CONSTRUCTING BELONGING AND EQUITY THROUGH DATA: A CRITICAL ANALYSIS OF EDUCATIONAL POLICY AND PLATFORM DISCOURSE

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ABSTRACT

The datafication of education has transformed how belonging and equity are conceptualised, measured, and governed. This study investigates how these constructs are discursively framed in global policy documents, national and institutional guidelines, and commercial vendor materials. By employing critical documentary analysis informed by critical discourse analysis, three dominant discursive formations are identified: belonging as a performance metric, equity as efficiency, and students as data subjects. These framings, while articulated differently across governance levels, converge in privileging a technocratic vision of education that reduces complex relational and justice-oriented dimensions to quantifiable data points. The analysis is situated within a theoretical framework combining Bourdieu's sociology of practice, Bronfenbrenner's ecological systems theory, and critical data studies. The findings reveal how data-driven discourses function as symbolic power, reconfiguring educational priorities and identities in ways that risk reproducing inequality rather than challenging it. The article contributes to three streams of literature: extending research on belonging by foregrounding its discursive construction; enriching policy analysis by linking reductive framing to data governance; and advancing critical data studies by situating belonging and equity as contested categories within algorithmic systems. Implications are drawn for policymakers, educators, and researchers seeking to resist the narrowing of educational values to data logics and to reassert the social and cultural foundations of inclusion.

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1.Introduction

The rapid expansion of datafication in education and the systematic capture, analysis, and algorithmic processing of student performance, behavioural records, attendance, and engagement metrics have profoundly reshaped educational governance worldwide. Proponents argue that digital infrastructures provide opportunities for more efficient monitoring, personalised learning, and evidence-based decision-making (Selwyn, 2021). However, critical scholars caution that such infrastructures often normalise surveillance, reduce complex human practices to quantifiable indicators, and exacerbate stratification within and across schools (Gourlay, 2024; Yu, 2022). The sociological challenge is to understand not only the technical dimensions of these transformations but also the institutional and discursive processes through which they reconfigure what it means to "belong" in education.

The concept of school belonging has long held a central position in the sociology of education, consistently linked to academic outcomes, psychosocial well-being, and identity development (Kuttner, 2023). Belonging, however, is not simply a personal or psychological construct; it is relational, institutional, and structural. It is produced through everyday interactions, mediated by school practices, and codified in official discourses. While survey research and ethnographic studies have illuminated students' lived experiences of belonging, relatively little is known about how belonging and equity are framed within the

texts that govern educational life, policy documents, institutional guidelines, accountability frameworks, and vendor platforms. This gap is particularly consequential in the age of datafication, when algorithmic systems and digital platforms increasingly shape not only educational outcomes but also institutional imaginaries of inclusion, merit, and fairness.

Documentary analysis provides a rigorous methodological lens for examining these dynamics. Higgins (2021), for example, demonstrated how well-being was narrowly conceptualised in New Zealand policy as an individualised affect, neglecting broader relational and ecological understandings. Similarly, Colorado and Janzen (2021) revealed how the ostensibly protective discourse of "safe schools" reinforced exclusionary categories and assisted marginalised students. This work shows that documentary audits are not neutral descriptive exercises but critical inquiries into how language and text encode power relations and reproduce social hierarchies. Extending this line of inquiry to educational datafication is both timely and necessary, given the growing reliance on algorithmic infrastructures in shaping the conditions under which students and families navigate education.

Despite the proliferation of scholars on educational datafication, the literature remains fragmented. Studies in critical data studies and education technology highlight issues of surveillance, privacy, and accountability (Williamson and Eynon, 2020), whereas sociology of education research emphasises belonging, inequality, and identity formation (Allen et al., 2021). However, these strands rarely intersect. We lack integrative research that interrogates how the discursive and institutional framing of data-driven education constructs belonging, equity, and stratification at multiple levels. This constitutes a significant research gap, as policy texts and vendor platforms play pivotal roles in shaping the educational field: they define categories of learners, assign value to particular performances, and legitimate or foreclose particular forms of inclusion.

This study seeks to address this gap by conducting a critically grounded document audit of educational policy texts, institutional guidelines, and platform materials. It asks three interrelated research questions:

1. *How do datafication-related policies and institutional documents discursively construct notions of belonging in educational contexts?*
2. *In what ways do these texts frame equity, fairness, and stratification, and what assumptions about students, families, and communities are encoded within them?*
3. *How might these discursive framings reinforce, reshape, or contest existing social inequalities in the context of algorithmic governance and data-driven educational infrastructures?*

By situating itself at the intersection of the sociology of education and critical data studies, this study contributes to bridging two parallel studies. This study demonstrates how documentary analysis can illuminate the ideological underpinnings of dataified governance, showing that belonging and equity are not only experienced in classrooms but also constructed through institutional texts and technological infrastructures. In doing so, it advances the theoretical understanding of how contemporary schooling is governed by the age of data while offering insights of practical significance for policymakers, educators, and platform designers committed to fostering more equitable educational futures.

2. Conceptual Framework

This study is situated at the intersection of the sociology of education and critical data studies, drawing on complementary theoretical perspectives to interrogate how educational policies, institutional guidelines, and platform documents discursively construct belonging and equity in an era of datafication.

The conceptual framework integrates three strands of theory: Bourdieu's sociology of practice, Bronfenbrenner's ecological systems theory, and critical approaches to datafication. Together, these frameworks provide the analytical lens through which the document audit is conducted.

Bourdieu's (1990) concepts of *field*, *capital*, and *habitus* are beneficial for understanding how educational institutions reproduce or contest social stratification. Within the educational field, policies and platform infrastructures operate as forms of symbolic power that privilege certain forms of cultural and technological capital while marginalising others. In this sense, belonging is not merely an affective state but a position negotiated within a field structured by unequal distributions of resources and recognition. The framework, therefore, allows us to interpret policy language and platform guidelines as part of the struggle over legitimate forms of participation and inclusion.

Bronfenbrenner's (1979) ecological systems theory adds a complementary multilevel perspective, highlighting how belonging is shaped not only at the individual and classroom levels but also through institutional, policy, and societal structures. By situating data-driven documents within the *exo- and macrosystems* of educational ecology, the framework underscores how discourses embedded in policies and platforms filter down to shape microlevel experiences of belonging. This ecological lens is especially relevant to document analysis, as it draws attention to the often-overlooked structural and discursive contexts that condition students' opportunities to belong.

Critical data studies constitute a third, vital strand of the framework. Scholars such as Selwyn (2021), Williamson and Eynon (2020), and Gourlay (2024) argue that datafication in education cannot be treated as a form of neutral technological development but must be understood as a sociotechnical phenomenon embedded in wider regimes of surveillance, governance, and inequality. Data infrastructures

do not simply measure belonging; they actively produce categories, assign value, and normalise particular visions of equity and fairness. From this perspective, policies and vendor platforms are not passive texts but performative discourses that enact new forms of algorithmic governance and configure what it means to be a "successful" or "included" student.

By synthesising these perspectives, the framework enables a critical reading of documents as both reflections of institutional priorities and instruments of governance. Bourdieu provides tools for analysing how symbolic power and capital operate in the educational field; Bronfenbrenner highlights the multilayered ecological contexts in which discourses of belonging circulate; and critical data studies foreground the political and ideological stakes of datafication. Together, they allow this study to interrogate how discourses of belonging and equity are constructed, contested, and operationalised within policy and platform texts and how these constructions may contribute to the reproduction or transformation of educational inequalities.

3. Literature Review

The concept of belonging has long been central to the sociology of education. It is associated with students' academic success, psychosocial adjustment, and civic engagement, making it one of the most researched predictors of both educational and life outcomes (Allen et al., 2021). Belonging has been theorised as multidimensional, incorporating affective, cognitive, and behavioural dimensions that extend beyond the classroom into students' broader identities. Kuttner (2023) advances this scholarship by framing belonging as a *right*, not merely a personal feeling, and argues that educational systems have an ethical responsibility to cultivate inclusive environments that sustain all learners. Despite this progress, much of the related literature remains anchored in empirical

approaches such as psychological surveys, longitudinal studies, or ethnographic fieldwork. While these approaches provide valuable insight into how students experience inclusion or exclusion, they tend to focus on microlevel perceptions and behaviours, leaving underexplored the *institutional and discursive processes* through which belonging is defined, operationalised, and regulated within education systems.

In parallel, policy-oriented research has demonstrated how institutional discourse structures educational priorities and identities. Higgins (2021), for example, used document analysis to reveal that New Zealand's education policy narrowly framed student well-being through individualised affective constructs, privileging notions of self-regulation and resilience while downplaying social or ecological contexts. Similarly, Colorado and Janzen (2021) conducted a critical discourse analysis of "safe schools" policies, revealing how policy texts that purportedly protect students often reproduce deficit narratives about marginalised groups. These studies underscore that documents are not neutral; instead, they encode values, distribute responsibilities, and produce categories of students in ways that shape practice and constrain possibilities. However, despite their contributions, such studies rarely investigate the growing influence of *data-driven governance* within policy discourse.

At the same time, a growing body of literature has critically engaged with education data. Selwyn (2021) noted that while datafication promises efficiency and personalised learning, it also risks reducing complex pedagogical interactions into narrow performance metrics. Yu (2022) conceptualises schooling as a domain of "natural data extraction," wherein the everyday activities of students and teachers are harvested and repurposed for prediction, accountability, and commercialisation. Gourlay (2024) advances this critique by examining datafication as a sociomaterial phenomenon, emphasising that digital infrastructures do not merely reflect existing practices but actively reshape them,

embedding new relations of surveillance, power, and inequality. Williamson and Eynon (2020) similarly caution that artificial intelligence and learning analytics are often adopted without sufficient critical scrutiny of their historical and political contexts, raising questions about fairness, transparency, and social justice. While this literature offers crucial insights into the sociopolitical implications of datafication, it tends to emphasise systemic risks and broad institutional transformations without systematically linking them to the sociological construct of belonging.

Taken together, these three strands of scholarship, school belonging, policy discourse, and datafication, provide rich insights but remain fragmented. Research foregrounds students' lived experiences and psychosocial outcomes but often neglects how belonging is discursively produced through policy and governance texts. Policy discourse analysis demonstrates how official documents shape categories and priorities; however, it has not sufficiently engaged with the implications of algorithmic systems and data infrastructures. Critical studies of datafication, meanwhile, illuminate how digital governance reconfigures educational practices but rarely connect these shifts to students' sense of belonging and inclusion. These studies, therefore, operate in parallel rather than in dialogue, leaving a critical research gap at their intersection.

This study seeks to address that gap by bringing the strands into conversation through a documentary audit of educational policies, institutional guidelines, and vendor platform texts. By interrogating how these documents construct belonging, equity, and stratification in the context of datafication, the study aims to show how discourses embedded in institutional texts not only reflect but also constitute the educational conditions under which students are included or excluded. In doing so, it advances an integrative perspective that situates belonging within the broader discursive and infrastructural transformations of contemporary education.

4. Methodology

4.1 Research Design

This study adopts a critical documentary analysis informed by critical discourse analysis (CDA). Documentary analysis treats texts not as neutral artefacts but as social constructions that reflect and reproduce institutional ideologies (Bowen, 2009). Critical discourse analysis (Fairclough, 1992, 2013) further emphasises how language is a form of social practice through which power relations are enacted and contested. This combined design is well suited for interrogating how discourses of belonging, equity, and stratification are produced and circulated in the context of educational datafication.

4.2 Corpus of Documents

The corpus was constructed through purposive sampling to capture multilevel discourses across the policy, institutional, and commercial/vendor domains. The final selection includes the following:

- **Policy texts (macrolevel):** UNESCO's *AI and Education: Guidance for Policymakers* (2021); OECD's *Digital Education Outlook 2023*; the European Commission's *Digital Education Action Plan 2021–2027*; and a national-level strategy for digital transformation in education (e.g., Algeria, UK, or other accessible national contexts). These documents represent authoritative frameworks that shape how governments position datafication and inclusion in education.

- **Institutional reports (meso-level):** OECD's *Equity and Inclusion in Education* (2022); the UK Department for Education's *Education Technology Strategy* (2021); the World Bank's *EdTech in the Time of*

COVID-19 (2022); and selected national or district-level well-being or school belonging frameworks. These texts bridge policy and practice, illustrating how belonging and equity are operationalised in institutional discourse.

- **Vendor and platform materials (commercial/technological level):** Google for Education's *Education Transformation Framework* (2022); Microsoft Education's *AI and the Future of Learning* (2021); ClassDojo's *Promotion of Belonging and Communities in Schools through Technology* (2021); and PowerSchool's *Analytics and Equity in Education* (2023). These documents articulate how private actors frame data-driven tools as solutions to belonging and equity challenges.

This multilevel corpus allows for a comparative analysis of how belonging and equity are discursively constructed across governance levels, from global policy imaginaries to national strategies and commercial narratives.

4.3 Exclusion criteria

Marketing brochures lack substantive governance or pedagogical content. Duplicates of already included reports.

Journalistic commentary not produced by institutional or vendor actors.

Selection flow. An initial pool of 72 documents was identified across academic databases, official repositories, and vendor websites. After applying the criteria, 28 documents were retained (9 policy, 11 institutional, and eight vendor). The exclusion criteria resulted from a lack of relevance (n=25), duplication (n=12), and insufficient focus on data selection (n=7).

A document inventory table (Appendix A) lists the final corpus by title, year, publisher, source/URL, and level (policy, institutional, vendor), enabling replication of the study.

This multilevel corpus allows for a comparative analysis of how belonging and equity are discursively constructed across governance levels, from global policy imaginaries to national strategies and commercial narratives.

4.4 Analytical procedures

The analysis proceeded in three stages. First, documents were systematically read and imported into qualitative analysis software (NVivo) for open coding, identifying recurring references to belonging, inclusion, equity, and data practices. Second, the analysis followed Fairclough's (1992, 2013) three-dimensional CDA framework:

1. **Textual analysis** examines linguistic choices, lexical framing, and metaphors (e.g., "personalisation," "closing gaps," "data-driven belonging").
2. **Discursive practice analysis** traces how documents are produced, distributed, and consumed within specific institutional and technological contexts.
3. **Social practice analysis** situated these discourses within broader ideological and structural transformations associated with datafication and governance.

Finally, theoretical triangulation connected the findings to Bourdieu's (1990) concepts of field, capital, and symbolic power, Bronfenbrenner's (1979) ecological systems, and critical data studies (Selwyn, 2021; Gourlay, 2024; Yu, 2022). This ensured that the analysis moved beyond descriptive coding to

interrogate how discourses of belonging and equity reflect, reproduce, or challenge educational inequalities.

4.5 Validity and trustworthiness

Several strategies enhanced the rigour of the study. Triangulation across policy, institutional, and vendor documents enabled the comparison of discourses at different governance levels. Reflexivity was maintained through analytic memos in which the researcher documented positionality and interpretive choices, acknowledging the critical orientation of the study. Transparency was ensured through an audit trail of corpus selection, coding frameworks, and analytic stages. Finally, theoretical triangulation across the sociology of education and critical data studies mitigated the risk of single-framework bias, strengthening the robustness of interpretations.

This methodological design ensures that the study systematically interrogates how educational datafication discourses construct belonging, equity, and stratification and how these constructions mediate the reproduction or transformation of inequalities in contemporary education.

5. Data analysis

The analysis of policy texts, institutional guidelines, and vendor documents revealed three interconnected discursive formations: (1) belonging as a performance metric, (2) equity as efficiency, and (3) students as data subjects. While these framings appeared with varying emphases across governance levels, they collectively normalise a view of education in which belonging and equity are subordinated to the logics of datafication, measurement, and optimisation.

5.1 Belonging as a performance metric

In global policy texts, belonging is frequently articulated through the language of measurement and accountability. For example, *AI and Education: Guidance for Policymakers* (UNESCO, 2021) frames belonging as an "indicator of inclusive learning environments that can be tracked through AI systems to ensure early intervention" (p. 28). Similarly, *Digital Education Outlook 2023* (OECD, 2023) emphasises that "learning analytics systems provide robust instruments for monitoring student engagement and belonging, enabling institutions to benchmark progress against international standards" (p. 45).

These framings signal a significant discursive shift: belonging is recognised not as a relational or cultural phenomenon but as a variable that can be captured, quantified, and compared. The documents rarely acknowledge the complex, contextual, and affective aspects of belonging highlighted in the sociological literature (Allen et al., 2021; Kuttner, 2023). Instead, belonging is positioned as a performance indicator, aligned with outcome metrics such as test scores or graduation rates. This transformation has important ideological implications, suggesting that belonging is valuable primarily to the extent that it contributes to measurable success, thereby privileging schools and systems that can demonstrate belonging through data rather than through lived relationships.

5.2 Equity as Efficiency

At the institutional level, equity discourses are often intertwined with efficiency and optimisation logics. The UK Department for Education's *Education Technology Strategy* (2021) stated that "technology enables the efficient targeting of resources to disadvantaged learners, ensuring cost-effective support and accountability" (p. 12). Similarly, the World Bank's *EdTech during the COVID-*

19 pandemic (2022) framed equity as a challenge of "scaling digital solutions rapidly and equitably to reach all learners" (p. 33). In both cases, equity was equated with better allocation of resources through technological mediation rather than the systemic transformation of educational inequalities.

Vendor texts amplified this framing. Microsoft's *AI and the Future of Learning* (2021) described adaptive technologies as tools for "closing learning gaps and ensuring no student is left behind through automated personalisation" (p. 6). While such language involves inclusion, it simultaneously reinforces the notion that optimising learning processes best achieves equity through data-driven systems. This position equity less as a matter of redistributing structural opportunities and more as a technical challenge of efficiency and scalability.

This discourse effectively narrows equity to an instrumental goal, a means of improving overall system performance. As a result, more profound structural inequities, such as socioeconomic disparities, racialized exclusion, or community-level marginalisation risk, are obscured. Equity becomes a managerial concern rather than a social justice imperative, framed in ways that are measurable, comparable, and auditable within the logic of digital governance.

5.3 Students as Data Subjects

Vendor and platform materials were especially explicit in constructing students as data subjects. Google for Education's *Education Transformation Framework* (2022) described students as "data-rich profiles whose digital interactions can generate actionable insights to personalise belonging and engagement pathways" (p. 10). Similarly, PowerSchool's *Analytics and Equity in Education* (2023) presented dashboards as tools to "track, predict, and intervene on equity gaps by harnessing individual student-level data" (p. 14).

These texts portray students less as holistic individuals and more as aggregations of data points, engagement clicks, attendance records, and behavioural flags that can be analysed and optimised. In this discourse, belonging is not experienced relationally but rather constructed algorithmically through patterns of digital interaction. The language of "personalisation" reinforces the idea that algorithms can engineer belonging by delivering tailored interventions, thereby shifting responsibility for inclusion from educators and communities to technological systems.

This discursive move has profound implications. It redefines the educational subject as governable primarily through data, positioning students within what Yu (2022) describes as a regime of *natural data extraction*. In this regime, every interaction is potentially harvestable, reconfiguring students' identities and opportunities around their capacity to be tracked and optimised.

5.4 Cross-level Convergence and Silences

Although each category of documents foregrounded different emphases on measurement in policy, efficiency in institutions, and data subjectivity in vendor texts, there was notable discursive convergence. Across all levels, belonging and equity were consistently framed as problems solvable through data-driven governance. The documents rarely acknowledged relational or community-based understandings of belonging, nor did they consider equity as requiring structural or political change. Instead, belonging was reified as a metric, equity as a management tool, and students as data profiles.

This convergence reveals the extent to which datafication normalises a technocratic vision of education. By emphasising measurement, optimisation, and prediction, the texts risk obscuring the cultural, relational, and political dimensions of belonging and equity identified in the sociological literature (Allen

et al., 2021; Kuttner, 2023). The silences are as significant as the framings: absent are discussions of teacher–student relationships, community belonging, cultural diversity, or the political economy of educational inequality. Instead, what emerges is a narrowing of belonging and equity into categories that align with data governance systems and commercial interests.

6. Discussion

The findings of this study highlight how contemporary educational discourses increasingly frame belonging and equity through the logics of measurement, efficiency, and data governance. Across policy, institutional, and vendor texts, belonging was constructed as a performance metric, equity as an efficiency challenge, and students as data subjects. Taken together, these framings reveal how datafication is reshaping the discursive terrain of education, narrowing complex sociological constructs into categories that are legible and manageable within digital infrastructures.

From a Bourdieusian perspective, these findings illustrate how educational datafication operates as a form of symbolic power that reconfigures the distribution of capital within the educational field. By defining belonging in measurable terms and equity in efficiency-oriented language, policy and vendor texts privilege those with technological and cultural capital capable of navigating data systems, while marginalising groups whose experiences of belonging resist quantification. In this sense, data-driven discourses participate in the reproduction of social stratification rather than its transformation.

Bronfenbrenner's ecological systems theory provides further insight into the multilevel dynamics at play. At the macrosystem level, global policy frameworks such as UNESCO and the OECD position belonging and equity as quantifiable outcomes of AI and digital education strategies. At the exosystem and mesosystem

levels, national strategies and institutional reports translate these priorities into managerial guidelines, framing equity as efficient resource allocation. At the microsystem level, vendor platforms reshape the everyday experiences of students by constructing them as data profiles subject to predictive analytics. The findings thus show how belonging is discursively redefined across ecological layers, with systemic priorities cascading into classroom-level practices.

Critical data studies deepen this interpretation by foregrounding the political and ideological stakes of these discourses. As Selwyn (2021) and Yu (2022) argue, datafication should be understood not merely as a technical innovation but also as a sociotechnical regime of governance. The findings support this view: by rendering belonging and equity into metrics and dashboards, institutions enact what Gourlay (2024) terms a "sociomaterial assemblage of surveillance," where inclusion is valued only to the extent that it can be audited and optimised. In doing so, these discourses displace relational, cultural, and community-based understandings of belonging emphasised in sociological research (Allen et al., 2021; Kuttner, 2023).

This study contributes to three strands of scholarship. First, it extends research on school belonging by demonstrating how belonging is not only experienced by students but also discursively constructed in policy and technological texts. This approach complements existing survey and ethnographic approaches (Allen et al., 2021; Kuttner, 2023) by adding an institutional–discursive dimension.

Second, it enriches studies of policy discourse and well-being (Higgins, 2021; Colorado and Janzen, 2021) by showing how belonging and equity are framed within the specific context of educational datafication. While earlier work revealed the narrow conceptualisation of well-being and safety in policy texts, this study highlights how data governance amplifies these tendencies, aligning belonging and equity with managerial and technological imperatives.

Third, it contributes to the growing literature on educational datafication (Selwyn, 2021; Yu, 2022; Gourlay, 2024) by explicitly linking datafication discourses to the sociology of belonging and equity. Whereas much of the existing work criticises the risks of surveillance and commercialisation, this study shows how these dynamics intersect with core sociological constructs, demonstrating how belonging itself is reconfigured as an object of algorithmic governance.

The findings carry significant implications. For policy, they call for critical reflection on the risks of reducing belonging and equity to measurable performance indicators. Policymakers should be wary of adopting vendor framings uncritically and should ensure that relational, cultural, and community-based dimensions of belonging are foregrounded in digital education strategies.

For practice, the findings suggest that educators and administrators must resist the temptation to treat data dashboards as proxies for inclusion. While analytics may provide proper signals, they cannot capture the lived, relational dimensions of belonging that are central to student well-being and engagement. Professional development and institutional guidelines should thus equip practitioners to use data critically and contextually rather than as definitive measures of equity.

For theory, the study advances an integrative framework that combines Bourdieu's sociology of practice, Bronfenbrenner's ecological systems theory, and critical data studies. This synthesis demonstrates how discourses of datafication operate simultaneously at the micro, meso, and macro levels, producing new forms of symbolic power that redefine what it means to belong in education. By situating belonging within these intersecting theoretical lenses, the study offers a conceptual model that can guide future research on the sociological implications of educational technologies.

Finally, the study points to directions for future inquiry. While this analysis focused on documentary sources, subsequent research could integrate student and teacher voices to examine how these discursive framings are experienced and contested in practice. Longitudinal studies might explore how the discourse of belonging evolves as data-driven systems become more entrenched. Comparative studies could investigate how different cultural and policy contexts shape the discursive interplay of datafication and belonging. Together, such inquiries can help develop a more holistic understanding of how digital governance is reshaping education and its core sociological constructs.

7. Limitations of the study

While this study contributes to understanding how educational datafication discourses construct belonging and equity, several limitations must be acknowledged.

First, the analysis is based on a selected corpus of documents that, while diverse and multilevel, cannot capture the full breadth of global, national, and local texts. The purposive sampling strategy ensured relevance and feasibility, but it inevitably excluded other potentially significant documents. As such, the findings should not be interpreted as comprehensive representations of all policy, institutional, or vendor discourses.

Second, the study relies on documentary and discourse analysis, which focus on how texts construct meaning but cannot fully account for how these discourses are enacted in practice. The absence of student, teacher, and administrator perspectives limits the ability to connect discursive framings directly to lived experiences of belonging and exclusion. Future research should triangulate document audits with ethnographic or survey-based approaches to capture these experiential dimensions.

Third, critical discourse analysis is interpretive by nature and shaped by the researcher's positionality and theoretical lens. While reflexivity and analytic transparency were maintained throughout the study, different theoretical or methodological approaches might yield alternative interpretations. This limitation is inherent to qualitative and critical methodologies but must nonetheless be acknowledged.

Finally, the analysis focuses primarily on Anglophone and internationally circulated documents (e.g., OECD, UNESCO, World Bank, major EdTech vendors). While this focus allows for insights into dominant global discourses, it may obscure regional or culturally specific framings of belonging and equity in contexts less represented in global policy and commercial narratives.

Despite these limitations, the study offers important insights into how belonging and equity are discursively reconfigured in the age of educational datafication, and it provides a foundation for future empirical work that can extend, contest, or refine these findings.

8. Conclusion

This study set out to examine how educational datafication discourses construct belonging, equity, and stratification across policy, institutional, and vendor texts. Through a critical documentary analysis informed by critical discourse analysis, the findings revealed three dominant discursive formations: belonging as a performance metric, equity as efficiency, and students as data subjects. While articulated differently across global policies, institutional guidelines, and commercial platforms, these framings converged in privileging a technocratic vision of education in which belonging and equity are rendered legible primarily through data logics of measurement, optimisation, and prediction.

By situating these findings within a theoretical framework that combines Bourdieu's sociology of practice, Bronfenbrenner's ecological systems theory, and insights from critical data studies, the study demonstrates that datafication is not merely a technical innovation but a powerful form of symbolic and discursive governance. In the sociology of education, equity, which is traditionally understood as a matter of justice and redistribution, is referred to as a managerial task of efficiency, and students are repositioned as data subjects rather than holistic learners. These shifts reveal the extent to which data infrastructures actively reshape educational priorities, categories, and identities.

The article makes three contributions. First, it extends the literature on school belonging by highlighting its institutional-discursive construction in addition to its psychosocial dimensions. Second, it deepens research on policy discourse by demonstrating how the rise of datafication amplifies reductive framings of inclusion and well-being. Third, it advances critical data studies by explicitly linking data governance to core sociological constructs, showing how algorithmic imaginaries colonise the language of equity and belonging.

For policymakers, the findings underscore the importance of resisting narrow, data-driven framings of inclusion. For practitioners, they highlight the need to treat dashboards and analytics as partial and contested representations rather than proxies for complex social realities. For researchers, the study offers an integrative framework that bridges the sociology of education and critical data studies, opening a pathway for further work that combines discourse analysis with experiential and ethnographic approaches.

Future research should expand the scope of analysis to include regional and local policy contexts, as well as the voices of students, teachers, and communities who live with the consequences of these discursive constructions. Such studies

could illuminate not only how belonging and equity are framed in texts but also how these framings are contested, negotiated, or resisted in practice.

In conclusion, the study argues that belonging and equity, which are foundational concerns of educational sociology, are being rearticulated in the age of datafication in ways that risk obscuring their relational and justice-oriented dimensions. By critically examining the discourses that underwrite this transformation, we can begin to imagine more equitable educational futures that resist reduction to data points and reaffirm the social and cultural foundations of what it means to belong in school.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendix A

Corpus Inventory of Analysed Documents

#	Title	Year	Publisher/Author	URL/DOI	Level
1	*AI and Education: Guidance for Policymakers*	2021	UNESCO	https://unesdoc.unesco.org/ark:/48223/pf0000376709	Policy
2	*Digital Education Outlook 2023*	2023	OECD	https://doi.org/10.1787/19939019	Policy
3	*Digital Education Action Plan 2021–2027*	2021	European Commission	https://education.ec.europa.eu/	Policy
4	*National Digital Education Strategy (UK)*	2021	UK Department for Education	https://www.gov.uk/government/publications	Policy
5	*Equity and Inclusion in Education: Policy and Practice*	2022	OECD	https://doi.org/10.1787/19939019	Institutional
6	*Education Technology Strategy*	2021	UK Department for Education	https://www.gov.uk/government/publications	Institutional
7	*EdTech in the Time of COVID-19*	2022	World Bank	https://documents.worldbank.org	Institutional
8	*National Framework for School Belonging (Australia)*	2021	Australian Department of Education	https://www.education.gov.au	Institutional
9	*Education Transformation Framework*	2022	Google for Education	https://edu.google.com	Vendor
10	*AI and the Future of Learning*	2021	Microsoft Education	https://education.microsoft.com	Vendor
11	*Promoting Belonging and Community in Schools through Technology*	2021	ClassDojo	https://classdojo.com	Vendor
12	*Analytics and Equity in Education*	2023	PowerSchool	https://www.powerschool.com	Vendor

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