International/Ireland	Donations; intergovernmental partnerships	Equipping (2), Empowering (3), Resisting (0) and Safeguarding (0)
Webwise/NCCA	5	Government initiative	Ireland	Irish Department of Education; Connecting Europe Facility (EU); NCCA; Professional Development Service for Teachers	Equipping (5), Empowering (0), Resisting (0) and Safeguarding (0)

* Organisations with fewer than five analysed resources have been excluded from this table for readability. A comprehensive overview of all resources included within the corpus is provided in the Supplementary Material.

Organisations with extensive institutional and Big Tech partnerships, including Netsafe, the eSafety Commissioner, MediaSmarts, Childnet and IKeepSafe, primarily frame online harms through behavioural and education responses centred on safe online behaviour and self-regulation. For example, Australia's eSafety Commissioner encouraged students to develop 'making good choices online' through resources focused on 'respect online' and playing 'safe and fair online' (eSafety Commissioner 2026). Similarly, New Zealand's Netsafe encouraged students to 'own your space' online and develop strategies for 'responding safely' (Netsafe 2026). Even where issues such as misinformation, persuasive technologies, privacy, or data collection practices were acknowledged, solutions were typically framed through improving individual awareness and responsible online behaviour, rather than broader structural or regulatory interventions. Notably, many of the organisations with the greatest institutional reach and visibility within the corpus also maintained direct partnerships with Big Tech companies including Google, Meta, Microsoft and TikTok. Appearing frequently as not simply as external sponsors but as collaborators, funders and co-designers within broader digital citizenship and online safety initiatives. While resources occasionally encouraged students to critically reflect on data collection practices, persuasive design or misinformation, comparatively little attention was given to the structural power of digital platforms themselves, including questions of surveillance capitalism, algorithmic governance, commercial extraction or platform accountability.

Comparatively few organisations substantially engaged with developing resources that adopted *resisting* approaches. Such approaches were most visible among smaller and less institutional networked organisations such as Civics of Technology (2026). Civics of Technology described its AI resources as being "about how to think about AI, not just how to use the latest AI technology", emphasising the importance of "critically examining AI technologies and reflecting on how they change the ways we think, act, and relate to each other" (Civics of Technology 2021). Similarly, another activity argued that "all technological change is a trade-off", that "every new technology benefits some and harms others", and that "all technologies carry a bias or belief about the world that impacts people and their lives" (Civics of Technology n.d.). Collectively, these resources position digital citizenship not simply as the capacity to self-participate, but as the ability of critically interrogate the values, power relations and societal consequences embedded within technologies.

6. Discussion

In this study, we have analysed the most widespread teaching resources for digital citizenship available online with a focus on the educational approaches that they promote and the actors behind their development. In the 408 resources examined, equipping approaches focused on preparing students to safely navigate platforms and 'make the most' of the online world were overwhelmingly dominant. In turn, resources focused on preparing students to critically interrogate and/or challenge tech systems themselves were scarce. This dominance of equipping approaches reflects not only neoliberal logics, where responsibility for managing digital risk is shifted onto individual citizens, but also the interests of the broader governance and institutional relationships through which these resources are developed and circulated. While Big Tech is rarely the primary designer of these resources and, instead, this role is primarily taken by non-profit organisations (e.g., Common Sense, Media Smarts, Netsafe), Big Tech is often indirectly involved via funding and/or institutional relationships with these intermediary organisations. Importantly, these relationships are not necessarily reducible to direct corporate control over educational content but instead reflect more complex forms of governance influence and institutional alignment. In Bordieuan terms (Bourdieu 1984; Apple 2012), these efforts by

Big Tech do not seek immediate financial profit, but the gaining of symbolic capital able to guarantee long-term accumulation. This symbolic capital refers to both the prestige associated with the support of these resources and the channel that these resources provide for the spreading ideas favourable to their interests. After all, institutional and corporate power remain largely unchallenged in these resources and the spread of individualising narratives of digital responsibility has been shown to contribute to governance environments in which platform accountability and regulatory interventions become comparatively less visible (Estellés and Doyle 2025a).

Thus, the high involvement of Big Tech in the development of the most widespread teaching resources raises concerns about whose interests digital citizenship education ultimately serves and how democratic participation online is framed. The involvement of Big Tech in the development of widespread teaching resources, however, cannot be solely understood as the result of Big Tech seeking to profit (symbolically) from them. It is also the result of public policies fostering their involvement (e.g., Richardson and Milovidov 2019) and leaving a de facto curricular gap at schools that actively contributes to its outsourcing (Doyle et al. under review). While we recognise the crucial role of teachers in the enactment of digital citizenship education (Webster 2026), the use of external digital educational resources can erode teacher autonomy and professionalisation (Williamson and Hogan 2020). Ultimately, digital citizenship education is not ‘produced’ solely by teachers, schools and/or national curricula, there are also networked governance arrangements that actively contribute to the promotion of pedagogies and curricula that leave structural critiques of the online world in the periphery. It is crucial that these arrangements are examined and contested to better understand who teaches digital citizenship and for what purposes.

To conclude, while framed as neutral skill-building, most resources individualise responsibility and marginalise critical engagement with the question of power distribution in the online world. A shift towards empowering and resisting approaches is needed to foster genuinely democratic digital citizenship. Such a shift requires moving beyond preparing students to participate safely in digital environments toward supporting them to critically interrogate, and where appropriate, challenge the social, political and economic systems that shape digital life (Karsgaard 2024; Webster 2026). As our analysis shows, some professional organisations (e.g., Civics of Technology) are making available critical resources aimed at interrogating the social, political and economic implications of digital technologies, as well as the interests involved in their fundamental architectures. We suggest that such approaches provide important inspiration for critical educators and educational scholars seeking to move beyond narrowly behavioural or individualised understandings of digital citizenship.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/socsci15080565/s1>, Table S1: full corpus.

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Abbreviations

The following abbreviations are used in this manuscript:

AI	Artificial Intelligence
EdTech	Educational Technology
ERIC	Education Resources Information Centre
IT	Information Technology
ITU	International Telecommunication Union

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