

Intentional Inclusion: Investigating Equitable Education and Intersectional EdTech

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Abstract

This study investigates how schools can become more inclusive through an ethical participatory Action Research intervention with school leaders, using educational technology (EdTech) within an intersectional, data-led approach. It draws on the theoretical foundations of lived experience, intersectionality, and social capital.

Capturing lived experience at scale in schools has been labour-intensive, inconsistently designed, and ethically problematic—often lacking psychological safety for those with protected characteristics under the Equality Act (2010). Current datafication logics tend to measure inclusion without fostering it, reducing complex identities to narrow categories. Given that most senior leaders hold privileged lived experiences that differ from those of their students and staff, schools risk reproducing exclusionary practices and relying on deficit-focused metrics rather than generating intersectional insights.

This gap in understanding is evident in persistent challenges around attendance, staff recruitment and retention, and school climate. The research examines how DEI-focused EdTech might disrupt entrenched inequalities and embed organisational inclusion at scale.

The study introduces Kaleidoscopic Data, a third-level data framework that humanises educational data by combining quantitative and qualitative insights to reveal dynamic, intersectional experiences. Positioned as 'data for inclusion,' it challenges conventional metrics by foregrounding psychological safety, ethical participation, and the surfacing of hidden voices. Supported by EdTech, Kaleidoscopic Data enables leaders to identify cultural gaps, build social capital (bonding, bridging, linking), and embed inclusion in sustainable and systemic ways.

By critically engaging with data ethics, participatory design, and leadership practice, this thesis contributes a new conceptual and methodological framework for intentional inclusion in education.

Keywords: Diversity and Inclusion (D&I), EDI, Data, AI, EdTech, Social Capital, Intersectionality, School Leadership, Ethical Participatory Design, Belonging, Well-being, Kaleidoscopic Data, Data for Inclusion, Education

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Introduction

Embracing an Autoethnographic Lens: Bridging Personal Experience and Research

Personal experiences and professional fieldwork have illuminated significant gaps in both academic research and policy frameworks, underlining the urgency for this study. For many “disadvantaged” children, where home may not offer a sense of comfort or belonging, school becomes a sanctuary—a space of stability, structure, and acceptance. For me, school was not just a refuge; it was a home away from home. This refuge was nurtured by relationships, authentic connections, and learner-centred approaches. School was not only a place where I found belonging, but also where my voice was heard, and where opportunities shaped the privileges I enjoy today.

The importance of place and belonging in schools is widely recognised as pivotal in fostering positive educational outcomes (Riley, Coates, & Allen, 2020). My research is grounded in this deeply personal connection to education, informed by lived experiences of witnessing and navigating hidden forms of marginalisation. These experiences span my roles as a student, teacher, and professional in educational technology (EdTech), where I have explored how technology can support large-scale, intentional inclusion. This contribution seeks to address the pressing need for a deeper understanding of intersectionality in educational spaces, shedding light on systemic gaps that often render these experiences invisible through the use of EdTech. By positioning my research at the intersection of personal lived experience and professional inquiry, I aim to contribute to creating more inclusive and equitable educational environments—ones that embrace, connect, and celebrate the diverse identities and narratives of all learners.

As a doctoral researcher, I approach this study through an autoethnographic lens—a methodology described by Given (2008) as positioning “the self” (Cohen, 2018), the researcher as the ultimate insider. This approach is especially fitting for a study focused on lived experience, as autoethnography integrates ethnographic research with personal narrative, connecting the autobiographical to broader political, cultural, and social contexts. My life and professional journey are deliberately embedded in this study, allowing for a critical examination of my connection to participants, the education sector, and broader sociological structures. By framing my work within this methodology, I engage in reflective

practice, merging personal experience, interactive interviewing, and deep introspection into the research process.

Given (2008) writes: *"The turn to autoethnography in qualitative research is connected to a shift from viewing our observations of others as nonproblematic to a concern about power, praxis, and the writing process."* (p. 49).

This perspective underscores how my personal and professional experiences are not only relevant but integral to the research. The autoethnographic approach recognises that my values, beliefs, and lived experiences shape my engagement with the research while also demanding an ethical responsibility to incorporate self-awareness. By critically reflecting on my lived experiences, ethical considerations, and positionality, I situate my narrative within broader societal and systemic patterns. This lens affirms lived experience as a legitimate source of knowledge, enabling an interrogation of hidden marginalisation and a commitment to transformative inclusion in educational spaces.

From Margins to Mission: Harnessing Education and EdTech for Inclusion

Inclusion in education is intricately tied to systemic structures that often marginalise hidden voices, leaving our most underserved students without adequate support. Throughout my professional journey, I have consistently observed the reliance on external consultants and guest speakers to address equity, diversity, and inclusion (EDI) challenges in schools. While these methods are insightful, they often lack sustainable, innovative mechanisms for capturing, measuring, and fostering a sense of belonging within school communities. This observation motivated my research, driven by a vision of creating schools as inclusive spaces where all voices are valued—a vision born from my own experiences of educational refuge.

My professional career has been closely intertwined with digital technologies, particularly in curriculum design and the application of educational technology (EdTech) for systemic change. Across roles as a Head of Department, examiner, content creator for online learning platforms, and school improvement partner, I have witnessed the potential of EdTech to enhance inclusion. While working with the educational charity Achievement for All (AfA)—a network of former school leaders committed to improving outcomes for children with Special Educational Needs and Disabilities (SEND)—I observed that continuing professional

development (CPD) aimed at closing gaps for underserved and 'disadvantaged' learners was predominantly delivered offline through workshops, webinars, and consultant-led sessions. Although these valuable approaches provided valuable professional learning, they did not fully leverage the scalability, accessibility, and data-rich opportunities of digital platforms. More importantly, they rarely incorporated mechanisms to capture the lived experiences of educators and students, leaving significant gaps in equity, diversity, and inclusion (EDI) practice. This misalignment between CPD delivery methods and schools' systemic needs became a central driver of my initial research.

Through my work, I have facilitated virtual dialogues with educators, thought leaders, and academics to better understand the practical realities of inclusion within schools. These efforts led to the creation of a collaborative intelligence and practitioner network— the 'Circle'— experts all dedicated to advancing inclusion in education. These dialogues revealed that existing EDI efforts too often focus on singular demographic identities (gender and/or ethnicity) and neglect the complexity of intersectionality and the broader lived experiences within the educational system.

Recognising the gap between EDI theory and practice, I aimed to create spaces where underrepresented voices could be amplified. My first grass-roots initiative, the GEC (Global Equality Collective), established this 'Circle' of experts to address the underrepresentation of *intersectional* identities in educational leadership, particularly in EdTech. Digital platforms proved invaluable in connecting diverse expertise and addressing issues of underrepresentation globally. This experience led me to question whether the gaps between academic theory and lived professional practice could be bridged with actionable solutions grounded in both systemic understanding and real-world application.

The Context: Intersectional Identities and Insights in Education

Intersectionality, a term coined by Kimberlé Crenshaw in 1989, provides a framework for understanding how various forms of oppression and privilege intersect to affect individuals differently based on their multiple social identities. Crenshaw's work, originally focused on the intersection of race and gender, has expanded to include a range of identity categories such as class, disability, and sexual orientation (Crenshaw, 1991). In educational contexts, intersectionality allows us to understand that students and staff are not defined by a single

identity, but by the interconnectedness of multiple social categories that impact their experiences and access to opportunities (Collins, 2000).

At its core, intersectionality compels us to examine how social categories such as race, gender, ability, and class do not function in isolation, conversely they are deeply interconnected (Crenshaw, 1989). The concept encapsulates the ways in which systems of power and oppression—such as racism, sexism, ableism, and classism—overlap, shaping distinct experiences of disadvantage. The University of Oxford (n.d.) defines diversity as “recognising, valuing and taking account of people’s different backgrounds, knowledge, skills, and experiences” (*What is EDI and why does it matter? 2025*). This perspective is essential for understanding the varied experiences of students and staff in educational settings. Within these environments, intersectionality reveals how individuals with multiple marginalised identities encounter compounded barriers. For instance, Black disabled students may face both racism and ableism, often in ways that remain unaddressed within existing diversity and inclusion frameworks (Hancock, 2021). Likewise, the intersection of gender and class influences educational outcomes, particularly for working-class women from racial or ethnic minority backgrounds (Andersen & Hill Collins, 2018).

Today educational leaders must recognise the presence and significance of the intersectionality matrix in creating inclusive environments for both students and staff. Traditional models of diversity and inclusion often fail to address how the interconnectedness, the overlapping identities, shape individual experiences in profound ways. For instance, female teachers from minority ethnic groups may manifest and face distinct challenges that cannot be understood through a singular focus on gender or race alone (Morley, 2003).

Incorporating intersectionality into leadership practices requires moving beyond surface-level diversity initiatives towards policies that recognise and address the multifaceted nature of identity. This involves ensuring that school leaders—including Senior Leadership Teams (SLT), executive boards, governance and leadership, school business managers, and middle leaders (pastoral and curriculum subjects) in both UK and international contexts—have access to professional development and leadership training opportunities that are explicitly designed with intersectionality in mind. This approach can help identify and reduce the barriers faced by women of colour, disabled staff, and other

underrepresented groups in educational institutions (Ahmed, 2012). Furthermore, an intersectional lens allows for the identification of systemic inequities that may otherwise remain invisible. For example, school leaders can use intersectionality to address disparities in disciplinary practices. Research has shown that Black students, particularly those with disabilities, are disproportionately affected by school exclusion policies, a phenomenon that is not always recognised without considering the intersection of race and disability (Ferguson, 2001). By considering intersectionality, leaders can develop more comprehensive strategies for reducing exclusionary practices and creating a more supportive school environment for all students.

One of the central strengths of intersectionality is that it avoids essentialism, recognising that people's identities are fluid and context-dependent. As McCall (2005) argues, intersectionality emphasises a multi-dimensional approach to social identities, helping to capture the complex layers of exclusion that individuals experience. This fluid framework is particularly relevant in educational settings, where students' diverse identities shape their access to resources, relationships, and opportunities for success. This makes it essential to consider not only which identities are recognised in schools, but also how these identities are represented, measured, and acted upon through data practices. In an era of increasingly datafied education, there is a risk that reductionist metrics obscure these lived complexities, translating nuanced experiences into narrow categories or compliance-driven targets. Framing this within the principles of data justice highlights the need for equitable, transparent, and participatory approaches to educational data, ensuring that students and staff are not only seen but also heard in how their experiences are interpreted. My research therefore builds on intersectionality by exploring how it can be intentionally embedded into educational data collection, leadership practices, and inclusion frameworks, offering a counter to reductive datafication and supporting more relational, ethical approaches to inclusion.

Specifically, I aim to investigate how data for inclusion developed to capture the nuanced and intersecting identities of students and staff—can provide deeper insights for school leaders seeking to drive intentional inclusion. Adopting intersectionality will also enable leaders to engage in more inclusive recruitment and retention practices. It encourages the diversification of leadership teams and teaching staff by considering the multiple identities of potential candidates. This not only strengthens the workforce but also ensures that the

lived experiences of marginalised groups are represented in decision-making processes. By adopting an intersectional perspective, educational leaders can develop policies and practices that address the nuanced needs of their students and staff, ensuring that those with intersecting identities are not overlooked in broader inclusion strategies.

Throughout this study, I will use the terms diversity, belonging, well-being, EDI, inclusion, and equity interchangeably, as appropriate to the context, while ensuring alignment with the specific focus of each discussion.

The Impact of Global Movements and Socio-Political Shifts on Inclusion

The context and motivation for this research are deeply rooted in my dual role as a researcher and practitioner in educational technology, but also the shifting socio-political landscape that has reframed discussions around diversity and inclusion. In recent years, global movements such as *Black Lives Matter* (2020), along with growing political divides and socio-cultural shifts today, have reshaped the discourse around inclusion, intersectionality, and identity in education. The current political climate, particularly in countries like the U.S. and the UK, has fostered polarised debates about race, gender, and inclusion in education. As political ideologies continue to influence educational policy and practice, schools are increasingly tasked with balancing national reforms with local community needs. These changes present significant challenges for school leaders and educators striving to create inclusive environments amidst complex societal and political landscapes. In this context, this research seeks to explore how EdTech can play a vital role in supporting schools in navigating these complexities, offering solutions that align with their specific needs and unique student populations.

Since starting this study, global movements such as the Anti-Racist protests of 2020, followed by significant riots and demonstrations in 2024, have dramatically reshaped the intelligence and prioritisation of inclusion in schools. These events not only altered the language used in these classroom conversations, but also influenced how inclusion is conceptualised and enacted within educational settings and across national localities. Simultaneously, other global trends—such as geopolitical tensions, the influence of orthodox religious and cultural beliefs, and the rise of social media echo chambers—have contributed to an increasingly polarised world. This environment presents unique

challenges for educators and school leaders tasked with addressing diversity in meaningful ways.

Resistance to inclusion efforts, systemic challenges, and organisational limitations are common hurdles, often compounded by the external pressures of community and national politics. The current political climate, particularly in regions like the United States, has seen sharp divides over issues of race and gender in education, with the rhetoric surrounding policies such as those introduced during Donald Trump's presidency continuing to influence debates on inclusion. Alongside the political pressures shaping school inclusion efforts, the U.S. Department of Education even introduced a new website in February 2025, to enable individuals to report concerns about Diversity, Equity, and Inclusion (DEI) practices in schools. The website allows parents, students, and others to submit complaints about how DEI is implemented in K-12 and higher education, reflecting ongoing political divisions in the U.S. on these topics. This platform, created under the Trump administration, is part of a broader initiative to scale back DEI programmes, particularly those addressing race and gender issues in education. This EDI use of technology underscores the growing cultural and political divide regarding how race, gender, and inclusion is addressed in schools. While some argue that it is necessary to ensure fairness in school policies, others see it as a restrictive measure that undermines efforts to create more inclusive educational environments. The introduction of this federal tool highlights the ongoing tension between federal, state, and local education policies, continuing to shape the discourse surrounding DEI in schools.

Home Policy Landscape and the Role of Leadership in Addressing Inclusion and Hidden Voices

In the UK, discussions around Special Educational Needs and Disabilities (SEND) have intensified. Sir Martyn Oliver, Chief Ofsted Inspector, stressed the need for schools to have a "laser-like focus on inclusion," advocating for systemic change over time (March 2025). Similarly, Bridget Philipson, Shadow Secretary of State for Education, has called for a comprehensive national overhaul of SEND provision, urging schools to improve their capacity for tailored interventions. These differing views highlight the tension between long-term systemic reform and the urgent need for immediate practical actions in SEND support.

Adding to this landscape, the *Curriculum and Assessment Review: Interim Report*, led by Becky Francis (March, 2025), has highlighted disparities in curriculum access for disadvantaged and SEND students. The review reinforces concerns that many curricula remain unintentionally exclusionary, failing to fully integrate adaptive and inclusive practices. It also raises questions about how schools can move beyond broad policy statements to embed truly responsive and equitable learning experiences. At the same time, research by the Education Policy Institute (EPI) and the 2023–24 Department of Education (DfE) *Pupil Absence in Schools in England* (March 2025) signal a more rigorous approach to tracking persistent absence, with a specific emphasis on vulnerable students, including those who are identified as FSM (Free School Meals) and SEN, although the latter still collects traditional data sets when it comes to Pupil Characteristics. This intersects with inclusion efforts, as schools will need to demonstrate not only how they are addressing absence but also how attendance policies align with broader equity and inclusion strategies. However, without a clear framework that accounts for the intersection of attendance, SEND, and inclusive practice, there is a risk that accountability pressures will drive reactive rather than strategic approaches.

The policy discourse surrounding inclusion and equality in England has become increasingly urgent, driven by a series of political and educational challenges. However, a key limitation in research stems from the national curriculum's exemption from the Equality Act (2010) and the ongoing, persistent lack of diversity in school leadership structures.

Since 2020, there has been a shifting momentum around D&I in schools. A surge of interest between 2020–2023, spurred by global social movements, led to initiatives like the DfE Flexible Working Ambassador School Programme (2021–2023). Although initially set to continue until 2025, this programme ended two years ahead of schedule. Workforce diversity initiatives during this period reflected the DfE's priorities on inclusion, yet intersectionality—addressing the overlapping impacts of race, socio-economic status, and neurodiversity—remains notably absent from official frameworks. While current guidance promotes a culture of inclusion, it lacks actionable strategies that school leaders can implement to meet the specific needs of their communities. This momentum waned until the summer of 2024, when the election of a new Labour government and race riots reignited the conversation. Despite this renewed urgency, there has been a shift in the political narrative towards inclusion, particularly with the upcoming Ofsted Scorecard for schools,

which introduces new sections on 'Well-Being' and 'Inclusion'. However, DfE guidance remains vague, especially regarding how school leaders can effectively close D&I gaps in their specific contexts.

National workforce statistics also highlight the critical need for more inclusive leadership in education. The continued dominance of White British leaders in educational leadership risks reinforcing systemic biases, excluding diverse perspectives, and failing to create environments that are inclusive and equitable for all students and staff. Furthermore, there is a need to consider the implications for marginalised senior leaders who are often tasked with closing equity, diversity, and inclusion (EDI) gaps, without adequate systemic support. Demographic data on school leadership underscores the extent of underrepresentation. The Race Disparity Unit (2023) reports that 92.9% of headteachers in the UK are White British, with even lower representation of ethnic minorities in other senior roles. Only 0.1% of deputy and assistant headteachers identify as Mixed White and Black African or Chinese, marking the lowest representation across all ethnic groups. Additionally, while women constitute approximately two-thirds of the 22,400 headteachers in the UK, 97.1% of male headteachers and 96.2% of female headteachers are White (Race Disparity Unit, 2023). These statistics underscore the lack of diversity in leadership and highlight the disconnect between school leadership demographics and the communities they serve.

To foster inclusive practices in schools, there is an urgent need to develop both the mindset and skillset required for meaningful change. The Department for Education's (DfE) *Independent Review of Teacher Professional Development* (2021) emphasises the importance of school-based professional development, arguing that building internal capacity enables sustained transformation. Similarly, the Education Endowment Foundation (2021) advocates for targeted, high-quality continuing professional development (CPD) to support teachers in embedding inclusive practices within school settings.

The impact of these systemic shortcomings is evident in student outcomes and experiences. Exclusions are rising, inequality persists in classrooms (UK Government, 2023), and issues such as Emotionally Based School Avoidance (EBSA) are becoming more pronounced (Lester and Michelson, 2024). The Children's Commissioner for England (2024) has also reported a sharp increase in mental health crises among young people. These issues are compounded by funding shortages (The Guardian, 2024) and post-COVID

disengagement among students, families, and communities (Sky News, 2024). Additionally, the education sector is witnessing high staff attrition, with tens of thousands leaving the profession (DfE, 2023), which has significant implications for subject expertise (Shugart and Hounshell, 1995), student behaviour, and trust in educational relationships (Barmby, 2006). The lack of representation among school staff further exacerbates these challenges, reinforcing cultural and systemic barriers (Lander and Zaheerali, 2016).

Current approaches to capturing student voice primarily focus on gathering student feedback to inform leadership decisions. However, these methods are often shaped by pre-existing government, consultancy and leadership frameworks, which assume that students will engage with predetermined topics. This approach is challenged in the literature, which argues for more meaningful ways to empower students to articulate their experiences (Mitra and Serriere, 2012). Understanding student experiences is essential for fostering inclusive and equitable school environments. Pollard (2007) highlights that recognising diverse student perspectives is a crucial first step in improving classroom relationships. Rather than dictating what students should discuss through surveys and interviews, schools should actively listen to the insights students wish to share. Enabling students to design the measures themselves can provide richer, more authentic data on school climate and inclusivity. Research shows that when students feel heard regarding their experiences of the 'classroom climate' (Sporer et al., 2020), they are more likely to engage in school life and develop a sense of belonging (Mitra, Serriere and Stoicovy, 2012).

Given this, there is a need to develop more effective ways of capturing student voice, particularly for the most vulnerable students—those who are marginalised, face attendance challenges, or struggle to engage in school life. Biddle (2019) argues that barriers to student voice are often created by teachers themselves. Teacher resistance to equity-focused data collection can shift reform efforts away from the students who need them most, resulting in reforms that primarily benefit already advantaged students (Biddle, 2019). Staats (2016) further contends that 'quiet voices' in the classroom are frequently misunderstood due to *implicit biases* held by educators. When students who are not dominant in class discussions are misjudged as disengaged or academically weak, underlying factors such as personality differences, neurodiversity, or cultural capital disparities are overlooked. Research suggests that students who feel unheard in the classroom internalise this marginalisation, leading them to perceive themselves as 'second-rate students' (Essien and Wood, 2023).

Addressing these challenges requires a paradigm shift in how student voice is conceptualised and measured. Schools must move beyond surface-level engagement and develop systems that prioritise listening to, amplifying, and acting upon the perspectives of all students, particularly those who are often overlooked. By doing so, education systems can foster truly inclusive environments where every student feels valued, supported, and able to thrive.

Investigating the Impact of Data-Driven Practices, Social Capital, and Intersectional Approaches on Diversity and Inclusion in Education

The OECD's work, particularly through the PISA studies, has consistently highlighted the significant role that social capital plays in shaping educational outcomes. These studies underscore the importance of student-teacher relationships and community engagement in fostering academic success. Strong social networks, both within the classroom and the wider community, contribute to a supportive learning environment, enhancing student motivation and achievement. PISA findings indicate that students who feel supported by their teachers and have a strong sense of belonging perform better academically, demonstrating the critical role of social capital in educational settings (OECD, 2018).

Internationally, organisations like UNESCO and the World Bank have also recognised the importance of social capital in education, particularly in promoting access and equity. As UNESCO (2020, p. 10) asserts:

"Education is the foundation for the renewal and transformation of our societies. It mobilizes knowledge to help us navigate a transforming and uncertain world. The power of education lies in its capacities to connect us with the world and others, to move us beyond the spaces we already inhabit, and to expose us to new possibilities."

However, despite the significant expansion of access to education worldwide, UNESCO (2020) also notes that: "...Education across the world continues to fall short of the aspirations we have for it":

"Despite the significant expansion of access worldwide, multiple exclusions continue to deny hundreds of millions of children, youth, and adults of their fundamental right to quality education. Discrimination persists, often systemically, along lines of gender, ethnicity, language, culture, and ways of knowing." — UNESCO (2020, p. 10)

Additionally, in the context of digital education, these organisations highlight how social capital—through collaboration, resource sharing, and mutual support—can help bridge digital divides, enabling more inclusive and accessible learning experiences. People-driven learning initiatives, supported by social capital, are seen as essential in achieving equitable educational outcomes, particularly in environments where formal education systems face resource limitations (UNESCO, 2020; World Bank, 2018).

Social capital has also been incorporated into national education policy discourses, particularly in relation to inclusion, equity, and school improvement. It has been identified as a means of combining both data for inclusion and lived experience to better understand inclusion, social mobility and social justice. The Department for Education (DfE) has addressed aspects of social capital within various policy frameworks related to school leadership, parental engagement, and inclusion strategies. For instance, the 2017 policy paper *Unlocking Talent, Fulfilling Potential: A Review of Social Mobility in the Education System* outlined the government's plan to improve social mobility through education, emphasising the importance of partnerships across education, business, and civil society to remove obstacles hindering individuals from achieving their potential. But, as said in the paper:

"Social capital has been defined in numerous ways and can refer to sociability, social networks and social support, trust, reciprocity and community and civic engagement. The effect of social capital upon children's well-being is under-researched." —
Department for Education (2016)

Additionally, the *Inclusive Britain Second Update Report* from May 2024 details actions to tackle disparities in educational outcomes for disadvantaged groups. It highlights the requirement for schools to publish strategies for spending funds allocated for disadvantaged pupils, ensuring these strategies are built around well-evidenced approaches. While these documents reference elements related to social capital, such discussions often remain surface-level and may not fully address the complexities of intersectionality within educational contexts.

Achieving meaningful, long-term transformation within schools requires sustained commitment and a strategic, leadership-driven approach that embeds inclusion at the core of the school's culture. Whole-school change is not achieved through quick fixes or superficial adjustments; it is a process that demands leadership to consistently prioritise

diversity and inclusion, integrating these values into every aspect of the school's operations. This type of change cannot be realised through generic, one-size-fits-all models. Each school operates within its own unique context, and it is the responsibility of leadership to drive the change that is most relevant to the specific needs of their community. Educational leaders, equipped with knowledge of their school's demographic, cultural, and organisational needs, are therefore uniquely positioned to lead this transformation. As schools are inherently context-driven institutions, they are best placed to cultivate a culture of inclusion that is specifically tailored to their unique strengths, challenges, and opportunities. In this environment, leaders must rely on their internal data and lived experiences, as these provide more immediate, relevant, and actionable insights than external frameworks that may not align with the school's specific realities.

The prevailing narrative within educational research often presents change as a generational process, requiring extensive policy reforms and long-term interventions. While this perspective appropriately acknowledges the complexity of systemic challenges (Beycioglu & Kondakci, 2020), it risks undermining the potential for meaningful change to emerge from within schools themselves. Proponents of emergent change perspectives argue that "change is a continuous, dynamic and contested process that emerges in an unpredictable and unplanned fashion" and that "even when changes are operational, they will need to be constantly refined and developed in order to maintain their relevance" (Burnes, 2012, p. 135). In this view, schools are not passive entities awaiting external solutions, but dynamic organisations capable of initiating and refining their own transformation processes. This challenges traditional top-down models, advocating instead for a more organic, context-driven form of change that is tailored to the unique needs of each school community.

School leaders hold the power to create and sustain change by acting on their internal data and insights, rather than waiting for broader, systemic shifts. Through this leadership, schools can push forward on inclusion in ways that are deeply relevant to their communities, ensuring that interventions are context-sensitive and tailored to their unique needs. In practical terms, this requires a reframing of how school leaders view their role in driving change. While schools may benefit from national policy guidance and frameworks, it is within their local context that they have the most influence and capacity to implement real change. Schools are positioned to foster inclusion not just because they have the data, but

because they possess the leadership capacity to act on that data with agility and vision. The leadership approach required for systemic inclusion demands deep engagement with local data and a nuanced understanding of the unique student population each school serves.

Kezar's (2001) six change theories offer a valuable lens through which to understand how school leaders can drive this transformation within their specific contexts. These theories provide insights into the leadership roles schools can take in fostering inclusivity by responding to the needs and challenges of their communities.

- *Evolutionary change* occurs as schools respond to external pressures like policy shifts or societal expectations. However, it is school leaders—deeply attuned to local needs—who tailor these responses to effectively support underrepresented students.
- *Teleological change* is purposeful and strategic. Leaders must move beyond reactive measures, proactively embedding inclusion through diverse curricula, restorative justice, and amplifying student voice.
- *Life-cycle change* recognises that schools evolve through stages of growth and transformation. Leaders must ensure inclusion is sustained across all phases, from recruitment to curriculum design, integrating it into long-term school culture.
- *Dialectical change* emerges from ideological tensions between traditional and inclusive practices. Leaders must navigate these conflicts by fostering open dialogue and ensuring marginalised voices are central to decision-making.
- *Social cognition* models highlight the role of learning in change. By promoting professional development, reflective practices, and discussions on social capital, leaders cultivate an inclusive mindset across the school community.
- *Cultural change* suggests that organisations are in a constant state of transformation, shaped by shifts in values, practices, and social dynamics. In schools, leaders can actively shape the school culture by fostering an environment where diversity is celebrated, and inclusivity becomes ingrained in daily practices. Through intentional actions, such as revising policies, celebrating diverse cultural events, and aligning practices with inclusive values, leaders can ensure that the school's culture evolves to meet the needs of all students.

Kezar's (2001) underscores the critical role of school leadership in fostering organisational change. Rather than relying solely on external policies or reforms, Kezar argues that school

leaders have the agency and responsibility to create immediate, meaningful change within their schools. By acting on their unique insights and data, leaders can prioritise inclusion, amplify the voices of those often marginalised, and create sustainable change tailored to their specific community context. Educational leaders must harness their ability to navigate the shifting dynamics of their context when it comes to inclusion, supported by their internal data and deep understanding of their community. Schools should not wait for broader national or generational shifts, but should take proactive, bold steps to implement inclusive practices that are responsive to their specific needs. Once this foundational work is in place, broader conversations about the role of locality in shaping these efforts can take place, mapping the greater landscape for inclusion in education.

How EdTech Might Work to Close Diversity Gap: The Role of EdTech in Systemic Inclusion

EdTech presents significant opportunities for improving the collection and analysis of inclusion-related data, enabling school leaders to develop a more comprehensive and contextually relevant understanding of the experiences of their students and staff.

Traditional national datasets, while valuable for benchmarking, often fail to capture the nuanced, real-time insights necessary for school-based interventions. By contrast, EdTech platforms—including digital surveys, interactive dashboards, and qualitative data tools—offer granular, perspectives on trends at both the school and multi-school levels (Williamson, 2017).

However, data collection is not a neutral or objective process. Without an intersectional framework, EdTech-driven insights risk reinforcing the same exclusions embedded in broader systemic structures (Selwyn, 2016). Aggregated data that is not sufficiently disaggregated by multiple characteristics can obscure overlapping forms of marginalisation, making it difficult to identify and address structural inequities (Gillborn, Warmington and Demack, 2018). For example, students who experience discrimination at the intersections of race, disability, and socio-economic status may remain invisible in broad demographic analyses. This inquiry examines how EdTech can move beyond these limitations to generate actionable, self-identifying and intersectional insights.

Traditional data collection methods in education often lead to generalised inclusion strategies that fail to account for the complex and intersecting identities of students and staff. A person's experience of inclusion or exclusion is not determined by a single

characteristic—such as gender, race, or socio-economic status—but by the ways in which these factors interact (Davis and Weber, 2020). Without an intersectional lens, school policies risk defaulting to one-size-fits-all solutions that inadequately serve those at the margins. EdTech has the potential to bridge these gaps by offering tools that enable schools to capture and analyse more nuanced data at an institutional level. Interactive platforms, digital surveys, and dashboards can provide real-time insights into student identity, inclusion, and well-being, allowing school leaders to make informed, data-driven decisions. Crucially, these tools can facilitate a shift from retrospective, compliance-driven reporting towards proactive, targeted interventions that respond to the lived realities of students and staff (Williamson et al., 2020).

This study investigates how educational technology (EdTech) can support school leaders—including headteachers, principals, CEOs of multi-academy trusts (MATs), SENDCos (Special Educational Needs and Disabilities Coordinators), EDI and Inclusion leads, and middle leaders such as pastoral and curriculum leads—in fostering a more responsive, equitable, and data-informed approach to inclusion. By exploring how intersectional data insights can guide targeted interventions, the research aims to develop a scalable and adaptable model for systemic inclusivity across a range of educational contexts. This work contributes to the growing field of research that advocates for ethical, participatory approaches to data collection and analysis in education.

Central to this research is the development of an integrated framework for Equity, Diversity, and Inclusion (EDI) in education, in which EdTech serves as a catalyst for systemic change. This framework will prioritise user-friendly, real-time data dashboards designed to equip school leaders with actionable insights into inclusion, well-being, and engagement. These tools will not only consolidate critical resources and professional development but also ensure accessibility across varying school settings. By facilitating data-informed decision-making and fostering collaboration, such platforms will empower leaders to track progress, identify disparities, and implement meaningful improvements in inclusion practices.

The study explores key questions: *To what extent can EdTech serve as a transformative tool for fostering inclusion and belonging in schools? How can digital platforms amplify the voices of disadvantaged and marginalised students?*

By addressing these inquiries, this research seeks to reimagine EDI frameworks in education and advocate for a data-driven, intersectional, and ethically grounded approach to systemic inclusion.

Chapter Summaries and Structure

Chapter One: Literature Review: This chapter maps the field of inclusion in education by critically examining current policies, practices, and implementation challenges. It explores social capital as a lens for understanding school leadership dynamics, power imbalances, and structural barriers within schools. It also investigates the digitalisation of coaching and continuing professional development (CPD) as mechanisms for systemic improvement, particularly in relation to equity, belonging, and organisational culture. A central focus is the humanisation of data—surfacing intersectional, lived experiences often obscured by traditional demographic measures. The chapter traces the evolution of EdTech within the wider political and educational landscape, critically examining both its disruptive potential and embedded risks. The review interrogates the role of data in either enabling or undermining inclusion, highlighting the risks of deficit-focused, performative datafication practices.

Chapter Two: Methodology and Ethics: This chapter establishes the methodological and ethical foundations of the study, explicitly integrating the Recorded Literature Review to create a coherent link between theoretical framing and practical research design. It draws on insights from the literature review to construct a clear framework for social capital and data-driven inclusion, offering school leaders a structured model for reporting and support that advances intentional inclusion. The research design is grounded in:

- **Ontological position** – Critical Realism, recognising structural inequalities while acknowledging the role of perception in interpreting them.
- **Epistemological position** – Participatory Interpretivism, ensuring knowledge is co-constructed with stakeholders rather than imposed.

It also addresses ethical considerations and approvals, aligning with participatory research standards and safe, people-centred approaches to EdTech. It details the design and rationale of multi-point interventions, linking each to the research questions:

1. **Intervention 1:** Design and build of the MVP Data for Inclusion Platform for school leadership and staff, focusing on gender and disadvantage.
2. **Intervention 2:** Development of the EDI EdTech Platform for school leadership and staff.
3. **Intervention 3:** Review and refinement of the Leadership and Staff Data for Inclusion Platform based on initial findings.
4. **Intervention 4:** Design and build of the Student Module to capture student voice in inclusion efforts.

The chapter concludes by positioning the study in inclusive, strengths-based methodologies informed by positive psychology and systems thinking, ensuring both robustness and practical applicability for school leadership.

Chapter Three: Multi-Point Interventions: This chapter builds on the methodological and ethical foundations to examine the practical implementation of the four multi-point interventions. At the heart of this exploration is the question of how technology can bridge lived experiences in schools, ensuring that data-driven approaches do not merely quantify inclusion, but actively support it. By drawing on insights from both the literature review and methodological discussions, it explores:

- Balancing quantitative measures with qualitative lived experience.
- The complexities of interpreting intersectional data for policy and practice.
- Ethical considerations around bias, privacy, and agency in data collection.

Each intervention is presented as part of a cumulative process, extending capability and insight for school leaders. The chapter closes by framing these tools within a systemic change model, showing how leadership attitudes, school culture, and power structures shape the way inclusion data is interpreted and acted upon.

Chapter Four: Findings: This chapter presents the findings from the interventions, combining quantitative and qualitative data to explore how school leaders address D&I gaps. It emphasises the role of social capital—particularly bonding, bridging, and linking connections—in student-centred interventions. A key finding is the emergence of **Kaleidoscopic Data**, a new intersectional dataset surfacing hidden voices and experiences. Findings show that:

- Kaleidoscopic Data captures identity, safety, and belonging beyond traditional metrics.
- Leaders are pivotal in closing D&I gaps, but face challenges in translating insights into change.
- Student voices, often marginalised, can be amplified through ethical EdTech approaches.

The chapter concludes that moving towards this richer, multi-dimensional dataset is essential for targeted, inclusive interventions that foster belonging.

Chapter Five: Discussion: The discussion interprets findings through the lens of social capital as a driver of inclusion in schools. It considers how leaders can strengthen bonding, bridging, and linking capital to create resilient, inclusive communities. It also:

- Introduces the future inclusion of parent/carers collaboration.
- Examines the ethical implications of data use, with safeguards for fairness.
- Highlights the policy potential of Kaleidoscopic Data to advocate for equity.
- Outlines a forward research agenda centred on intersectional approach

Chapter Six: Recommendations: This chapter translates findings into practical, phase-specific recommendations for school leaders, trusts, independent schools, and international contexts. It:

- Positions Kaleidoscopic Data as a tool for tracking progress and supporting transitions.
- Advises trusts and regional leads on building inclusive data frameworks.
- Encourages policy reform so inspections consider D&I alongside academic performance.
- Emphasises leadership development as essential for sustaining inclusive practice.

Chapter Seven: Conclusion: The conclusion reaffirms that EdTech, when combined with a social capital-informed approach, can act as a catalyst for transformative inclusion. Kaleidoscopic Data offers leaders a more holistic view, enabling them to foster belonging and respond to diverse needs with precision. The study closes with a call for sustained commitment to this model, underlining its potential for long-term systemic change.

Research Questions

RQ1. How are school leaders addressing Diversity and Inclusion (D&I) gaps for staff and students?

RQ2. How can insights into social capital and intersectionality, along with attitudes and values towards D&I, help schools explore innovative pathways for intentional inclusion and improvement?

RQ 3. In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices?

Research Objectives

Objective 1: To explore how school leaders address and close Diversity and Inclusion (D&I) gaps for staff and students.

Linked to RQ1: How are school leaders closing D&I gaps for staff and students?

- **Research Method:** Conduct a literature review on attitudes, values and practice and policy
- **Data Collection:** Interviews with school leaders about D&I gaps
- **Analysis:** Compare and contrast findings to identify current strategies and gaps

Objective 2: To investigate how insights into social capital and intersectionality, alongside attitudes and values towards D&I, can inform school improvement strategies.

Linked to RQ2: How can insights into social capital and intersectionality, along with attitudes and values towards D&I, help schools explore innovative pathways for intentional inclusion and improvement?

- **Research Method:** Literature review and utilise mixed-method approaches to explore theories and models of social capital and intersectionality
- **Data Collection:** Map D&I approaches in school frameworks, conduct surveys using EdTech for organisational change

- **Analysis:** Develop and test a digital framework for inclusion based on findings

Objective 3: To examine the potential of EdTech in creating new opportunities for schools to address intersectionality and enhance D&I practices.

Linked to RQ3: In what ways could data for inclusion enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices?

- **Research Method:** Literature review on DEI, Critical Data Studies (CDS), and data for inclusion.
- **Data Collection:** Review of EdTech applications in organisational and scaled change, pilot studies of the EdTech platform for D&I improvement with school leaders
- **Analysis:** Evaluate the results and effectiveness of data for inclusion intervention for school improvement

Chapter 1: Literature Review:

Ethical Edtech, Data Justice and Inclusive Leadership.

This thesis positions itself at the intersection of school leadership, social capital, and *data for inclusion*, offering an original framework—grounded in intersectionality—for understanding and addressing diversity and inclusion (D&I) gaps in schools. While policy discourse increasingly references intersectionality, lived experience, and cultural capital, there is still no coherent, ethically grounded method for capturing and applying these concepts in everyday school contexts. This research responds to that gap, proposing a framework that draws on Critical Data Studies and ethical EdTech design to surface hidden voices and enable intentional, evidence-based inclusion at scale. Its originality lies in integrating these three domains into a single, practice-informed, theoretically robust model that bridges the gap between academic theory, practitioner insight, and the ethical use of technology in education.

The chapter engages with debates on the opportunities and risks of datafication in education, critiques the rise of consultancy culture, and examines the persistent gap between policy-driven evidence systems and the lived realities of marginalised students and staff. These concerns are explored in relation to the study's research questions: RQ1 (school leadership and inclusion), RQ2 (social capital and intersectionality), and RQ3 (data for inclusion). It is structured as follows: Section 1.1 considers how leadership research informs the capacity of school leaders to close D&I gaps (RQ1). Section 1.2 examines social capital theory and its application to inclusive leadership (RQ2). Section 1.3 draws from Critical Data Studies to interrogate how EdTech can be ethically designed to surface intersectional insights and avoid extractive practices (RQ3). Together, these sections provide the theoretical and conceptual grounding for analysing how inclusion is enacted, measured, and advanced in schools. There is a growing and urgent call for inclusive education to dismantle structural barriers and foster environments where students and staff feel seen, valued, and heard. Many current approaches, though well-intentioned, fail to capture hidden voices—particularly from underserved communities—due to methodological limitations, lack of psychological safety, or reliance on deficit-based frameworks that risk reinforcing exclusion. For example, standardised metrics often frame marginalised students as

underperforming without accounting for the intersectional disadvantages they face, thus reinforcing stereotypes and shaping policy responses in ways that may deepen inequality. A lack of diversity in school leadership and limited access to robust, equity-focused data tools only exacerbate these systemic challenges leaving students and staff from underrepresented groups feeling reluctant to participate in these processes due to fears of being ignored, tokenised, or not having their concerns genuinely addressed.

This context —where inclusion efforts are hindered by both structural and methodological challenges—underscores the need for a critical, intersectional review of inclusion theory and practice, drawing from both traditional academic sources and contemporary practitioner-led solutions. The literature review therefore takes a dual approach: examining scholarly research alongside real-world strategies used by school leaders to implement inclusion at scale, with a particular focus on inclusive education and digital data ethics. This includes exploring how digital tools can create safer, more inclusive mechanisms for collecting lived experience, and how technology might address long-standing methodological gaps.

The chapter focuses on three key areas:

- **Repositioning School Leadership** – Exploring how schools and trusts currently lead D&I work, the people involved, and the barriers they face. This includes analysing leadership pathways, consultancy culture, and the shifting role of school leaders in championing inclusive change.
- **Policy, Intersectionality, and Social Capital** – Reviewing legal and policy frameworks (such as the Equality Act 2010) alongside emergent concepts like social capital and Kaleidoscopic Data. This includes interrogating how intersectional identities are currently (mis)represented in educational data and the implications for long-term systems change.
- **Data for Inclusion** – Examining the expanding role of EdTech in supporting inclusive practice. This includes both opportunities (e.g. personalised learning, anonymous voice tools, accessible CPD) and ethical risks (e.g. bias, surveillance, data misuse) through the lens of Critical Data Studies.

By situating this research within the existing literature, the chapter provides the academic foundation for understanding how inclusive, evidence-based leadership interventions can be designed and scaled. It also sets the stage for the development of a new *data for*

inclusion framework, offering a practical and ethically grounded alternative to performative or extractive models of inclusion.

1.1 Repositioning School Leadership: Who is Educating the Educators?

This section explores how leadership training and policy developments currently shape the role of school leaders in England, and why many inclusion strategies often fall short of their intended aims. Across the literature, a tension is evident: school leaders are increasingly expected to deliver inclusion and equity outcomes without sufficient training, resourcing, or system support to do so effectively. For example, there is limited formal training within National Professional Qualifications (NPQs) that addresses intersectionality or critical consciousness (Keddie, 2012; Lumby, 2016). When coupled with high-stakes accountability and performative pressures (Parker, 2020; Keddie, 2012), this creates a policy context where school leaders are tasked with ethical responsibilities that exceed their operational remit. As a result, leadership capacity for equity and inclusion is often fragmented, reactionary, or dependent on external actors.

The Education Inspection Framework (EIF) and national policies set expectations for inclusive leadership, yet there is a gap between policy ambition and leaders' preparedness to enact meaningful change (DfE, 2019; Ofsted, 2023). Professional Learning (PL) frameworks such as the Headteachers' Standards (DfE, 2020) reference equality and diversity, but only in procedural terms. They fail to reflect the complexity of intersecting marginalisations or to guide culturally responsive leadership. As Lumby (2016) and Santamaría & Santamaría (2015) argue, leadership is too often framed as neutral or technical, obscuring how education systems reproduce racialised, gendered, and ableist norms.

Griffiths et al. (2023) warn that such governmental prescription disregards the situated and relational nature of education, neglecting the liminal spaces where professional learning and identity are negotiated. As they observe, their findings "foreground non-linear, multiple ways of becoming teacher, and we further reflect upon affordances of liminal PL spaces" (Griffiths et al., 2023). This omission erases the significance of teacher identity, which, as Day et al. (2006) emphasise, is central to motivation, commitment, and resilience, yet continually reshaped by accountability pressures and school cultures. Disregarding identity risks

reducing leadership to compliance, limiting leaders' capacity to recognise how their own positionality shapes inclusive practice.

This is compounded by the lack of diversity in leadership pipelines: positions remain disproportionately occupied by those outside the global majority (Coplan, Hughes, Bosacki, & Rose-Krasnor, 2011), whose experiences often diverge from both staff and students. A lack of intersectional representation entrenches inequities, reinforcing exclusion. Addressing this requires engaging school leaders directly to challenge attitudes towards inclusion before moving to student voice initiatives. An alternative lies in *ethical leadership* that foregrounds equity and inclusion in all decision-making. As Shields (2010) articulates, this model emphasises justice, care, and the active disruption of structural inequalities. Grounded in Crenshaw's (1991) theory of intersectionality, it calls for cultures where individuals can thrive and bring their authentic selves. As Bhopal (2018) stresses, inclusion must go beyond recruitment to address retention and progression, while Lumby and Morrison (2010) highlight the need for psychologically safe environments where staff voice is heard and barriers to advancement removed. Furthermore, the Department for Education's (2021) research on school leadership diversity underscores that retention of minoritised and underserved leaders is closely linked to the presence of inclusive organisational cultures and equitable access to leadership pathways. Taken together, these perspectives reinforce that ethical leadership must be proactive, relational, and intersectional in its efforts to build sustainable inclusion across the educational system.

This argument is further reinforced by Rabiger (2024), who challenges the notion of "completion culture" in schools, critiquing how inclusion efforts are too often structured as short-term, tick-box exercises that fail to engage with the deeper, ongoing nature of structural racism. In her work on permanent anti-racism in schools, Rabiger calls for a reimagining of leadership that not only recognises systemic racism as a *permanent* feature of the educational landscape, but actively resists it through sustained, embedded action. Her emphasis on ongoing, relational leadership grounded in anti-racist ethics adds a vital dimension to the conversation around school leadership and social justice, aligning with Shields' (2010) model of ethical leadership.

One of the key insights from this research is the way that marginalised senior leaders are often forced into a position where they cannot freely express their lived experiences or

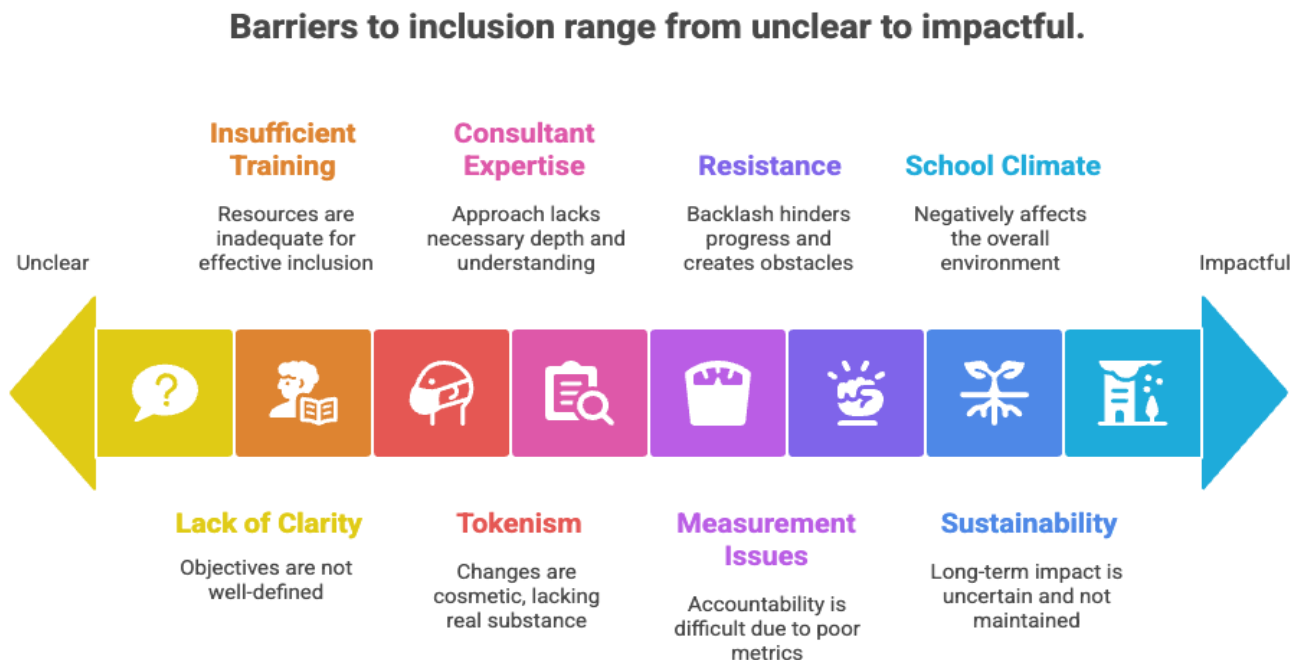
engage in open dialogue about their identities due to fear of discrimination, victimisation, or retaliation. As illustrated in Miller and Callender's (2018, p. 20) *Liabilitisation Process and BAME Senior Leaders* (Figure 1), this suppression of voice is systematically embedded within institutional discourse. Such a climate of silence creates a substantial barrier to retention and professional growth. Where schools fail to create psychologically safe spaces that value leaders' "personality fit" and allow them to express concerns without fear, these individuals may 'quietly quit' or experience 'managed exclusion'—a process in which talented, experienced leaders are pushed out because they do not conform to dominant cultural norms. The final stage of this exclusion is often resignation, redeployment, or dismissal, underscoring the damaging impact of systemic racism on leadership careers. Miller and Callender argue that this not only removes the unique contributions of BAME leaders, but also deprives students of visible role models, perpetuating a monocultural leadership model. Consistent with this, while overt experiences of racism were not always cited as the primary reason for leaders leaving the profession, there was clear evidence of an "active pattern of liabilitisation" (Miller and Callender, 2018, p. 20)—a form of intentional exclusion with effects that closely mirror those of systemic racism. The challenge of retaining senior leaders who lack social capital is not solely an individual problem, but one embedded in structural dynamics. Ironically, due to the lack of intersectional expertise in leadership, schools often turn to external EDI consultants or diversity trainers. However, these outsourced interventions rarely lead to sustainable transformation.

Gunter, Hall, and Mills (2014) describe this convergence and dependency as a form of "consultocracy," where external consultants shape policy and reform without accountability or alignment to the lived experiences of school communities, building on Hood and Jackson's (1991) earlier critique of consultants' unaccountable influence within public administration. These "actors" often offer surface-level training, divorced from whole-school cultural change. Bell's (1979) early critiques of non-directive coaching models remain relevant today, as many consultancy offerings focus on individual rather than deep systemic change. Ahmed (2012) and Kline (2020) further argue that diversity training often becomes performative, allowing schools to symbolically demonstrate commitment without real change. The absence of robust, intersectionally-informed evaluation frameworks deepens this issue. Despite its authority, the Education Endowment Foundation (EEF) lacks meaningful guidance on intersectionality or whole-school inclusion strategies (EEF, 2025). This evidences a broader systemic neglect.

This has particular implications for inclusion when it comes to school leaders. In Gunter et al.'s (2014) view, "consultocracy" does not merely reflect the use of consultants, but signals a deeper epistemic shift in the public sector: from schools as sites of professional judgement and ethical decision-making to sites of outsourced delivery and managed compliance. As a result, school leaders are increasingly positioned as recipients of externally produced knowledge, rather than co-constructors of localised, inclusive practice. Their work calls for a stronger engagement with political theory to understand how sovereignty, authority, and knowledge exchange relationships shape the endurance of state-led education reform—and how this may constrain the agency of those most committed to social justice. This shift also invites reflection on the nature of expertise itself. Bell (1979) distinguishes between *directive consultancy*—where the consultant is the expert imparting ready-made solutions—and *non-directive consultancy*, where the consultant acts as a facilitator to enable reflection and localised decision-making. In the context of school leadership and inclusion, most EDI-focused consultancy aligns with the *directive model*, offering pre-packaged resources or one-off sessions that lack contextual sensitivity. These models, while often well-intentioned, can disempower school leaders and staff by positioning them as passive recipients rather than active agents of change. By contrast, *non-directive approaches* are better aligned with participatory leadership practices and foster co-created, sustainable transformation—yet they remain underutilised in the current system of performative accountability.

Research also underscores the critical role of leadership in fostering psychological safety. Shahid and Din (2021) found that leadership behaviors, team dynamics, and organisational culture significantly influence teachers' willingness to engage in inclusive practices. School leaders who prioritise trust and open communication create environments where teachers feel supported in voicing concerns, leading to stronger collaboration and inclusive decision-making. Similarly, EdFuel (2021) highlights that teacher psychological safety directly impacts student well-being and learning. When educators feel secure in raising issues and taking risks, students benefit from more adaptive and inclusive teaching approaches. There is also a growing critique of the dominant models of leadership development, which tend to privilege managerial competencies over critical consciousness. According to Santamaría & Santamaría (2012), leadership programmes rarely equip educators with the tools to challenge injustice or understand systemic oppression. Instead, they focus on generic standards of performance, improvement, and accountability—leaving school leaders

ill-prepared to address the realities of intersectional exclusion. These missing tools include equity audits, participatory data methods, and trauma-informed leadership strategies that empower reflective, inclusive practice. The emotional cost for these leaders is also high, as



recent research on teacher and leader burnout and social withdrawal (Jacobs, Beck, & Crowell, 2014; Coplan, Hughes, Bosacki, & Rose-Krasnor, 2011) demonstrates the growing toll of inclusion leadership on those without sufficient systemic support. My research finds that few schools move beyond the middle of this spectrum when it comes to knowledge production and exchange —often due to time constraints, fear of accountability exposure, or a lack of internal capacity to act on complex data. This typology (Figure 1) reveals a wider issue: without deep systems literacy and data confidence, many leaders default to performative or tokenistic action.

Figure 1: Barriers to Inclusion Range from Unclear to Impactful, Ponsford (2025)

When we take a more granular approach, the literature shows us ways that consultants can exclude rather than include, based on the following research and recommendations:

1. Lack of Clarity and Consensus on Objectives:

- **Vague Goals:** One of the key challenges facing the implementation of EDI initiatives in schools is the lack of clarity and consensus around objectives. As Khalifa, Gooden, and Davis (2016) point out, many EDI initiatives suffer from broad and often vague goals, which leads to confusion about what success looks like. This can result in decision-makers focusing on what they perceive to be important, potentially influenced by biases or reactions to past events, rather than establishing clear, actionable objectives that address the root causes of inequality. This tendency can distort the direction of EDI programs and lead to unproductive or inconsistent efforts across schools. The lack of specificity in goals often extends to the methods used to gather and report data, which can further compound the issue.
- **Biased Outcomes:** Bias in data collection methods, as well as in the analysis and subsequent actions taken, can result in misleading insights and ineffective strategies (Bensimon, 2005). Without clear metrics or well-defined success criteria, it becomes difficult to measure progress or determine the impact of efforts. For example, the lack of focus on measurable outcomes can make it challenging to identify whether changes are truly making a difference in promoting inclusion and equity (Aguirre & Martinez, 2013). As part of my study, I propose that addressing this issue requires a clear and focused approach to goal-setting. Specifically, an audit tool and a comprehensive EDI 360 review should be the foundation of any action plan to ensure that all initiatives are clearly aligned with measurable objectives. This process would allow schools to benchmark their starting point, track progress, and ensure that time and resources are spent on meaningful actions that drive change. This approach will ensure that EDI efforts are not only purposeful but also outcome-driven, making it easier for school leaders to see tangible results and adjust their strategies as needed.
- **Inconsistent Implementation:** The inconsistent implementation of EDI principles across schools is a critical challenge. As Riehl (2000) argues, different schools often interpret and implement EDI principles in varied ways, leading to disparities in how these initiatives are carried out. This inconsistency can result in fragmented efforts that do not achieve the desired outcomes, either within a single school or across a network of schools. Khalifa et al. (2016) reinforce the point that a clear catalytic objective is essential, but it is equally important to ensure that the implementation strategy remains consistent. This consistency should be maintained across all schools, regardless of their context or specific challenges.

- **Narrow Focus:** One significant issue that arises from inconsistent implementation is the presence of consultants or advisors with a narrow or singular lived experience. As studies have shown, relying on a single consultant can sometimes create tension rather than resolve it, especially when the consultant's approach does not align with the needs or perspectives of the wider school community (Cole, 2009). This issue is particularly evident in cases where consultants, such as those leading race, disability or gender training, may bring their own personal experiences or biases, which can inadvertently escalate conflicts or create divisions within the school community. As Cole (2009) discusses, the challenge lies in ensuring that consultants bring a broader, more inclusive perspective, representing the diversity within the school itself rather than one individual's viewpoint. To overcome these challenges, my study proposes a centralised, quality-assured rollout of EDI strategies that includes clear, step-by-step guidance for implementation. This approach would ensure that all schools, regardless of size or context, have access to consistent, evidence-based strategies that are adaptable yet standardised. By doing so, it will be easier to demonstrate measurable starting points and track progress across multiple schools or school networks, ensuring that EDI initiatives are not only consistent but also effective in achieving their goals.

2. Resistance and Backlash:

- **Cultural and Political Resistance:** Significant pushback can come from parents, staff, and community members who disagree with or feel threatened by EDI efforts (Sue et al., 2019). Authors such as Riel and Khalifa et al., debate how this changes from school context to context, year to year can also change meaning that not only do people's focus change but the people themselves as school communities change year to year. Seen in racial conflicts and tensions, when things get 'tricky' or misunderstood, without a lived experience of the protected characteristics or community emotions can quickly escalate to the point of no return. Right wing decision makers in schools have seen the 'woke' reaction to gender, religious and Anti-Racism programmes and struggle with managing relationships and a political stance in their roles as social leaders. As a result they can be frightened and fearful when faced with localised outrage or challenge by their wider communities. By embedding psychological safety at all levels, schools can move beyond surface-level compliance to cultivate genuine inclusion and systemic change. This

aligns with my study's focus on equipping leaders to navigate complex legal and cultural landscapes, ensuring education environments that are both inclusive and psychologically safe.

- **Perceived Threats to Academic Standards:** Some critics argue that a focus on EDI may undermine academic rigor and merit-based standards. Lewis and Diamond (2018) note that equity initiatives are sometimes seen as a challenge to academic excellence, with detractors claiming that promoting diversity and inclusion can detract from the pursuit of merit-based outcomes. Whereas Banks (2026) argues against this, that effective EDI strategies can actually improve academic outcomes by creating a more inclusive environment that supports the full participation of all students, allowing them to achieve their academic potential. In environments where academic and performative excellence are the sole focus, with a "silent" school culture and zero-tolerance policies dominating, inclusion efforts can often be sidelined or perceived as unnecessary add-ons. This approach risks missing the broader benefits of diversity and belonging, particularly the positive impact it can have on the overall academic environment. It is important to challenge this perception by demonstrating that EDI is not just a "nice to have" but a central component of educational success. As Banks explains, EDI initiatives, when effectively integrated into the curriculum and school culture, not only enhance student engagement but also improve academic performance. Banks suggests that educational environments that embrace diversity tend to foster more robust critical thinking, creativity, and a deeper engagement with the content. Therefore, the assumption that EDI compromises academic excellence is a misconception that needs to be addressed in school leadership and policy. For this study, it would be necessary to present EDI as both a central and aspirational aspect of a school's mission. To illustrate that belonging is not a 'nice to have', it is a critical factor to education success. By framing it with authority and a clear quality standard, I aim to ensure that school leaders perceive initiatives as a foundational strategy that directly contributes to academic excellence, rather than a peripheral concern.

3. Insufficient Training and Resources: Many coaching and consultancy models rely on being tied to that individual, rather than a sustainable and legacy-based means of training and school improvement. It obviously benefits a consultant to have a longer term contract

with a school or network, but creates an inequality with under-financed schools, their staff's standards of professional development and thus the decisions and experiences (practice and policy of their CYP). Implementation or 'initiative' fatigue, the 'cascade' needed by senior and middle management leaders to implement these changes and a whole staff lack of buy-in means this is an expensive and time consuming approach, with no guarantees of success. Also engaging in these partnerships can be outside of a staff member's contract, time-allocation and only bring in a niche of the intersectional inclusion issues that school is battling with (Hall, 2023).

- **Inadequate Training for Educators:** Time constraints are a significant barrier to the effective implementation of EDI strategies in schools (DeMatthews, 2018). Educators often struggle to find the time to engage in professional development, which can hinder the adoption of new approaches. As a result, training initiatives must be efficient, accessible, and easy to implement in order to address the time limitations school leaders and staff face. Research by Guskey (2000) supports this by emphasising the need for well-structured professional development that takes into account teachers' limited time. Similarly, Darling-Hammond et al. (2017) argue that without accessible and time-efficient training, many schools will fail to implement meaningful changes in their approach to EDI. Digital platforms have become an increasingly popular solution to overcome these time barriers. For example, Penuel and Gallagher (2017) argue that online programs can bridge the gap between educators' time constraints and their professional development needs. By offering scalable, flexible training options, these platforms allow teachers to engage with CPD materials at their own pace and on their own schedule. This flexibility is critical in ensuring that all staff, regardless of their role or experience, have the opportunity to engage in professional learning that meets the school's EDI goals.
- **Resource Constraints:** Schools often lack the financial and material resources to sustain comprehensive EDI programs, which is a point emphasised by Furman (2012) so a one-stop shop that is accessible in all ways is key to the success of any solution. Another issue can be that traditional *working in person* services (consultant led workshops, INSET days, focus groups or consultancy sessions with individuals) and in the main - limit geographic range and reach. Therefore using virtual sessions and online solutions means that scaling is a reality. Consultancy can also be expensive and therefore exclude schools that cannot afford these services. With schools and

Multi-Academy Trusts (TES Magazine, 2023), who are also currently being severely challenged with budget constraints, EDI training is not a mandatory or statutory requirement. The study would need to bring in low cost, high standard digital content that could work to scale. An inbuilt digital consultant co-pilot for school leaders, a virtual EDI assistant to help build interactives and recommended actions for the school or trust leader that took their data and helped them to shape practice, training pathways and also support policy review and creation.

4. Measurement and Accountability Issues:

- **Lack of Clear Metrics:** Skrla et al. (2004) highlighted the challenge of a lack of clear, measurable outcomes for EDI initiatives, which makes it difficult to assess their effectiveness. This issue persists in more recent literature, with many studies noting the absence of comprehensive intersectional data collection across educational settings. However, contemporary research has expanded on this challenge, offering insights into the development of more inclusive and effective EDI metrics. In the context of higher education, Strydom and Fourie (2018) examined how diversity factors influence strategic implementation, underscoring the difficulties of measuring inclusion and the necessity for robust frameworks to ensure meaningful EDI outcomes. Their findings indicate that without clear, actionable metrics, educational institutions struggle to translate EDI strategies into tangible and sustained progress. Looking beyond education, Raimi and Kah (2022) highlight the growing recognition of the need for EDI metrics that reflect the lived experiences of marginalised and intersectional groups. They note that while some progress has been made—particularly in designing HR data collection tools that capture characteristics such as gender, race, and disability—there remains a lack of granularity in addressing the full spectrum of diversity, equity, and inclusion. As they emphasise:

"The managerial implication... is that although DEI is increasingly adopted by human resource development (HRD) in different parts of the world with a focus on gender, race and ethnicity, there is a need to extend the understanding, application and accommodation of other DEI dimensions, such as age, social class, sexual orientation, sexual identity, nationality, ability status, religion/spirituality, socio-cultural and political affiliations." (Raimi and Kah, 2022, p.17).

Building on this, their work supports the notions that mainstreaming diversity, equity, and inclusion into institutional practices requires the development of comprehensive, measurable DEI frameworks and moving beyond the waterline of visibility. This tells me that I should also advocate for a more granular approach to intersectional identity in schools. Rather than relying on broad categorisations of identities, I would like to now explore how multiple forms of identity intersect and impact both staff and students' educational experiences.

- **Accountability Challenges:** A clear and effective framework for inclusion, advocating for both the ethical and business case for EDI, is essential for schools. Such frameworks should be structured across two modules—one for staff and one for students—to ensure that both groups are held accountable to EDI standards. However, holding individuals accountable can be challenging without clear guidelines and enforcement mechanisms (Theoharis, 2007). For frameworks to be truly effective, they must be clearly articulated, academically tested, and embedded in the “why”—the rationale for action, methods for implementation, and steps for continuous improvement. On review, the *Index for Inclusion* (Booth & Ainscow, 2002), similar to the AfA Needs Analysis model, provides a strong foundation for fostering inclusive school environments through participatory self-assessment. While it has been widely adopted, it is limited in its integration of modern educational technology (EdTech) and intersectional data methodologies, which are increasingly crucial in capturing and addressing the complex realities of student and staff experiences. In the era of AI and real-time data collection, traditional audits such as the *Index for Inclusion* provide a starting point but fall short in areas such as intersectionality, scalability, and alignment with policy frameworks. Similarly and arguably, other proven frameworks, such as the *Inclusion Quality Mark*, *The Wellbeing Framework* (Children's Commissioner for England), and the *Diversity and Inclusion Audit* (The Diversity Trust), face similar limitations, lacking the integration of EdTech for real-time, granular data collection and intersectional data analysis. Modernising these frameworks through EdTech can offer schools a more dynamic, scalable, and actionable approach to measuring and improving inclusion. By incorporating real-time data collection, these frameworks could move beyond broad categories of identity and allow for the systematic aggregation of diverse voices, providing evidence-based insights into the lived experiences of students and staff. This

integration would also support cross-school or trust benchmarking and align EDI efforts with national and institutional policy frameworks. My research aims to explore these gaps by leveraging EdTech and intersectional data methodologies, pushing the boundaries of traditional inclusion audits to make EDI efforts measurable, actionable, and aligned with policy priorities, ensuring that all individuals are seen, heard, and supported in the educational environment.

5. Tokenism and Superficial Changes:

- **Surface-Level Changes and Tokenism:** Some EDI efforts result in superficial changes rather than addressing deeper systemic issues. Gorski (2013) highlights how surface-level diversity initiatives fail to create meaningful change - it needs to be more than a gesture. Changes have to be integrated and therefore really get under the hub for this. The study would need to focus as much on the action as the data - how the insights and analytical advantage were driving collection action to support organisational change for an individual school or a cluster. Building on Gorski, school-based initiatives may be seen as token gestures rather than genuine attempts to foster inclusion, leading to cynicism among staff and students (Kohli et al., 2017). Being able to "reach, teach and unite" is part of ensuring that real inclusion is not just a gesture. This meant that for the study being a mechanism against cynicism amongst school leaders, it had to have both the heart of the people, the grassroots approach of social justice but also the weight of whole organisational change and evidence-based backing that appeals to leadership teams and decision makers.

6. Consultant Expertise and Approach:

- **One-Size-Fits-All Services and Solutions:** EDI consultants come from diverse backgrounds, and their expertise, views and therefore effectiveness can vary widely (Davis et al., 2022). Meaning that for the intervention a diversity of diverse educators and experts would need to be understood and consulted with in order to best understand how school leaders can understand and access all of the intersectional identities and communities in a way that was easy for them to both understand - and find new voices that they had not heard of before. Schools are all about their individual context. Further to this, research by Singleton and Linton (2006) illustrates that consultants may offer generic solutions that do not account for the specific

needs and context of individual schools. This means that for my interventions, a framework for inclusion would need to have a user-based, context-driven personalisation built into it, to enable leadership teams to differentiate progress and improvements based on their own unique data set.

7. Sustainability and Long-Term Impact:

- **Short-Term Focus:** Some EDI initiatives are implemented as short-term projects without plans for long-term sustainability (Gordon & Louis, 2009). These result in awareness days and a moment - much like Singleton and Linton inspire - rather than a movement for inclusion. This meant the intervention had to be more of a movement than a moment. Annual surveys and benchmarking would enable a school to bring in a multiple year approach and timeline in order to work out their pain points and best practice as they would any other whole organisational development or improvement programme.
- **Leadership Turnover:** Changes in school leadership can disrupt or deprioritize ongoing EDI efforts, a challenge again noted by Riehl (2000) which can be seen when a staff member goes and no-one picks up the baton from them, it literally stops there. This is why bringing in a range of SLT with support from the CEO or headteacher is key to long term impact. With whole organisational change requiring 2-3 years, staffing committed to this is key or having a platform that maps out what has happened and what is needed so the role can be picked up with ease. Fullan's (2001) work on educational change emphasises that sustainable school improvement is a gradual process that often spans several years. Fullan discusses how deep changes in school culture, practices, and structures take time to be fully integrated and accepted by all stakeholders which means a solution needs to consider staff turnover too. The study would therefore need to focus on senior school leaders and managers to ensure more of a consistency of approach. This is not just in terms of a turn-over rhetoric but the work could be part of their performance management and their annual roles and responsibilities. Ensuring leaders who led on policy change and implementation (SLT) would be the point of contact was therefore built into my study.

8. Impact on School Climate:

- **Divisiveness:** Inclusion initiatives, if not carefully managed, can sometimes lead to divisions within the school staff and wider community (Gooden & Dantley, 2012). When these initiatives are not designed to promote inclusive dialogue, they can inadvertently foster discomfort, resistance, or division. This highlights the importance of schools fostering a culture and ecosystem capable of navigating uncomfortable conversations around equity and diversity without fragmenting the community. Leadership must approach EDI initiatives with confidence, transparency, and a clear vision to help staff feel supported, safe, and empowered to voice concerns. Both Gooden & Dantley (2012) and Ladson-Billings (2014) stress the importance of creating inclusive spaces where staff, regardless of their role, can engage in EDI conversations without fear of alienation. Gooden & Dantley (2012) underscore the need for schools to cultivate a culture that embraces discomfort, where staff can openly discuss differences without causing a rift in the school community. They argue that leadership should facilitate these discussions to ensure that the staffroom remains united, even as difficult topics are explored. Ladson-Billings (2014) builds on this by focusing on the role of culturally relevant pedagogy in supporting school climate transformation. She argues that educational leaders must be proactive in ensuring that EDI work is not simply an isolated initiative but is embedded within the core practices of teaching and learning. According to Ladson-Billings, EDI initiatives should be structured in a way that empowers all members of the school community, including staff, students, and volunteers, to engage in the process of cultural relevancy. Ladson-Billings says that not only does student culture have a large role in learning, but by doing so, schools can prevent divisions from arising and create a collective, shared commitment to inclusivity. Her focus on 'what is right' rather than what is wrong is a strong takeaway for me in this work.
- **Morale and Trust Issues:** Poorly managed EDI efforts, although not "a total failure" (UK Research and Innovation, 2020, p.36), can lead to decreased morale and trust among staff and students, which can be particularly detrimental in the context of the ongoing recruitment and retention crisis in education. Arar and Oplatka (2020) also highlight the importance of leadership in fostering trust and morale during the implementation of EDI initiatives. They argue that without authentic leadership and a focus on psychological safety, poorly executed EDI strategies risk further alienating staff, exacerbating feelings of disengagement, and lowering morale. Given these

challenges, it is essential to ensure that EDI initiatives are designed to promote psychological safety and community engagement. Tools like anonymised surveys can offer a safe space for staff to voice their concerns, helping to build trust. Moreover, solutions that are co-designed with stakeholders, reflect a strong sense of community, and are grounded in authenticity and academic rigor—while maintaining high security—are crucial in fostering an inclusive school culture. This approach can help mitigate the risks of poorly managed initiatives and support schools in creating an environment where staff feel valued, engaged, and supported.

These eight core barriers to inclusion, emphasise the need for clarity, effective training, and long-term sustainability:

1. Lack of Clarity and Consensus on Objectives
2. Resistance and Backlash
3. Insufficient Training and Resources
4. Measurement and Accountability Issues
5. Tokenism and Superficial Changes
6. Consultant Expertise and Approach
7. Sustainability and Long-Term Impact
8. Impact on School Climate

EDI consultancy approaches range from superficial to deeply embedded.

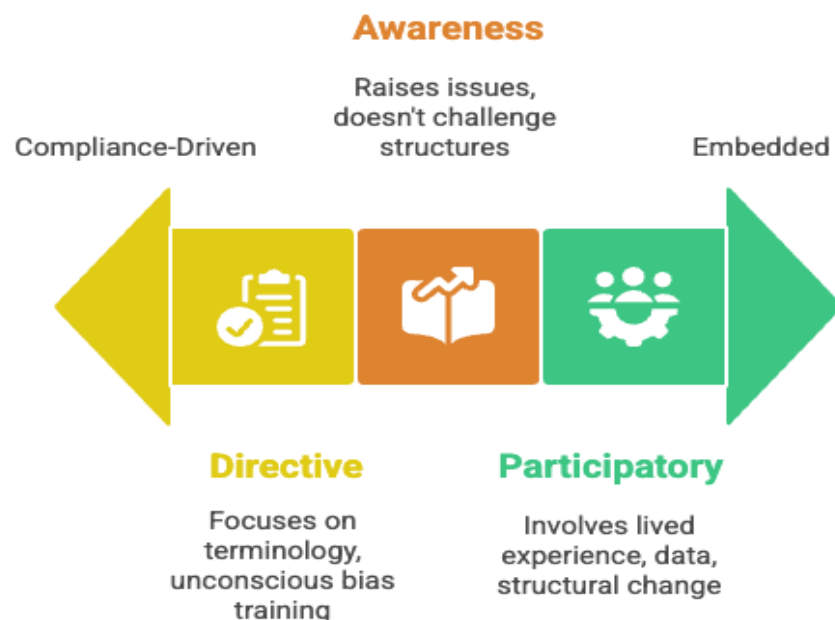


Figure 2: EDI: Consultancy Approaches Range from Superficial to Deeply Embedded, Ponsford (2025)

Based on my own research, I have developed a typology of EDI consultancy approaches used in schools (Figure 2). These fall along a spectrum: at one end are directive, compliance-driven interventions, often initiated in response to reputational risk or Ofsted recommendations. These interventions tend to be superficial, focusing on terminology or unconscious bias training. In the middle of the spectrum are awareness-based strategies that raise issues but do not challenge structures. At the other end are participatory, embedded models that involve lived experience voices, data-informed inquiry, and structural change.

In contrast, this research proposes a model of internal capacity-building that centres social capital and lived experience. Drawing from the work of Miller, Crenshaw, and Stewart-Hall et al. (2022), it argues that school leaders must be supported to lead with authenticity, recognising their intersectional identities and empowering others to do the same. Rabiger's (2024) call for "permanent anti-racism" that rejects the tick-box, temporary nature of current efforts reinforces the urgency of this shift. The use of ethical EdTech offers one route to support this internal transformation. Platforms that centralise inclusive data and feedback can help schools move from deficit-led data practices to models that elevate underrepresented voices. As this thesis explores in later chapters, data for inclusion must become a core leadership function—one that integrates intersectional insights with systemic action. In sum, truly inclusive leadership cannot be outsourced. It must be built from within, grounded in ethical frameworks, supported by critical data, and sustained through deliberate cultural change.

1.2 Policy, Intersectionality, and Social Capital: Rethinking Engagement and Belonging

Social capital theory offers a powerful interpretive lens for analysing data related to inclusion in educational settings. In particular, it considers how the typologies of bonding, bridging, and linking social capital can help reveal systemic patterns of belonging, marginalisation, and participation across school communities. Drawing from foundational theorists including Bourdieu (1986), Coleman (1988), Putnam (2000), and Woolcock (2001), this framework

supports a more relational understanding of how staff and students experience inclusion and exclusion within school systems.

This study begins with Bourdieu (1986), whose work remains a foundational point of departure for understanding how power is embedded in social relations. While Bourdieu is best known in educational research for his theory of cultural capital—the idea that schools often reward the dispositions, tastes, and knowledge of dominant social groups—his concept of social capital is equally critical. Social capital, in Bourdieu's terms, comprises the resources individuals access through networks of relationships, often shaped by class, habitus, and institutional recognition. His concept of habitus is central here: it reflects how individuals internalise their social conditions, shaping what they see as possible or permissible. This makes social capital a dynamic and powerful mechanism for inclusion—or exclusion—within schools. While cultural capital typically centres on privilege and symbolic assets (e.g. schools arranging museum or theatre visits)—which often benefits those already positioned advantageously—social capital spotlights *relational equity*: the trust, reciprocity, and networks enabling individuals to participate meaningfully in school communities. Research highlights its importance in education; for example, studies have shown that teacher social capital (based on trust and collaboration) significantly enhances professional development and instructional quality (Ekinci, 2012; Boonmann-Coppens et al., 2021). For students, relational social capital has been positively correlated with academic engagement and school belonging, particularly for those from marginalised backgrounds (Alcocer & Martínez, 2022).

This makes social capital a particularly effective lens for intersectional inclusion, as it brings to light the often-invisible relational barriers—such as exclusion from decision-making networks or lack of trust between students and teachers—that are missed by more structural or deficit-based models. By foregrounding relationships and institutional ties, social capital theory reveals how marginalised staff and students are excluded or disconnected, and how equitable access depends not only on cultural familiarity but also on visibility, trust, and belonging within school networks.

Social capital, broadly defined, refers to the resources embedded in social relationships that individuals can access and mobilise. However, its conceptualisation has varied across disciplines. Coleman (1988) emphasises its functional role in supporting educational

achievement through trust and shared norms. Putnam (2000) and Woolcock (2001) later expanded the framework to distinguish between bonding (within-group ties), bridging (across-group connections), and linking (relationships with power and institutions). More recently, critical scholars have challenged overly functionalist interpretations of social capital, arguing that it can also obscure structural inequalities or reinforce dominant norms (Field, 2003; Reay, 2004; Nunn, 2022). Skeggs (2004) critiques the tendency to treat social capital as a neutral resource, warning that such framings may reproduce symbolic violence by privileging certain relationships and norms over others. Schuller (2007) adds that social capital discourse has often been appropriated within policy to shift responsibility for inequality from institutions to individuals or communities, obscuring systemic causes.

This thesis builds on these insights by applying a critically framed social capital model to educational inclusion data. In doing so, it responds directly to Research Question 2, which investigates how insights into social capital and intersectionality can help schools develop innovative and intentional strategies for inclusion. By examining both staff and student experiences through the lenses of bonding, bridging, and linking capital, my aim is to surface hidden dynamics of marginalisation and belonging—often missed by traditional data tools.

Bonding Data: Understanding Homogeneous Communities and Building Trust

Bonding capital reflects the trust and solidarity within homogenous or closely-knit groups, often based on shared demographic identity such as ethnicity, disability, or socioeconomic status (Putnam, 2000). When considered in the context of self-identified underserved or marginalised groups, this data serves as a foundational tool for identifying the specific needs and characteristics of different communities. When applied to educational data, this category highlights the lived experiences of marginalised groups of staff or students who may experience exclusion due to lack of cultural fit, visibility, or recognition. For example, survey responses from self-identified neurodivergent students or staff with invisible disabilities can reveal patterns of exclusion not typically surfaced by standard SEND data.

Bonding data enables schools to understand how exclusion operates within peer, family, or identity-based networks—and to identify where relational supports (such as affinity groups or peer mentorship) may strengthen inclusion. This highlights the need for leaders to recognise internal diversity within marginalised communities, the importance of

understanding the lived experiences of students, staff, and families, particularly within marginalised or underserved groups, and co-design support with those affected.

Bridging Data: Assessing Intersectionality and Strengthening Cross-Group Connections

Bridging capital refers to relationships that span different social groups, enabling mutual understanding and shared norms across diversity lines (Woolcock, 2001). In educational settings, this includes interactions between students of different cultural backgrounds, staff-student trust, and inclusive leadership practices that connect groups across role, race, or gender. Bridging data, therefore, involves comparative analysis of intersectional experiences across groups—surfacing where disparities exist and where meaningful connections are lacking. As Crenshaw (1989) has argued, intersectionality is essential to understanding how multiple inequalities compound to shape lived realities. This insight enables school leaders to identify points of tension or disconnection and design interventions that intentionally foster bridging capital—such as how different identities overlap and influence both staff and students' access to support, resources, and opportunities such as inclusive curriculum reforms, equitable CPD offers, or rebalanced recruitment pipelines.

Linking Data: Connecting Communities to Institutions and Systems of Power

Linking capital focuses on the connections between individuals or communities *within the school and external systems of power, institutions, and networks*. This includes vertical relationships with formal institutions or authority structures—such as school leadership, local authorities, or policy frameworks (Woolcock, 2001). Linking data enables schools to evaluate how well marginalised groups are able to influence or access institutional power. This includes how inclusive practices are embedded (or not) in school governance, SEND implementation, training budgets, or curriculum decisions. For example, if student feedback mechanisms are tokenistic, or staff with protected characteristics are routinely excluded from SLT, then linking capital is weak. Conversely, when inclusive leadership training is co-developed with underserved staff, or when data informs structural change, linking capital is strengthened.

This analysis also supports system-level insight: scaled linking data can inform national trends, sectoral improvement, or external partnerships. However, it also requires caution. As

scholars like Reay (2004), Nunn (2022), and Schuller (2007) warn, linking capital can reproduce unequal power dynamics if not designed ethically. Thus, efforts must centre lived experience and psychological safety, ensuring that feedback and inclusion data do not become extractive or performative.

From Data to Systemic Change

Taken together, bonding, bridging, and linking data represent a critical social capital framework for understanding how inclusive leadership can be both relational and systemic. While traditional practices isolate metrics by group or outcome, this model encourages schools to see inclusion as dynamic, networked, and multi-layered.

Crucially, it also addresses critiques of EdTech, where dashboards can reduce complexity or reinforce deficit views (Carmi, 2021; Williamson, 2017). As Carmi and Yates (2020, p. 4) remind us, “digital and data literacy must be grounded in an ethical and social understanding of how platforms operate, how data are collected, and how power circulates online.” While digital platforms may offer scale and visibility, ethical design and participatory methodologies remain essential. This research therefore advocates for data for inclusion—an approach rooted in social capital, intersectionality, and systemic change. In advancing this model, the research contributes theoretically by integrating social capital with intersectional EDI practice in education. It argues that relational, voice-centred data can guide school leaders beyond performative inclusion toward culturally responsive, equity-focused environments where staff and students genuinely belong.

This model of social capital, when applied to educational data, moves us beyond a simplistic view of inclusion as compliance or diversity targets. It invites school leaders to engage with data ethically, relationally, and with a critical awareness of power. The following section explores how these ideas intersect with Critical Data Studies and the ethical use of EdTech, extending this lens into the tools and technologies shaping educational leadership today.

1.3 Data for Inclusion: Critical Data Studies and the Ethics of EdTech

Educational digital data systems have long shaped the ways in which students (and staff) are seen, supported, and ultimately valued within schools. Traditional approaches, often

reductionist and performative, rarely capture the complexity of lived experience, particularly for those at the intersections of marginalisation.

When we ask students, staff or parents about their experiences in school —whether they feel safe, who they can turn to for support, or whether they see themselves reflected in the curriculum and leadership —they become not just recipients of education, but active critics and co-creators of the education system (Cook-Sather, 2020). This process is vital for empowering marginalised students to influence how and what is taught. By giving these students ownership over their educational experience, we foster a sense of trust in the system and promote genuine inclusion for all. As Ainscoe, Booth, and Dyson (2006) emphasise, capturing the voices of marginalised students is essential to understanding their lived experiences. Engaging school leaders in understanding the broader educational ecosystem, and the importance of capturing authentic student voices, is key to fostering student agency and safe schools.

Leadership plays a pivotal role in this work. Increasingly, research underscores the importance of combining transformational and instructional leadership to achieve both academic excellence and equitable, inclusive practice. Leithwood et al. (2008) and Robinson et al. (2008) argue that leadership must be grounded in a moral purpose that transcends technical skill. When leadership practices are informed by a strong commitment to diversity, equity, and inclusion, it can fundamentally reshape the way schools approach data collection and support to underserved student groups.

Moral reasoning plays an essential role in this transformation. As Greer, Searby, and Thoma (2015) point out, moral reasoning in educational leadership is linked to prosocial behaviours, including critical reflection on practices and a deep respect to diversity. School leaders must recognise that moral purpose is integral to challenging the inequities embedded in traditional data systems and the way inclusion is measured and understood. By integrating transformational leadership with an instructional focus on student-centred outcomes, leaders can close gaps in data collection and move toward more comprehensive, intersectional approaches to inclusion.

School leaders must therefore look beyond traditional and narrow metrics and adopt data that truly reflects the intersections of identities and experiences of all students, particularly those from underserved backgrounds. When combined with transformational and

instructional leadership, this shift enables school leaders to drive the moral, ethical, and practical changes necessary to make inclusion a genuine priority. Aligning leadership with data that captures the full range of student experiences creates educational systems that are not only effective in terms of academic outcomes but also just, inclusive, and equitable. A clear focus on social justice is critical, starting with leadership's understanding of how vulnerable students experience school culture.

Increasingly, scholars and practitioners recognise the need for ethical, inclusive, and intersectional data practices that challenge this status quo. This section situates the need within the wider field of Critical Data Studies (CDS), examining how school leaders reframe their understanding of inclusion, leadership, and accountability. Drawing on digital education research, social justice theory, and practitioner insight, it argues school data must move beyond compliance to become a relational, humanising tool for systemic change.

EdTech Without Equity: A Policy and Practice Review

The development of educational technology (EdTech) in the UK has followed a trajectory shaped more by policy imperatives around performance, efficiency, and infrastructure than by concerns for equity, inclusion, or social justice. Since the 1990s, significant investment has been channelled into digitising classrooms, from the early expansion of ICT facilities to the widespread adoption of interactive whiteboards in the early 2000s. These efforts were largely driven by assumptions that technology would *fix education* — modernise pedagogy, close attainment gaps, and boost economic competitiveness. Yet, as Selwyn (2016) and Williamson (2017) argue, this instrumentalist view of EdTech often ignored the social contexts in which technology is implemented and failed to account for the uneven ways it is experienced by learners and educators alike.

With a backdrop of 'fast policy' (Peck & Theodore, 2015), educational policy was rapidly shaped by necessity rather than long-term planning. The policy framing of EdTech was crystallised in 2019 with the Department for Education's strategy *Realising the Potential of Technology in Education* (DfE, 2019). Under then Secretary of State Damien Hinds, the strategy promoted technology as a mechanism to "reduce teacher workload," "improve accessibility and inclusion," and "boost student outcomes." While it acknowledged inclusion as a goal, it did not meaningfully address the structural or intersectional barriers faced by marginalised learners. Absent was any discussion of how EdTech might capture student

voice, emotional wellbeing, or the relational dimensions of school life. The emphasis remained on performative metrics, with little consideration for ethical data use, risks of bias, or the potential to reinforce inequalities.

The COVID-19 pandemic rapidly accelerated the integration of EdTech into mainstream schooling. In March 2020, the UK government launched the EdTech Demonstrator Programme to support remote learning, with over 11,000 schools seeking out digital solutions during the first lockdown. Major technology providers such as Google and Microsoft 'gifting' free access to virtual learning platforms, establishing rapid infrastructure changes across school systems. Research suggests that structured and well-supported EdTech adoption can lead to improved engagement and learning outcomes (Selwyn, 2020). In other words, providing students with access to the same digital platforms, remote learning had the potential to level the playing field. However, while many students benefited from increased digital access, others—particularly those in socio-economically disadvantaged areas—struggled due to a lack of devices or reliable internet connections (UK Parliament POST, 2020). These disparities and digital divide disproportionately affected additional students, those from racially minoritised communities, and those with Special Educational Needs and Disabilities (SEND), illustrating how EdTech can widen rather than close equity gaps when not accompanied by inclusive design and equitable implementation.

As the South West Lead for the DfE EdTech Demonstrator Programme from 20 March 2020, I saw first-hand how schools adapted. Over 11,000 schools sought out online learning systems, rapidly transitioning from traditional Virtual Learning Networks (VLNs) to embracing large-scale platforms such as Microsoft 365 and Google Classroom. This transformation was not merely about technological adoption, but a reshaping of school-wide cultures. EdTech was no longer just a tool for digital enhancement, but a necessity for ensuring educational continuity, however it was context driven. The World Bank (2021) highlights that while technology played a crucial role in keeping learning active during school closures, it also underscored systemic inequities. Schools with well-established digital infrastructures transitioned more effectively than those that lacked prior investment in EdTech. While technology ensured continuity, outcomes depended heavily on prior digital investment. The crisis exposed the reality that technology alone does not guarantee educational equity; rather, it must be embedded within a strategic framework

that prioritises access, teacher training, and student engagement (Williamson, Eynon & Potter, 2020).

Post-pandemic policy shifts further embedded EdTech into the education system. The creation and expansion of the Oak National Academy positioned standardised, centrally developed online lessons as a core support for "excellent teaching." Yet critiques emerged around Oak's narrow curriculum focus, lack of contextual responsiveness, and insufficient attention to cultural representation or differentiated needs. While efficient in crisis, this centralisation risked marginalising learners whose experiences fell outside mainstream assumptions.

Although there are some similarities with other countries as explored with Peruzzo, Ball and Grimaldi (2022), the UK's unique mix of capital gain, political positioning, and grassroots enthusiasm shaped its EdTech moment. Many schools and multi-academy trusts then looked to workforce reform and scale alongside academisation, rather than the inequity of their staff and students' lived experiences or attitudes to education. Management Information Systems (MIS) increasingly integrated teaching, administrative, and performance data—but still prioritised results and attendance over lived experience.

The rise of cloud-based MIS warehouses meant schools and trusts were storing more data than ever, but within a narrow, traditional frame. Data collection largely served Department for Education requirements, ignoring intersectional demographics and lived experiences that could inform inclusion. The Office for National Statistics (ONS) has identified a "critical data gap" in representing underserved populations, including pregnant and maternity status, religion, and socio-economic background. The ONS Data Taskforce calls this the "digitally excluded population" and it includes pregnant and maternity, religion and socio-economic status which meant these all needed to be part of the study. They also note the fluidity of identity, underscoring the complexity of demographic data collection—issues central to this research.

From a policy perspective, EdTech can be used as a means to promote teacher collaboration, to reduce workload, and improve daily practice. During lockdown, such improvements were starting to be seen and adopted, particularly by trusts operating across multiple sites. In the corporate world, the post-lockdown focus shifted to attracting people

back to physical offices and reforming workplace culture. Technology companies developed tools to humanise data and support wellbeing—examples include WorkTripp, TerryBerry, GoJoe, and Culture Amp—some of which entered the education sector. For example, Flair Impact, originally an anti-racism EDI platform for business, now works with schools, though it lacks intersectional demographic data capture.

Some education-focused providers have adapted their approaches to align more closely with inclusion agendas. For example, Edurio pivoted from parent surveys to EDI, targeting multi-academy trusts as its primary customers, though its foundations in lived experience remain unclear. Flexible working—widely recognised as an equity issue in schools—has been supported through Timewise and Capita's DfE-backed consultancy, which focus primarily on staff recruitment and retention rather than student wellbeing. Platforms such as Teacher Tapp (staff pulse surveys) and Votes for Schools (student-centred engagement) demonstrate that both staff and students are willing to engage with EdTech when asked relevant, meaningful questions. However, neither collects dedicated and mapped student and student EDI insights. Collectively, these examples highlight that while schools will engage with EdTech when they perceive a clear purpose and value, many tools continue to separate staff and student feedback rather than integrating these perspectives into a unified, intersectional evidence base.

Well-being surveys, frequently used in schools to assess students' mental health and overall wellness, have been widely criticised for oversimplifying mental health and failing to capture intersectional, contextual realities. Standardised "tick-box" surveys, like those found in well-received frameworks such as the Anna Freud Centre's *Well-Being Measurement Framework for Schools* (Centre for Outcomes Research and Evaluation, 2017), predominantly measure broad well-being markers but rarely reflect into deeper, more meaningful insights about students' lived experiences. Furthermore, these surveys often do not account for the diversity of student backgrounds, including social, economic, and psychological factors, resulting in limited actionable insights.

Orth, Moosajee and Van Wyk (2022) conducted a systematic review of instruments used to measure adolescent mental wellness between 2000 and 2020, highlighting the persistent limitations of traditional tools in capturing the nuanced realities of young people's mental health. They note that many adolescent well-being measures remain one-size-fits-all, often

adapted from adult tools without co-design. This detachment from young people's lived realities has persisted for decades (Ravens-Sieberer et al., 2008; Granlund et al., 2021).

Digital well-being platforms integrated with school MIS often rely on narrow proxies such as Free School Meals (FSM), which Hobbs and Vignoles (2010) argue is an imperfect measure of socio-economic status. Safeguarding-focused EdTech tools, such as The Student Voice and The Safeguarding Company's suite, require identifiable data for child protection purposes. However, for interventions aiming to explore lived experiences, psychological safety must take precedence—ensuring staff and students can share openly without fear of repercussions, and placing their voices at the forefront of both data collection and reporting.

School Leadership Practice and Inclusive Data Ethics

When there is a lack of access, there is a lack of equity — and, ultimately, a lack of outcomes. In examining demographic data aligned with the Equality Act, and with a particular emphasis on EDI and inclusion, one critical gap became apparent. Intersectional questions were rarely asked — resulting in an absence of evidence to guide the closing of equity gaps or the recognition of positive, inclusive cultures. Existing EdTech solutions tended to focus narrowly on classroom teaching and teachers, thereby excluding the wider staff ecosystem from review. This omission neglects key actors in the school environment, including decision makers such as governors, and support staff who have daily contact with marginalised students and families. Roles such as office administrators, lunchtime supervisors, and site teams often interact with students during informal or 'unsupervised' times, spaces which can be critical to feelings of belonging or exclusion. Without their perspectives, the data collected offers only a partial view of the school's inclusion landscape.

Moreover, many existing tools address only a single element of an inclusion framework — for example, administering a survey, with or without headline results — and provide neither follow-up coaching for leaders, training for staff nor embedded capacity for sustained change, instead relying on external consultants to interpret and act on the findings. From a Critical Data Studies perspective, this reflects a structural limitation in both the design and deployment of educational technology, where data is collected but rarely connected to the systemic change it is intended to inform.

Recent developments in educational technology have reshaped the role of school leadership, positioning Senior Leadership Teams (SLTs) as key gatekeepers of digital adoption. They determine which tools are implemented, what data is prioritised, and how technology is embedded into everyday school practice. Yet SLTs are rarely equipped with comprehensive training in digital data and software ethics, inclusive design principles such as Universal Design for Learning (UDL), or equitable data analysis that incorporates intersectionality. Consequently, even well-intentioned leaders may select tools that inadvertently reinforce existing biases or fail to address the emotional and cultural dimensions of inclusion.

Procurement practices — particularly across large Multi-Academy Trusts — often prioritise platforms that align with data-mining and accountability frameworks over those designed to capture lived experience or foster student agency. Within schools, inclusion work has too often been characterised by isolated initiatives, compliance-focused audits, or fragmented interventions driven by external consultants. As outlined in Chapter 1.1, leadership for inclusion should be framed not as a series of discrete actions, but as an integrated moral and professional responsibility, embedded within the core values and practices of the school.

Coaching, particularly when designed to promote reflective and equity-informed practice, offers one route to enable this. Blandford (2019) suggests that inclusive leadership is nurtured through deliberate reflection and challenge, with coaching acting as a critical support mechanism. This resonates with Whitmore's GROW model (1992), which scaffolds conversations around Goal, Reality, Options, and Will. However, while coaching may reveal affective or relational dynamics (e.g., feelings of exclusion or marginalisation), these insights are rarely captured within whole-school data systems or improvement plans. The literature offers little guidance on how to integrate these dimensions into formal accountability frameworks.

Amir Mohammad et al. (2024) emphasise that coaching accelerates the process of change by helping leaders make quick yet thoughtful decisions in complex situations. This approach is particularly relevant in fostering inclusive environments, where rapid change must be balanced with ethical considerations of diversity and inclusion. As Greer, Searby, and Thoma (2015) note:

“Moral reasoning is not just an ethical capacity. Moral reasoning has been linked to prosocial behaviors in education, from critical reflection on practice and facilitative classroom management to student-centered teaching and respect for diversity” (p. 526).

This underscores the importance of integrating moral reasoning into school leadership. However, to ensure that these decisions promote not only technical success but also respect for diversity and inclusivity, school leaders need expert guidance, coaching, and support. It is through continuous, well-structured coaching that leaders can navigate the complexities of inclusion and create sustainable, equitable practices across their schools.

A key suggestion emerging from the literature is the possible use of educational technology (EdTech) to address some of the challenges faced by marginalised leaders and to promote a more inclusive, equitable system. By leveraging data-driven tools, EdTech could play a crucial role in providing anonymous feedback, monitoring progress on D&I initiatives, and offering safe spaces for dialogue. Through the use of e-learning, SaaS platforms might allow for real-time tracking of school cultures, engagement with staff, and the collection of feedback. By doing so, schools can make evidence-based decisions that reflect the true diversity of experiences within their communities. Furthermore, data for inclusion tools can help to provide ongoing professional development opportunities for school leaders, particularly in the area of D&I. Such tools can enable leaders to engage with relevant research, access tailored training modules, and track their personal progress in developing more inclusive practices. By equipping school leaders with the knowledge, skills, and data they need, schools can foster an environment that promotes inclusion not just at the student level, but throughout the entire school ecosystem. The use of data is particularly important because it allows school leaders to see the gaps in inclusion efforts and address them proactively. Schools should not just collect data on gender and ethnicity but should broaden the scope to include other dimensions of diversity, such as neurodiversity, disability status, and social class. This holistic approach to data collection ensures a deeper understanding of how different factors intersect and influence both students' and staff members' experiences.

Drawing on this model, I plan to develop an adapted digital coaching framework within my research to support school leaders to reflect on systemic barriers to inclusion in their own contexts. However, a key challenge quickly emerges: *how could the nuanced, affective digital data be surfaced through coaching—such as feelings of belonging, exclusion, or*

marginalisation—be meaningfully captured in code and integrated into whole-school evaluation? While leadership reports and school improvement plans offer strategic visibility, they rarely reflect the relational and intersectional dynamics that underpin genuine inclusion. The literature remains underdeveloped in offering guidance for school leaders seeking to integrate these relational dimensions into formal accountability or data systems.

This points to a broader issue: inclusion is not only about technical leadership or compliance with policy expectations. It is fundamentally about moral reasoning and ethical decision-making. Greer, Searby, and Thoma (2015) emphasise that moral reasoning in leadership is linked to prosocial behaviours, student-centred pedagogy, and respect for diversity. Similarly, Day (2017) argues that school leadership must engage with the ethical dimensions of social justice, moving beyond managerialism to consider the lived realities of students.

“Leadership in education must go beyond the technical aspects and engage with moral and ethical dimensions, particularly in addressing issues of diversity, inclusion, and social justice” (p. 32).

This statement aligns with the need for comprehensive coaching frameworks that go beyond just operational leadership, addressing the moral and ethical aspects that are central to driving inclusion. As school leaders face the complexities of ensuring equity and social justice, they require tailored support that challenges their thinking and decision-making processes to ensure that inclusion is not only a technical goal but a moral imperative. The need, then, is for data systems—and the EdTech platforms that increasingly support them—to reflect this ethical imperative, rather than reinforcing surface-level metrics.

The vast majority of UK schools today rely on Management Information Systems (MIS) and inspection frameworks that prioritise easily quantifiable student metrics: attendance, attainment, behaviour incidents, or exam results. These categories, while important, offer a partial and often distorted view of students' experiences—particularly for those who occupy multiple, intersecting sites of disadvantage. Data can illustrate an association, but this does not prove causation. As Gillborn et al. (2013) argue, statistical associations between underperformance and socio-economic background are frequently interpreted as causal, with blame directed at families or communities. These groups include those identified in the

system as having Special Educational Needs and Disabilities (SEND), from racially diverse communities (such as Black students, Gypsy, Roma, and Traveller students), and from under-resourced backgrounds (Gillborn et al., 2013). Such interpretations deflect responsibility away from schools and obscure the systemic nature of exclusion. We see this in the association by educators that when students from a low socioeconomic home underperform, or miss school, it is interpreted as a direct result of their communities or families. This is an assumption and leads to the other assumption, that the sole reason for this inequity is due to matters “outside of the school” (Gillborn, p.19).

Furthermore, much of the data currently collected in schools is siloed by single identity categories (e.g., SEND, ethnicity, pupil premium), failing to account for intersectionality. Crenshaw’s foundational work (1989) makes clear that systems of oppression do not operate in isolation but compound one another. Yet educational data systems often disaggregate students into static labels that cannot reflect how, for example, a neurodivergent Black girl from a low-income background might experience school differently than her peers. As Hall (1976) reminds us, absence from the data is itself a form of exclusion.

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Therefore, invisibility in the data system can result in students being excluded from crucial conversations about their needs and support, despite being at risk for underachievement and exclusion. As historical education research shows, specific demographic groups of children and young people (CYP) are disproportionately affected by policies and practices in schools every year. These groups include those identified in the system as having Special Educational Needs and Disabilities (SEND), from racially diverse communities (such as Black students, Gypsy, Roma, and Traveller students), and from under-resourced backgrounds

(Gillborn et al., 2013). Data-driven tools *are* used to make decisions about underserved students, whose identities may not fit neatly into existing data structures. Without systems that can account for these human and nuanced experiences, schools risk reproducing the very inequities they aim to address.

This data invisibility is compounded by what Van Dijck (2014) terms “dataism”—the uncritical belief that data is objective, apolitical, and capable of fully capturing reality. Such assumptions overlook the value-laden processes through which data is collected, categorised, and interpreted. Eubanks (2018) describes how automated systems often “launder bias,” embedding discrimination within the guise of neutrality. Data for inclusion cannot simply be about ticking boxes for categories like SEND or race as Rabiger argues (2024), it must capture the multifaceted nature of students’ lived experiences and how various factors intersect to influence their educational journeys. This represents a paradigm shift that is urgently needed.

While there has been growing attention to equality, diversity, and inclusion (EDI) in education, the methods for measuring and evidencing inclusive practice remain limited. Following the murder of George Floyd and the resurgence of the Black Lives Matter movement, many schools adopted anti-racism statements and began exploring their cultures through surveys and training. Yet these initiatives often relied on pre-packaged tools, imported from corporate contexts, which failed to capture the intersectional experiences of students and staff. For instance, while platforms such as Edurio and Flair have adapted EDI surveys for education, they tend to focus on staff perspectives or broad categories like race and gender, leaving out dimensions such as neurodiversity, disability, or socio-economic background. This reinforces the importance of intersectionality as a foundational concept for understanding how intersecting identities shape inclusion in education.. A closer examination of how schools pursue improvement pathways in their vision and values reveals a predominant reliance on leaders who have lived experience or external consultants (as Section 1.1 explores), rather than adopting a data-driven or research-led approach.

Inclusive and equity-based sentiment data typically and historically show how poorly vulnerable students are doing when it comes to performative outcomes when we look at national data sets. As Pritchard-Rowe and Gibson (2024) note, the deficit positioning of

students as 'outsiders' rather than 'insiders' —particularly those deemed 'vulnerable'—persists in both policy and practice. Terms such as 'disorder', 'symptoms', or even 'disadvantaged' can medicalise or pathologise students rather than recognising their strengths or contextual challenges. Consequently, the data landscape often documents exclusion, without offering meaningful insight into how to address it. This challenge extends to student voice and well-being frameworks. Surveys such as the Anna Freud Centre's Wellbeing Measurement Framework (2017) and other standardised tools often rely on generic indicators that fail to reflect the diversity of student experience. Orth, Moosajee, and Van Wyk (2022) critique these instruments for adapting adult mental health models without meaningful co-design with young people, resulting in reductive, one-size-fits-all approaches. Participatory design, as advocated by Campano et al. (2015), offers an alternative: frameworks that are shaped with, not just for, the communities they aim to serve.

Alongside these policy and leadership shifts, and the expansion of cloud-based Management Information Systems (MIS) and digital data warehouses has changed how schools collect and analyse information. These systems are often optimised for compliance with Department for Education data returns, focusing on attendance, attainment, behaviour, and headline demographic indicators (e.g., FSM, SEND, gender). Yet they remain structurally unable to surface the complex intersections of identity, power, and marginalisation that underpin many students' experiences. As Van Dijck (2014) and Eubanks (2018) argue, the logic of datafication often reduces human experience to what can be easily measured—excluding precisely those elements that matter most for inclusion.

The growing use of artificial intelligence (AI) in these systems—such as predictive analytics for attendance or behaviour—is accelerating the automation of decision-making in schools. While such tools promise efficiency, they risk reinforcing bias and excluding context-specific knowledge, particularly when used without transparency, ethical oversight, or meaningful input from those affected. As D'Ignazio and Klein (2023) argue, data systems driven by AI must be scrutinised not only for what they measure, but for who defines success—and who is left out. These critiques align with broader concerns from Critical Data Studies and digital sociology, which warn of "data colonialism"—the appropriation of human experience as a raw resource for extraction and commodification (Couldry and Mejias, 2019; Guyan, 2022).

In the context of growing interest in AI and machine learning within education, reclaiming the purpose and ethics of data becomes even more urgent. As schools increasingly adopt AI-driven tools, this research highlights the importance of centring human voice, agency, and relational accountability in how these technologies are developed and deployed. Against this backdrop, this thesis positions data for inclusion not as a neutral reporting mechanism, but as a deliberate act of resistance—reclaiming data as a tool for relational, humanised, and systemic transformation in education.

Critical Data Studies scholars have charted two dominant reactions to the rise of data and AI in education. On one hand, *techno-solutionism* embraces analytics and algorithmic interventions as panaceas for systemic challenges, often overlooking questions of power, bias, and context (Williamson, 2017; Van Dijck, 2014). On the other, *techno-abandonment* rejects any data-driven approach on ethical grounds, fearing extractivism and surveillance (Eubanks, 2018; Selwyn, 2016). This binary obscures a middle path that neither naïvely deploys nor wholly rejects digital tools. This contribution proposes a “slow-creep” model of humanised data practice, grounded in:

- **Ethical stewardship**, in which all data are collected with participant consent and interpreted through an equity lens;
- **Cultural responsiveness**, ensuring dashboards and survey instruments reflect local identities, languages, and accessibility needs; and
- **Participatory leadership**, where users co-design indicators, manually review outputs, and retain ultimate control over action plans.

Data for inclusion needs to embody this third way by embedding lived-experience expertise at every stage—from survey co-design with those with lived experiences to researcher-guided dashboard interpretation—thereby harnessing EdTech to amplify rather than flatten marginalised voices. Few schools currently have access to tools that explore student and staff experiences of belonging, safety, representation, or psychological wellbeing in a genuinely intersectional way. While there has been growth in EdTech platforms focused on wellbeing or staff surveys (e.g., Votes for Schools, Teacher Tapp, Edurio), these are typically limited in scope, lack sustained intersectional insight, and often

treat data collection as a one-off event rather than an ongoing, participatory dialogue. Furthermore, many tools position staff and students as passive respondents rather than co-constructors of the data that shapes their educational environments. This perpetuates what D'Ignazio and Klein (2023) describe as the "power imbalance" in conventional data systems: those most affected by inequity are rarely invited to define what inclusion means, how it is measured, or how it should be improved.

This absence of intersectional, co-constructed data in mainstream educational tools represents a significant gap in both practice and research. While scholarship on diversity, equity, and inclusion in education has expanded, much of it remains disconnected from the technical design and governance of the data systems used in schools. Similarly, the EdTech literature often centres on innovation, adoption, and market growth, rather than critically examining how tools can be adapted to surface nuanced experiences of marginalisation and belonging. This disconnect between what school leaders need and what digital tools deliver highlights the need not only for new metrics, but for a reimagining of data collection, interpretation, and action—grounded in ethical participatory methodologies and informed by critical perspectives on power, bias, and representation.

While much of the educational technology literature frames innovation as an inherently positive force, it rarely interrogates the underlying epistemologies, values, and power relations embedded within these tools (Selwyn, 2016; Williamson, 2017). In many cases, EdTech is presented as neutral infrastructure, when in practice its design choices—what is measured, what is ignored, and how outputs are framed—reflect the priorities of developers, policymakers, and commercial stakeholders rather than those of school communities. This absence of critical scrutiny can result in the reproduction of inequities under the guise of progress. By positioning data for inclusion within a CDS framework, this research seeks to disrupt these assumptions and offer an alternative model where digital tools are not simply "adopted" but actively shaped by those who use them. Such an approach foregrounds lived experience, equity-driven metrics, and context-sensitive interpretation, moving beyond the binary of technological optimism and scepticism. In doing so, it provides a conceptual and practical foundation for reimagining the role of EdTech in closing D&I gaps—shifting from a compliance-led logic to one of intentional inclusion.

EdTech is often positioned as a neutral or even progressive force within education—offering tools for personalised learning, accessibility, or workload reduction. Yet critical scholars have warned against this technological determinism. Selwyn (2016) argues that much of the EdTech sector rests on assumptions rather than evidence, while Williamson (2017, 2019) explores how data infrastructures in education shape not just practice but ideology. Benjamin (2019), writing from a data justice perspective, reminds us that technologies reflect the values of the societies that create them—and can reinforce exclusion unless intentionally designed otherwise. Carmi et al. (2022) extend this critique by demonstrating how algorithmic systems in education actively configure identities and practices, often amplifying existing inequalities. Their call for data literacy among educators highlights the risks of uncritical adoption and the need for participatory approaches that resist exclusionary logics. Taken together, these perspectives underline the importance of positioning EdTech not as a neutral intervention but as a contested site where equity, ethics, and power must be made explicit.

In practice, the educational technology market remains fragmented and under-regulated. Platforms that capture student data—whether for safeguarding, well-being, or performance—often operate with limited transparency, raising ethical concerns around consent, surveillance, and datafication. The rise of AI-powered tools further compounds this, with algorithmic decision-making increasingly influencing everything from lesson planning to behaviour monitoring. As Carmi et al. (2022) show, these systems risk amplifying existing inequalities unless checked by robust ethical frameworks and *network of (data) literacy* among educators. These debates point towards the growing call for a more humanised, justice-oriented approach to educational data,

Datification in schools is therefore not a neutral process but a contested terrain of power. EdTech and data for inclusion are increasingly linked to high quality professional development, research and evidence based pedagogy being centralised for scale. Interestingly, the UK's Digital Futures Commission (2023) published a blueprint that focused two of the three baseline standards on data — “data in the best interests of the child” and “developing trusted data infrastructures.” These emphasise both the promise and fragility of educational data practices. At the same time, the humanising of data is increasingly called for, particularly in relation to capturing the perspectives of the most vulnerable and marginalised in education. Sriprakash et al. (2024) argue that socio-digital opportunities must

be framed through the multiple lenses of “reparations, sovereignty, care, and democratisation.” Such approaches challenge the dominant positioning of EdTech as simply steering educational priorities through a “promissory” vision of the future.

The current convergence of AI and datafication amplifies these dynamics. On one hand, these technologies carry the potential to capture intersectional lived experiences of the equitable learning gap, provide personalised feedback to improve engagement, and support the design of curriculum content that meets students where they are. If aligned with inclusive values, such developments could foster improved attendance, positive behaviour, stronger relationships, and more intentionally inclusive cultures. On the other hand, without robust ethical frameworks and explicit commitments to justice, these same technologies risk entrenching existing inequities. It is within this tension that this study intervenes. This research builds on the concept of what Sriprakash et al. (2024) term a “socio-digital opportunity space,” where the ethical use of data must centre care, justice, and democratic participation. While EdTech has the potential to support inclusive practice, it can only do so when co-constructed with the users it serves—especially those whose experiences have historically been excluded from data systems. The intersection of digital tools and critical inclusion offers an opportunity not just to gather more data, but to gather it differently. This thesis responds by exploring how educational data can be reimaged in ways that humanise the process, foreground marginalised voices, and position inclusion as an intentional and participatory practice.

Data for Inclusion: Placing Equity at the Centre

Despite widespread adoption of digital tools in education—particularly during the pandemic—most EdTech solutions remain limited in their ability to meaningfully address diversity, equity, and inclusion (DEI). While platforms have evolved to capture a range of feedback, they often fail to support intersectional insights or co-produced data. In part, this is due to their design logic: they are frequently built to serve performance metrics, accountability systems, or user convenience, rather than to centre lived experience, social justice, or ethical leadership. Crucially, most EdTech survey tools do not allow for nuanced exploration of how identities intersect, nor do they invite students, staff, or families to articulate experiences that fall outside predefined demographic categories. For example, while some school surveys may include categories such as gender or ethnicity, they often

omit key dimensions like neurodivergence, caregiving responsibilities, religion, or socio-economic status. Moreover, the framing of data collection instruments often reflects dominant cultural and institutional norms, offering little space for participants to articulate their own definitions of inclusion or marginalisation.

This concern aligns with a central critique in *Data Feminism*, where D'Ignazio and Klein (2023) warn that “if we only collect what we already know how to count, we will never learn what we need to know.” In other words, restrictive categories and pre-set response options risk reproducing existing biases and epistemic exclusions, particularly for those at the intersections of multiple marginalised identities. Guyan (2022) expands this conversation by introducing the concept of *Queer Data*, which interrogates how data practices have historically rendered LGBTQ+ individuals invisible or misrepresented within institutional datasets. His work argues for a more expansive, justice-oriented approach to data that recognises non-normative identities and the structural inequalities they face.

Building on these critiques, this thesis introduces the concept of the *Intersectional Data Gap* to describe how overlapping forms of marginalisation remain unrecognised in conventional educational datasets. Whereas Perez (2019, p. xi) highlights the “gender data gap” and Guyan (2022) identifies the invisibility of queer data, the *intersectional data gap* foregrounds how multiple identities are simultaneously erased when systems rely on reductive categories. Integrating this perspective into educational data collection challenges default assumptions and reinforces the case for intersectional and intentional methodologies. A multi-dimensional and fluid framework advances this position by centring hidden voices and allowing for non-binary and fluid identity markers to be self-defined, rather than imposed.

This recognition of what is absent from current datasets also connects directly to broader critiques of EdTech's underlying logics, where questions of whose knowledge counts—and whose voices are excluded—shape how data is mobilised in practice. Building on this critique of data design and inclusion, recent scholarship has also questioned the structural and ideological forces behind how educational data is mobilised. Davies, Eynon and Salveson (2021) argue that AI in education is often mobilised not for pedagogical equity, but as a tool of symbolic capital within elite policy and commercial fields, shaping EdTech agendas in ways that often reinforce existing social hierarchies. Their Bourdieusean analysis foregrounds the structural conditions and vested interests that underpin much of the

so-called innovation in education—a concern mirrored in this thesis's call for more inclusive, co-produced, and intersectionally informed data systems. This concern is also mirrored in critiques of EdTech's underlying infrastructures. Gray, Gerlitz, and Bounegru (2018) highlight the need for “data infrastructure literacy” to uncover the often-invisible systems that govern how data is collected, interpreted, and used in schools. These perspectives strengthen the case for intersectional, justice-driven alternatives to current EdTech practices—such as the ‘data for inclusion’ framework developed later in this thesis.

Even those EdTech providers who have pivoted toward DEI—for instance, by adapting staff voice tools to include EDI statements—often focus on compliance or reputation management, not transformation. These systems rarely enable school leaders to act on feedback in real time or to track change across multiple identity categories and roles. Critically, few offer tailored insights for decision-makers across different levels of school communities (e.g., teaching staff, leadership teams, governors, support staff, students). The result is a fragmented and depersonalised approach to inclusion data that struggles to inform meaningful intervention. In contrast, the concept of *data for inclusion*—as developed in this thesis—prioritises the ethical gathering of lived experience data across diverse identities and roles. Rather than viewing inclusion through a single lens (such as protected characteristics or attendance figures), this approach seeks to illuminate the invisible: the emotional, relational, and cultural dynamics that shape whether individuals feel they belong. Importantly, it recognises that belonging and inclusion are not static conditions but fluid, context-dependent states that must be understood longitudinally and intersectionally.

What becomes evident across the literature is a persistent tension: schools are under increasing pressure to demonstrate inclusive practices, yet lack the tools, training, and data systems to capture the complexity of lived experience. Intersectional disadvantage—particularly among students who experience multiple forms of marginalisation—remains poorly represented in school improvement plans, inspection frameworks, and EdTech reporting dashboards. While national strategies, such as the Department for Education's (2019) *Realising the Potential of Technology in Education*, have emphasised EdTech's promise for accessibility, they have not adequately addressed the ethical, cultural, or relational dimensions of how inclusion is defined and enacted.

The growing field of critical data studies offers important theoretical tools to interrogate this gap. Scholars such as Williamson (2017), Selwyn (2019), and Eubanks (2018) challenge the assumption that data is neutral or universally beneficial. Instead, they argue that educational data systems are deeply embedded in power relations—shaped by commercial interests, state priorities, and algorithmic logic. This raises pressing questions for school leaders: What kinds of data are valued, and why? Who is excluded from data collection—and with what consequences? How might data systems be reimaged to support ethical, inclusive, and participatory leadership? These questions are particularly urgent in a climate of growing datafication and automation. The shift toward AI-driven analysis, predictive risk modelling, and behavioural analytics has the potential to reproduce existing inequalities at scale (Benjamin, 2019; Noble, 2018). For example, platforms that use machine learning to identify students “at risk” may rely on historically biased data, failing to recognise the cultural, familial, or psychological factors that contribute to student behaviour. Likewise, staff performance dashboards—often used to evaluate teaching quality—may not account for structural factors affecting job satisfaction, well-being, or progression for marginalised groups. This contribution proposes a different approach: data for inclusion. It builds on a revised model of social capital that centres relational trust, visibility, and the ethical exchange of voice in inclusive leadership. This emerging model is rooted in:

- Ethical leadership;
- Intersectional analysis;
- Participatory design; and
- System-wide applicability.

Rather than reducing lived experience to static metrics, it centres relational trust, visibility, and cultural nuance. It asks: Who is not being seen? What stories remain untold? How can school leaders use data not only to monitor, but to transform? This study advances the field by introducing a data for inclusion framework that integrates ethical leadership, intersectional analysis, participatory design, and system-wide use—addressing a gap in academic literature and current EdTech practice. Despite growing investment, schools remain constrained by narrow, compliance-oriented infrastructures. A persistent tension exists between the policy imperative to evidence inclusion and the lack of tools to do so meaningfully. CDS offers leaders a lens to interrogate what data is collected, why, and for whom. In a landscape shaped by algorithmic decision-making and AI, this lens is not

optional—it is essential if schools are to resist data fundamentalism, avoid reductive identity categories, and design more equitable forms of evidence. Against this, and linked directly to Research Question 3—In what ways could data for inclusion enable schools to explore new opportunities for intersectionality and advancing D&I practices?—this thesis examines how ethically designed, participatory, and context-responsive data systems can act as catalysts for inclusion. The research combines a literature review on leadership and data for inclusion with analysis of EdTech in organisational and scaled change, supported by pilot studies of a digital D&I platform with school leaders. Findings are evaluated to determine outcomes and the effectiveness of such interventions in driving improvement. Chapter 2 details how the framework was co-constructed, tested, and refined in partnership with schools, offering a practice-based alternative to performative inclusion models. In an age of algorithmic accountability, inclusion must not simply be datafied—it must be redefined.

Chapter 2: Methodology & Ethics

2.1 Transitioning from Literature Review to Methodological Framework

The originality of this contribution lies in integrating school leadership, social capital, and data for inclusion into a single, intersectional framework—bridging academic theory, practitioner insight, and ethical EdTech to surface hidden voices and enable intentional inclusion at scale. This section marks the transition from the literature review to the research methodology, where I outline the approach I will adopt to explore how educational technology (EdTech) can enhance diversity and inclusion (D&I) practices within schools in a multiple intervention study. Drawing on insights from the literature review, which highlight the challenges with measuring diversity and inclusion metrics in education and the significant potential of EdTech in fostering inclusive learning environments, this section sets out the research design, data collection methods, and analysis strategies that will be employed to address the research questions. By bridging the theoretical foundations with practical application, I aim to provide a clear framework for investigating how data for inclusion can support the development of intersectional and inclusive practices that contribute to positive change within educational settings, driven by school leaders. This section serves as a critical step in moving from a conceptual understanding of D&I in education to a methodologically rigorous examination of how these ideas can be operationalised through technology.

Objective 1: To explore how school leaders address and close Diversity and Inclusion (D&I) gaps for staff and students. Linked to RQ1: How are school leaders closing D&I gaps for staff and students?

My literature review directly informs this question by providing insight into the challenges faced by school leaders in tackling D&I gaps. Specifically, the literature points to the complexity of addressing systemic inequalities in educational settings, as discussed in studies by Khalifa et al. (2016) and Riehl (2000). These studies highlight the struggle of school leaders to create and implement effective D&I strategies in environments where the overall culture may be resistant to change. Additionally, the literature emphasises the critical role of leadership in setting clear goals and fostering an inclusive culture that promotes

diversity. However, my review also reveals that a consultancy approach may create more barriers than opportunities (Figure 2 and 3) and that many schools lack clear frameworks for measuring the success of these efforts, making it difficult for school and trust leaders to assess progress or identify areas for improvement.

A multiple intervention approach, supported by an EdTech platform, was used for this study, referred to as the "data for inclusion" tool. This platform was developed through co-design with educators and experts within the Global Equality Collective (GEC), a practitioner-led, not-for-profit community of educational leaders, academics, and inclusion specialists. The interventions were delivered with partial funding from innovation and inclusion grants, alongside the platform's earlier development funding from angel investment (2020) and a community crowdfunding campaign (2021), supplemented by in-kind contributions from participating schools and partner organisations. Recruitment spanned both UK and international contexts through open calls and professional networks to ensure diversity across socio-economic, geographic, and demographic settings. The platform is not backed by a large technology corporation. This ensures that school data remains local. The platform is GDPR compliant and supported by a small internal team providing regular updates, troubleshooting, and ethical stewardship. Its affordances include anonymous surveys, intersectional data dashboards to surface lived experience across staff and student groups and offer support to leaders.

The platform's MVP (Minimum Viable Product) was developed in collaboration with researchers from the University of Surrey, University of Kent, and UCL, with my unique contribution centred on developing the co-design methodology, curating the inclusion metrics, and embedding practitioner voice throughout. This collaborative process ensured the platform responded to real-world leadership needs while aligning with the intersectional ethics underpinning this study.

The use of the platform across interventions supports the ethical aim of co-constructing insights rather than extracting data. Co-construction was achieved through an iterative cycle: participants (school leaders, staff, and students) completed surveys, commented through anonymous narrative boxes, and were then invited into feedback loops—such as focus groups or follow-up interviews—where findings were reflected back for critique and

refinement. Leaders also reviewed summary insights, challenged interpretations, and co-developed improvement priorities through facilitated workshops.

A multiple intervention strategy emerged as the most effective approach during the pilot phases because it allowed for layering of insights, deeper trust-building with participants, and responsive design based on school needs. Each intervention built upon the last, increasing engagement and validity. The triangulation across surveys, interviews, and focus groups was essential: while the survey provided measurable trends, interviews allowed leaders to articulate context and intention, and focus groups enabled collective sense-making. These combined methods offered the most comprehensive view of inclusion efforts in schools and revealed both alignment and disparity between stated policies and lived realities.

Regarding the secondary review of literature for Intervention 1, it focused specifically on evaluating recent practitioner-facing frameworks and policy documents from 2019–2024 to supplement the academic review already provided in Chapter 1. This was necessary because of the rapidly evolving nature of inclusion policy, especially post-pandemic, and ensured that the instruments used in this research (e.g. survey questions) were aligned with current sector expectations and terminology. These texts also helped frame key questions and categories for the mixed-methods data collection, ensuring both rigour and relevance.

Data Collection: This research employs a mixed-methods approach, integrating both qualitative and quantitative data collection to provide a comprehensive understanding of how school leaders respond to the challenges of Diversity and Inclusion (D&I) in education. The combination of these methods ensures both depth and breadth in capturing the complexities of leadership decision-making, implementation challenges, and long-term impact.

Quantitative survey data (collected through the data for inclusion platform) identifies broad patterns, such as gaps in inclusion experiences between demographic groups or variations across schools. Narrative comments allow participants to contextualise those patterns, providing insight into root causes. Interviews with school leaders explore strategic priorities and perceived barriers, while focus groups with staff and students offer collaborative insight into which interventions feel effective and why. All data was anonymised and securely stored in accordance with data ethics protocols. These multiple methods were chosen to

maximise triangulation, ensure accessibility for participants with different communication preferences, and enable reflexive iteration over time.

Analysis: In my analysis, I will cross-reference the challenges and solutions discussed in the literature with the perspectives gathered from school leaders. For instance, the literature suggests that effective leadership in D&I requires both expertise in equity and lived experience. The interview data will help me determine if and how far leaders feel equipped to address D&I gaps in their schools and what resources or support they need. The contrast between the literature's theoretical EdTech framework and the real-world practices of school leaders will help identify gaps between research and practice, offering insights into how these challenges might be better addressed.

Theoretical Perspectives: The theoretical perspectives on exclusion and systemic inequality in my literature review provide a lens through which to analyse the strategies of school and trust leaders. For example, the concept of unintentional exclusion discussed in the literature is key to understanding how school leaders may unintentionally perpetuate D&I gaps despite their best efforts. By applying these theories to my data, I can assess whether leaders are aware of these systemic issues and how they are working to overcome them. This will be achieved by asking them both anonymously and then as a group to better understand how to frame the context.

The insights gained from this research aim to inform a more holistic and systemic approach to inclusion, one that moves beyond tokenistic gestures and addresses the root causes of exclusion through leadership, voice, and actionable data. This chapter sets the methodological groundwork for doing so, positioning the research as a contribution not only to academic debate but to the lived realities of practice.

Objective 2: To investigate how insights into social capital and intersectionality, alongside attitudes and values towards D&I, can inform school improvement strategies.

Linked to RQ2: How can insights into social capital and intersectionality, along with attitudes and values towards D&I, help schools explore innovative pathways for intentional inclusion and improvement?

In my literature review, particularly Section 1.1, I examined who holds decision-making power in schools and how this influences the shaping of D&I strategies. This analysis highlighted

that while school leaders can drive change, their ability to do so is often shaped by their access to social capital and how their own identities intersect with systemic structures of power. Research from Miller and Callender (2018) underscores that marginalised leaders often face exclusionary barriers even when they possess the expertise to lead D&I work effectively. Similarly, intersectional theory challenges the reduction of identity to single categories, urging a more complex understanding of how race, gender, class, disability, and sexuality combine to shape experience (Crenshaw, 1991).

To explore this, my research adopts a framework of social capital operating at three levels: bonding, bridging, and linking (Putnam, 2000). Bonding social capital reflects intra-group connections (e.g. between SEND pupils or BAME staff networks); bridging refers to cross-group alliances (e.g. staff-pupil collaboration across differences); and linking involves institutional partnerships and access to external resources and decision-making structures. Understanding how these forms of capital are nurtured—or blocked—within schools provides insight into where innovation and inclusion can occur. In this study, these principles underpin the development of an intersectionally aware, social capital-informed framework that operationalises intentional inclusion. This framework - referred to throughout this thesis as the *data for inclusion framework* - functions as both a diagnostic and developmental tool. It enables schools to identify strengths and gaps across bonding, bridging, and linking capital, and to target interventions that address inequities and strengthen inclusion.

The GEC Circle played a key methodological role in this study, providing an expert intersectional lens across design, data construction, and analysis. This collective, which I convened and facilitated, included educational professionals, researchers, and practitioners from diverse backgrounds and roles. Their input reflected a co-design ethos rooted in participatory research methods (Bozalek et al., 2013), aligned with an autoethical approach that accounted for my positionality and mitigated researcher bias (Campano et al., 2015). The Circle served as both sounding board and critical friend—reviewing survey instruments, framing the professional learning resources, and ensuring alignment with ethical and inclusive practice.

Their involvement also exemplifies social capital in action. As linking capital, they enabled access to schools, provided validation of frameworks, and connected the research to policy and practice networks. As bridging capital, they fostered cross-sector dialogue and shared

learning. Their continuous role across design, piloting, and refinement of tools ensured practical relevance and reflective integrity.

This methodological strand also investigates the extent to which schools use EdTech tools—specifically data for inclusion—to interrogate and improve their own D&I practices. Literature from 2019–2024 shows that inclusion policy has evolved rapidly, often outpacing implementation. Many D&I efforts are siloed or superficial, lacking coherence or sustainability. To address this, my framework draws on data for inclusion principles (developed in response to Ch.1), bringing together quant and qual insights, intersectional analysis, and feedback mechanisms that allow all voices to inform decision-making.

Data collection tools were shaped by this theoretical grounding. Surveys asked about attitudes to inclusion, values, and lived experience; interviews explored how leaders and staff apply or struggle with inclusive principles; and focus groups enabled collaborative insight, especially on what 'good' looks like. These instruments were triangulated to map how social capital operates within and across schools, and how intersectionality is—or isn't—accounted for in school improvement plans.

In analysis, I apply an intersectional social capital lens to explore relationships between identity, influence, and improvement. For example, when leaders from marginalised backgrounds described isolation despite official D&I policies, this pointed to a failure of bonding capital. When CPD or curriculum review processes failed to include minoritised staff or pupils, bridging capital was limited. When external partnerships drove inclusion forward, it indicated strong linking capital. These insights inform the digital inclusion framework I propose.

This digital framework operationalises intentional inclusion. It aims to help schools build sustainable cultures by reinforcing positive patterns of bonding, bridging, and linking capital, and surfacing gaps where these are missing. It draws directly from the methodological cycle of co-construction, feedback, and refinement used throughout this study, making it a product of both theory and lived practice. Therefore, this section outlines how a social capital-informed, intersectionally aware methodology allows this contribution to move from analysing D&I values and intentions to identifying structures and strategies that promote genuine systemic change.

Objective 3: To examine the potential of data for inclusion in creating new opportunities for schools to address intersectionality and enhance D&I practices.

Linked to RQ3: In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices?

This objective interrogates how EdTech can be used not only to support Diversity and Inclusion (D&I) practices in schools, but also how it must be reimagined through a critical and ethical lens to avoid reinforcing exclusionary systems. As explored in Section 1.3 of the literature review, the field of Critical Data Studies (CDS) warns against the uncritical adoption of digital tools in education. Scholars such as Boyd and Crawford (2012), Williamson (2017), and Selwyn et al. (2021) argue that the growing datafication of education risks reducing learners and staff to decontextualised metrics, stripping away complexity and exacerbating existing inequalities. This study positions itself in direct response to such concerns, investigating whether it is possible to humanise EdTech by embedding intersectionality, lived experience, and social justice into its design and implementation. In response to these critiques, this research adopts a multiple intervention strategy using a bespoke EdTech tool—referred to as the "data for inclusion" platform—co-designed with practitioners, researchers, and inclusion experts. It is independently funded through educational licensing and deliberately structured to protect data privacy, avoid monetisation, and enable contextualised, intersectional insight. This ensures that the digital tools used in the study align with ethical research principles and do not reinforce surveillance or performative inclusion.

Data Collection: This objective is addressed through a practical deployment of the platform across diverse school contexts, gathering both quantitative and qualitative data from school leaders, staff, and students. The interventions involved anonymous surveys, qualitative narrative boxes, and collaborative feedback loops including focus groups and workshops. Informed consent and opt-in participation were central to the process, with multiple opportunities for participants to review, challenge, and co-develop the findings.

The data generated included insights into platform usability, impact on school improvement, and whether schools were able to identify and respond to intersectional needs more effectively using EdTech. Importantly, the participatory design of the tool allowed staff and

students to frame their own narratives, breaking away from traditional deficit-based data approaches.

Analysis: The data analysis for this objective focused on triangulating digital platform data with participant feedback and observational notes from the intervention workshops. Through this, the research examined how the EdTech tool supported inclusive practices and whether it enabled schools to translate intersectional insight into action. The analysis also interrogated limitations, including where data visualisations or tools may have fallen short in surfacing nuanced identity factors or in prompting meaningful change.

Theoretical Perspectives: The research draws from Critical Data Studies (CDS) to problematise the increasing use of EdTech in schools and to frame data as a socio-political artefact. This approach challenges dominant narratives around data neutrality and instead treats data as relational, contextual, and power-laden. By situating intersectionality within this framework, the research prioritises ethical, justice-oriented approaches to digital innovation in education. The concept of "small data" (Manolev et al., 2019) is also important here, advocating for locally governed, human-centred data use that resists algorithmic generalisation and maintains reflexivity throughout the school improvement process. By applying this critical lens, the research offers an alternative vision of EdTech—one that can centre equity, enable staff and student agency, and promote systemic change through ethical and intentional design.

Key Opportunities Emerged:

- **Reclaiming Voice in Data:** The platform allowed staff and students to express experiences beyond performance metrics, reclaiming narrative space often lost in standardised data cycles.
- **Interrupting the One-Size-Fits-All Model:** By surfacing intersectional insights, the platform disrupted homogenised interpretations of inclusion (e.g. 'FSM' or 'SEND' categories), enabling more nuanced strategies.
- **Ethical Decision-Making:** Leaders could make real-time, community-informed decisions without outsourcing authority to opaque algorithms.

- **Trust-Building Through Transparency:** The cyclical, opt-in nature of the interventions built trust, crucial for surfacing authentic insight on sensitive topics such as race, gender identity, and discrimination.

The research undertaken contributes to the evolving field of ethical EdTech by offering a model for intentional, reflexive data practices in schools. Through a CDS-informed design and analysis, the research demonstrates that digital tools—when shaped by participatory ethics and social capital—can support schools in addressing intersectionality, not just documenting it. The research challenges dominant paradigms of data in education and offers an alternative route forward: one where inclusion is not a checkbox but a co-constructed, lived process embedded in how schools collect, interpret, and act on information.

2.2 Research Design

A critical element of any research design is an understanding of the underlying ontological and epistemological assumptions that shape the study (Crotty, 1998). These philosophical considerations underpin the research questions, methodology, and the ways in which knowledge is constructed and interpreted throughout the study. In this thesis, both the ontological and epistemological positions align with critical realism and participatory interpretivism, reflecting the need to surface hidden inclusion gaps in schools through dialogue and co-created knowledge with staff and students.

Ontology concerns the nature of reality and what is considered to exist (Guba & Lincoln, 1994). The research undertaken adopts a critical realist ontological stance, acknowledging that social structures—such as educational policies, leadership practices, and school cultures—shape experiences of inclusion and exclusion in schools. These structures exist independently of individuals, yet they are experienced differently by staff and students based on identity, social capital, and intersectional factors (Thorpe, 2019; Bhaskar, 1975).

Critical realism offers a framework that emphasises how social structures in education, while existing independently, influence individual experiences in multi-dimensional ways. This complexity arises from the interplay between objective structures and subjective individual agency, where individuals—leaders, staff, students, families—interpret and respond to these

structures differently based on their social positioning and lived realities. For instance, educational policies may set broad directives, but how they are enacted and experienced can vary significantly, shaped by factors such as race, gender, disability, or socio-economic background. Critical realism, therefore, allows this study to explore the disjuncture between structural inclusion frameworks and lived experiences, particularly as they intersect with multiple marginalised identities.

At both policy and practice levels, inclusion frameworks mandated by Ofsted and other regulatory bodies create a real structural context within schools. However, the lived experiences of inclusion differ significantly between staff at different hierarchical levels and students from diverse backgrounds. A critical realist stance enables the recognition of both these structural conditions and the subjective experiences of navigating them. This is essential in understanding how inclusion gaps manifest in everyday school life—especially through nuanced, hidden dynamics that are not easily surfaced through traditional metrics.

Epistemology concerns the nature of knowledge and how it is acquired (Bryman, 2019). This approach offered here adopts a participatory interpretivist epistemology, which assumes that knowledge about inclusion is socially constructed through the lived experiences of staff and students within schools. As Schwandt (2000) explains, interpretivism emphasises understanding how individuals make sense of their social worlds, with knowledge emerging from the meanings people attach to their experiences. Cohen, Manion, and Morrison (2017) support this view, arguing that educational research grounded in participatory interpretivism allows for a deeper exploration of how knowledge is co-constructed within the social context of schools—particularly in relation to complex issues such as inclusion. Therefore, both staff and students each hold valuable, yet distinct, insights into the barriers and enablers of inclusion. Staff may understand institutional priorities and policies, but their ability to implement inclusive practices can be constrained by structural and cultural barriers. Students experience inclusion through daily interactions and relationships, shaped by identities, intersectional experiences, and access to social capital within the school community.

The participatory nature of this research reflects an ethical and methodological commitment to co-production, amplifying the voices of those typically marginalised by institutional systems. This approach aligns with intersectionality (Crenshaw, 1989), a core concept in this

research, which recognises that individuals' experiences of inclusion are shaped by overlapping identities and social positions. However, critiques of intersectionality argue that its application can become overly complex, making it difficult to draw actionable conclusions (Phoenix & Pattynama, 2006). Moreover, while participatory research aims to democratise knowledge production, Fine (2008) warns that power asymmetries between researchers and participants may persist, shaping the research process and outcomes in unintended ways. Critical realists such as Maxwell (2012) argue that privileging subjective voice alone can risk detaching findings from structural analysis. These critiques are acknowledged and addressed by the dual lens used in this study, which bridges participant voice with systemic critique.

This research design is grounded in the belief that inclusive educational transformation must be both systemic and participatory. The combination of critical realism and participatory interpretivism provides a philosophically robust foundation for understanding inclusion as both a structural condition and a lived, relational experience—capable of being reshaped through collaborative inquiry.

2.3 Research Design and Contextual Framework

This research adopts a multi-method action research approach, integrating quantitative and qualitative methods to address the research questions. The methodological design reflects the study's philosophical stance, combining critical realism (Bhaskar, 1975) with participatory interpretivism (Heron & Reason, 2001). This aligns with the research aim to investigate how school leaders close Diversity and Inclusion (D&I) gaps for staff and students, and to explore how insights into social capital and intersectionality can help schools develop innovative pathways for intentional inclusion.

This contribution adopted a participatory action research (AR) framework, grounded in critical realism and intersectionality. Each phase of the research was shaped in dialogue with participants. The action research design allowed for iterative cycles of intervention, reflection, and refinement. Here I operated as both practitioner and academic, supported by academic supervisors and a wider education research community. Ethical clearance was granted by Bournemouth University's Research Ethics Committee and aligned with the British Educational Research Association (BERA) ethical guidelines. GEC safeguarding

protocols were also followed, as well as those from partner universities, establishing a dual ethical framework across academic and practitioner-based contexts.

Rationale for Data Collection Methods

The combination of surveys, focus groups, and interviews enabled the ability to gather both breadth and depth of insights, grounded in the lived experiences of school staff and students. The rationale for each method is detailed below:

- **Surveys** were used to collect large-scale, anonymised quantitative and qualitative data from school leaders, staff, and students across multiple schools. This allowed the identification of trends and disparities across demographics and themes related to inclusion. For example in Intervention 1, Prolific was used to pilot questions with 428 non-education participants to ensure clarity and accessibility of language. The full surveys were tested with leadership teams across 60 schools, mainly headteachers and deputy heads. Following this the GEC Platform offers a series of surveys and Google Forms were used in Interventions 1 and 3.
- **Focus groups** provided a dialogic space for participants to explore their experiences and perceptions of inclusion in greater depth. These were used across all interventions to help co-design survey questions, inform platform development, and refine implementation strategies. Focus groups were conducted online and asynchronously, allowing diverse participation from multiple regions and roles.
- **Semi-structured interviews** allowed for deeper reflection on leadership perspectives, lived experience, and platform impact. These interviews, conducted across all four interventions, captured the nuanced views of leaders, trust executives, and school staff, offering qualitative depth to the findings.

The use of action research facilitated direct engagement with participants as co-constructors of knowledge. This was particularly important in addressing power imbalances, ensuring that school leaders, staff, and students could shape both the research process and the tools used to measure inclusion. This approach also reflected my

autoethical stance, acknowledging positionality and lived experience while applying safeguards to minimise bias.

All methods were piloted, refined, and reviewed by the GEC Circle to ensure accessibility, cultural sensitivity, and relevance. Triangulation was used to enhance validity, cross-checking findings across methods and participant groups. This approach ensured that all interventions incorporated ethical, contextually grounded data gathering while enabling responsive changes based on participant input.

Research Question	Method	Justification
RQ1	Survey	Gathered broad baseline data from leaders and staff on current D&I practices
RQ1	Focus Groups	Enabled co-construction of tools and surfaced key leadership challenges
RQ1	Interviews	Provided in-depth insights into leadership strategies and barriers
RQ2	Survey	Captured intersectional insights from students and staff
RQ2	Focus Groups	Informed participatory tool development and platform accessibility
RQ3	Platform Observation	Evaluated EdTech usability and practical application
RQ3	Interviews	Assessed EdTech impact on leadership decision-making and equity work

Table 1: Data Collection Methods Mapped to Research Questions

These data collection methods were embedded across the four interventions and contributed directly to the iterative action research process. Each of the subsequent interventions (outlined in Chapter 3) built upon this foundation, forming a cumulative evidence base for understanding the role of ethical EdTech in inclusive education.

The literature review highlighted the need for a series of targeted interventions that prioritise equitable data capture and the inclusion of diverse, intersectional lived experiences. To address the complexities of intersectionality and advance D&I practices in schools, it is essential to uncover the often-overlooked narratives that reflect the true culture, *the true colours*, of a school or trust. These hidden narratives, as the review illustrated, can reveal both the challenges and opportunities for fostering a more inclusive environment. The review emphasised that meaningful change requires school leaders to have a comprehensive understanding of their school's social dynamics, enabling them to make informed decisions that promote equity and inclusion. This insight directly shaped the research methodology, guiding the development of tools and approaches designed to capture these nuances, while maintaining a strong ethical focus on the treatment and participation of individuals involved in the study.

The theoretical framing draws on social capital theory (Putnam, 2000; Coleman, 1988) and intersectionality (Crenshaw, 1991), with bonding, bridging, and linking capital used as analytic categories. Bonding capital refers to intra-group connections, bridging capital to cross-group alliances, and linking capital to connections between individuals and institutions with differing power or resources. These categories were embedded in the design of the surveys and resources, and later used to interpret the findings.

The methodological approach also integrates data for inclusion principles, introduced in Chapter 1. This concept combines quantitative and qualitative insights to humanise the educational data process, surfacing intersectional and nuanced experiences beyond traditional performance metrics. In this study, data for inclusion was operationalised through a framework that brings together social capital theory and intersectionality to enable deeper understanding of the school community. While social capital offers a useful heuristic for exploring how relationships, trust, and networks support inclusion, scholars caution that the concept can also obscure inequalities by privileging dominant norms or reinforcing exclusionary practices (Portes, 1998; Fine, 2001). A critical use of the framework is therefore necessary, recognising both its explanatory power and its potential limitations.

The interventions were shaped by the theoretical frameworks set out in 2.2, and were underpinned by both institutional and practitioner ethics protocols. This approach was also informed by critiques of "data fundamentalism" (Crawford, 2013)—the belief that large-scale

datasets and predictive analytics guarantee objectivity. Such assumptions risk reproducing bias, erasing lived experience, and creating inaccurate models to guide policy. In response, the design of this research drew on Feigenbaum and Alamalhodaie's (2020) principle that data storytelling should be "critical, creative, collaborative, and caring" (p. 218), and on their suggestion that data can be treated as "characters" with histories and relationships (p. 38). These perspectives guided the development of hidden voices as the "heroes" of the data process, reframing educational evidence around lived experience rather than reductive metrics. The next crucial step, therefore, was to build a methodology that was not only robust but also ethical and human-centred. The aim was to design a research framework that respected the dignity and agency of all participants while capturing the richness of their experiences. A multiple intervention approach, supported by an EdTech platform, emerged as the most effective strategy. This methodology would allow for the identification and prioritisation of a people-first approach, ensuring that the voices of those with lived experiences were central throughout the study. This chapter outlines the process of developing this ethical, inclusive, and intervention-driven framework, detailing how it integrates these principles into every stage of the research.

Therefore this research project represents a multi-point action-based intervention study, combining data collected through the *GEC EdTech Platform* with data specifically generated for this Ed.D. Every stage of the research was underpinned by stringent ethical and safeguarding protocols to ensure participant wellbeing, confidentiality, and compliance with both academic and professional standards. Data gathered through GEC activities adhered to well-established safeguarding policies, designed to protect participants and align with national standards for inclusion, diversity, and data protection. These policies ensured that all data collection was conducted ethically, with robust procedures in place to address any potential safeguarding concerns.

For data collected specifically for this doctoral research, the study was governed by Bournemouth University's Code of Practice for Research Ethics. This Code provides a detailed framework for ethical oversight, mandating processes such as informed consent, risk mitigation, and the protection of participant rights. Ethical approval was sought and obtained through the University's formal ethics review process before any data collection began. This ensured that all research activities conducted within the scope of the Ed.D. met

the University's rigorous standards for ethical research, demonstrating transparency, accountability, and respect for participants.

As a multi-point, action-based intervention study, it was critical to revisit and uphold ethical considerations at each stage, in line with the practices outlined by Lankshear and Knobel (2004) and Guillemin and Gillam (2004). They highlight the importance of maintaining transparency, informed consent, and participant rights throughout the research process. Furthermore, the integration of the GEC safeguarding protocols with the Bournemouth University ethical framework provided a dual-layered approach to safeguarding, which is consistent with the work of Kemmis and McTaggart (2005) and Bryman (2004), who both emphasise the necessity of robust ethical governance and reflexivity throughout "the multiple stages" of Action Research (AR). Kemmis and McTaggart (2005) advocate for the "cyclical" nature of participatory AR, where ethical considerations must be revisited continuously as the research evolves. Similarly, Bryman (2004) stresses the significance of ensuring ethical integrity in longitudinal and multi-stage research settings, aligning the researcher's responsibility to protect participant rights with the broader research objectives.

Each intervention is presented in the following section, with an outline of its alignment to the research questions, theoretical foundations (including social capital, intersectionality, and ecological systems theory), and ethical considerations. The GEC (EdTech) Platform development was delivered through a series of interlinked interventions, designed to explore and address the core research questions (RQs) focused on improving engagement between school leaders, staff, students, and parents/carers. Each intervention reflects the lived and observed experiences of participants, incorporating safeguarding protocols to ensure ethical and inclusive practices.

Intervention 1: Design and Build of the MVP Data for Inclusion Platform for School Leadership and Staff (Gender and Disadvantage)

Alignment: RQ1 and RQ3:

RQ1. How are school leaders addressing Diversity and Inclusion (D&I) gaps for staff and students? *This intervention directly explores how school leaders address D&I gaps, particularly in relation to gender and disadvantage. It focuses on helping leaders identify challenges in their schools and implement targeted strategies to improve outcomes for disadvantaged groups.*

RQ 3. In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices? *By creating a digital tool to support school leaders in their D&I work, this intervention demonstrates how EdTech can facilitate new approaches to identifying and addressing intersectionality in school settings.*

This intervention was designed to explore the lived experiences—both observed (what participants had directly seen) and indirect (including dependents, close family, and community networks)—of school leaders and staff in addressing gender and 'disadvantage' within educational settings. The concept of 'disadvantage' in this context was reframed through an intersectional lens that combines socioeconomic status (SES), race and ethnicity, gender, neurodiversity, disability, multilingualism, religion, and family-status identity demographics. This definition aligns more closely with the protected characteristics outlined in the Equality Act (2010), moving beyond the reductive categories typically captured in school Management Information Systems (MIS). This framing supported a more nuanced, legally grounded, and ethically responsible lens on inclusion challenges in schools. These conceptual shifts directly respond to the literature review's identification of limitations in traditional data practices and the urgent need to centre intersectional experiences in both research and school leadership decision-making.

Participants were invited to reflect on both direct experiences (bonding social capital) and indirect or systemic challenges (bridging and linking social capital), allowing this intervention to explore the relational dimensions of inclusion as conceptualised in social capital theory (Field, 2005; Putnam, 2000). This enabled deeper insights into how leadership practices shape inclusion outcomes.

This intervention employed a mixed methods approach within an iterative action research model (Biesta, 2021; Johnson & Onwuegbuzie, 2004), ensuring that both qualitative and quantitative insights informed the development and refinement of the MVP Data for Inclusion Platform. Biesta (2021) highlights that mixed methods research is most effective when it serves a pragmatic purpose, with the combination of approaches driven by research aims and context. This aligns with Johnson and Onwuegbuzie's (2004) 'developmental' function of mixed methods, in which findings from one phase directly inform the next, thereby strengthening both rigour and relevance.

The qualitative phase involved semi-structured interviews and focus groups with school leaders and staff, exploring their perspectives on barriers to inclusion, gaps in current practice, and leadership roles in addressing gender and disadvantage. These narratives were analysed using thematic analysis (Braun & Clarke, 2006) to identify patterns, discourses, and recurring challenges. Building on these insights, a quantitative survey was developed to assess the prevalence and perception of the identified issues across a broader sample. The survey included both closed and open-ended questions, enabling both the quantification of leadership engagement with D&I challenges and space for reflective narrative input. Data from this stage was analysed using descriptive and inferential statistical methods to identify key trends and triangulate qualitative findings.

The Minimum Viable Product (MVP) for this module was co-developed in collaboration with researchers from the University of Surrey, University of Kent, and University College London (UCL). The primary aim was to create a digital tool that enabled school leaders to identify practice gaps, engage with lived experiences, and implement evidence-based interventions. The MVP module was aligned with the research questions, particularly focusing on how leadership behaviours and strategic decision-making impact inclusion and outcomes for disadvantaged groups (Appendix 3).

To ensure ethical integrity, GEC safeguarding protocols were embedded into the platform's design and deployment process. This dual ethical oversight—comprising both practitioner-based safeguarding measures and Bournemouth University's Code of Practice for Research Ethics—ensured participant protection and alignment with the values of participatory action research (Kemmis & McTaggart, 2005). The development of the MVP followed a cyclical action research process, with continuous refinement based on prototype testing and participant feedback. Participants trialled the platform and provided qualitative insights into usability, accessibility, and contextual relevance, which led to successive refinements. The revised MVP was then piloted in selected schools. In this phase, quantitative usage data was collected alongside longitudinal qualitative reflections, supported by integrated multimedia resources and a digital training hub.

By embedding an iterative, mixed methods approach within an action research framework, this intervention ensured that data-driven school leadership was informed by both participant-led insight and real-time usability data. This aligns with Biesta's (2021) advocacy

for pragmatic pluralism in educational research and with Johnson and Onwuegbuzie's (2004) view that research should evolve dynamically across phases to deepen applicability and contextual validity. Importantly, it also demonstrates the ethical and inclusive use of EdTech—an area identified in the literature review as a critical consideration—by ensuring that digital tools were co-developed with users, responsive to diverse lived experiences, and embedded within safeguarding and participatory research protocols.

Overall, this intervention contributed to both theoretical understanding and practical capacity-building by showcasing how ethical EdTech design, underpinned by social capital and intersectionality frameworks, can support inclusive leadership development in schools.

Intervention 2: Design and Build of the EDI EdTech Platform for School Leadership and Staff

Alignment: RQ1, RQ2, and RQ3

RQ1. How are school leaders addressing Diversity and Inclusion (D&I) gaps for staff and students? *This intervention builds on the MVP platform by expanding its focus to broader EDI issues, supporting school leaders in their efforts to close D&I gaps for both staff and students.*

RQ2. How can insights into social capital and intersectionality, along with attitudes and values towards D&I, help schools explore innovative pathways for intentional inclusion and improvement? *The design process incorporates insights into social capital and intersectionality, helping schools explore innovative pathways for improving inclusion practices.*

RQ 3. In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices? *This intervention highlights the potential of EdTech to evolve and adapt, providing a scalable solution for continuous improvement in D&I practices*

Building on the initial intervention, this second phase focused on updating and evolving the platform to integrate a more confident and comprehensive AR, Equity, Diversity, and Inclusion (EDI) framework. The objective was to explore how EdTech could enable school leaders to better understand and act on the nuanced experiences of staff and students—particularly those historically excluded from traditional school data processes. Consistent with the gaps identified in the literature review, this phase prioritised the need for humanising educational data and incorporating intersectional voice into leadership development. The design process was participatory, drawing on the lived experiences of

school and trust leaders and their staff in the UK. It encouraged participants to reflect on systemic barriers and the intersectional challenges experienced by students, families, and educators within their communities. In line with Warm Data principles (Nora Bateson, 2021), this design methodology sought to honour contextual complexity, focusing not on standardisation but on meaningful, relational insight (Appendix 4). In line with Warm Data principles (Bateson, 2021), this design methodology honoured contextual complexity, focusing on meaningful, relational insight over standardisation. Screenshots in Appendix 4 illustrate the user-facing interface through which data was collected and thematically interpreted by the researcher.

The research questions guiding this intervention aimed to understand how school leadership can drive sustainable cultural change, and what tools, frameworks, and community-led approaches most effectively promote EDI within education settings. The iterative development process ensured responsiveness to user feedback and emerging D&I priorities. This design-led approach reflects the principles of inclusive EdTech co-creation, as outlined in recent critical EdTech literature (Selwyn, 2021; Williamson et al., 2022), which advocate for tools that are not only functional but also ethical, participatory, and aligned with inclusive values. As with Intervention 1, dual-layered ethical oversight was applied. GEC safeguarding protocols were embedded throughout the platform development process, and the research adhered to Bournemouth University's Code of Practice for Research Ethics. These measures ensured a safe and supportive environment for participants and aligned with the participatory action research tradition (Kemmis & McTaggart, 2005; Guillemin & Gillam, 2004). Ethical considerations were continuously revisited throughout development cycles to safeguard participant dignity and ensure research integrity. This intervention demonstrates how inclusive EdTech, grounded in theoretical and ethical rigour, can support scalable and context-sensitive leadership strategies to close persistent equity gaps. It also begins to position the GEC Platform as a living framework—one that evolves with the needs of its users and contributes to knowledge mobilisation within the field of inclusive school leadership.

Intervention 3: Review of the Leadership and Staff Data for Inclusion Platform

Alignment: RQ3

RQ 3. In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices? *This review process focuses on*

evaluating the effectiveness of the EdTech platform in advancing D&I practices. The feedback gathered will help assess how digital tools can support schools in exploring new opportunities to address intersectionality and improve inclusion.

Following the co-design and implementation of the EDI EdTech Platform, this third intervention focused on a structured review phase to evaluate the platform's usability, perceived value, and practical impact in school settings. Conducted as part of this doctoral research at Bournemouth University, the intervention sought to understand how school leaders and staff engaged with the tool, and to what extent it supported more intentional, data-informed decision-making around equity and inclusion.

Participants—primarily school leaders, SENCOs, inclusion leads, and teaching staff—were asked to reflect critically on their use of the platform. Using a combination of follow-up surveys, targeted interviews, and user-generated feedback, the review explored how the platform influenced leadership behaviours and whether it contributed to tangible improvements in addressing structural inequalities within schools. These reflections captured both direct engagement with the data and shifts in organisational culture, aligning with concepts of social capital and intersectionality explored earlier in the literature review.

This phase directly responded to RQ3 by assessing the functional and ethical role of EdTech in enabling schools to identify blind spots and act upon inclusion challenges through digital reflection and planning tools. This intervention built upon critical EdTech studies (Selwyn, 2021; Eynon, 2023) that caution against the assumption that technology alone leads to improved outcomes without proper contextualisation, co-design, and reflective implementation.

Ethical protocols remained central. The review process was governed by Bournemouth University's Code of Practice for Research Ethics, alongside the safeguarding policies of the GEC. Participants were reminded of their right to withdraw, and efforts were made to ensure anonymity and minimise burden. Feedback loops were embedded to respect participant agency, and to ensure that insights would contribute to further development of the platform in line with participatory action research principles (Kemmis & McTaggart, 2005; Guillemin & Gillam, 2004).

Early findings highlighted areas of success, including increased confidence among school leaders in understanding and responding to intersectional issues, and the usefulness of visualised data in facilitating internal discussions. However, limitations also were surfaced—such as the need for more tailored recommendations and training to support consistent implementation across diverse contexts. These results fed into the next iteration of the platform and informed guidance for wider deployment.

This intervention reinforced that inclusive EdTech must be designed not as a static product but as a dynamic process—shaped by user feedback, theoretical grounding, and ongoing ethical review. The findings helped demonstrate that digital tools, when participatory and critically constructed, can serve as valuable mechanisms for surfacing lived experiences, informing leadership practice, and ultimately advancing equitable school improvement.

Intervention 4: Design and Build of the Student Module

Alignment: RQ2 and RQ3

RQ2. How can insights into social capital and intersectionality, along with attitudes and values towards D&I, help schools explore innovative pathways for intentional inclusion and improvement? *This intervention aims to explore student voice and experiences of inclusion, using insights into intersectionality to inform the design of a student-centred module. The focus is on understanding the social capital that students bring and how their attitudes and values impact inclusion efforts.*

RQ 3. In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices? *The creation of a dedicated digital module for students demonstrates how EdTech can empower students to engage with EDI issues and foster more inclusive school cultures.*

Recognising that students play a critical role in creating inclusive school cultures, Intervention 4 focused on developing a Student Module. This activity was designed to empower students to engage with EDI principles, encouraging them to reflect on their own lived and observed experiences of inclusion and exclusion within school settings.

The design process for this module was collaborative and informed by pedagogical expertise, including partnership with researchers from Goldsmiths, University of London (part of the GEC Circle). Voluntary 'opt-in' student participation was central to the process,

ensuring that the final design was both age-appropriate and responsive to the diverse needs and experiences of learners (Appendix 5). As with previous interventions, rigorous safeguarding protocols developed through the GEC were embedded throughout, and ethical oversight was provided via Bournemouth University's Code of Practice for Research Ethics.

In the case of student participants, additional ethical safeguards were embedded within the survey design to ensure both agency and protection. This included a visible, compulsory "I'm happy" consent button, which had to be selected before any survey content was shown—ensuring active opt-in. A co-developed Teacher Toolkit was distributed to all participating schools, offering guidance for safeguarding practices before, during, and after data collection. Schools were advised to identify students requiring additional support and ensure DSLs were present during survey sessions. The survey content was reviewed by both DSLs and a national safeguarding organisation to ensure questions were trauma-informed and developmentally appropriate. Sensitive themes such as abuse, self-harm, and online safety were intentionally excluded, and open-ended comment fields were limited to prevent re-traumatisation. The anonymity of responses was maintained throughout. These measures ensured that student participation was ethical, safe, and empowering, in alignment with university policy and broader safeguarding legislation.

The research questions guiding this phase focused on understanding how students perceive EDI challenges, the systemic and interpersonal barriers they experience, and the ways in which digital tools could support more inclusive, supportive, and participatory school environments. Data collection drew on mixed methods, including surveys and facilitated discussion forums, enabling students to articulate both their personal experiences (bonding capital) and their observations of broader cultural and systemic dynamics (bridging and linking capital).

By placing student voice at the centre, the intervention aligned with participatory action research principles and extended the concept of 'data for inclusion' beyond leadership and staff to include learner-generated insight. The development of the module was grounded in the same theoretical and ethical principles as prior interventions, drawing on intersectionality (Crenshaw, 1991), intersubjectivity (Husserl, 1931; Given, 2012), and Warm

Data (Bateson, 2021) to frame the complexity of student identities and relationships within the school ecology.

This phase was embedded within the broader Action Research framework guiding the study. The development of the Student Module followed the cyclical process of planning, action, observation, and reflection (Cohen et al., 2018), enabling iterative co-creation with learners and school staff. This ensured that the intervention was responsive to emerging needs and findings, consistent with the principles of participatory inquiry and ethical reflexivity established in earlier phases.

Additionally, my use of an autoethnographic lens and constant reflection on my role in the research process supports the reflexivity that is key in Action Research, ensuring ethical considerations are revisited at each stage (Cohen et al., 2018). By structuring the study around multiple, iterative interventions across a diverse participant base, this research does not just analyse existing conditions, but actively tests and co-develops solutions, reinforcing Action Research's commitment to meaningful, systemic change in D&I practices. In recognition of the complexity and scope of this study, I ensured that all research activities were designed and implemented with the highest ethical standards in mind. This included maintaining rigorous records of all ethical approvals, participant consents, and safeguarding measures. These measures not only ensured compliance with ethical standards but also reinforced the integrity and validity of the research findings.

This intervention also reflected the study's overarching aim to humanise educational data, engaging with ongoing debates in critical data studies and EdTech ethics (Selwyn, 2021; Williamson et al., 2022). By integrating student perspectives into a structured digital framework, the intervention sought to challenge deficit-based approaches to student data and promote asset-based narratives rooted in strength, belonging, and well-being. In practical terms, the module was designed to provide schools with real-time insights into how students experience inclusion, representation, and support—thus supporting the creation of action plans that are both data-informed and ethically grounded. These insights fed into the wider ecosystem of the GEC Platform, where they could be triangulated with leadership and staff data to offer a holistic view of inclusion within each school context.

When it came to the participants of data collection, I wanted to authentically and ethically consider the individuals and how to best capture their individual and intersectional identities

and lived experiences. Participatory enquiry is one way of approaching ethical research and puts both people and their connections at the heart of the methodology. Heron and Reason (1997) speak of four forms of knowledge and knowing—experiential, presentational, propositional, and practical—which are interconnected and build on each other. They emphasise that:

"To experience anything is to participate in it, and to participate is both to mould and to encounter; hence experiential reality is always subjective-objective." (Heron & Reason, 1997, p. 278)

This aligns with the concept of intersubjectivity, originally coined by philosopher Edmund Husserl (1859–1938), which refers to the interchange of thoughts and feelings, both conscious and unconscious, between two persons or "subjects," as facilitated by empathy (Cooper-White, 2014). Intersubjectivity is particularly relevant in qualitative research methodologies such as autoethnography, where the researcher's lived experience is embedded within the study. Given (2012) further highlights the role of critical subjectivity in autoethnographic research, which involves reflexively deconstructing one's own beliefs, biases, experiences, and identities to achieve deeper self-awareness and transparency in the research process. This reflexive practice ensures that the researcher maintains both personal engagement and analytical distance, allowing for a rigorous and ethically sound exploration of complex social issues. Critical intersubjectivity research examines how individual and collective social practices may be irrational, unsustainable, or unjust, particularly for those affected by them (Kemmis, 2008). In participatory inquiry, this reflective process enables participants to critically evaluate and, where necessary, transform social practices to create more equitable and sustainable alternatives. Heron and Reason (2001) argue that participatory approaches must position research *with* rather than *on* people, ensuring that interventions are co-constructed with participants and meaningfully address their lived realities. In this study, the iterative and multi-interventional nature of the research required ongoing engagement with participants—including school leaders, educators, and students—to ensure that interventions were both relevant and beneficial. By embedding reflexivity and collaboration at every stage, the study upheld the principles of participatory Action Research, ensuring that the interventions were not only ethically sound but also effective in addressing diversity and inclusion (D&I) challenges in educational settings.

An important consideration emerging from this study is the framework for systemic reform. Clonan et al. (2004, p. 106) suggest that schools can serve as catalysts for fostering positive human development through the principles of positive psychology. This approach shifts the focus away from merely addressing weaknesses, instead nurturing and enhancing the positive qualities of their people. By applying positive psychology as a means to disrupt deficit-oriented practices, schools can adopt a person-centred approach that focuses on universal design for mental well-being and belonging. This strength-based approach seeks to enhance both the social capital and academic competencies of all students, responding to their needs where they are and promoting preventative measures rather than reactive ones.

Positive psychology recognises the presence of "layers of influence" within the school environment, as outlined by Clonan et al. (2004). Therefore the interventions draw on Bronfenbrenner's *Ecological Systems Theory* (1979) to understand how various environmental layers influence school leaders' perspectives on diversity, inclusion, and EdTech adoption. Bronfenbrenner conceptualised human development as occurring within a nested structure of systems, ranging from immediate relationships (microsystem) to broader societal influences (macrosystem). Applying this model to educational research allows for an exploration of how individual attitudes, institutional policies, and external policy frameworks interact to shape inclusive practice in schools.

By using this framework, the research acknowledges that school leaders operate within multiple, interconnected contexts that influence their decision-making and capacity for change. The microsystem (e.g., direct interactions with staff and students) impacts their daily leadership decisions, while the mesosystem (e.g., collaboration between school leadership teams, networks, and external partners) informs their professional development. The exosystem (e.g., governmental policies, EdTech initiatives, and funding structures) affects institutional priorities, and the macrosystem (e.g., societal attitudes towards inclusion and digital transformation) shapes overarching educational norms.

Understanding these systemic interactions is particularly relevant when investigating the integration of EdTech for inclusion, as it requires navigating policy constraints, institutional readiness, and individual agency. This approach aligns with the study's commitment to an

ethical participatory methodology, ensuring that findings are contextualised within the lived realities of school leaders while recognising the broader structures that shape their experiences.

A potential EdTech solution (the GEC Platform) was introduced to enable a series of interventions, informed by my literature review and to directly address the research question - RQ 3. In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices? Areas of development were targeted; the surveys, 'consultancy' or coaching recommendations, a digital action plan for leadership collaboration and external evidencing and an online training hub, based on my professional experience with CPD creation. Applying the doctoral lens, I would look to create a comprehensive school improvement framework for improving EDI change. This was a digital transformation and evolution of my previous professional field work. As a result of this framework, I would be able to create, and then utilise data (from a leadership self-assessment, staff surveys and then student surveys) through the lens of this Action Research study and the research questions.

With my research questions focusing upon *'how can we humanise the digital experience for the case of inclusion?'*, involving typical classrooms of today, which see data, AI and multiple monitoring surveillance embedded in our day to day school systems, this PAR looks to better understand how data might need to be rebuilt, to look to do more good than the harm we are seeing in the headlines. Instead of deleting these elements, could the intention need to be flipped? Understanding new approaches like *Warm Data* from the Bateson Institute, which seeks to bring the complexity of relationships into dialogue, this study has been designed to explore whether we can adopt a more realistic perspective on the function of our schools and the humanity we seek to understand and support (Bateson, 2017). This is timely. The absence of participatory consent and transparency regarding the use of personal data by young people, particularly in relation to its role in supporting their academic progression and future projections, presents a significant concern. Against the backdrop of social media platforms in the United States being predominantly controlled by white, cis-gender male billionaires, coupled with the denial of censorship by right-wing policy groups in the context of geopolitical events, there is an increasing need for scrutiny. Additionally, the growing recognition of bias in AI systems underscores the urgency of reconsidering how data is collected, interpreted, and applied in educational contexts,

particularly when third-party applications are involved. This calls for a re-evaluation of the ethical and practical implications of data use in shaping the educational experiences of young people. This research invites us to consider whether the digital tools we use in education can be reoriented to reflect values of equity, empathy and transparency - placing human relationships and connections at the heart of data-driven decision making - rather than reducing our learners to metrics, giving access to their data to giant technology companies and better understanding how a solution could be created from within the education and edtech system, for the system. By doing so, can we move towards a more inclusive, ethical and digital ecosystem that prioritises consent, agency and humanity in the learning experience?

A further challenge of this study is the pressing need for a deeper understanding of the psychology behind survey-design for educators, along with improved dashboard visualisations that prioritise usability and accessibility. Data systems and warehouses need to be built on ethical foundations - which flips the current top-down model that often prioritises institutional needs over meaningful, human-centred insights. This is what this AR multi-strand intervention will also review in the initial interventions in the first place. Additionally, training in survey design and data visualisation is essential to ensure that insights and impact can be effectively communicated as part of this study. The approach was to examine how the data is framed and communicated to effectively communicate insights and impact from a school leader point of view (intervention 3). I need to know how to best demonstrate impact externally and for evaluation. *What does the data tell us about intersectionality in the lived experiences of teachers and school leaders? How does it help us understand intersectionality? How could technology support our understanding of intersectionality and the impact this has on the UK education sector?* Data that takes the pixels to centre on our people will create a more inclusive and equitable education system. In short, our dashboards need to meet our needs, not the other way around.

This study will therefore seek to see how they might be tools for empowerment, helping school leaders to do better and make data-driven decisions that could improve inclusion and outcomes for all students. Keeping the person-centred approaches of Husserl (1931) and Pritchard-Rowe, E., & Gibson, J. (2024) at the forefront of this work will ensure that the framework remains grounded in the individual lived of the participants. I want to examine

better ways to capture the voices of diverse participants, using an inclusive and respectful design process that reflects the complexity of each individual's perspective. Designing a solution with diversity in mind, but built as an inclusive experience for the participant. By focusing on intersubjectivity - the shared understanding between individuals - this research will aim to tap into both conscious and unconscious attitudes towards intersectionality amongst the participants. This includes both the school leaders driving progression and the students and homes they serve. The goal is to design a solution that acknowledges and respects diversity, while ensuring that every participant's experience is both valued and understood. At its core this work seeks to create data practices that are not just inclusive in content, but inclusive in experience - empowering school leaders to build more equitable schools by understanding the humanity in the data. Humanising data has to be the focus; rebalancing accountability can't be just about *more* data, but about *new ways* of understanding, collecting and understanding data. Rethinking how schools gather data and apply this to the complex realities of the individuals behind the numbers is linked to considering how technology can help us explore attitudes and sentiments to inclusion in schools. To capture these insights meaningfully, we might develop scalable solutions that benefit the entire education sector.

The intervention also helped inform the development of more inclusive survey design and dashboard visualisation approaches, in response to a broader concern raised in the literature and echoed by participants: that data systems often reflect institutional priorities rather than individual lived experience. By drawing on Bronfenbrenner's ecological model (1979), the intervention acknowledged the interconnected layers influencing student well-being and educational outcomes, from micro-level peer interactions to macro-level policy environments. In doing so, Intervention 4 served as both a practical and conceptual extension of the doctoral research framework. It demonstrated how inclusive EdTech can not only support school improvement but also foster a rights-based, student-centred approach to educational data—one that is participatory, ethical, and capable of responding to the full complexity of learners' lives.

Chapter 3: Multi-Point Interventions

Building on the methodological rationale outlined in Section 2.3, this chapter details the four interventions undertaken with school leaders to co-construct and refine the data for inclusion framework. These interventions formed the practical component of this action research, aligned with the overarching aim of investigating how EdTech can support equitable and inclusive practices through ethical design and practitioner collaboration. Each was developed iteratively, with earlier findings shaping subsequent tools and platform refinements.

In line with the critical realist and participatory interpretivist stance adopted in this study, each intervention combined qualitative and quantitative methods and incorporated cycles of feedback and co-construction. The following table summarises the data collection methods used across all interventions and how each aligns to the three research questions (RQs).

Method	Purpose	Participants	Intervention(s)	Aligned RQ(s)	Justification
Pilot Survey (Leadership and Staff)	To gather baseline insights into school leaders' understanding of D&I	30 schools (headteachers and deputies)	1	RQ1	Provided a foundational understanding of existing practices; informed tool design.
Prolific Testing Survey (Staff)	To ensure clarity and neutrality of survey	428 non-education participants via Prolific	1	RQ1	Validated usability and accessibility across a broader user base.

language for
all staff types

Leadership EDI Self-Assessment	To support reflective practice and self-evaluation on D&I readiness	60 School leaders including School Business Leaders (2 x trusts)	1	RQ1	Supported personal/institutional reflection and digital tracking of D&I.
Focus Groups	To co-design and refine survey tools, platform usability, and student inputs	GEC Circle members, teachers, students	1, 2, 3, 4	RQ1, RQ2, RQ3	Ensured participatory ethics, relevance, and iterative design refinement.
Staff Survey	To gather perspectives on professional culture, safety, development, and inclusion	Staff in 21 schools (approx. 2,500)	2	RQ1, RQ3	Quantitative staff data supported inclusive strategy development.

Semi-Structured Interviews	To explore leadership and staff reflections on data use, platform impact, and inclusion	School leaders, senior staff, students	1, 2, 3, 4	RQ1, RQ2, RQ3	Rich qualitative insights added depth to survey findings; supported reflection and design.
Data Visualisation Feedback	To evaluate and iterate real-time EdTech interface usability	Staff and leaders	2, 3	RQ3	Helped assess platform effectiveness and support needs.
Student Survey workshops	To capture diverse student voices on inclusion, curriculum, safety, and identity	Students in 21 schools and 7 nurseries.	4	RQ2	Centralised pupil voice to drive intersectional understanding of inclusion.
Platform Analytics	To monitor engagement patterns and surface digital inclusion gaps	Anonymous logs from 300 user sessions	3, 4	RQ3	Enabled tracking of behaviour, access, and platform adoption barriers.

Table 2 Overview of Data Collection Methods and Alignment to Research Questions

Each method was selected to maximise insight while maintaining ethical integrity, ensuring diverse participant voice, and balancing scale with depth. All stages followed ethical protocols approved by Bournemouth University's Research Ethics Committee and reflected the safeguarding standards developed by the GEC. While participant feedback and early engagement insights are shared to illustrate the implementation of each intervention, a full analysis of findings is presented in Chapter 4.

The sections that follow now present each intervention in detail, showing how the tools were implemented, adapted, and evaluated in practice.

3.1 Intervention 1: Prioritising Participants: Amplifying Silent Voices for Deeper Insights

Recognising that traditional third-party EdTech survey tools would not provide an inclusive experience or reliable EDI data, it became clear that a new EdTech platform was essential to house this AR methodology, the interventions and, as a result, a new human-centred approach to data for schools. This technology would integrate a simple dashboard for school leaders and an initial three-step process for driving EDI, grounded in evidence-based practices, while incorporating a 'human library' of resources designed to educate and empower educators. By structuring the study around multiple, iterative interventions across a diverse participant base, this research does not just analyse existing conditions but actively tests and co-develops solutions, reinforcing Action Research's commitment to meaningful, systemic change in D&I practices.

For this first intervention, the EdTech platform would be the foundation for a comprehensive, multi-dimensional digital benchmarking tool, measuring progress towards gender equality and disadvantage in schools. Drawing from the success of coaching models I've implemented in my professional work on these topics (Blandford, 2014), the platform would harness new school data, integrating the voices of schools to inform and shape its approach. Schools using the platform would benefit from a full suite of leadership training and be able not just to close gaps, but to better understand best practice. As a result, they would also have the chance to earn celebratory awards recognising their commitment to fostering inclusive environments and advancing social and educational equity.

The MVP (minimum viable product) included two key accessible data options for schools—gender (particularly for staff: gender pay gap, flexible working, increasing female leaders, and supporting the largest demographic of women leaving education, 30–39-year-olds, as I had been) and students (attitudes towards women in STEM, misogyny in schools, the evidence of *Everyone's Invited*, and sexist attitudes and stereotypes from early years onwards). Disadvantage initiatives and data would support FSM (Free School Meals) and PP (Pupil Premium) cohorts in students, but also address the elephant in the room of the state school sector serving the public while reflecting middle-class biases that I had experienced as a student and school leader. I wanted to flip the narrative from “underserved students” to better understanding the privilege and affluence of school staff as the focus. The initial framework would house data in two audits: a self-assessment survey for leaders (a needs analysis) and a staff/employee survey. Reporting would surface the most positive and negative group feedback (mainly Likert-scale and RAG-rated). Recommendations from a network of experts—the Circle community of experts, created for this purpose—would help close gaps for schools and QA lived-experience survey questions and training materials. The platform's eLearning teacher-training suite comprised online modules designed to progressively build knowledge and practical skills. The learning journey began with a foundational introduction to key concepts, followed by engagement with relevant academic research, before progressing to coaching strategies and practical applications aimed at supporting wider school improvement. The content was developed with accessibility at the forefront, whilst maintaining a high standard of professional integrity and academic rigour. This approach ensured that the modules were respectful of both lived experience and professional expertise, offering valuable new insights to participants at Level 2 qualification standard or equivalent, regardless of educational background.

To refine the survey questions and assess their effectiveness, the initial set of questions was shared with primary and secondary school leaders through a familiar platform, Google Forms. This pilot testing phase allowed me to gauge engagement, identify potential issues with survey design, and understand how a basic third-party tool might lack the sophistication necessary for a study of this scale.

According to Cohen et al. (2018), pilot testing is an essential step in survey design, helping identify weaknesses in the questions, format, and the instrument's ability to collect valid data. This iterative process provides insights into how the survey can be improved before

final implementation, ensuring that it effectively captures the intended data. The trial run also illuminated how the tool's limitations could impact the depth of insights needed to fully explore opportunities for action-based change within the study. This third-party Google survey would not support the level of data analytics needed, but it gave staff in schools the opportunity to engage with the evidence-based statements and questions. Three of the 44 school leaders who responded engaged with this; however, all were interested in being part of the design and build of the EdTech product. Being part of designing a new framework—and it being contained in a new app—was highly appealing. Engagement in a potential new approach was seen as an exciting opportunity to shape the future of educational technology and improve practices within their schools.

Part of the findings of this intervention was that participants illustrated that traditional broad strokes of data were not useful when implementing change. When it came to gender, one school leader said:

"Whilst we do look at 'gender patterns / discrepancies' during data analysis; because we are a small school (149 children on roll) we tend to focus on individuals rather than make broad sweeping gestures. For example; we might look at gender patterns to make changes to the curriculum / forthcoming topic, to ensure it might be more boy-friendly or girl-friendly; however we look at individual children's progress and attainment to make small changes to intervention and support that might be used to move the child's learning on. We do not look at the above data and make an assumption that 'girls are failing in Year 5 Maths' (for example), because we feel that this doesn't tell us anything specific. We believe it is far better to look at each of the girls individually to support them."

This illustrated the need for a middle ground in data use—with more personalised data, for individual support, surfaced in the analysis. Demographic data for just one group was not useful to school leaders. Additionally, the literature review illustrated that school leaders did not always know what they wanted from data and reporting, as they typically used only standardised metrics. Simply put, they did not understand what was possible as they had never been asked. I therefore sought to diversify the voices that would co-design this solution as part of the first intervention.

In terms of participatory methodology, my interventions—and, in this case, the EdTech EDI solution—prioritised user experience. This was evidenced through the thoughtful and

informed ordering of evidence statements and survey questions. A common mistake in educational survey design is to treat surveys as 'quizzes' for students. This approach often leads to educator-designed surveys and audits that lack robust, psychologically safe methodologies, resulting in a subpar user experience and diminished confidence in findings. The surveys were created with school leaders, EDI practitioners, and academic gender experts in mind. I worked directly with Dr Lauren Spinner (Associate UCL and University of Surrey) and Dr Aife Hopkins-Doyle (University of Kent), who led the research team and supported the design of what an inclusive staff survey would look like and achieve.

The first intervention was designed to gather baseline data on school leadership's understanding and implementation of Diversity and Inclusion (D&I). This phase (Table 2) focused on co-developing a pilot Leadership Self-Assessment and school employee survey tool, in collaboration with academic researchers from the Universities of Kent, Surrey and UCL, using Boateng et al. (2018) best practice for testing and validating scales (Figure 4). Voluntary school leaders and education experts from the GEC Circle also participated in the design. The purpose was to capture perceptions, priorities, and practical experiences related to D&I practices across a range of education settings.

Their expertise was in gender demographics and survey design. Bringing in my professional fieldwork on frameworks for disadvantage addressed this point. The resulting staff survey content was mirrored in a self-assessment survey (an audit) for leaders to complete, as the 'voice' of the organisation. This was a formal undertaking, but the real focus was the staff survey.

Drawing on existing D&I literature, particularly from 2018 to 2020, the initial survey questions and assessment framework were informed by key themes including intersectionality, inclusive leadership, representation, curriculum reform, and staff/student voice. The rationale for building on the existing literature review in Chapter 1 was to test how well theoretical constructs translated into practical, context-specific insights for schools.

To ensure clarity and accessibility of the survey items for a wide range of school staff (including non-teaching roles), an initial pilot was run via Prolific, involving 428 non-education participants. Feedback from this cohort helped identify ambiguities, reduce jargon, and improve readability.

Once satisfied with the survey questions, these were quality-assured with the Circle across the protected characteristics, in and outside education, to ensure applicability. The focus was to understand and unlock participants' sense of "place" (Bourdieu, 2002) in terms of personal and professional lived experience. The approach followed the three phases and nine steps of scale development and validation (Boateng et al., 2018). Over 300 people took part in the research before launch with schools across the UK, from Primary and Secondary to Further Education (see Appendix 3 for participant research method on the core questionnaire).

There were three phases (Appendix 3i–3.iv):

- **Question development:** an initial set of questions that could work in any workplace (developed with the research team) and then revised to work in schools (with school leaders and my own work) to support attitudes to equality and inclusive cultures in action.
- **Scale development:** reduction and revision of the initial questions into a robust measurement tool, selecting and constructing the correct metrics and pre-testing the questions.
- **Scale evaluation:** testing the reliability of the measurements.

The crowdsourcing website Prolific was used for the third part, with a target of 300 participants as a 'good' sample for feedback (Comrey and Lee, 1992). The final sample for the GEC Platform consisted of 428 participants.

The initial 10 sections or measures included:

1. Inclusion and belonging (26 items)
2. Professional opportunities (26 items)
3. Values and leadership (28 items)

4. Actions towards diversity and inclusion (20 items)
5. Training/CPD (12 items)
6. Perks, benefits and employee provisions (4 items)
7. Flexible working (5 items)
8. Beliefs (12 items)
9. Harassment, discrimination and victimisation (12 items)
10. Social and environmental sustainability (17 items).

For sections 1 and 2, some participants also completed additional questionnaires based on discrimination experiences due to sex, race, age or LGBTQ+/gender-variant identity. Three further sections for wider staff-body stakeholders with responsibilities for these topics included:

11) Students

12) Families

13) Curriculum

Feedback from the intervention illustrated that the survey questions worked. Participation was high and engagement sound. Methodologically, the surveys brought conscious and unconscious findings together to support a better understanding of social capital for all staff.

The results showed the GEC Platform content to be:

"Robust and measure absolutely what you want it to measure when it comes to diversity, equality and inclusion." — **Dr Lauren Spinner**

"We were able to test the assessments for organisations, at a high level, and we know it has very good construct validity and reliability for its users." — **Dr Aife Hopkins-Doyle**

Digitalising intersubjectivity-based surveys (Husserl, 1931) provided an opportunity to reduce human bias in the data collection process. By leveraging EdTech, I was able to surface intersectional insights, offering a more comprehensive understanding of participants' experiences. These insights were then presented to school leadership with empathically evidenced findings, allowing for data-driven decision-making that was sensitive to the diverse needs of students and staff. Integrating the surveys into the EdTech platform was a crucial next step. It was essential to ensure that the design of the platform—particularly the dashboard's colour scheme, copy, and overall user experience (UX)—encouraged inclusivity, supported familiarity, and promoted both active and passive expression of participants' voices.

As highlighted by Garrett (2011), and in alignment with modern inclusive design principles, focusing on UX played a pivotal role in fostering engagement and ensuring that users felt their voices were valued. Central to this process was the aim to make participants feel safe, empowering them to share their perspectives freely, both consciously and unconsciously. This user-centred approach was crucial to ensuring the platform not only captured meaningful data but also provided a safe and inclusive space for all participants. Colours for the dashboard and surveys were selected for their psychological and representational design values in the initial MVP. Rounded edges created a softness of approach, and 'button-wrap' style buttons encouraged completion. The EdTech solution needed to be as automated as possible to support scaling and simplification. This meant building in time indicators, automating 'next steps' to make a platform tour easy for non-EdTech users, and providing a clear RAG (red, amber, green) rating that school leaders would find familiar.

The methodology for this AR is tied to the development of the participants-first approach, which highlights the importance of centring individuals' lived experiences in the pursuit of meaningful change within educational environments. A bespoke platform became essential to capture the depth and nuance needed for effective EDI interventions—creating an inclusive environment where data could be gathered, analysed, and acted upon in ways that give voice to often-silent perspectives. As highlighted in the literature review, humanising data is paramount for facilitating actionable change. The surveys designed for the MVP centred on a multi-dimensional benchmarking tool, addressing key issues such as gender equality and disadvantage.

The surveys' design sought to ensure that leaders had a clearer understanding of both the individual and collective barriers faced by staff and students, through a combination of self-assessment tools and staff engagement. Participant feedback reinforced the value of these nuanced insights and highlighted the importance of diversifying the voices involved in co-designing the solution. This approach ensured that the EdTech platform could support the measurement of progress towards more inclusive school cultures in ways that are both reliable and grounded in lived experience. By integrating qualitative and quantitative data in a people-centred platform, this research advances the conversation on the role of EdTech in improving D&I practices. The next section explores how the platform's features and the data collected might support leadership teams in driving systemic change and fostering inclusive cultures across schools.

The tools were then iteratively developed and tested through a Quality Assurance (QA) process led by the GEC. This involved collaboration with over 30 educators—primarily school leaders (e.g., headteachers and deputy heads)—who helped refine the language, format, and focus of the survey questions to ensure cultural responsiveness, accessibility, and practical relevance. Participants were selected through purposive sampling from the GEC network and partner organisations, prioritising diversity in region, school type, and demographic characteristics (Appendix 3).

Co-construction of the survey tools occurred via several feedback loops (see Figure 4), including online focus groups, asynchronous feedback forms, and one-to-one interviews with educators from different sectors. Informed consent was obtained, and participants were engaged voluntarily through professional interest by participating schools.

This phase also included the design of an MVP version of the digital Leadership Self-Assessment tool, developed in collaboration with GEC Circle researchers and data specialists from UCL, the University of Kent, and the University of Surrey. The MVP focused on enabling school leaders to self-assess their D&I provision and identify areas for improvement. My unique contribution was to translate insights from the literature review and QA phase into a functioning tool integrated into the EdTech platform. The platform was built using agile development processes and supported by ethical data-design principles.

The platform supported an Action Research cycle as Figure 5 illustrates—although for the MVP the action planning was offline, following traditional school data-maturity models.

Participants were introduced to the tools during trust-wide webinars and 1:1 onboarding sessions. Survey access was facilitated via secure logins and GDPR-compliant protocols. Schools were informed that all data remained local, encrypted, and anonymised. The GEC Platform is independently maintained and operated by a UK-based team with ethical oversight. It is not funded by Big Tech companies; instead, it is sustained through philanthropic funding, academic partnerships, and paid educational licences.

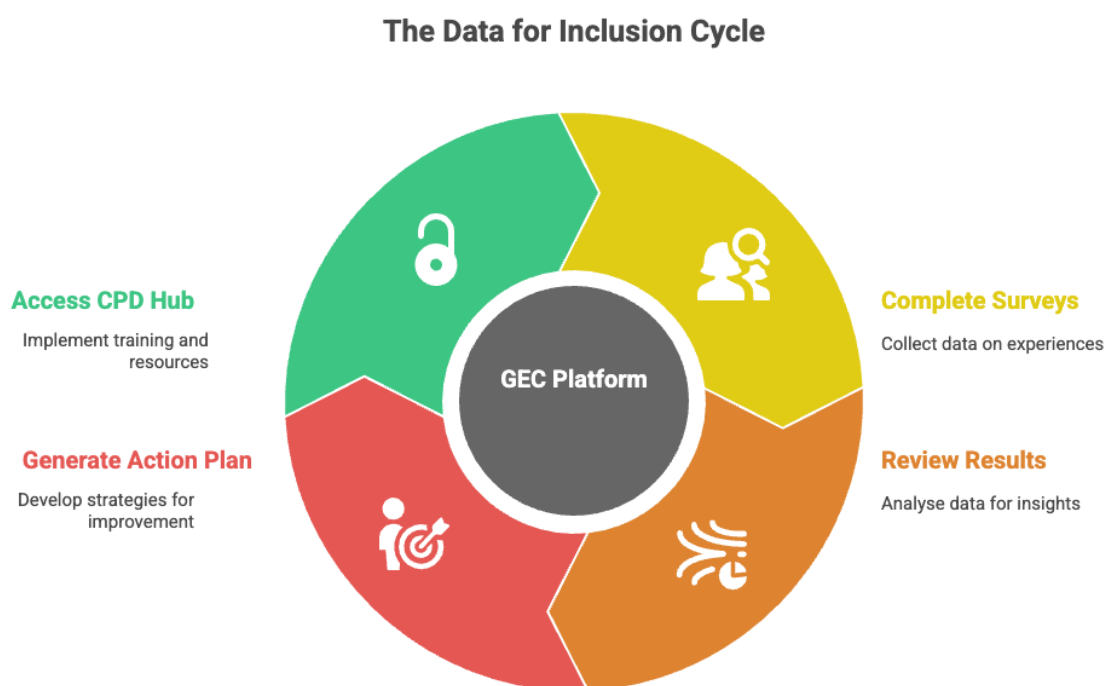


Figure 3: How the GEC Platform Works – Data For Inclusion Cycle (Ponsford, 2025)

GEC and partner-university safeguarding protocols were followed, establishing a dual ethical framework that blended academic and practitioner-informed standards for participant care and data protection.

Feedback from this intervention confirmed the value of the self-assessment as a reflective tool. Engagement was high, with leaders from approximately 20 schools involved in the pilot and QA testing process. Participants reported that the questions prompted meaningful conversations and strategic action planning. In response, the survey and tool were integrated into the wider platform ecosystem and used to support further interventions.

Screenshots and further details of the platform interface are provided in Appendix 3. These visual examples illustrate the user journey and affordances, including colour-coded dashboards, equity heatmaps, and automated reports.

This intervention marked the first step in the action research cycle, enabling the planning and design of future stages. By embedding reflexivity, co-creation, and ethical design into the research process, Intervention 1 supported the study's commitment to humanising data and fostering inclusive practice through practitioner engagement.

3.2 Intervention 2: An Intersectional Intentional Inclusive Leadership Approach

The second intervention emerged during a period of global disruption and deep societal reflection. On 25 May 2020, the murder of George Floyd in Minneapolis acted as a catalyst for renewed international attention to systemic racism. Concurrently, the COVID-19 pandemic placed unprecedented pressure on educational systems. In England, these intersecting crises exposed long-standing inequities and prompted urgent calls for change within schools. Many school leaders began reassessing their institutional commitments to equity, diversity, and inclusion (EDI), seeking tools and frameworks that could address structural inequalities and foster inclusive cultures.

This moment marked a turning point in the national discourse on race and education, as school leaders recognised the need for intentional strategies that engaged with the intersectional nature of discrimination. Drawing on my professional background in EDI, I anticipated the sector would require tools for whole-organisation benchmarking and sustained development. The early success of Intervention 1, including participant feedback and evidence of action planning, confirmed that the participatory, school-led approach was effective and scalable. The original group of schools voluntarily continued with the platform during the lockdown period, moving beyond audits to active planning, reflection, and monitoring cycles.

"The GEC Platform is sensational. It has really raised awareness amongst my staff and shown that as a school we take equality seriously. The overall findings have been incredibly useful and informative, leading us to consider elements of our

approach that we had not fully thought about before."

– Headteacher, All Through School

"An accessible, elegant and intuitive tool for any school leader looking to embed meaningful change within their context."

– Headteacher, Secondary School

"The GEC Platform is a superb way to engage staff on the range of issues that fall within equality, diversity, inclusion and social justice. Not only does it help frame the questions, it provides a straightforward way of creating an action plan tailored to the school or trust, and a wealth of supporting materials to help you on the journey."

– CFO, Trust of Primary and Secondary Schools

These testimonials demonstrate how the second intervention deepened engagement by enabling strategic reflection at leadership level.

The next stage was to upgrade the MVP (Gender and Inclusion) to an EdTech platform that could support more EDI demographics and wider social capital challenges in schools. Elements that needed to be added:

- A digital action plan feature enabling school leaders to plan, assign, and track inclusion-focused tasks
- Custom coaching and consultancy pathways developed by lived-experience experts from the GEC Circle
- Expanded eLearning modules and CPD content, including interactive videos and inclusive leadership training (Cordingley et al., 2015; Earley & Porritt, 2014)
- Full coverage of Equality Act 2010 protected characteristics, plus additional demographics
- Extended functionality for intersectional data filters, benchmarking, and coaching recommendations (Arday & Mirza, 2018; Gillard & Kirschner, 2020)

Bringing in new groups (such as family or HE) was something that would require more flexible survey functions and more data collection so this was something that was pushed down the line of the timeline. However, all of the other accessories could be incorporated. This was done using the same build process – the framework was ready – and additional

training material was written in advance of the platform build, leveraging our existing proprietary technology for the new version. This aligns with emerging research on digital inclusion and responsive design in education, which emphasises the importance of accessible, user-friendly platforms for reducing barriers to participation and supporting diverse user needs (Eynon & Geniets, 2016; Gillard & Kirschner, 2020).

This was then reviewed with the University of Kent (see Appendix 3). The demographics were extended, a diversity review was executed, and 'hyperdiversity' was integrated into the platform surveys, data collection with new coaching recommendations linked to the Staff Survey data reportage and an extension of EDI content in the training hub for all staff.

To me, understanding diversity, multiculturalism, cultural, and social capital means going beyond traditional demographic data, diving deeper into the invisible layers of experience and identity that shape individuals. These layers encompass lived experiences, personal values, intersectional identities, and socio-cultural contexts that often remain unexamined in standard data collection processes. As Bourdieu (1986) suggests, cultural and social capital are not simply fixed assets but fluid constructs that shape an individual's opportunities and experiences, particularly in education. Furthermore, Crenshaw's (1989) concept of intersectionality underscores how various aspects of identity—such as race, gender, disability, and socio-economic status—intersect to create unique experiences of inclusion or exclusion, which cannot be captured through traditional demographic data alone. By focusing on these hidden aspects, we can uncover more nuanced insights into the challenges and opportunities individuals face in educational settings. This deeper understanding can inform the development of truly inclusive practices that take into account not just who individuals are but also how they navigate the world and interact with their environments (Sen, 1999; Nussbaum, 2011).

This approach involves prioritising the participants, recognising that each person brings a unique, multifaceted perspective that extends beyond surface-level characteristics. By focusing on the complexities beneath the waterline of visibility, leaders can better understand the needs of all individuals and put the participants first. Davidson (2018) expands this idea further, distinguishing between 'demographic diversity' (gender, race, sexual orientation, etc. as referenced in the Equality Act 2010), 'experiential diversity' (cultural

capital), and 'cognitive diversity' (neurodiversity). This framework also calls for incorporating biodiversity, addressing ecological issues and solutions that intersect with social inclusion.

To operationalise the theoretical constructs of social capital and intersectionality in the staff module, members of the grassroots GEC Circle were invited to co-review and refine the evidence-based survey statements. Drawing on their lived experience and professional expertise in equity, diversity, and inclusion (EDI), these participants contributed to the development of a more representative and inclusive survey framework. Volunteers were recruited via a targeted GEC Circle newsletter callout. Those who opted in were then engaged through asynchronous online interviews and feedback loops, which included the emailed sharing of survey drafts and contextual prompts. Participants represented a wide range of demographic groups and professional roles, including educators, coaches, researchers, and policy advisors, each with experience supporting systemic change within education and adjacent sectors.

This co-construction process foregrounded relational trust and acknowledged how systemic inequities—including racism, misogyny, classism, ableism, and ageism—are manifested and (re)produced within workplace cultures. It was essential that survey statements reflected these lived realities, enabling all staff to see aspects of their identity and experience represented in the anonymous survey format. Simultaneously, care was taken to preserve psychological safety and anonymity in alignment with ethical safeguarding principles. By embedding lived experience at the design stage, this intervention aimed to generate a survey model grounded in both equity and professional integrity. This participatory method ensured that staff voice was not only captured authentically but used as a foundation for informing inclusive policy and leadership strategies.

The second intervention extended the scope of the study beyond teaching and curriculum staff to include a wider range of school professionals and contexts. The first phase of this intervention was conducted in partnership with the Institute of School Business Leaders (ISBL), where members were offered the opportunity to participate in the EdTech platform pilot. Two Multi-Academy Trust (MAT) leaders and ISBL advisors also took part. This phase contributed to both Research Questions 1 and 2, particularly by re-examining how school leadership is defined and by exploring innovative pathways for professional inclusion

beyond the classroom. In doing so, it opened up new understandings around organisational culture, operational structures, recruitment practices, and sustainability, including how 'culture fit' is interpreted across different roles in schools and trusts.

Importantly, the programme 'Champion' in this intervention was a school business leader, rather than a headteacher. This shift introduced a fresh lens on the challenges and priorities of equity, diversity and inclusion (EDI) from operational and strategic perspectives, including human resources (HR), finance (CFO), and school business leadership—alongside senior leaders from teaching and learning, such as heads, deputies, trust leads, and SENDCOs, as included in Intervention 1. As part of the outreach, I delivered keynote contributions at regional ISBL events and participated in a series of webinars. These engagements allowed me to gather first-hand insights into the priorities of school business professionals regarding EDI and incorporate these findings into the evolving design of the framework.

While this phase included informal engagement with professionals beyond the core research participant group, it provided a valuable opportunity to ensure that the evolving framework supported wider school system needs—particularly in relation to recruitment, retention, and sustainability. Of note, two pilot trusts—Hearts Academy Trust and Priory Learning Trust—were involved in this phase due to their recognised expertise in sustainability and their reputations as thought leaders in trust operations and inclusive strategic development.

The action research approach of this intervention also deepened the inclusion of additional staff groups within the education system. A key insight that emerged during this phase was the absence of systematic intersectional data collection in many schools, especially in non-teaching roles and in sectors beyond state education. This prompted a deliberate expansion of the study to explore how EDI could be effectively measured through EdTech in a wider range of contexts, including independent and international schools. By incorporating voices from support staff, office administrators, central teams, and other non-teaching personnel, this intervention offered a more holistic view of workplace culture and inclusion within schools. These perspectives were critical in refining the platform's survey questions and support pathways to ensure all staff—regardless of role—could engage meaningfully in the organisational improvement process.

This inclusive and strategic broadening of scope laid the groundwork for Intervention 3, which focused on refining the framework through co-design with EDI experts and lived experience practitioners. Their critical engagement ensured the tool would be both theoretically grounded and practically inclusive—fit for purpose in diverse educational contexts.

3.3 Intervention 3: Ethical Insights for Equity Provision in School Leadership

The EdTech platform was being used in UK schools, and internationally, collecting an increasing amount of data from a diverse range of educational settings, beyond the initial group of UK state schools. For the purpose of this study, I had access to a working model that allowed me to review, both the participants' experiences and its impact on their trust and school communities. This next intervention focused on reevaluating the platform in relation to the three research questions, specifically examining how participants experienced and utilised the EdTech platform, following the earlier interventions. The emphasis was on assessing how successfully the schools were able to transform educational practices for staff and students, particularly in closing D&I gaps with data for inclusion. With an established group of participants, I was able to benchmark the platform's effectiveness and explore new opportunities for addressing intersectionality in educational leadership, school practice and policy.

My focus moving forwards was on the following key areas:

- Understanding the critical role of leadership in driving D&I efforts, with a particular focus on how leaders' 'lived experiences influence their decisions around inclusion and equity (RQ1)
- Exploring the unique contexts of individual school contexts when it comes to leadership choices, how they were shaped by individual contexts, whilst assessing the potential of EdTech as a practical solution to D&I challenges (RQ2 and 2)

By focusing on my research questions and these areas, I aimed to gain deeper insights into how leadership behaviours, combined with the use of data for inclusion could advance and transform educational outcomes for both staff and students.

In other words, the research questions findings could move from diagnosing the problem towards action planning, action taking, evaluating and even specifying learning as part of the AR methodology:

- RQ1. How had the school leaders addressed Diversity and Inclusion (D&I) gaps for staff and students before?
- RQ2. How had insights into social capital and intersectionality, along with attitudes and values towards D&I, helped schools explore innovative pathways for intentional inclusion and improvement?
- RQ 3. In what ways has EdTech enabled schools to explore new opportunities for addressing intersectionality and advancing D&I practices?

A social constructivism approach meant recognising that the participants in my studies defined "themselves" and their lived experience (Beck, 1979) which can be fluid and "changing rather than fixed or static" (Cohen L., Manion, L., and Morrison, K., 2018). The earlier interventions had provided a safe space for participants to share their perspectives through surveys, collaboratively with expert input, yielded high rates of engagement, completion, and reflective responses, demonstrating their effectiveness in capturing authentic voices.

Central to this process was a conscious effort to approach the participants' experiences with empathy not sympathy, ensuring that the design of these tools was sensitive to both their explicit and implicit needs. This empathetic stance guided the co-design of a framework that could be embedded within an EdTech platform, creating a meaningful and scalable engagement EdTech tool. By merging ethics with the methodology here, as Izak van Zyl & Amalia Sabiescu, (2020, p.16) explore, both need to be referenced and anchored in this third intervention:

"Intersubjectivity is the epistemological dimension of emerging in a new, shared, negotiated space. Through appropriate engagement in joint practice, participants make sense, together, of

the ethics system that best sustains their joint effort. This implies the need for joint practice, relatedness, and dialogue as the basis for a sound ethical approach to take shape."

Ethical product design should be central to any study in EDI, with consent, transparency and a respect for participants sharing their private lived experiences at the core. Whilst in professional roles, participants in an EDI intervention, have to be respected and given personal space, as involvement in the research process is a 'lived experience' in itself. The earlier interventions served as the foundation for building trust and establishing a collaborative relationship with participants, all trust and school leaders. This was crucial for the third phase of this study. In this phase, I examined the participants' "themselves", their evolving relationship with the intervention process itself. Specifically, I investigated how school leaders interacted with the EdTech solution, assessing the extent to which the process fostered deeper personal and professional understanding of intersectionality and social capital within their school and trust communities. Better understanding how they might move between a conscious and unconscious stance.

The aim was to explore whether the intervention had facilitated meaningful change in their awareness and practice, particularly in recognising and addressing the diverse lived experiences of individuals within their educational settings. This was achieved through a mix-methods approach, using the quantitative and qualitative data from the platform, but also an online survey and a group based virtual call. Collins et al argue that "the mixing of quantitative and qualitative techniques for the rationale of optimising the sample" (2006, p.76) provides "participant enrichment", and can be used to ensure "that each participant selected is appropriate for inclusion" (Johnson et al. 2007, p.116). I chose a mixed-method approach in terms of the structure of the study and how data is captured, with an emphasis on being respectful to the lived experiences of the participant too.

Applying the doctoral lens once necessitates a critical reflection upon Westernised ethical frameworks, concepts of consent and academic conventions of research. In this context, it became apparent that many school leaders involved in this intervention were unfamiliar with the processes of indirect Action Research (AR), requiring me to guide them through an approach that was largely new to the group. While this cohort of school leaders had

significant experience in educational leadership, few had previously participated in university-led, co-designed academic research.

Although school leaders are widely encouraged to be *evidence-informed* for their instructional practice, for their schools to be *research-engaged*, and to use *research knowledge* to play an active role in their policy decisions at a national level (NFER, 2019), their direct involvement in co-constructed academic research projects remains limited. This is significant given the broader policy contexts in England, where research-informed practice continues to be championed at a national level. For example, Department for Education (DfE) reaffirmed its commitment, in September 2022, by re-endowing the Education Endowment Foundation (EEF) with a grant of £137m to serve as an "independent evidence broker, evaluating and spreading best practice across English schools, nurseries and colleges, for at least another decade", disseminating best practice across schools, nurseries and colleges.

Despite these systemic efforts to embed research use in education, the experience of directly engaging in the co-design of research frameworks, as part of an academic inquiry was unfamiliar. This highlights a disconnect between the aspiration of schools to be research-engaged and the practical realities of involving school leaders in academic research. My role as a researcher, as evidenced in the literature review, has been to explore attitudes and values in education and society through multiple lenses, including the perspectives of those involved at the heart of educational practice. This approach reflects an ethical stance grounded in lived experience, which underpins the content and nature of this research. By prioritising collaborative, co-designed methodologies, I aimed to bridge the gap between academic research and practical application, fostering deeper engagement with the processes of inquiry and reflection.

Throughout the development of the surveys, participants were also offered both individual, confidential sessions, and group-sharing exercises. This dual approach provided opportunities for deeper reflection and collective learning. It was fascinating to observe how participant's reflections evolved over time, particularly as they engaged with different stages of the process and were given space to consider their experiences. Notably the opportunity to reflect both individually and within a group context seemed to influence what participants identified as most impactful in their learning journey. Adopting a mixed-methods approach was pivotal in capturing the most authentic data and outcomes. This ethical methodology

allowed them to balance quantitative insights gathered through EdTech platform with qualitative reflections drawn from more personalised engagement opportunities. By offering participants a combination of individual and group experiences, I was able to create a more comprehensive and meaningful framework for understanding their perspectives and responses, ensuring that the research captured the complexity of “themselves”, the complexity of their lived experiences within education.

Ethical considerations in this contribution encompassed both above the line and below the line issues. The primary *above the line* ethical concern involved ensuring participants anonymity when they were brought together for the group exercises, as well as the capture of the survey responses. The individual online surveys for this intervention were fully anonymised, which meant that I was unable to easily identify specific participants or their personal experience through the data collected. This approach prioritised ethical rigour in protecting their identities and allowed them to choose what they expanded on in the group sessions after being provided with a safe space to reflect on this in advance.

In terms of *below the line* risks for this intervention, the most significant challenge related to participant engagement and survey completion rates, largely due to the competing time pressures faced by busy senior leaders. Given their demanding roles, maintaining consistent participation required careful consideration of workload, urgent disruptions and time constraints. Another ‘below the line’ issue arose from my existing relationships with participants, particularly those who had shared their lived experiences with me and then would be before the group of unknown participants. This pre-existing familiarity could have influenced the dynamics of the intervention. There was also the risk that discussing ‘themselves’ might be triggering in terms of sharing their marginalised lived experience or having to reflect on harassment, victimisation or discrimination. To mitigate this, I prioritised transparency in the design of the intervention (see Appendix 3ii) and took steps to ensure all of my participants were fully informed. This included a clear warning about the possibility of personal and professional triggers throughout the research process in my correspondence with them. Thereby fostering a safe and ethically conscious environment for participation.

The tools and participatory methods that I used are part of the rationale used to investigate new knowledge in this intervention. Participants were selected based on their status as existing school leaders, and that they had all used the diversity and inclusion platform.

Selection was based on them being the sole participants that had experience of this and that they would be able to evaluate the process.

Although working remotely, the field work meant practising school leaders and desk research (reviewing of data and surveys by self) for another mixed methods approach. For the study, I wanted to understand those that have experienced the initial leadership and staff surveys, therefore had a smaller pool of those who are applicable for this, but the small sample of participants for this intervention ideally supported a larger scale study as a consequence. Using action-research and interviews in the focus group and online questionnaire will provide different discourse and qualitative data. Participants were also encouraged to include the quantitative data from their 'GEC Platform' report (5-subscales likert and tick-box answers) so they could speak to data from their school audit using the EdTech platform as well as having the opportunity to reflect personally in the group- session as part of a structured conversation with other participants.

Putting the participants in the design and process of this intervention again was essential to better understand my research questions. This participatory approach aimed to explore the subjective-objective nature of the experience for all involved, aligning with Heron and Reason's (1997). I have leaned towards intersubjective ethics in community-based research as outlined by Izak van Zyl & Amalia Sabiescu, 2020. This ethical stance emphasises the co-construction of knowledge through relational engagement and mutual understanding. By incorporating Heron and Reason's four forms of *knowing*, my aim was to ensure that the research process itself became a space for collaborative learning and reflection, where participants' lived experiences shaped both the content and outcomes of the intervention. Intersubjectivity and the related notions of "critical subjectivity" and "critical intersubjectivity" are concepts which are central to participatory inquiry, resonating equally with critical theory and constructivism. Understanding the perspective of my participants, through prior relationships and school experiences both as students and adults (staff), an understanding of the participants' emotional literacy, cultural references, institutional perception of academic processes, and a transparency of the pilot study process, was all key before they agreed to participate. What I sought could therefore only be uncovered through (practical) participation. I was eager to ensure that participants had a clear understanding of what I am asking them to do (experience) but also that I want them to also help co-design questions (in the first activity) that we could include in the second (activity). There was in addition to this,

a critical subjectivity of this, asking participants about their lived experience, another lived experience in itself.

This element of the intervention would focus more on action-research to support new knowledge on how to develop the means to capture the lived experience of participants (mainly headteachers), to better understand how to build a digital, scalable solution. This is why there were two activities:

- The first an anonymous, short (no more than 10 minutes in duration) individual ('I' rather than 'we') online questionnaire, designed for them to feel 'safe', psychologically safe, in order to be authentic, truthful and reflect on their feedback. Long-form answers are encouraged by the GForm 'long paragraph' boxes - and the three questions above completed by 'Do you have any other comments you would like to share here?'
- The second activity was an online focus-group discussion using the interactive 'whiteboard' software, Miroboard - used by digital product teams and more so in academia today. This longer session of around 45 minutes followed the first, in order to allow participants, in a 'shared attention' activity time to reflect on the questions in the initial questionnaire. This was as a group, focusing together - at the same time - giving a special significance to the materials, or "cognitive prioritisation" (Murphy Paul, 2021, p.221). It was a closed-public session, where shared comments, interaction and filming were encouraged. This forced an awareness of their subjective position and individual perspective when interacting and interpreting their position, their experience of the study and the content. Reflections following this session were also of interest, so I could better understand how to capture the lived experiences of school leaders - and what the best means to analyse and understand this - *is it anonymous, or public? Are digital focus groups more informative or are online anonymous surveys?*

Data Collection Methods

1. **Online (Google Form) questionnaire - school leaders, individuals, private and anonymous. Open ended text options (see Appendix 3.ii).**

(Jacobs, J., Beck, B., & Crowell, L., 2014) state : *“As inequities continue to be present for students of color, for English-language learners, for students from low-income households, for LGBTQ students and for students with disabilities, schools must find ways to increase achievement and high expectations for all students.”* The drive to embed equity often is instigated or delegated to teacher leaders (TLs) who have a passion for, or a lived experience of inequality, but this creates challenges as evidenced by Stewart Hall et al, 2022. They found that:

“...TLs facilitating change for equity in schools with unsupportive conditions (i.e. fear, lack of principal support) found these conditions served as barriers for teachers to address inequities. These TLs had to put equity on hold and focus on building more supportive conditions. Teacher leaders in schools with supportive conditions (i.e. collegiality, principal support) found that these conditions promoted a focus on equity and led to teacher empowerment and greater educational equity”. – Stewart Hall et al. (2022)

Alongside the recent Dfe guidelines on 'Political Impartiality in Schools' (Department of Education, 2020) we see “novice” (Stewart Hall et al, 2022) school leaders “resisting” how to engage and centralise equality and justice at scale with their organisations, mainly as they do not know how to engage with it themselves. Building on the work of Stewart Hall et al. (2022) who believe that leaders need to “integrate new knowledge and (re)organise and prioritise strategy” (when it comes to racial equality and anti-racism in the education sector). We need participants to reflect on their lived experience - that both included the 9 protected characteristics of the Equality Act, and go beyond - to bring in socio-economic status, single parents rights and work-place policies of inclusion (flexible working, menopause and neurodivergent reasonable adjustments for example). Therefore this activity was designed for the participants to reflect on their own lived experiences - and their *observed* (what they have seen) and *indirect* (one person removed, which can include dependents, family and friends) lived experiences.

The online anonymous survey provided them with psychological safety, to be authentic and reflect on their experience to date. By also offering them a medium that they were familiar with - a simple Google online survey - and a time scale that they can fit into their schedule, supported comfort, engagement and familiarity - and therefore a willingness to open up

their personal lives, prejudices and observations. This was something that I had to give evidence for as it was a risk in terms of my pilot study but I felt was important in terms of creating psychological safety for my participants.

2. Interactive focus group session - school leaders, joint session, group-activity with filmed interviews, with pictorial and multimedia contributions encouraged.

New technologies being used for social sciences and focus groups is debatable in terms of the ethics and methodology. Whilst apps like WhatsApp have been explored in the past by Hooley T, Marriott J, Wellens J. (2012) and more recently Colom (2021), digital ethnography offers us the options of both synchronous and asynchronous interactions. By offering this second activity, participants were offered one set time for them to join a virtual, and filmed session. This was also a public focus group, which directly differed from the one listed above.

Through reviewing the scope of their engagement and the data captured, I was able to review which is the more effective route for understanding the lived experiences and reflections of school leaders as part of this study. Using this specific industry standard interactive whiteboard platform was a potential unfamiliar technology for the participants, as was encouraging them to use multimedia as a means of communication for them - although this was not a large risk as they were all used to using whiteboards due to being ex-classroom teachers.

Prior engagement with the EdTech platform resulted in a knowledge of intersectionality and social capital, but none of these participants had been previously brought together to reflect on their personal and professional views in relation to their organisational data. This study, therefore, positioned participants at the heart of the decisions surrounding equity, encouraging them to critically examine their role in embedding equity within their schools. By fostering this reflective process, the study aimed to empower participants to consider not only the data for inclusion, but also their agency in shaping equitable practices and policies within their educational environments.

Personal enquiry (activity 1) and the group discourse (activity 2) allowed the participants to challenge their assumptions, the context of their interpretations, and personal beliefs (based on lived experiences) to expand their reflections (Mezirow, 1991, 1995). As participant action was my focus, the experience of doing 'something new' and unfamiliar as part of my design - I wanted them to engage as a group and bond over this experience, in real time. Filming the session captured their dialogue as a separate layer of discovery, alongside their interactions within the whiteboard-style software. Agreeing with Belzile, J. A., & Öberg, G. (2012) the "treatment of participant interaction needs to be a conscious and explicit design decision" and this can be seen in the two differing digital ethnography activities. They were asked the same questions as in the first activity, but the sharing of responses were then later reviewed in comparison, as well as epiphanies or extended reflections, and the general interactions of the participants too. Participants created their own individual question to ask one another, resulting in the participants co-designing this intervention with me, in terms of the experience and research outcomes. Ultimately the findings, the question development, scale development, and scale evaluation designed here would then support the EdTech developments as a further outcome of the intervention.

3. Additional support - participant school's EdTech report databoard (self assessment and staff surveys, existing online data, qualitative and quantitative) including qualitative and quantitative data from the GEC Platform data from their schools:

- a. An online self-assessment assessment (yes/no/in progress) for a school leader/SLT (RAG rating)
- b. Similar staff assessment with anti-racist and Modern Sexism Scale MSS (Swim et al. 1995) included. Likert scale with demographic filters in reportage and QAed recommendations for roadmap, Action Plan.
- c. GEC Action Plan - customisable with content, calendar scheduling, priority codes and completion actions.
- d. 'Netflix' style 'GEC Library', digital online content for CPD for all school staff, 230+ materials.

Participants were encouraged to review the data from their GEC dashboards and consider how this confirmed their status as a "novice" or their intersectional awareness. Reflecting on

how this had supported their role as a school leader was of great interest, as well as their lived experience either as a child or as an adult (professionally or personally).

I applied for ethical consent by Bournemouth University and I adhered to BERA Ethical Guidelines (2018). However, I also brought in pilot study aftercare, as I take my ethical responsibility seriously as a researcher in equity and justice. In the participants' letter (See Appendix) I referred them to the mental health organisations that I have partnered with to support DEI needs of those I work with and my networks. By offering these organisations to participants my aim was to alert them that there may be triggering, emotional responses subsequent to sharing their lived experiences, and privilege blindspots as part of this investigation.

Researcher Reflections

"To be aware and reflexive about one's own unilateral meaning-making and knowing perspective (critical subjectivity) implies that one opens up to others' viewpoints and ideas through dialogue and exchanges (critical intersubjectivity)." – Heron, J. and Reason, P. (1997)

For me, as a researcher, this particular intervention was significant. As an ex-school leader myself, my leadership insights have been shaped by my own lived experiences, so it was essential for me to fully understand the ("practical") meanings in the words of the participants. The reflective question I consistently ask is whether, as an insider researcher (Kanuha, 2000), I am also becoming an interpretive researcher?

There is no doubt that I share the social capital (Bridwell-Mitchell & Cooc, 2016), language, identity, and experience of the participants as a former school leader, and this commonality also gave the participants reason to trust me. "The complete membership role gives researchers a certain amount of legitimacy and/or stigma" (Adler & Adler, 1987), which in turn grants the insider greater acceptance and trust from participants—something educators tend to view as authentic and reliable when collaborating (Moolenaar et al., 2012). This insider role status often leads to quicker and more complete acceptance by participants, encouraging them to be more open, which ultimately deepens the data gathered. However, I frequently reflect on whether I wish to integrate my own experiences into the narrative of this study.

As previously acknowledged, my lived experience has been a driving force behind my research, particularly in the areas of educational inclusion and intersectionality. While my personal and professional background has provided valuable insight into the challenges faced by marginalised groups, I have consciously maintained a distinction between my experiences and those of my participants. In qualitative research, particularly within an ethical participatory framework, the researcher's positionality must be explicitly considered to ensure that the participants' voices are authentically represented (Dwyer & Buckle, 2009) and not unduly influenced:

"Being a member of the group under investigation does not unduly influence the process in a negative way. Disciplined bracketing and detailed reflection on the subjective research process, with a close awareness of one's own personal biases and perspectives, might well reduce the potential concerns associated with insider membership. Furthermore, one does not have to be a member of the group being studied to appreciate and adequately represent the experience of the participants. Instead, we posit that the core ingredient is not insider or outsider status but an ability to be open, authentic, honest, deeply interested in the experience of one's research participants, and committed to accurately and adequately representing their experience." – Dwyer & Buckle (2009)

This perspective aligns with my approach, where I have employed ongoing reflexivity to ensure that my interpretations do not overshadow the distinct perspectives of those I surveyed and interviewed. Moving from desk-based research to fieldwork was not a challenge for me, as I recognise that social research is inherently "messy" (Bryman, 2019). This complexity required the careful navigation of power dynamics and interpretative lenses, and I engaged in peer debriefing and systematically interrogated my assumptions to maintain critical self-awareness.

Recruitment and participant commitment required time and reinforcement, especially considering my prior fieldwork experience in national charities and the development of the EdTech Platform. Having established solid relationships with school leaders, I was aware of the typical drop-off rates in pilot studies, based on prior research projects like the Microsoft research on assistive technology and the DfE EdTech Demonstrator Programme (2020-21). I was also not concerned that the focus of the pilot would significantly alter the nature of the final study. I used the research questions as the basis, and considered this small-scale study

as a way to refine subsequent research. This experience gave me the opportunity to potentially adapt survey questions from other studies, such as those related to Bourdieu's cultural capital (Zimdars et al., 2009), or allow participants to construct and edit their own questions (Hussain, 2012). As Gagnon and Colley (2001) state: "...Constructivist approach played a significant role in the process of learning to construct knowledge."

It could be argued that my immersive experience over the years, working alongside school leaders, could be described as ethnographic research—not only as an observer but also as someone who distanced themselves while conducting research to further design and evolve the EdTech tool for this study. This study was overt, with participants drawn from the pool of school leaders already using the GEC Platform. My participation in data capture was flexible, with the online survey completed independently, and the group-Miro board carefully facilitated to encourage engagement and collaborative learning. My interpretive lens, aligned with Action Research methodology, sought to understand their lived experiences concerning intersectionality and investigate the process of change within this context. This made the study inherently subjectivist, as I aimed to explore the intentional behaviour adopted by the participants using EdTech in their schools, as per my research questions.

In light of these considerations, I have also reflected on insights from ethnographic scholars like Denzin and Lincoln (2005) and Hammersley and Atkinson (2007), who emphasise the importance of reflexivity and the researcher's biography in shaping research. Denzin and Lincoln (2005) argue that understanding the researcher's positionality is essential in qualitative research, especially ethnography, where the researcher's personal and professional background influences how they engage with data and interpret findings. I adopted a 'Researcher-as-Bricoleur' approach (Kincheloe, 2005), drawing on a range of methods, tools, and theoretical perspectives to craft a flexible, adaptive research process. This approach felt particularly appropriate for the mixed-methods study of intersectional data, allowing me to combine and adapt techniques like surveys, focus groups, and collaborative Miro board activities to meet the evolving needs of the research and participants. As a bricoleur, I have engaged with participants in a dynamic, context-sensitive manner, reflecting the complexities of their lived experiences and the diverse nature of the educational landscape. By integrating multiple perspectives and methods, I have been able to better understand the intersectionality inherent in the participants' experiences, offering a

rich, layered dataset that would not have been captured through a singular, rigid methodology.

Hammersley and Atkinson (2007) highlight that ethnography is about understanding participants' worlds from an insider perspective, and although I did not employ participant observation as a primary method in this study, the depth of my engagement with participants, grounded in shared experiences, aligns with ethnographic principles. Reflexivity, as discussed by Marcus (1994), is a key element in this process, ensuring that my interpretations reflect the participants' experiences, rather than imposing my own perspective.

Research Outcomes

This third intervention engaged participants who were already aware of this research approach for their school staff populations and engaged, having already demonstrated and considered this. The participants varied in location across England, age phase, age, sex/gender, race and ethnicity. I was keen to draw out how professional work (attitudes, values, decisions and experiences) intersect with data capture. The intervention was successful in testing a mixed-methods approach, with the pool of participants who had used the EdTech Platform (experience of DEI qualitative and quantitative data capture by their schools) to understand how intersectional live experiences impact on educational leadership. The intervention brought in their professional experience of using a new EdTech survey-based platform, that flipped the script when it comes to typical DEI surveys that they had used in the past, typically excelling in highlighting the majority narrative (*Pearson School Report*, 2023). Instead, this intervention was to spotlight the perspective of school leaders on their professional attitudes and practice when it comes to the marginalisation of people in schools and better understanding how every voice has a place and could be heard using an data for inclusion tool for equity.

Due to my professional work leading on national research projects, I knew engaging with school leaders would be "messy" (Bryman, 2019) and was ready for participant drop-out and conversational deviation when in the focus group so was keen to trial challenging aspects to test. I was also eager to build trust and ethics into this in order to mirror the psychological safety of the Edtech platform. The 'above the line' considerations including protecting

anonymity and the sharing of information (data and GDPR), and the 'below the line' related to attendance of busy school leaders, engagement rates, professional respect between participants due to the sharing of lived experiences did not impact on the timeline of this intervention. Engagement and trust were key, so the inclusion of accessible technology was a successful part of the small scale study. Using this familiar software (Google Forms and Zoom) and also ensured that the technology was a barrier for the participant experience of the intervention and was in keeping with the methodology of this study. Five of the seven recruited participants were able to be involved. Four participants were engaged in both activities (one dropping out due to an unscheduled Ofsted inspection and Trust CEO interview that clashed with the previously timetabled pilot study). The first survey was completed on time by participants and illustrated a variety of responses from the same questions. It illustrated the challenge of participants' reflections without guidance - when answering questions in isolation. For example, being asked the same question on lived experience, they all used their very different contexts to frame responses and showcasing their values. This illustrated a lack of consistency for their decision making. If they had not experienced an issue, they had not considered it. This illustrates the importance of a comprehensive and full mapping of intersectional needs, a social capital framework for school leaders co-designed with experts and school leaders, to help schools better understand their communities from a leadership perspective.

The online focus group enabled co-design between the participants as they offered new questions for consideration as well as ideas for evolving the EdTech platform. The successes of the first part of this intervention was the inclusion of 'familiar' technology, the group dynamic, richness of lived experiences and the enthusiasm for the topic. Learnings included focus and timings in the online session and a narrower focus of activities. The data illustrated to me that there are systemic issues for school leaders when it comes to inclusion for state schools and Trusts in England. This includes the Church of England, Ofsted, political interventions and traditional clusters of school leaders (regional headteacher groups were mentioned). This reflects the literature review and how school leaders want centralised QA guidance, training outside of this in order to challenge these systems. Participants also cited that demographics above the 'waterline of visibility' (age, race and ethnicity and sexism) are the focus for them in terms of the systems, rather than further protected characteristics and

not intersectional. They also illustrated the challenges of time versus legislation and concerns from both parents/ carers and students.

The main points emerging from the sessions highlighted several challenges related to Diversity, Equity, and Inclusion (DEI) within the participants' educational settings. One key challenge identified was the lack of diversity in recruitment and representation, pointing to a clear need for HR and senior leadership team (SLT) training on DEI issues. Many participants also emphasised the need for a deeper understanding of DEI, with some mentioning this explicitly in the questionnaires, while others brought it up during the group session discussions. Additionally, challenges in engaging stakeholders and addressing unconscious bias were recurring themes throughout the sessions, suggesting that these areas require further attention and targeted action within their organisations.

In terms of leadership decision-making, participants reflected on how their lived experiences had a significant impact on their strategic choices, particularly in terms of avoiding past mistakes. However, there was also a recognition that decision-making tended to be reactive rather than proactive, due in part to the ongoing DEI challenges at the national level. Personal experiences with DEI issues were found to shape both the vision and the actions of leaders within their organisations, influencing their approaches to fostering more inclusive and equitable educational environments. This underscores the importance of considering leaders' personal and professional experiences when examining the broader impact of DEI on organisational practices.

When considering the next steps for presenting the findings, I was initially uncertain about the most effective approach. My goal was to make the results as accessible and inclusive as possible, particularly for teachers and individuals outside of formal academia. I therefore considered creating infographics or an animation to accompany the completed thesis, ensuring the findings would resonate more effectively with a wider audience. This approach aligns with my intention to integrate ethics with a mixed-methodologies in my research, making the process of sharing findings both engaging and reflective of the diverse participants involved. This decision also influenced how I would present work as a whole. Ultimately, I determined that producing a thesis supplemented later by infographics and

open-source research could allow me to present the final findings in a way that both preserves academic rigour and promotes broad accessibility.

3.4 Intervention 4: People Like Me: Child-Centred Approach to Intersectionality and Inclusion

Supporting students and enhancing their experience of education has always been at the core of my professional field work and this study. Consistent with the literature linking well-being to inclusion, equity, and a sense of belonging (Safir & Dugan, 2021; Ladson-Billings, 2021), this intervention recognises that students' lived realities are a critical dimension of school improvement data. Therefore, after successfully securing the participation of the leadership and staff ecosystem, the next logical step was to engage students directly, capturing their experiences through age-appropriate, ethically designed methods that foreground intersectionality, and ensure their voices are meaningfully heard, valued, and integrated into decision-making.

Survey questions and evidence based statements, accompanied by Likert ratings, were first developed in the leadership Self Assessment section on Students, followed by the Staff Surveys. This structure was designed to prompt school leaders and staff to critically reflect on school culture from a student perspective, enabling comparison between the perceptions of senior leadership teams (SLT) and those of wider staff members. The findings frequently revealed marked discrepancies, exposing a knowledge gap between different sub-groups of staff regarding students' experiences. The subsequent stage in the development process integrated the student perspective through the inclusion of *student voice*, ensuring that their lived experiences were systematically captured and used to inform the ongoing evaluation of school culture. Mirroring the co-design and participatory AR methodology, the approach was to bring in a collaborative team of academic researchers, child development experts, school leaders and, most significantly, the participants, the students 'themselves'. During this discovery phase, the work streams were working in parallel. (See Appendix 5)

The data for inclusion framework would remain the same as Intervention 1 and 2, with the evolution of a survey-based reportage tool for school leaders to capture 'student voice'. This meant that the first stage of Intervention 4 was to develop the initial student-centred survey

questions. Following the learnings from the staff and leadership surveys, I wished to mirror the same AR cycle and engage with academic guidance to guide and quality assure the process. Knowing that the existing digital framework would be used, a Likert and tickbox scoring system with qualitative 'storytelling' inbuilt, would be the measurement based upon evidence based statements for leadership teams to review.

Over the course of a year (2023-24), the staff-facing 'Student' statements from the Staff Module were used to test an initial core of statements that would serve as the foundation for benchmarking. These statements were then developed into a student survey, designed to be anonymous and to include self-selected demographic information in order to capture relevant intersectional data. The survey focused on school behaviour, student attitudes, cultural values, and the lived experiences of students in relation to school culture (Appendix 4-5).

As identified in the work of Whitman (2020), Lyon (2003), Gitelman (2013) and Smith (2016), data collection processes often risk creating "data doubles" — abstracted representations of individuals that stand in for, rather than emerge from, their own voices. This form of *dataveillance*, particularly evident in higher education and in the USA, can result in data that speaks *for* people rather than *by* them, reinforcing structural inequalities and producing unreliable predictions. In direct response to these concerns, this intervention sought to invert that dynamic. Rather than relying on teacher-reported accounts of student experience, it placed the power of expression directly in the hands of students through in-person or virtual workshops (Appendix 5). Students provided first-hand accounts of their school life using workshop booklets, participating in online sessions with the researcher and the internal product team, and contributing through 'Children's Parliament' student council meetings. These methods ensured that students' perspectives were recorded on their own terms.

By countering the abstraction of lived experience into reductive data proxies, this approach exposed gaps in educators' understanding of school culture. The resulting insights — grounded in the lived realities of students — provided a richer and more authentic evidence base, surfacing issues that might otherwise have been misinterpreted or overlooked. This process resulted in six thematic sections and 40 questions for the student voice module (Appendix 5.v). Methodologically, this reflects the study's ethical participatory stance, where data creation is co-constructed with participants rather than imposed upon them. By

foregrounding student voice in this way, the intervention directly supported the development of the Data for Inclusion Framework: a means of capturing nuanced, intersectional experiences to inform more intentional and equitable inclusion practices.

Seeking to examine the extent to which student data privacy should be scrutinised within ethical approaches to education. Data capture must have a clearly defined purpose: what information is being collected, for what reason, and to what end? Raw data is not inherently neutral; it is shaped by cultural contexts and institutional priorities. Its interpretation is always mediated by human actors, whose perspectives influence how 'truth' is constructed. As outlined in Chapter 1.3 of the literature review, data in this context does not produce a single objective truth, but rather reveals multiple, diverse lived experience narratives.

This underscores the need for data processes to be designed with the participant in mind from the outset through to the completion of the action. Such ethical design begins with the construction of data frameworks and platforms and must also involve ongoing scrutiny of the intentions, assumptions, and decision-making processes of those responsible for collecting and interpreting the data—whether school leaders or EdTech designers. In this way, data can be used to serve the interests of participants, rather than the convenience of institutions, ensuring that it remains rooted in the authentic perspectives it seeks to represent.

Another outcome of the intervention was in terms of predictive modelling, from the data and insights in reference to the research questions and the primary users.

In terms of RQ.1 what was the current practice, if any, when it came to school leaders capturing student voice in terms of intersectional identities or their point of view when it came to school life? Then, by gathering intelligence on the intersectional identities and social capital, the differing demographic experiences of students surfaced to school leaders, what was the impact on school policy and practice (RQ. 2)? Could student voices when collected in this manner help 'nudge' teachers into better understanding the perspectives of their young people and apply evidence-based strategies to improve cultures and experiences as a result (RQ.2)? Can EdTech platforms help change how schools react to their marginalised students, and change the environment for the students who cannot change their context (RQ.3)? In short, would an EdTech help a trust or schools lean into and meet their students where they are at now.

As Whitman (2020) says, "data must be made". In line with this principle, Goldsmiths University expressed a strong interest in supporting the intervention, recognising its potential to enhance EDI practices in education. The first phase of the study involved a comprehensive review of the existing Student questions for staff in the staff survey within the EdTech framework. Dr Betty Liebovich, Senior Lecturer and Early Years Specialist Goldsmiths University of London and The Teachers Centre at Goldsmiths played a key role in this process whom I was connected to via the GEC Circle. Dr Liebovich provided detailed feedback on the questions, ensuring they were relevant across age phases and appropriately addressed both demographic data identifiers and EDI considerations. She emphasised the importance of recognising "the diversity within their schools and the ways in which they and others belong and are supported to feel safe".

With this critical input, I was prepared to pilot the questions with both staff and students. Liebovich's involvement also facilitated an important extension of the project through a collaboration with the South Thames Early Education Partnership (6 nurseries, STEEP), a network of London-based nurseries. This collaboration ensured that the discovery phase of the intervention included younger children, recognising that from around the age of three, children can typically articulate perceptions of their surroundings through a range of communicative modes, including speech, gesture, sign language, and drawing. As a result, the questions could be adapted for use with children aged 3–5+ years, ensuring that their perspectives were meaningfully represented (Appendix 5).

Ensuring accessibility for students from diverse backgrounds, particularly those impacted by marginalisation, discrimination, and systemic barriers, was a core aim of this intervention. Research highlights that young people from underrepresented groups—including neurodiverse students, students with disabilities, those with English as an additional language (EAL), and those from racially minoritised or socio-economically disadvantaged backgrounds—are often excluded from traditional research methods (Clark et al., 2013). To address this, the intervention initially adopted a multi-modal methodology, drawing upon Clark and Moss's (2011) *Mosaic Approach*. The Mosaic Approach is a participatory research framework that combines multiple methods—such as interviews, visual methods, mapping, and observations—to create a more inclusive and child-centred approach to research. It is designed to capture the perspectives of children and young people in ways that are

meaningful to them, particularly those with diverse communication styles and accessibility needs.

This aligns with UNCRC Article 12 (1989), which asserts that all children have the right to express their views and have them taken seriously (United Nations, 1989). The methodology was also informed by Lundy's (2007) *Model of Participation*, ensuring that students had:

1. Space – Opportunities to contribute through various accessible formats.
2. Voice – A choice of communication modes that suited their needs.
3. Audience – Their perspectives acknowledged and valued.
4. Influence – A clear pathway for their input to shape outcomes.

The Children's Commissioner for England has consistently highlighted the importance of amplifying young people's voices, particularly in education policy and decision-making. Reports such as *The Big Ask* (Children's Commissioner, 2021) demonstrate that children and young people—especially those from disadvantaged backgrounds—often feel unheard in school environments. The Commissioner's work reinforces that to achieve genuine inclusion, research must go beyond consultation and actively create mechanisms for young people to shape the decisions that affect them. For students who have experienced exclusion due to disability, discrimination, or structural inequities, meaningful participation is not just about providing alternative methods, but about ensuring that research processes are responsive to their voices. By incorporating Mosaic-inspired methods—such as visual prompts, scaffolded language supports, and multiple response formats—this intervention reinforced a core principle of inclusive education: that accessibility must be embedded from the outset, ensuring that all students can engage on equal terms.

Once the initial set of statements was developed, it was essential to involve students in reviewing their comprehension and relevance. This was crucial to ensure that the participatory process aligned with the *Mosaic Approach* (Clark & Moss, 2011). To apply the research questions and achieve this, I collaborated with several participatory schools and trusts (already using the EdTech platform), working remotely to better understand their and their students' specific needs when it came to the implementation of student surveys within their school settings. This collaboration allowed me to explore how digital questionnaires were used and perceived by *both students and staff*, focusing on ethical considerations and

identifying practical features that could be integrated into the EdTech platform to enhance engagement and accessibility. Using the Mosaic Approach as a guide, a combination of in-person events and virtual sessions were offered to facilitate this process, ensuring that the students had multiple pathways to contribute. The workshops were designed to capture feedback through visual methods, interactive discussions, and hands-on activities, allowing for a broader range of student voices to be heard. The use of multi-modal techniques mirrored the Mosaic's focus on varied expression methods (Clark & Moss, 2011), offering more inclusive opportunities for students to engage critically with the material.

To support the workshops, I designed a research workshop booklet to guide students through the feedback process. This booklet was carefully crafted to support various modes of interaction, encouraging students to engage through drawing, annotations, and verbal feedback, as well as providing space for critical reflection. The booklet allowed students to engage critically with the survey questions, providing valuable insights on clarity, relevance, and usability. Moreover, the workshops encouraged students to contribute to the co-design of the technological framework, ensuring that their perspectives as participants were embedded into the platform's build. This co-design process is central to the Mosaic Approach, which sees children and young people not only as respondents but as partners in shaping the research tools and outcomes (Clark & Moss, 2011). By involving students in the co-design process, we ensured that the final platform was shaped by their lived experiences and was responsive to their needs.

1. Primary School Student Participant Workshops (In Person)

The first participant group was drawn from a large multi-academy trust comprising 30 primary schools. The trust integrated the project into their existing *Children's Parliament* initiative which involved students from Year 2 and 6. School leaders utilised their in-person Parliament meetings to facilitate engagement with the research workbooks, guiding them through the survey questions and gathering their feedback. In total over sixty students across the trust volunteered to contribute their feedback on the content, structure and format of the survey questions. Their contributions extended beyond the survey itself too, as they also engaged with broader discussions around data consent and the Edtech product design. Virtual assemblies were then held so I could interview students and hear their feedback too.

This process highlighted the importance and ease of including students' voice, from a young age, in the shaping of educational technologies, particularly in making them accessible, engaging and relevant to learners. The data and findings were collected and integrated into the design and build of the subsequent surveys (Appendix 4.iii and 5.i - 5.) and product build.

2. Secondary School Student Participant Workshops (In Person and Virtual)

A group of secondary schools in the Home Counties participated in the review process, ensuring representation of participants aged 11 to 18 years of age. The participating students were members of their school's Student Councils and played an active role in gathering additional insights from their peers. This was achieved by meeting in person representing several secondary and sixth form phases who were already using the EdTech platform. The research booklets for this age group had again been developed in collaboration with their teachers. During the session, the teachers filmed interviews with the students for feedback and captured the completed workshops with photography (Appendix 5).

These teachers attended the follow up research meetings to provide feedback on behalf of their students. This approach ensured that a wider range of student perspectives was incorporated into the evaluation, reinforcing the importance of co-design and student voice in shaping the framework.

An online workshop was held for students, facilitated through Zoom, in collaboration with staff from participatory schools. During the session, students provided feedback on a series of survey questions, with their responses recorded for analysis (Appendix 4ii). In addition to reviewing the survey content, students were asked to share their experiences with EdTech tools (Appendix 4.iii), focusing on features that could support onboarding for them and younger students, maintain anonymity, incorporate gamification and utilise multimedia alongside the questions. Notably, students largely rejected both gamification and

multimedia elements, instead emphasising the importance of clear, accessible language and thoughtful phrasing to ensure inclusivity and engagement.

The students' input directly resulted in several product design and build decisions (see Appendix 4.iii and 5.i- iv):

- Engaging and brighter design palette of colours across the EdTech platform.
- No integration of multi-media as the participating students rejected this functionality. As they denied these features, it resulted in the student module mirroring the staff module.
- Positive language throughout as participants advocated for softer language was better perceived and no zero jargon which they felt would be a barrier for literacy levels, social and cultural capital.
- Simple, comprehensive and clear instructions to support accessibility of their user experience throughout the process of using a platform for EDI student voice capture.
- Additional survey question. Participants also were able to illustrate gaps in the survey's questions. One safeguarding and school cultural aspect cited by a student was the physical safety that school sites allow or ignore. Therefore a statement on "Where do you feel most safe" in school was added to the evidence set.

1. Staff Leadership Participant Workshops (Virtual)

An online workshop was also conducted for GEC school and teacher leaders as part of this multi-strand intervention, to better understand the perspective of school leaders both in terms of their experience of student voice but also the process of the EdTech platform as a means to build on staff perceptions (Appendix 4.ii-4.iii). These participants were selected as they had experience of the platform, they were the 'Champions' who had already overseen the staff module roll-out and, most importantly, had expressed an interest in this next stage. Their insights were gathered in terms of the student survey questions, but also user-driven (Appendix 5.v). For example, discussion points included the favoured frequency of student surveys across an academic year, easy ways for leadership teams to share access to the surveys and how to best tackle legislative and safe-guarding concerns. These reflections

were further reviewed from both an Edtech onboarding perspective and through the lens of data collection practices from the school leaders' point of view (Appendix 5.vi). All participants in this stage were confident EdTech users, which allowed the session (with the technical team in attendance) to focus on identifying potential improvements to both the survey and the overall product. The discussions also emphasised the importance of integrating ethical data collection practices into the design from the outset, ensuring that safeguarding and inclusivity considerations were embedded through the process.

2. Data for Inclusion: Surveys and Safeguarding

It was evident that safeguarding would need to be embedded into the survey design from the outset. This consideration emerged not only through the initial ethical review process, but was reinforced during the staff research sessions, where safeguarding concerns were raised further.

Designing the surveys that capture the demographics of young people while exploring their experience of school culture typically involves identifiable data collection. However, building on the success of the early interventions and the build of an anonymous staff module, it was critical to explore how a student survey could maintain anonymity without compromising safeguarding principles. This required a careful balance between ensuring student safety and gathering meaningful insights. To achieve this, I interviewed individuals and organisations to better understand the best practices for ethical and secure data collection. This consultation process led to the adaptation of the Information Commissioner's Office framework on *Children's Rights in the Digital Environment* (ICO, 2018), also known as the 'Digital Rights of the Child'. Placing the "best interests of the child" at the centre of the design became a guiding principle, ensuring that the student module prioritised safeguarding, inclusivity and ethical data practices throughout its development.

"The best interests of the child should be a primary consideration when you design and develop online services likely to be accessed by a child."

Information Commissioner's Office (2018)

In addition to this, the *UNICEF Rights of a Child* framework (2022) was also considered to ensure that transparency, safeguarding and consent were integral components of the survey design. This approach further reinforced the commitment to uphold the participants, the children's rights, ensuring their participation in the surveys was both ethically sound and fully aligned with internationally recognised standards for protecting their well-being. Echoed in Sriprakash et al (2023) collaborating at scale, and building EdTech with the best interests of the child is optimistically achieved to provide social digital opportunities for EdTech and education. Giving us an alternative way to shape the technology that can go on to shape the sector, oppose injustice and exclusion within our sector.

To ensure the ethical integrity of student participation and uphold safeguarding responsibilities, this intervention was designed with a strong emphasis on transparency, informed consent, and support structures. A comprehensive downloadable *Teacher Toolkit* accompanied the roll-out of the student-facing survey, developed collaboratively using feedback gathered from prior workshop sessions and co-design interventions. This resource provided detailed guidance for school leaders and practitioners, including instructions to identify Designated Safeguarding Leads (DSLs), procedures for managing students requiring 1:1 support, and strategies for delivering aftercare following survey completion.

A significant insight from student voice during the pilot phase was that young people often felt their consent was assumed or overlooked when completing school surveys. In response, a deliberate design feature was introduced into the platform—a required “I’m happy” consent button that students must actively select before accessing the survey content. This embedded opt-in mechanism supports student agency and ensures that participation is voluntary and informed. No data is collected unless this explicit consent is given. The safeguarding protocols were rigorously developed in collaboration with DSLs from participating schools, who reviewed all student-facing materials and question wording prior to implementation. In addition, a national safeguarding organisation was consulted to review the product design and survey content from a trauma-informed, child-protection perspective. Their feedback was used to refine the platform, ensuring alignment with best practice in safeguarding and psychological safety. As a result of this process, key design decisions were made to protect student wellbeing. Unlike the staff surveys, the student survey does not contain open comment banks for every question. This minimises the risk of

students being asked to disclose sensitive information and maintains the anonymity of responses. Furthermore, questions relating to online safety, physical abuse, or sexual abuse were intentionally excluded. The survey was instead framed positively and with inclusive language, designed to surface meaningful insights without triggering emotional distress.

The anonymous nature of the survey responses and the built-in consent and safeguarding features differentiate this tool from other wellbeing or EDI surveys currently used in schools, which participants had described as emotionally exposing or lacking in follow-up care. By embedding ethical considerations at the point of design and providing schools with the necessary wrap-around support—before, during, and after data collection—this intervention sought to create a transparent, protective, and empowering data collection experience for students. This approach aligns with the ethical standards of participatory research and strengthens trust between students, schools, and researchers.

The Build of the Student Module

Initially, this intervention was open to schools that had been part of the workshops, alongside a select group of schools and trusts chosen to 'test' the functionality and experience of students completing the module to ensure a diversity of participants.

1. Overview

- Student Module (age 3 years to post-16)
 - 6 standards 38 questions with intersectional demographics
 - Academically tested survey for all students to complete
 - Leadership dashboard including data collection and reportage with intersectional analytical data capture in the EdTech platform
 - Full suite of DEI coaching recommendations that can be pinned to a digital Action Plan
- 'Netflix' style training hub for all staff teams and student materials
- Celebratory downloadable digital assets including a 'membership badge' and Awards (bronze, silver and gold)

2. The Sections

This module was designed to capture and amplify student voices on inclusion and

belonging through the following six sections:

- Belonging and Wellbeing - students will see 'Belonging and Wellbeing'
- Culture - students will see 'Our Culture'
- Representation - students will see 'Representation'
- Safety - students will see 'My Safety'
- Diversity - students will see 'Diversity'
- Inclusion- students will see 'Inclusion'

3. Demographics Collected

To understand the diverse needs and experiences of students, the following intersectional identity demographics are captured:

- Age (by key stages)
- Race and ethnicity
- Sex at birth
- Pronouns
- Disability
- Neurodiversity
- Religion/faith
- Socio-economic status
- Family

4. Student Module Roll-Out: Ethics and Participatory Methodology

The development of the student module was embedded within an Action Research framework, positioning students not only as respondents but as co-researchers in the process of generating knowledge about their school environment. Guided by the ethical principle of prioritising the *best interests of the child*, the design foregrounded participatory methodology to ensure that the resulting data would emerge from students' own perspectives rather than being mediated solely through adult interpretation.

Within this framework, the module was conceived as a key component of the data for inclusion approach, enabling the systematic collection of nuanced, intersectional insights into students' lived experiences. By inviting students to shape both the content and the design of the surveys, the process aimed to generate data that was contextually rich and

ethically grounded. As the module was implemented across participating schools, the ethical requirements of informed consent, transparency, and safeguarding remained integral. Students engaged with the process in workshops and pilot sessions, offering feedback not only on the survey questions but also on their experience of participation. This iterative cycle of feedback and refinement reflected the cyclical nature of Action Research, in which the generation of data is directly connected to ongoing improvement.

The emphasis on co-construction helped to ensure that the data collected was not a “data double” but a meaningful representation of lived experience. As one school leader reflected, the surveys revealed “what we did not know we knew,” highlighting the capacity of this approach to surface previously unrecognised dynamics in school life. This demonstrates the methodological and ethical value of positioning student voice as a central driver of both the content and the impact of the initiative, ensuring that data serves the participants first, while providing an authentic evidence base for intentional inclusion practices.

3.5 Data Analysis: The Drop Curb, Real-World Application of DEI in Schools

A distinctive contribution of this research lies in its ability to bridge theoretical concepts with practical, lived experiences of those actively engaged in diversity, equity, and inclusion (DEI) efforts within education. Rather than speaking *for* participants, this section foregrounds their voices, using direct testimonials from school leaders and educational institutions who have implemented the data for inclusion framework via the GEC Platform. These narratives provide a qualitative depth that complements the quantitative findings, offering insights into how theoretical models translate into day-to-day practice.

The current literature on data for inclusion is sparse, often privileging high-level policy or compliance-focused approaches over the lived realities of educators, students, and leaders. This gap can result in interventions that are technically well-intentioned but disconnected from the complexities of school culture. The GEC Platform—developed as part of this Action Research—was designed to address this gap, offering a mechanism to centralise research, practical tools, and expert guidance. By applying *drop curb* thinking, it embeds accessibility, universal design for learning, and intentional inclusion into everyday school processes,

ensuring that improvements benefit *all* members of the community, not just targeted groups.

A recurring theme among participant feedback is the perception that the GEC Platform provides more than just an accreditation or a set of guidelines—it represents an active, evolving resource that supports whole-school transformation. For example, Discovery Schools Academy Trust articulates this clearly:

"This is much more than an accreditation. The GEC Platform is a one-stop shop of curated research, analytics, expert sector voices, ready-made CPD tools and resources, peer-reviewed reading recommendations, and a supportive community of education sector specialists. This isn't just another mark to put on your letterhead; this is a springboard to real and ongoing whole-scale organisational change and development."

This perspective highlights a fundamental challenge in DEI work—many schools approach inclusion as a compliance-driven requirement rather than an embedded cultural shift. The distinction made here is critical: rather than a static certification, the GEC Platform functions as both a data for inclusion tool and a continuous professional development (CPD) tool, offering sustained support for educators to navigate complex intersectional issues.

Similarly, Avonwood Primary School (part of United Learning Trust) emphasised the timeliness and necessity of such an initiative:

"The GEC Platform is the platform of our time. I think every school in the country should engage in the GEC movement!"

This assertion reflects a growing awareness among educators that traditional approaches to DEI are no longer sufficient in addressing the evolving needs of diverse student populations. The emphasis on a "movement" suggests a collective and systemic shift rather than a series of isolated interventions.

One of the most pressing challenges in implementing DEI strategies is the lack of centralised, actionable data to inform decision-making. This research highlights significant

gaps in educational D&I, particularly regarding socioeconomic status, maternity and pregnancy, menopause, and neurodiversity—areas that are frequently overlooked in mainstream discourse. The urgency of these issues is reinforced by St Olaves Grammar School, who describes the discovery of the GEC Platform as a pivotal moment:

"Thank you to the team behind the GEC Platform. It has genuinely been like accidentally discovering a gold mine."

This statement underscores a critical issue—many schools lack access to comprehensive, user-friendly DEI resources, and when they do encounter them, the impact is transformative. The metaphor of a "gold mine" suggests not only the value of the content but also the idea that such resources have previously been hidden or inaccessible to school leaders seeking meaningful change.

The raw data from the platform now includes 1.8 million rows of live data, tens of thousands of responses in terms of quantitative and qualitative insights. Given the scale, it is necessary to select participant voice for focused analysis. In this section, I examine raw anonymous data collected from school staff, exploring their comments, their experiences of exclusion within the workplace. I have chosen five key demographic topics to better understand the complexities of intersectional identities: religion or beliefs, race or ethnicity, parent or carer status and/or pregnancy, disability and/or additional needs, and socio-economic status.

By critically analysing these five dimensions, the discussion moves beyond isolated categories to consider the interplay between them, highlighting how structural and cultural dynamics within schools produce both overt and subtle forms of discrimination. This selection also allows for reflection on the limitations and potential biases in self-reported data, as well as the ways in which anonymity can encourage candour while constraining follow-up. The aim here is not only to document instances of exclusion but to interrogate the conditions—policy, practice, leadership attitudes—under which they occur. In doing so, this analysis contributes to a more nuanced, intersectional understanding of inclusion within the school setting and informs the development of targeted, contextually relevant interventions.

Question 1: At times, I have felt excluded here because of my religion or beliefs.

When examining the quantitative data alone, surveying 12,000 staff members (February 2025) reveals notable differences in comfort levels among various religious groups. For instance, while some groups express higher confidence in reporting exclusionary behaviour to senior leadership teams (SLTs), others display more apprehension. This variation underlines the challenges with EDI headline data that often fails to offer the nuanced insights necessary for context-driven metrics. A deeper examination of the data reveals that comfort in reporting exclusion is not evenly distributed across religious groups, highlighting significant disparities.

Quantitative Breakdown:

- **High Confidence:** Staff with no religious affiliation and Christians report greater comfort in reporting exclusionary behaviour, with 71% and 67% respectively agreeing or strongly agreeing that they would feel safe doing so.
- **Moderate Confidence:** Hindus and Buddhists exhibit moderate confidence levels, with 55% and 51% respectively agreeing or strongly agreeing.
- **Low Confidence:** Muslims and Jewish staff report the lowest levels of confidence, with only 44% and 40% respectively agreeing or strongly agreeing.
- **Neutral/Disagreement:** A significant portion of staff across all groups remain neutral or disagree, indicating that trust in reporting mechanisms and the overall environment for raising concerns is inconsistent.

These figures illustrate a clear disparity in the experience of religious inclusion and exclusion, suggesting the need for more tailored, intersectional approaches to support staff across different religious backgrounds. A more in-depth look at these experiences, however, is necessary to understand the full extent of exclusion and discomfort.

Qualitative Insights:

When we shift from purely quantitative data to incorporate the qualitative stories—*voices* that capture the lived experiences of staff—the true culture of the establishment begins to emerge. The raw data from interviews and surveys brings to light the specific challenges faced by staff across different religious backgrounds, as well as the dynamics of exclusion and discomfort.

- *"I have concerns that there is a lack of dynamism/ lack of pro-activity by senior managers. Mainly lack of coordination in pupil attendance to lessons in school, and engagement in lessons."*
- *"This has only happened in lessons with students once I tell them about my Jewish background. I believe lots of students feel the animosity between the Jewish/Muslim communities which is something we need to combat (and which I try to combat in instances like this)."*
- *"I keep my religion private because I do not think that many of the staff members here would be accepting of a pagan coworker."*
- *"Pathways evening, academic awards evening during the month of Ramadan. Trainee celebration during the month of Ramadan, including alcohol."*
- *"Only Muslim staff get 3 days off paid for Eid, and non-Muslim staff are expected to work as normal. Whereas when it's Christian celebrations everyone gets them off."*
- *"Sometimes I feel judged for not being religious."*
- *"I am not religious, and learners have used this in the past as a way to discriminate against me."*
- *"I feel that I am supposed to value and teach about accepting all other religions but mine."*
- *"I believe that social contagion plays a major role in girls wanting to identify as a different gender or non-binary. But I don't feel like I can express this view without being labelled as intolerant or 'anti-woke'."*

These voices provide invaluable context to the quantitative data, revealing how staff feel that their religious beliefs—or lack thereof—are often met with discomfort or intolerance. The lack of coordination by senior management during religious observances, such as Ramadan, further highlights a systemic failure to account for the diverse religious practices of both staff and students. The experiences shared also reflect a tension between valuing all religions equally and the challenges faced by those who follow less mainstream or

non-religious beliefs, such as Paganism. Furthermore, comments about being judged for not being religious or feeling pressured to value all religions except one's own suggest a potential bias in how religious beliefs are handled. This discrepancy in treatment may contribute to an environment where certain perspectives—especially those challenging dominant liberal views, such as differing opinions on gender identity—are not tolerated or are met with hostility. These insights reveal a need for a more inclusive and supportive environment where all beliefs, religious or non-religious, are respected and valued.

The quantitative data reveals significant gaps in the confidence staff have in reporting exclusionary behaviour, with certain groups feeling more empowered than others. The qualitative data brings these figures to life, illustrating the personal impact of exclusion on staff members and highlighting the cultural and systemic issues that contribute to this disparity. Together, the data points to the importance of fostering a more inclusive environment where staff feel safe and supported in expressing their beliefs and concerns without fear of judgement or retaliation.

Question 2: At times, I have felt excluded here because of my race or ethnicity.

Qualitative Insights:

- *"I think Christian values are being oppressed in favor of progressive / liberal values."*
- *"Staff body is white dominated."*
- *"Mainly due to being outnumbered and not understanding heritage languages."*
- *"Felt like I dealt with microaggressions as a black woman working here from multiple members of the community."*
- *"My nationality is often seen as an issue with regards to how good of a teacher I am."*
- *"A few years ago, things have moved on since and improved greatly. Partly due to time and settling, partly due to changes in Leadership Team."*
- *"Just because I am in a massive minority, and therefore harder to always feel part of it, not because I have been directly excluded."*
- *"I appear physically as one race but grew up in a completely different environment."*

Focusing on the qualitative data provides a mixed picture of race and ethnicity in the school environment. Some participants from this initial pool of surveyed staff express frustration

about the dominance of white values in the institution, particularly in relation to Christian traditions being prioritised over other religious or cultural practices. The notion of microaggressions and the intersectional challenges faced by Black staff highlights the prevalence of everyday racism, which may not always be overt but accumulates over time, subtly reinforcing feelings of exclusion. However, there are also positive shifts mentioned, such as changes in leadership and improvements over time, which indicates that efforts to address exclusion and diversify the workplace are slowly having an effect. Participants' experiences of feeling like a minority, particularly in relation to language barriers, highlight how exclusion is not only about overt actions but also about a lack of understanding or accommodation of diverse cultural backgrounds in their context.

Understanding the racial and ethnic diversity of staff groups is crucial for recognising power dynamics and pinpointing areas where the inclusion of more intersectional identities can bridge gaps in representation and equity. Ahmed (2012) argues that diversity initiatives often prioritise visibility over addressing the deeper, systemic power relations that sustain inequality. She critiques the reliance on diversity statements in an audit culture, where such statements are frequently seen as performative rather than as genuine calls for change. This is evident in schools where moments like Black History Month are celebrated, yet microaggressions and racial pay gaps persist. As Ahmed (2015, p. 111) observes, institutions with poorly rated diversity statements may be prompted to take action, while others may merely treat these statements as symbolic gestures, failing to produce meaningful change on the ground. Similarly, Stewart-Hall, Rabiger, Lander, and Grant (2023) argue that in majority-white senior leadership teams, anti-racist leadership practices are often undermined by the dominance of whiteness, with many efforts remaining superficial unless there is a deep commitment to addressing systemic inequalities. Their research highlights how anti-racist leadership and professional learning initiatives need to go beyond performative actions to challenge power structures within predominantly white leadership teams in schools.

Increasing the presence of intersectional identities within staff groups challenges existing power structures, fostering a more inclusive environment. This shift not only enhances representation but also helps create safer spaces for confronting microaggressions and discrimination, ultimately contributing to a more equitable and supportive school culture.

Question 3: At times, I have felt excluded here because of my parent or carer status and/or pregnancy.

Qualitative Insights:

- *"Upon my return to work after having my second child it was extremely difficult to get the school to agree to some flexibility on my start time at school as I had issues with childcare/distance to school and not being able to get in to school before 8am. Initially, they refused my request which was going to force me to leave—I ended up getting my union involved which swiftly resolved the issue."*
- *"On my first day, a colleague expressed open surprise that I was working full-time and a mother. Frankly, the culture here seems decades out of date."*
- *"I actually have felt more excluded because I am not a parent... like my outside of work life doesn't matter because I do not have children. Like I cannot possibly experience stress or fatigue, because I do not have children. To some extent, as though I cannot understand parents or children, because I do not have children."*
- *"Maybe sometimes not supported rather than excluded."*
- *"I am a carer for my disabled wife and I also have two young children, and there have been times when I have struggled to marry work and personal responsibilities, but I have recently been permitted flexible working, which has helped greatly and is very much appreciated."*
- *"I have felt excluded sometimes because I am not married and don't have children."*

These responses demonstrate how parental and carer status can create both physical and cultural barriers to inclusion. The lived experience narratives, difficulty in negotiating flexible working hours, especially after returning from maternity leave, illustrates a systemic lack of understanding and support for parents.

Meanwhile, the feeling of being judged or questioned about balancing work and family life reflects a wider societal bias about the assumed responsibilities of parents in the workplace. On the other hand, those without parental responsibilities express a feeling of exclusion due to the dominant culture of valuing "parents" and assuming that only parents face stress and fatigue. The comments highlight a complex dynamic where both parents and non-parents

feel marginalised in different ways, revealing a lack of inclusivity for diverse personal situations.

Question 4: At times, I have felt excluded at this setting because of my disability and/or additional needs.

Returning to combining qualitative and quantitative data can also help reveal a mixed picture of belonging and inclusion, in this instance if we look at the results focusing upon staff identifying with disabilities and/or additional needs. While a significant portion of staff feel included, there are still notable gaps that need addressing. The majority of respondents did not feel excluded, but a small yet significant percentage reported feelings of exclusion, highlighting the need for continued efforts to foster an inclusive environment.

Quantitative Breakdown:

- **Majority Inclusion:** 55% of respondents did not feel excluded due to their disability or additional needs.
- **Positive Feedback:** 29% strongly disagreed with feeling excluded, indicating a strong sense of inclusion for these members of staff.
- **Areas for Improvement:** 6% disagreed, 5% were neutral, and 3% each strongly agreed or agreed that they felt excluded, showing that there are still areas where inclusion can be improved.
- **Need for Continued Efforts:** The data underscores the importance of ongoing initiatives to ensure all staff feel fully supported and included in their educational settings.

Qualitative Raw Data:

- *"I was able to share my illness diagnosis without fear of being stigmatized."*
- *"Being hard of hearing, it's difficult to always remind people to speak up in meetings or at events. To have people repeat what others are saying in the audience."*
- *"As an ADHD person, I have been incredibly supported by my direct team and line manager. Also allowed flexibility by the wider school and valued for my inputs and differences by the entire school."*
- *"I returned to work in January 2021 after having 9 months off for the diagnosis and treatment of stage 4 cancer. I was sent to Occupational Health, who recommended I*

had a lengthy return to work phase. My consultant wrote a letter saying I needed a minimum 6-month phased return to work but I was fit to return to work with adjustments. I was told I was allowed a 2-week phased return. When I questioned this I was told 'it's always been two weeks.' I questioned whether that meant that it always had to be two weeks and was told by the head teacher at the time 'how am I supposed to differentiate between what happened to you, or someone that is going through a divorce or breaks their leg?'"

- *"My return to work was incredibly stressful and upsetting because I had to fight for a fair phased return to work, despite being protected by the Disability Act. I was supported heavily by my immediate team but I was treated appallingly by the school."*
- *"Soon after returning to work I caught COVID after a breakout in my year group, my children then caught COVID from me. Once I was fit to return to work but was unable to due to having to stay at home with my children, I was told I wasn't entitled to paid time off to look after my children like the rest of my colleagues because my sickness levels were 'unsatisfactory.' The only absences I had at that time were when I was off battling cancer. This decision was reversed after I'd complained."*

Yet the lived experiences enable us to see the culture and attitudes experienced. These responses illustrate the barriers faced by staff with disabilities or health conditions, especially when returning to work after illness. The lack of understanding about the needs of staff with long-term health conditions is particularly evident in the refusal to provide a reasonable phased return to work in this example. The dismissal of the participant's health needs by the head teacher reflects a systemic failure to apply the protections of the Disability Act appropriately. The lack of paid leave for caregivers of children with COVID-19, despite the staff member's prior illness, highlights the inconsistency and unfairness in how disability and health-related leave is managed.

While some participants reported positive experiences, such as being supported by their immediate teams, these negative experiences demonstrate a significant gap in organisational practices around disability support and illustrate how recruitment and retention opportunities can be addressed for the underserved staff groups identities through data for inclusion.

Question 5: At times, I have felt excluded here because of my current or previous lower socio-economic status.

Schools do not collect data on the socio-economic status of staff, so capturing this as a new demographic data group brings in new knowledge, and a new means of measuring and bridging inclusion.

In this area, staff who are currently or have previously been from lower socioeconomic backgrounds report higher levels of feeling excluded compared to their peers who have never experienced lower socioeconomic status. This highlights the ongoing challenges and barriers faced by socioeconomically disadvantaged students, emphasizing the need for targeted support and inclusive practices to ensure all students feel valued and included.

Quantitative Breakdown:

- **Current Lower SES Staff:** 24% feel excluded (Agree + Strongly Agree), with only 41% strongly disagreeing.
- **Previously Lower SES Staff:** 15% feel excluded, with 55% strongly disagreeing.
- **Never Lower SES Staff:** Only 3% feel excluded, with a significant 77% strongly disagreeing.
- **Prefer Not to Say:** 6% feel excluded, with 65% strongly disagreeing.

This data underscores the importance of addressing the unique challenges faced by staff from lower socioeconomic backgrounds to foster a more inclusive and supportive educational environment. However, when we include the lived experience we can again better understand the lived experience of our people. What it means to belong.

Qualitative Insights:

- *"Because I'm not academic staff, sometimes I feel I have less authority."*
- *"At times, upper-level management asks lower-paid employees where we're going on vacation during half terms and we have nothing to offer back, which feels isolating."*
- *"At times, working-class people are made to feel inferior to colleagues who have a different cultural and educational background."*
- *"I think this could go both ways, it may not always be lower socio-economic status that is discriminated against, it could be higher."*

Responses suggest that socio-economic status (SES) subtly influences staff interactions within schools, often manifesting in the devaluation or dismissal of lower-paid staff. Several participants described feeling alienated when upper-management posed personal questions they could not answer due to financial constraints, reinforcing a sense of otherness. This alienation seems to stem from the perception that working-class staff are inferior, particularly in contrast to colleagues with higher SES backgrounds, which highlights a cultural disconnect.

This disconnect underscores the need for a more empathetic approach to supporting staff from diverse socio-economic backgrounds. While many school Management Information Systems (MIS) capture data on students' socio-economic status (such as Free School Meals (FSM) and Pupil Premium (PP)), these indicators are often unreliable and do not account for staff socio-economic background. The failure to capture staff socio-economic data in meaningful ways further limits the potential for addressing these disparities in staff relationships and support.

The data explored here, collected from staff across various identity categories and survey questions, reveals significant systemic exclusion within schools, highlighting challenges related to religion, race, ethnicity, parenthood, caregiving status, and disability. These forms of exclusion are deeply embedded within broader cultural and institutional factors, such as unconscious biases, outdated policies, and a general lack of understanding regarding diverse staff experiences.

These lived experiences are powerful when reflected back to leadership teams, who can read, reflect and then act on the cultural health of their school.

The data findings also align with the central focus of my study, particularly in exploring how social capital, intersectionality, and the attitudes of school leaders influence the pathways toward intentional inclusion for both staff and students alike. These systemic issues underscore the importance of a more nuanced, data-driven approach to inclusion—something my research identifies as vital for school improvement.

The experiences reflected in the data speak directly to the need for schools to adopt a comprehensive, participatory framework for addressing diversity and inclusion challenges. By focusing on the intersectionality of identities and integrating insights from data for

inclusion, school leaders can identify and respond to exclusionary practices more effectively for all of the people in their school. To build a truly inclusive school environment, leadership *must* act proactively, addressing both the cultural and institutional dimensions of exclusion. This requires developing strategies that not only recognise, but also actively support the diverse needs of staff, ensuring that all voices are heard and valued. The path forward involves a commitment to continuous reflection, adaptation, and the creation of spaces where every individual can thrive, contributing to the shared goal of improving equity and inclusion across the school system.

While awareness of DEI challenges is growing, meaningful action requires structured, evidence-based interventions. However, traditional data collection methods—often dominated by quantitative metrics—fail to capture the complexity of lived experiences within education. Inclusion and well-being cannot be fully understood through numerical indicators alone; they require qualitative insights that reveal the *how* and *why* behind the data. This research asserts that participant voices must be at the heart of inclusion metrics, ensuring that data reflects not just policies and structures but the realities of those navigating them.

Data for inclusion that can map the field through theoretical research, but also seeks to provide actionable insights (through CPD modules, data collection tools, and a framework for continuous school improvement) supports all aspects of a social capital framework. Yet, these mechanisms are only meaningful when shaped by the perspectives of those they aim to support.

The integration of voices is not an optional layer of analysis—it is fundamental to capturing the nuance, intersectionality, and lived realities of school communities.

Without qualitative data, inclusion metrics risk becoming a reductive exercise, measuring surface-level diversity without addressing deeper structural and cultural barriers.

The qualitative insights embedded in this research demonstrate the direct impact of structured DEI interventions, highlighting the ways in which inclusion efforts succeed or fail in practice. Schools need more than policy guidance; they require practical, context-specific tools informed by the experiences of students, educators, and leaders. By foregrounding

participant narratives, this study ensures that inclusion and well-being are not abstract concepts but measurable, meaningful aspects of school improvement.

Crucially, qualitative data transforms metrics into a tool for action. While numbers can indicate disparities, voices explain them. The integration of participant perspectives strengthens the credibility, relevance, and applicability of these findings, ensuring that school leaders, policymakers, and educators can move beyond compliance-driven reporting towards intentional, data-informed change.

Chapter 4: Findings

"Diversity is difference - not just visible external characteristics (like gender, race, ethnicity, religious dress) but also in ways of thinking, background, education and perspective."

– Staff response, GEC Platform (2025)

This research highlights the need for a robust theoretical foundation for the metrics and frameworks used in educational settings. Initially, the focus was on gender and disadvantage, which then expanded to include broader EDI (Equality, Diversity, and Inclusion) considerations, and now encompasses inclusion and well-being. This evolution reflects a growing awareness of the multiple dimensions of capital being captured, much like overlapping Venn diagrams. Data analysis from this Action Research (AR) intervention points to the need for a return to the concept of social capital to better understand how these findings can inform the development of a new framework for the datafied society of contemporary education. This process is also informed by insights from critical data studies, which challenge the assumption of data neutrality and emphasise that all data is socially and politically situated. Recognising that data for inclusion is shaped by the contexts, assumptions, and priorities of those who collect and interpret it ensures that the analysis remains reflexive and critically engaged.

The interventions were designed to approach these complex issues from fresh perspectives, drawing on my research questions, literature review, Action Research methodology, and data analysis. In analysing the data for this study, I chose to aggregate findings across all participating schools rather than presenting data on a school-by-school basis. This decision was driven by the need to identify broader patterns, trends, and intersections within the data, allowing for a richer and more nuanced exploration of inclusion and diversity in education. Given the study's focus on social capital and intersectionality, a school-specific approach risked limiting the depth of insight by isolating findings within individual institutional contexts rather than capturing the systemic and structural issues that emerged across multiple settings. By considering the data holistically, I have been able to highlight overarching themes, common challenges, and shared opportunities for improvement, rather than focusing on localised variations that may not be as generalisable.

This approach also ensures that participant voices are contextualised within a wider framework, reinforcing the study's aim to provide actionable insights that could inform best practices beyond any single institution. Aggregating the data in this way, I feel, has ultimately strengthened the study's contribution by offering a more comprehensive understanding of how schools can collectively move towards more intentional and equitable inclusion practices.

Building on the foundational theoretical insights and the evolving understanding of social capital, the findings of this research are structured around the key research questions that guided the intervention. Each question explores a distinct but interconnected aspect of the educational landscape, from school leaders' attitudes toward Diversity and Inclusion (D&I) and the role of social capital, to the potential of data for inclusion in addressing intersectionality and advancing D&I practices.

The data collected through Action Research reveals both challenges and opportunities within the educational system, offering valuable insights into how school structures, leadership dynamics, and technological tools can foster more inclusive and equitable environments. In the following sections, the findings are presented in relation to each of the three research questions, highlighting the implications for both theory and practice in the context of contemporary education. This chapter explicitly integrates the voices of participants, with quotes used to illustrate key findings. These quotes were selected through thematic coding and reflect anonymised, direct responses from staff and students to ensure that their experiences are central to the analysis.

4.1 Leading from the Front

RQ. 1 How Are School Leaders Closing D&I Gaps for Staff and Students?

Staff Survey Statement: All students enjoy being here.

Staff response: "This is my general assessment of the children in my class, they seem happy to come to school and within the day."

Staff Survey, GEC Platform

This inquiry moves beyond what is typically recorded in traditional datasets to examine *why* patterns exist, focusing on the lived experiences of school life and how belonging can be

evidenced as a driver for whole-organisation improvement. This section draws from aggregated data across 26,000 participants, including qualitative free-text responses and Likert-scale quantitative data.



Figure 4: Stacking the Challenges: A Layered Analysis of Leadership Barriers to Inclusion (Ponsford, 2025)

Figure 4 illustrates the nine interconnected leadership challenges identified in addressing diversity and inclusion (D&I) gaps for staff and students. These themes emerged from participant interviews, focus groups, and survey responses, and are presented here as “stacked layers” to reflect how each barrier builds upon the others. The following sub-sections correspond directly to each layer in Figure 4, with participant voice embedded to highlight lived experiences and sector-wide patterns:

1. Espoused vs. Enacted Values

A recurring theme was the gap between *espoused* values—those articulated in strategic plans or public statements—and *enacted* values—those implemented in daily practice. Several participants described leaders who expressed enthusiasm for inclusion but lacked the operational frameworks, data literacy, or confidence to sustain change.

In contrast, leaders who actively engaged with the *data for inclusion framework*, served by the GEC Platform, identified intersectional barriers more effectively and implemented targeted actions. In these cases, staff and student voice informed decision-making, influenced policy adaptation, and supported cultures of belonging. Where leaders relied solely on attainment or attendance metrics, structural inequalities often went unrecognised.

2. Social Capital in Leadership Practice

The role of social capital emerged clearly. Leaders cultivating strong *bonding capital* within staff teams and *bridging capital* between stakeholder groups were more likely to embed inclusive practices across the community. However, *linking capital*—connections to wider policy networks, local authorities, or external expertise—was uneven, limiting leaders' ability to align school-level inclusion work with systemic change.

3. Disconnects Between Perception and Experience

The research highlights significant gaps in teacher engagement, student voice, and representation. The research highlights substantial gaps in teacher engagement, student voice, and representation. For example:

- 33% of SEND learners strongly disagreed that teachers listen to their perspectives, compared to 8.7% of non-SEND students.

- Only 21.2% of non-disclosure students felt heard by teachers.

"Our SEND students are telling us they don't feel heard, and we're struggling to shift the mindset of some staff who still see inclusion as an 'add-on' rather than part of their core practice." — Secondary school leader

Curriculum representation gaps were also significant:

Curriculum representation gaps were also stark: 33.2% of students felt invisible in the curriculum (≈ 2.99 million students).

"It has had a huge impact in helping us change the culture of our school, resulting in increased pupil numbers." — MAT leader

These findings also show that students felt their support and inclusion challenges were unmet and widespread:

- 34% of students strongly disagreed their needs are supported (approx. 3.06 million students).
- 20.65% of students with invisible disabilities strongly disagreed that their needs are supported in classrooms.

A student explained:

"If someone's got learning needs or special needs they get treated differently."

This juxtaposed with the staff survey responses showed that 62% of students were perceived to feel they belonged, and 60% were believed able to "be their authentic selves." This contrasts sharply with student-reported experiences, signalling a persistent perception gap in disadvantage, disengagement, well-being, and inclusion.

4. Curriculum Representation, Safety, and Attendance

A significant lack of curriculum representation exacerbates feelings of exclusion, contributing to non-attendance. The sense of belonging varies considerably across different ethnic groups, with SEND students, neurodivergent learners, and non-disclosure students reporting feeling particularly unheard and unsupported. These systemic gaps in

representation, student voice, and tailored support mechanisms have a direct impact on attendance.

Traditional MIS attendance data—absences and lateness—often underpins punitive interventions such as rewards assemblies or sanctions, without addressing underlying causes. Such measures fail to account for intersectional factors—race, disability, neurodivergence, gender identity, socio-economic background. The data here show a strong correlation between safety, belonging, and attendance:

- 64% of 12,000 students disagreed or strongly disagreed that they feel safe at school.
- Marginalised groups reported higher absenteeism due to safety concerns:
 - 38% of non-binary students
 - 34% of Jewish students, 35% of Buddhist students
 - 36% of students with physical disabilities
 - 30% of neurodivergent students

For SEND students more broadly, the statement *“I have missed time here due to feeling unsafe”* was frequently affirmed:

- 29% of students with mental health conditions
- 30% with invisible disabilities
- 30% neurodivergent students
- 18% with chronic disabilities strongly agreed
- 36% with physical disabilities expressed concern

- Students with learning disabilities had the highest percentage of strong disagreement (38%), indicating varied but still concerning responses

This evidence challenges the assumption that attendance issues are purely behavioural, highlighting the need for proactive, inclusive strategies informed by intersectionality and social capital.

5. Bias, Coaching and CPD

Findings also indicate limited and inconsistent diversity and inclusion training, often reduced to one-off sessions. Staff frequently reported lacking the tools to address bias effectively:

"I think there is an assumption that people are not biased [now], but I have personally witnessed someone with unconscious bias towards a student and been unsure how to address it." — Staff Survey participant

"I think some staff are given more support and guidance to be in a better position for advancement based on those that think similarly to current leadership." — Staff Survey participant

These accounts suggest that without sustained professional learning and linking capital from leadership, training risks remaining superficial, with limited cultural shift. Participants reported that bias, inconsistent training, and a lack of targeted coaching continue to hinder D&I progress. While leaders value opportunities to understand and use D&I data, without structured, bias-aware CPD and coaching, the impact is often limited.

"The most valuable aspect of the platform is the ability to see patterns across any schools/key stages. This allows us to have a very evidence informed action plan for moving forward, and make the most effective holistic changes if needed. In addition, the ability to break the information down into the smaller subgroups allows us as a team to have laser sharp focus on some areas and presents a very personalised approach." — CEO, Trust

However, converting this confidence into meaningful action remains challenging. Leaders need sustained coaching and practical tools to bridge the gap between data awareness and strategic implementation.

6. From Data to Action: Leadership Challenges

Findings also indicated limited and inconsistent diversity and inclusion training, often reduced to one-off sessions driven by leadership. Access to D&I data increased confidence but structural constraints—time, policy, hierarchy—often blocked change. Staff frequently reported lacking the tools to address bias effectively:

"I think there is an assumption that people are not biased [now], but I have personally witnessed someone with unconscious bias towards a student and been unsure how to address it." — Staff Survey participant

"I think some staff are given more support and guidance to be in a better position for advancement based on those that think similarly to current leadership." — Staff Survey participant

These accounts suggest that without sustained professional learning and linking capital from leadership, training risks remaining superficial, with limited cultural shift.

Another key barrier was the complexity of school and trust systems. While leaders reported that access to D&I data increased their confidence, translating insights into action was challenging: Even when leaders have access to relevant data, structural factors such as time constraints, policy limitations, and hierarchical decision-making often hinder their ability to implement best practices:

"The GEC Platform is a superb way to engage staff on the range of issues that fall with Equality, Diversity, Inclusion and Social Justice. Not only does it help frame the questions, it provides a straightforward way of creating an action plan tailored to the school or Trust and a wealth of supporting materials to help you on the journey." — CFO, Trust

"The most valuable aspect of the platform is the ability to see patterns across any schools/key stages... it allows us to have a very evidence-informed action plan and make holistic changes if needed." – SLT, Trust

"Results illustrated that, even though we have just started our journey, staff, children and the wider community are fully engaged with the GEC Platform. They are keen to find out more, to understand how we can ensure that we make everyone feel welcome, to work together and to remove any barriers." — Headteacher, Primary School

Leaders sought *contextual*, actionable insights—what to do next—not just headline figures. Data storytelling, not just numbers. Structural factors such as time constraints, policy limitations, and hierarchical decision-making hindered the implementation of best practice. This highlights the need for ongoing leadership development and support structures that empower leaders to move from insights to action.

7. Inclusion Champion Role

A recurring result in these findings is the importance of a dedicated 'Champion' to maintain momentum in D&I work. Successful schools had a dedicated Inclusion Champion safeguarding progress and focus. Leaders who have successfully embedded inclusion into their school culture tend to have a clear advocate—someone responsible for sustaining progress and safeguarding inclusion, belonging, and well-being as ongoing priorities. Without one, D&I efforts lost momentum due to survey fatigue, initiative overload, or pushback. For example, in Intervention 3 a school leader illustrated that "prejudged" pushback from external factors such as parents or inspectors caused issues.

"Ofsted challenged you on what they foresaw the issues were, what their narratives around it [were] which was different to yours... We've had head teachers, but more in the independent schools, and they're getting pressure from the parents to be more inclusive than some of the staff members would like them to be." — Intervention 3 participant

The role of Inclusion Champion is inconsistently recognised across schools—sometimes held by senior leaders, other times by middle leaders or passionate staff members without

formal authority. Identifying, equipping, and empowering these champions is essential to closing D&I gaps. Therefore a dedicated *champion* is essential for driving sustained and strategic change in diversity and inclusion (D&I) from a leadership perspective. By leveraging data-driven insights, this role can then safeguards inclusion, belonging and well-being as a priority, even amid shifting internal and external pressures.. Identifying, equipping, and empowering these champions is vital to closing D&I gaps and fostering meaningful, lasting progress.

Empowering this role is critical for sustained progress.

8. Leaders' Lived Experiences

Lived experience significantly shapes leaders' perspectives and priorities. Participants highlighted how socio-economic background, gender, racism, and class have influenced their professional journeys and leadership style.

"The headteachers [had] experienced issues related to their own socio-economic background and gender. As headteachers, issues of racism and class were common." — *Intervention 3 participant*

Supporting leaders through safe spaces for professional development and well-being is not only vital for personal resilience but also for recruitment and retention of leaders committed to inclusion.

The lack of equity for underserved staff also became clear. Flexible working illustrated the core lack of belonging for staff. For example, among staff with disabilities and additional needs, 41% agreed or strongly agreed that flexible working was necessary to remain in their role. Of this number, two in five (21% agreed, 20% strongly agreed) confirmed that such measures were essential to prevent them leaving. This reinforces the connection between inclusive employment practices and staff retention.

9. Isolation vs. Collaboration

An unexpected finding was that many leaders prefer to work in isolation rather than collaborate with other schools on D&I initiatives. This isolation may stem from time

constraints, a lack of trust in sharing sensitive data, or the perception that each school context is too unique for shared strategies.

However, a centralised, research-informed EdTech offer was seen to provide a 'safe space' for sector-wide clarity on best practice, enabling leaders to benchmark progress without the risks sometimes associated with direct peer-to-peer comparison.

"Knowing that the GEC is behind it—a collective of forward-thinking, research-informed educators—was something we liked. Knowing that there are learning models and a research library available to all staff users... can lead to positive change not just for the workforce, but for the curriculum and experiences of the pupils and parents." — *Executive Headteacher, Primary School*

This raises important questions about how best to share best practice in inclusion and well-being—whether through aerial, sector-wide insights or through smaller-scale collaborative networks.

Synthesis: Answering RQ1

In answering RQ1—*How are school leaders closing D&I gaps for staff and students?*—the evidence suggests that leaders are deeply engaged with D&I work but face systemic and structural challenges. While data-driven insights can boost confidence, there is a critical gap in converting these insights into sustained, intersectionally informed action. The policy landscape offers limited guidance on practical strategies for addressing social capital and intersectionality, leaving leaders to navigate these complexities with varying levels of expertise and resource.

Moving forward, addressing these nine interconnected challenges—bias and CPD gaps, turning data into action, securing dedicated champions, supporting leaders' lived experiences, and building more effective collaboration models—will be essential for closing D&I gaps in meaningful, lasting ways.

4.2 The Inclusion Framework: Integrating Social Capital and Kaleidoscopic Data for Transformative Change

RQ.2: How can insights into social capital and intersectionality, along with attitudes and values towards D&I, help schools explore innovative pathways for intentional inclusion and improvement?

A key insight emerging from this study is the need for a new approach to data collection and analysis—one that goes beyond the traditional performance-based metrics to capture the social capital and intersectional experiences that shape students' engagement and well-being. I term this evolved approach **Kaleidoscopic Data**, which offers school leaders a more comprehensive, nuanced understanding of their communities, uncovering hidden narratives and identifying opportunities for intentional inclusion.

Despite the growing reliance on Management Information Systems (MIS) to house large datasets, the content and focus of school data remain largely limited to performance metrics and compliance-based indicators. Schools collect data primarily to meet the DfE's accountability requirements, but these data points fail to provide a full understanding of the barriers to inclusion and the social-emotional dimensions of students' experiences.

From the data gathered in this study, it is evident that schools predominantly rely on two types of data:

1. **Satellite Data:** Broad, high-level trends, such as attendance patterns, behaviour incidents, and academic achievement scores. While this data provides a general overview, it requires further investigation to uncover the root causes of patterns.
2. **Mapping Data:** More detailed, individual-level data on academic progress, such as reading, writing, and numeracy scores. While this data is more granular, it still fails to capture the social and emotional experiences that influence student engagement and achievement.

What is notably missing from this model are the human narratives that reflect the lived experiences of students and staff within the school community. Building on Safir and

Dugan's (2021) concept of "street-level" data, which seeks to capture the realities of marginalised voices, this contribution advances the idea of Kaleidoscopic Data by integrating intersectionality and social capital into a cohesive framework. To operationalise this, I developed a Data for Inclusion Framework, which applies Kaleidoscopic Data through the lenses of bonding, bridging, and linking social capital. This framework functions as both a diagnostic and developmental tool, enabling leaders to pinpoint strengths, identify systemic gaps, and co-design targeted interventions that foster equity and belonging. It enables a deeper understanding of inclusion, helping school leaders to move beyond surface-level data to truly understand the diverse needs and experiences of their communities. The analysis of Kaleidoscopic Data incorporates both quantitative metrics and anonymised qualitative voice collected during interventions, allowing the lived experience to surface in a protected, ethical manner.

The literature review, multi-strand interventions and analysis of the data from this study led to the development of the *Kaleidoscopic Data* framework, which directly addresses the limitations of traditional data practices. By combining quantitative metrics with qualitative insights, *Kaleidoscopic Data* provides a more comprehensive view of school communities, surfacing hidden barriers and identifying opportunities for meaningful change. Unlike traditional performance data, *Kaleidoscopic Data* emphasises the *why* behind student disengagement and exclusion—whether due to a lack of trusted relationships, curricular disconnection, or experiences of bias. This directly supports intersectional, social capital-informed decision-making as theorised in Chapter 1. For example, if attendance rates are low for a specific group of students, *Kaleidoscopic Data* seeks to understand why: *Is it because the students feel excluded from the curriculum? Do they struggle to connect with teachers or peers?* Furthermore, *Kaleidoscopic Data* includes sentiment analysis to assess workplace culture, recruitment and retention attitudes, and the social capital present within both the school and the broader community. By integrating these diverse qualitative insights, the framework enables school leaders to identify and address the root causes of disengagement and exclusion in a focused, intentional and strategic manner.

Kaleidoscopic Data also enables schools to capture the intersectionality of both staff and student identities, considering factors such as gender, ethnicity, neurodiversity, the home environment, socio-economic status, and other dimensions. This framework uncovers

patterns of exclusion that traditional metrics often overlook, allowing schools to explore how factors like socio-economic hardship, cultural disconnect, and bias intersect to affect students' engagement with education. It also illuminates how staff experiences of culture and belonging are shaped by these intersections. In line with Critical Data Studies (see Section 1.3), this approach redefines who is counted, how data is constructed, and whose voice is surfaced in educational improvement strategies. The framework recognises that social capital—the relationships, networks, and connections within the school community—is essential for fostering a sense of inclusion and belonging. By examining both individual and collective dimensions of social capital, Kaleidoscopic Data helps school leaders uncover the hidden dynamics that shape the school environment, providing a more nuanced and actionable understanding of inclusion.

A critical finding from this research that ethical data practices are foundational to the success of *Kaleidoscopic Data*. The inclusion of human narratives in data collection raises important questions about consent, privacy, and transparency. Each intervention demonstrated that participants were more likely to share their experiences honestly through anonymous digital surveys than through traditional methods where power imbalances may inhibit open expression. This aligns with feminist and participatory methodologies discussed in Chapter 2, where the protection and amplification of marginalised voice are prioritised. This underscores the importance of ethical safeguards in data collection processes, particularly in environments where marginalised voices are often silenced.

Without these ethical considerations, there is a risk of re-traumatising vulnerable individuals by exposing them to unwanted scrutiny. Therefore, the Kaleidoscopic Data framework prioritises ethical data collection practices, ensuring that the process is participant-led, transparent, and focused on empowerment, rather than surveillance. The ethics model used was informed by safeguarding reviews, opt-in design protocols, and child rights-based approaches (UNCRC, 1989), integrated into each intervention.

This study introduces the concept of Kaleidoscopic Data—highlighting that schools lack the nuanced, intersectional insights needed to drive intentional inclusion.

- Intersectionality and hidden inequalities:

- SEND, Multi-Linguistic Learners/ EAL and Pupil Premium (PP) data are often tracked separately to other data collections like Speech, Language and Communication (SLC) support, Wider Curriculum engagement, without intersectional analysis. This fragmentation of data echoes Crenshaw's (1991) original concern—that systems are not built to recognise compound identities.
- 20.65% of students with invisible disabilities strongly disagree that their needs are supported in classrooms. This demographic group is self-identified meaning that a bigger pool of underserved students can be 'heard'.

Students with multiple marginalised identities face compounded challenges, but schools lack structured mechanisms to address these complexities. Kaleidoscopic Data enables the mapping of these overlapping identities to better inform inclusive planning and strategy. For example if we take the survey question, 'Teachers here help me to do my best' the headline data is:

- Majority Support: 61% of students feel positively about the support they receive from their teachers.
- Neutral Sentiment: 23% of students feel neutral, indicating room for improvement in teacher-student engagement.
- Disagreement: 16% of students either disagree or strongly disagree that their teachers help them do their best, pointing to a gap that needs addressing.

Traditional data collection would have stopped at the headline statistic. Kaleidoscopic Data, however, disaggregates these trends intersectionally:

- Gender: Boys feel the most supported by teachers, with 34% strongly agreeing and 35% agreeing.
- Gender Disclosure: Those who prefer not to disclose their gender identity have mixed feelings, with 26% strongly agreeing but 30% either strongly disagreeing or disagreeing.
- Religion: Muslim students report the highest support (51% strongly agree), while Buddhist and Jewish students report higher dissatisfaction (18% and 13% strongly disagree, respectively).
- Family Structure: Students living with carers report the lowest levels of strong agreement (26%) and the highest dissatisfaction (31% disagree).

- Disability: Students with mental health disabilities report the lowest support levels (18% strongly agree); those with invisible disabilities also report low agreement (24%).

These intersectional insights highlight structural challenge areas in current inclusion efforts, reinforcing the need for multi-dimensional data practices.

A school leader admitted that supporting students to be authentic and true to themselves is complicated and inconsistent:

"I think we try our best with the limited tools we have."

Students themselves also cited that they want to know more about nuanced inclusion and disadvantage. One anonymous student from a Sikh trust said:

"I would also like to know, or just learn, how people think they are "gay" because I thought that God made you a way, you will live for your entire life, and that you can't bend it and do something like "being gay" (not in a rude way). I also want to know why being gay is a thing."

This quote exemplifies the importance of supporting *inclusive dialogue* in ways that are culturally respectful, safe, and educational. It also highlights how young people may hold genuine questions around inclusion that, if left unaddressed, risk misunderstanding or exclusion. Schools that prioritise identity literacy and community-responsive dialogue can better navigate these tensions.

Attitudes and values towards inclusion

School leaders vary in their approach to D&I, with some embedding inclusion into school improvement strategies, while others treat it as a compliance-driven task.

A trust CEO shared that leadership lived experiences affect decision-making:

"Sometimes [as a result] they are reactive and often, due to pushback from parents and the unknown, fear can kick in too."

There is a need for a shift from 'tick-box' inclusion to a more relational, trust-based model. The findings here demonstrate that when D&I strategies are informed by Kaleidoscopic

Data, school leaders are better equipped to act confidently and responsively, even when external pressure exists. One school leader said:

"The data highlights areas where the average can improve policies / approach and be proactive in supporting all in school."

Social capital and the role of relational trust

Stronger networks of trust between students, staff, and leadership improve belonging and engagement. Students and staff who feel heard report higher levels of belonging and engagement. This finding aligns with the literature on social capital as a protective and connective force within school communities (Hanifan, 1916; Putnam, 2000).

The data reveals that while a majority of students feel they have at least one adult at school they can speak honestly to, a notable portion still feels disconnected. This insight underscores the importance of fostering strong, supportive relationships between students and staff to ensure every student feels heard and valued.

- 57% of students feel they have at least one adult at school they can speak honestly to (33% strongly agree, 24% agree).
- 20% of students are neutral, indicating a potential area for improvement in building stronger connections.
- 23% of students feel they do not have an adult they can speak honestly to (12% disagree, 11% strongly disagree).

The data highlights the need for schools to prioritise building supportive relationships to ensure all students feel heard and valued. A student said they felt safe in lessons due to being able to just be themselves:

"I feel safe when I'm in an art classroom, because with the paint and colours I can express my feelings and emotions through colours and strokes."

Practical Use and Leadership Action

A teacher from a diverse urban school noted that insights on belonging, social capital and trust help them to embed these principles into their culture:

"I use the school and staff data to inform our strategic goals. The anonymity allows users to be honest and feel comfortable providing qualitative data—examples of being othered or excluded, as well as observations about organisational policies and approach. This makes it easier to understand the lived experience of all in school and make adjustments to our approach where necessary."

One Champion across two schools said:

"The data provided by the GEC has been instrumental in informing our action plan for EDIB and identifying what we need to do in school to facilitate belonging for all stakeholders. The resources have not been fully utilised up to now—but they will be embedded within our new PSHE units for middle and high school. They are powerful and all-encompassing."

These examples illustrate how Kaleidoscopic Data moves beyond collecting experiences to inform policy changes, CPD prioritisation, and new leadership strategies that are aligned with the lived realities of school communities.

My research underscores the need for intersectional data insights and relational trust to develop more effective and sustainable inclusion strategies. Current approaches to tracking student needs often overlook overlapping identities, limiting the ability to design targeted, impactful interventions. The findings suggest that a social capital-driven approach—centred on trust, relationships, and shared responsibility—can create more meaningful and lasting improvements in D&I. This research highlights the critical role of intentional data collection and intersectional analysis in shaping equitable school practices. Schools that successfully integrate social capital principles into their strategies foster stronger networks of support, enhance belonging, and drive collective responsibility for inclusion.

Although over a century old, Hanifan's (1916) exploration of social capital in rural communities remains foundational in understanding how fostering relationships within communities can positively impact various outcomes, including school attendance. In his work *The Rural School Community Center*, Hanifan argues that the act of bringing parents into schools through intentional engagement led to the development of stronger social capital, which, in turn, resulted in improved school attendance. He insightfully concludes:

"It is not what they did for the people that counts for most in what was achieved; it was what they led the people to do for themselves that was really important. Tell the people what they ought to do, and they will say in effect, 'Mind your own business.' But help them to discover for themselves what ought to be done and they will not be satisfied until it is done. First, the people must get together. Social capital must be accumulated. Then community improvements may begin. The more the people do for themselves the larger will community social capital become, and the greater will be the dividends upon the social investment." – Hanifan (1916)

This notion of collective empowerment through social capital—where communities and individuals come together to act for mutual benefit—remains profoundly relevant in contemporary education. Hanifan's emphasis on empowerment resonates with current practices in schools, where fostering relationships at various levels can lead to enhanced outcomes for both students and staff. Reinterpreting Hanifan's framework through a modern, intersectional lens, social capital in schools operates on three levels:

1. **Bonding Social Capital:** Within affinity-based communities (e.g., LGBTQ+ student groups, SEND support networks), the strength of peer relationships provides emotional support and fosters a sense of belonging, significantly reducing feelings of isolation. For students who are often marginalised or underrepresented, this sense of community can drive greater school engagement and improve attendance, as they feel seen, valued, and understood.
2. **Bridging Social Capital:** Cross-group interactions, facilitated through inclusive curriculum design and extracurricular activities, help bridge divides between students from diverse backgrounds. These interactions are crucial for counteracting segregation, promoting understanding, and fostering collaboration across groups, ultimately enhancing the broader school community's cohesion. Such bridging efforts reduce feelings of alienation, create more inclusive spaces, and offer students the opportunity to contribute to a collective identity.
3. **Linking Social Capital:** The relationship between students and trusted adults—such as teachers, mentors, and pastoral staff—is fundamental to providing secure reporting pathways and bolstering student confidence in the support structures available to them. When these connections are strong, students feel safer, which in

turn enhances their engagement and attendance. These trusted relationships enable a supportive environment where students are more likely to actively participate in school activities and attend regularly.

By enhancing social capital at these three levels—bonding, bridging, and linking—schools can create an environment where students feel empowered and connected. This, in turn, leads to more consistent attendance and active participation. Hanifan's work, though historical, continues to resonate in contemporary educational settings, reinforcing the idea that the empowerment of communities and individuals is key to achieving sustainable school improvements.

Viewing school attendance through the lens of social capital—focusing on relationships, trust, and a sense of belonging—provides a more effective framework for addressing disengagement. As my earlier findings indicate, underserved students often miss school due to feelings of unsafety and marginalisation. Schools with strong social capital, fostering inclusive cultures where students feel safe, seen, valued, and supported, are likely to experience improved attendance and engagement.

Reflecting on staff responses to the question 'All students enjoy being here', we see differing perspectives that highlight both the challenges and potential for creating a culture of belonging:

"There will always be students that form groups and with that, students will be left out." "I would say most of them, but I can imagine that a few do not or have not adjusted yet." "The initiative of the Student Leadership Group appears to be offering great opportunities for students to express ideas and opinions." "Each child has a different experience."

– Staff Survey, GEC Platform

These diverse responses underscore the importance of fostering an inclusive culture where every student's experience is acknowledged and supported. By integrating social capital into attendance strategies, school leaders can move beyond punitive measures and develop student-centred interventions that address the root causes of disengagement. These interventions, grounded in relational and community-building approaches, are key to improving attendance, engagement, and overall school inclusion.

4.3 The Role of EdTech in Advancing Kaleidoscopic Data

RQ 3. In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices?

My research highlights that while EdTech has potential to bridge gaps, its impact depends on how it is implemented and whether it is designed with ethical participatory principles. This finding aligns with the theoretical framing established in Chapters 1 and 2, where social capital (Hanifan, 1916; Putnam, 2000) and intersectionality (Crenshaw, 1991) are positioned as critical for understanding how relationships, networks, and overlapping identities shape inclusion. Without intersectional insights, overlapping forms of inequity—such as race, gender, and SEND status—remain obscured, limiting schools' ability to design interventions that address the realities of lived experience. When EdTech tools are designed and implemented with these lenses in mind, they have the potential to amplify marginalised voices and strengthen relational trust within school communities.

In traditional data systems, the “heroes” of education are attendance figures, grades, or behaviour points—metrics that dominate accountability processes yet fail to capture lived realities. By embedding ethical data storytelling principles (Feigenbaum & Alamalhodaie, 2020), *Kaleidoscopic Data* reframes staff and student voices as the true protagonists of datafied education. This narrative shift allows EdTech not only to gather information but to humanise it, positioning hidden voices at the centre of inclusion. In doing so, technology becomes a conduit for belonging and equity rather than a mechanism of surveillance or reduction. By repositioning hidden voices at the heart of educational data, *Kaleidoscopic Data* strengthens the forms of bonding, bridging, and linking capital that underpin inclusive school communities, ensuring that relationships and networks—not reductive metrics—become the foundation for meaningful change.

Yet despite this potential, gaps in data collection and usage remain a significant barrier. Many schools lack intersectional insights, which constrains their ability to identify patterns of exclusion or develop effective recruitment and retention strategies. One school leader explained that *Kaleidoscopic Data* “enhances the quality of school data we have” and “allows us to identify gaps more explicitly so we can target appropriate interventions.” A headteacher of a SEND school similarly reflected: “The staff survey identified that career progression and investment in staff is an area for development, so we are now exploring

providing apprenticeship opportunities." Another headteacher noted that the framework "helped to form our ideas for a complete overhaul of our behaviour strategies." These testimonies demonstrate how Kaleidoscopic Data not only illuminates inequities but also empowers leaders to reimagine entrenched systems, from staff development to behaviour management.

Training the trainers—teaching the teachers—emerges as a critical enabler of this process. As one headteacher commented, "The tools and resources available from the collective have helped us to become a more inclusive school focusing on equality and diversity." Another leader reflected: "Great platform, easy interface. Hits the mark for all EDI aspects within a school and provides accessible and high-quality professional learning based around identifying the actual needs of individuals and whole schools." These perspectives highlight that without sufficient staff training, even the most promising EdTech risks under-delivery. Assistive and data-driven technologies can only be transformative when educators have the necessary skills and confidence to implement them. Properly integrated, digital tools can help leaders engage with the concept of social capital, strengthening inclusion, collaboration, and support networks within their communities.

This is particularly evident when schools move beyond one-size-fits-all approaches and adopt intersectional perspectives. A headteacher of a Church of England primary school described the system as "comfortably the most comprehensive platform for DEI and superb for ensuring inclusion is as good as it can be." A digital strategy lead highlighted how "using the resources helps us develop authentic learning experiences for our young people, which is central to the curriculum for Wales and provides our learners with essential knowledge and skills in an up-to-date way." Similarly, an Executive Headteacher reflected: "Helps us shape our PSHE/PD programme. Provides useful data around key areas of DEI," adding that it "has had a huge impact in helping us change the culture of our school, resulting in increased pupil numbers." Such accounts underscore how participatory and ethically designed EdTech can drive both cultural change and tangible outcomes.

Nevertheless, this contribution also reveals the risks. A lack of intersectional data analysis prevents schools from leveraging technology to address diverse needs with precision. Without targeted staff training and participatory co-design, EdTech risks becoming a passive tool rather than an active enabler of inclusion. This echoes critical perspectives within the

EdTech literature (Selwyn, 2016; Williamson, 2022) that caution against techno-solutionism—the assumption that technology alone can resolve complex social issues. Without active engagement from school leaders and educators in the co-design and interpretation of data, digital tools may reproduce existing inequities or prioritise efficiency over equity.

A key finding from this study is the value of ethical EdTech in creating psychologically safe spaces for disclosure. Traditional methods such as focus groups or interviews are often hindered by power dynamics and fear of judgement. In contrast, anonymous digital surveys used in this research enabled staff and students to share lived experiences openly and honestly. This reflects the participatory and ethical principles outlined in Chapter 2, where anonymity, choice, and psychological safety were embedded into design. These safeguards mitigate coercion and bias, producing more authentic representations of diverse experiences. In high-surveillance environments like schools, this approach is particularly significant, enabling staff and students to disclose sensitive experiences without fear of stigma or retribution.

Digital data tools therefore provide schools with the means to collect qualitative insights alongside quantitative data, allowing leaders to capture the intersectional and social-emotional dimensions of experience. This richer evidence base enables schools to identify exclusionary practices, celebrate community strengths, and design targeted interventions.

In response to RQ3, the research reveals a lack of widespread recognition of the potential role EdTech could play in advancing intersectionality and inclusion. However, this landscape is shifting. The forthcoming Ofsted scorecard (2025), which will include inclusion metrics, combined with the rapid adoption of EdTech and AI in schools, is driving a much-needed rethink in how data is collected, analysed, and applied (Schools Week, 2024). Although adoption has thus far focused largely on staff-related processes, student-centred applications are likely to expand as state schools adopt practices already more common in independent and international contexts.

In summary, EdTech has the potential to be transformative in advancing intersectionality and D&I practices, but only when underpinned by ethical, participatory principles. Kaleidoscopic Data illustrates how digital tools can humanise metrics, reposition hidden voices as central,

and strengthen relational trust in schools. Yet, the research also highlights persistent gaps in how schools collect and use intersectional data, and in how staff are trained to act on these insights. To avoid techno-solutionism, EdTech must be embedded into leadership practice as a critical, creative, collaborative, and caring endeavour. Only then can schools fully harness its potential to surface hidden voices, strengthen social capital, and intentionally design more inclusive futures.

4.4 Data Discussion: Delving into the Data

The platform developed as part of the doctoral investigation, aimed to surface individual contexts, enabling insights into how staff and students engage with data. With 26,000 surveys collected, the volume of responses required systematic analysis. Initial analysis relied on human interpretation of coded responses, supported by basic computational tools for dashboard reporting and segmentation. Initially, using standard tools for data analysis was necessary due to cost and technological constraints, findings indicated that scalable insight tools would be key to unlocking the potential of this data. This reflected a wider shift in education towards integrating technology to meet the demands of a rapidly evolving landscape.

Leaders highlighted the importance of creating meaningful feedback loops by revisiting Kaleidoscopic Data insights annually, rather than using more frequent 'pulse' surveys. This intentional design aligned with School Improvement Plan (SIP) cycles and aimed to prevent superficial data collection or 'tick-box' approaches. It also enabled leaders to plan, implement, and review long-term actions based on nuanced evidence. While annual deep-dive surveys allowed for richer insights and strategic reflection, some school leaders still expressed concerns about survey fatigue, particularly for staff who are frequently asked for feedback across multiple initiatives. This reflects established concerns in the literature, where repeated survey requests without visible outcomes can reduce both engagement and reliability. To address this, the study's data collection approach was designed to be transparent and voluntary, with participants informed how their responses would contribute to meaningful change. Some schools adopted shorter, themed follow-ups only where relevant, maintaining participation while reducing burden.

This approach reinforces the ethical commitment to participant well-being and closes the loop between data and action.

Unveiling the Depths of Data Interpretation Challenges in Education.

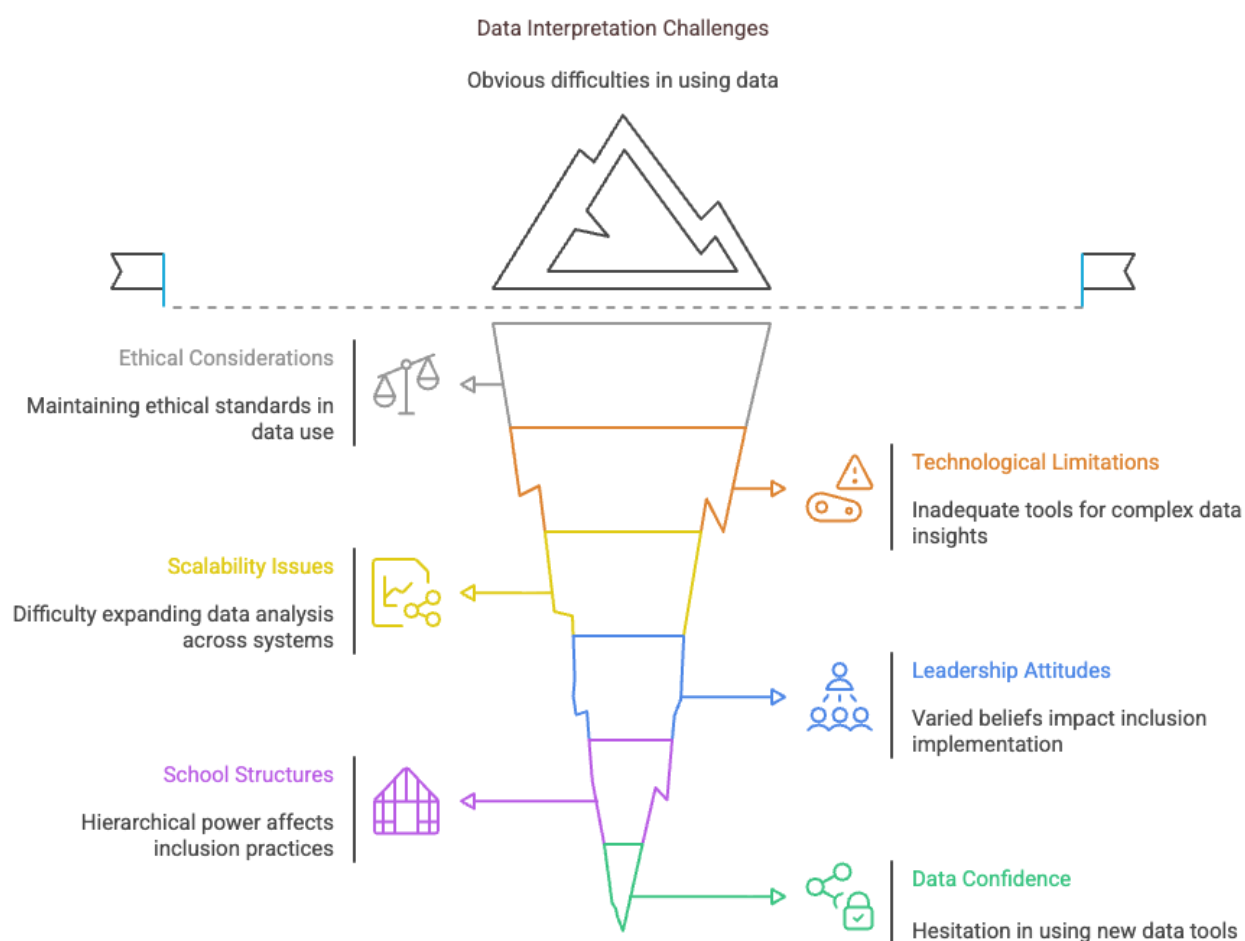


Figure 5: Unveiling the Depths of Data Interpretation Challenges in Education.(Ponsford, 2025)

Figure 5 summarises the following key findings :

1. **Ethical Challenges in Data Interpretation:** A critical challenge that emerged in this study was the difficulty in maintaining ethical standards when working with

intersectional data metrics and analysis. The platform's use of anonymous datasets was essential for ensuring GDPR compliance, yet the interpretation of lived experience data requires care to avoid overgeneralisation or misrepresentation. The balance is that by capturing lived experience, leaders are not just implementing a tool but increasing relational trust and intelligence across an organisation. As a result, the next phase of this research should explore how to unpick these intersectional elements while maintaining the ethical framework that has underpinned this study.

2. **Technological Challenges in Data Interpretation:** The study also revealed the limitations of traditional data visualisation tools which, while robust, did not meet the need for more accessible and contextually rich data insights. Initially, off-the-shelf data collection tools were considered an optimal tool for visualising large datasets, but they struggled to convey the complex, intersectional nature of the data in ways that school leaders could use to drive actionable change. This led to a pivot in the research towards exploring other methods of data extraction that would allow school leaders to interact with the data in more meaningful ways. Initial explorations can be seen in Appendix 5
3. **Scalability and the Need for Broader Insight Tools:** As the study expanded from individual schools to multi-academy trusts and larger regional cohorts, there was an increased need to scale the data analysis. This created a demand for tools that could support system-level insight generation without automating conclusions. Tools that support pattern recognition and allow leaders to filter by role, phase, and identity group began to emerge from the study, highlighting the need for tailored, real-time insights. While national publications have explored the potential of more advanced technologies for analysing student performance and creating personalised learning environments (Schools Week, 2024), the findings emphasise the human interpretation of such data within an ethical research framework.
4. **From Data to Action: How School Leaders Use Kaleidoscopic Data:** A key finding from this study is how school leaders practically applied Kaleidoscopic Data to inform meaningful change. Several leaders reported that survey findings were used to shape or revise School Improvement Plans (SIPs), providing a live diagnostic for areas such as representation, curriculum inclusion, and staff culture. CPD sessions were developed based on gaps identified in staff survey themes—for example, addressing anti-racist practice or improving support for neurodivergent students.

Other leaders used the platform to establish working groups or review HR policies, while some embedded the data themes into line management conversations and student leadership programmes. These examples illustrate a tangible link between data collection and leadership action. Schools moved beyond insight to implementation by using the platform's tools to generate action plans and track change over time. As shown in Appendix 4.i-iii platform features such as the self-assessment tool, 'GEC Playbooks', and task-based Action Plan function enabled school leaders to respond to identified gaps with evidence-informed strategies. Leaders could filter data by staff role, phase, or demographic group, making it possible to tailor support to those most affected.

The impact extended to policy change and curriculum design. In one trust, student survey feedback prompted a revision of the PSHE curriculum, and CPD tiles shown in Appendix 4.ii were used to train middle leaders. Appendix 4.iii highlights how student voice was included via a gamified dashboard and inclusion awards, which were used to drive visibility of progress in assemblies and tutor time. Leaders described this process as "empowering" and "concrete," enabling them to triangulate qualitative and quantitative data, track progress, and embed inclusion into whole-school planning.

Leaders also reported using feedback loops—such as the platform's annual resurveying, alongside new staff forums, and student voice panels—to measure the impact of interventions and refine strategies. This cyclical process reinforced inclusion as an ongoing priority and helped to avoid the pitfalls of one-off data collection. As a result, inclusion became embedded in broader strategic AR development, not siloed within D&I roles.

5. **Talking to the Data:** Data analysis tools, while initially promising, could not provide the depth of analysis needed for intersectional data (Appendix 5). This led to a focus to next developing custom tools to allow for more nuanced insights, particularly in terms of social capital and intersectionality. By "talking with" the data—rather than simply visualising it—we can uncover insights that go beyond surface-level trends. For instance, by examining demographic data at a more granular level, we can identify where schools are making progress in terms of inclusion and where they still need to focus their efforts.

6. **Survey Fatigue and Ethical Considerations:** In response to feedback, survey cadence was intentionally kept annual rather than termly or monthly. This decision reflected the wishes of participating leaders who wanted data to align with their SIP cycles and avoid over-surveying their communities. While survey fatigue has been well-documented in the literature (Porter et al., 2004; Revilla & Höhne, 2020), annual data points allow time for impact to embed and change to occur. Participation was voluntary, with opt-in approaches explained in Chapter 3.4 and Appendix 1, reinforcing ethical principles of autonomy and transparency.

The research questions (RQs) guided the exploration of complex social capital and data issues in education. The findings directly relate to the following key leadership areas raised by the interventions (see Figure 5) and are further outlined in terms of the RQs and objectives:

- a. **Leadership Attitudes and Values Towards Inclusion, Intersectionality, and Social Capital (RQ1):** The data reveals that school leaders' attitudes, values, and beliefs around inclusion are crucial in shaping the educational climate. However, there is variability in how these attitudes manifest, particularly regarding intersectionality and the integration of social capital. In some schools, inclusive leadership is embedded within the culture, yet in others, D&I remains a reactive, rather than proactive, focus. School leaders' understanding of intersectionality was often limited, resulting in uneven implementation of inclusive practices. The findings underscore the need for professional development to address these gaps and provide leaders with the tools to bridge the D&I gaps for staff and students.
- b. **School Structures (Status and Power) (RQ2):** The analysis highlights the critical role that school structures—specifically hierarchical relationships—play in shaping D&I practices. It was found that the distribution of power within schools, particularly in terms of decision-making authority, can either facilitate or hinder inclusion efforts. In schools where leadership structures were more collaborative, inclusive practices were more effectively integrated, whereas top-down, hierarchical systems often struggled to fully engage with D&I initiatives. The findings indicate that addressing power dynamics is key to enhancing inclusion, as school leaders must both empower staff and foster a culture of collective responsibility.

- c. **Data Collection and Inclusion (RQ3):** The study found that while data collection practices are becoming more common in schools, their application in the context of inclusion remains underdeveloped. There is a growing awareness of the potential for digital tools to collect and analyse data related to student inclusion, but limitations in data use and interpretation persist. Many schools still rely on traditional data collection methods, which are not well-suited for capturing intersectional data.

Additionally, the lack of integration between data platforms and existing school management systems creates barriers to effective use. The findings suggest that there is significant untapped potential for digital tools to improve inclusion by providing more granular and contextual insights into student performance and experiences. This contribution reinforces the need for digital inclusion literacies among school leaders, ensuring they can interpret and apply intersectional data effectively in decision-making.

- d. **Data Confidence-Building for School Leaders (RQ3):** The research reveals that inclusive data platforms have the potential to serve as a confidence-building tool for school leaders by providing data-driven insights that inform decision-making on D&I. However, the findings suggest that current data tools in use are not yet sophisticated enough to fully support this function. Leaders were often hesitant to fully embrace new tools for D&I work due to concerns over data privacy, the complexity of interpretation, and the potential for bias. These findings suggest that to build confidence in digital tools, it is necessary to address both technical limitations and ethical concerns, ensuring that platforms are designed to support inclusive practices effectively.

Chapter 5: Discussion

“I feel like people sometimes are not included because of their differences.”

–Staff Survey, GEC Platform

This chapter builds on the findings outlined in Chapter 4, discussing their implications through the lens of the study's conceptual frameworks—particularly intersectionality, social capital, and ethical participatory leadership. It offers an integrated interpretation of the research outcomes, focusing on how school leaders can practically use Kaleidoscopic Data to drive intentional inclusion. Each section relates the findings to broader educational debates and literature, while identifying challenges, emerging opportunities, and implications for future research, policy, and practice.

5.1 A Social Capital Framework for Inclusion and Educational Reform

Building on the introduction of the Data for Inclusion Framework in Chapter 4, this section applies its principles to analyse the study's findings. By mapping Kaleidoscopic Data through the lenses of bonding, bridging, and linking social capital, the analysis examines how inclusion operates across different contexts, identifies systemic gaps, and highlights where targeted interventions could most effectively foster equity and belonging.

Social capital is a multi-dimensional concept increasingly recognised as critical to fostering supportive and inclusive environments. In this contribution, I define social capital in the educational context as the networks of relationships that exist between individuals—whether students, staff, families, or community members—within the school ecosystem. When these relationships are strong, they provide individuals with vital support, opportunities for personal growth, and access to resources that may otherwise be inaccessible. These connections extend across the school community, from teachers and mentors to peers, families, and wider social networks, and they shape educational outcomes by contributing to a sense of belonging and shared purpose.

The concept of social capital in education emphasises the role of relationships in facilitating not only academic success, but also broader social justice. Relationships are not merely a

means to achieve specific educational outcomes, such as qualifications; they are integral to the processes of learning, development, and social mobility. Strong social capital has the potential to bridge gaps in access to educational opportunities and to shift the dynamics of power and status within a school, thus enabling more equitable access to success for all stakeholders (Figure 6). The power embedded within these relationships—who we know, and who stands with or against us—can be transformation in advancing educational equity.

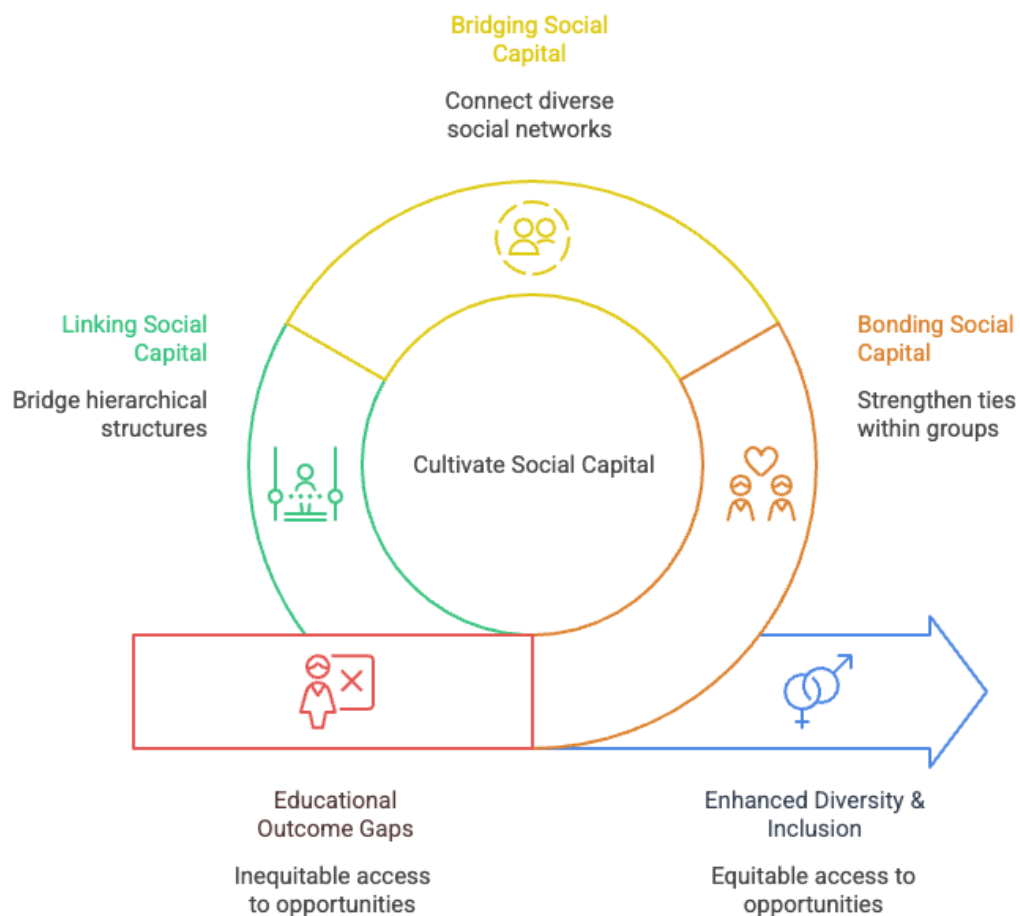


Figure 6 - Building Social Capital in Schools (Ponsford, 2025)

Through this exploration, it became clear that social capital—defined as the networks and quality of relationships within and beyond a school community—holds transformative potential for closing gaps in educational outcomes and enhancing diversity and inclusion

(D&I). Within education, relationships not only help us learn from one another and ourselves but are frequently regarded as a means to an end. They help us attain qualifications, build networks, collaborate, and advance social mobility. Social justice, social mobility, and social capital are deeply intertwined—relationships hold power, and it is this power that generates capital. The impact of who you know can be transformative, as evidenced in repeated findings across contexts. Who you stand with or against can shift the dynamics of any situation.

Social capital is not a static resource, but a dynamic force shaping individual and collective action. In the context of schools, social capital exists across three key dimensions—bonding, bridging, and linking social capital - with differing outcomes:

1. **Bonding Social Capital:** Bonding social capital refers to the relationships and networks that form within a singular demographic or homogenous group, such as families, peer groups, or 'communities' with shared experiences, including groups organised around protective characteristics. This can include protected characteristics communities and groups too. While these connections offer emotional support, trust, and resource-sharing, they can also foster exclusivity, insularity, and groupthink, potentially leading to the exclusion of individuals who do not belong to the same group. In schools, bonding social capital strengthens ties among individuals from similar backgrounds, but also risks reinforcing divisions within the school community if not actively balanced with other forms of social capital.

The importance of bonding social capital is evident in contexts such as community-building within classrooms or peer support networks. When successful, bonding relationships allow individuals to feel valued, providing them with emotional and social support. However, a focus solely on bonding can hinder inclusivity, particularly for those on the margins of school communities, such as minority groups or students with additional needs.

2. **Bridging Social Capital:** Bridging social capital expands beyond homogenous groups to create connections across diverse social networks. This dimension promotes inclusivity by connecting individuals from different backgrounds, identities,

and experiences, fostering collaboration and collective action. Bridging capital is particularly valuable in educational contexts where diversity is increasingly present. It allows for the cross-pollination of ideas and experiences, enabling individuals from various demographics to unite in pursuit of common educational goals.

For schools, bridging social capital facilitates the building of more diverse and inclusive environments. In practice, bridging capital can be cultivated through community outreach initiatives, collaborative projects across different student groups, and activities that promote cultural exchange and mutual respect. The GEC Platform's emphasis on intersectional allyship, for example, reflects the importance of bridging social capital in advancing equality and inclusion in schools.

3. **Linking Social Capital:** Linking social capital focuses on the relationships that bridge hierarchical structures and institutional boundaries —for example, between students, staff, senior leaders, and external agencies — enabling individuals or groups to access resources, support, and opportunities that are otherwise out of reach. This dimension of social capital is crucial in navigating power dynamics within and across educational institutions. By fostering relationships between students, teachers, and school leaders, linking social capital helps to establish a sense of trust and reciprocity across different levels of the school hierarchy. The role of school leaders in fostering linking social capital cannot be overstated. By cultivating relationships with external stakeholders, such as local authorities, parents, and community organisations, school leaders can unlock new opportunities for their students and staff, particularly those from marginalised communities. This was evident in the findings, where students who identified as neurodivergent or from ethnically minoritised backgrounds reported feeling “othered” through wider institutional structures, signalling weak bridging and linking capital and the need for leadership intervention (see Figure 7 'Cons').

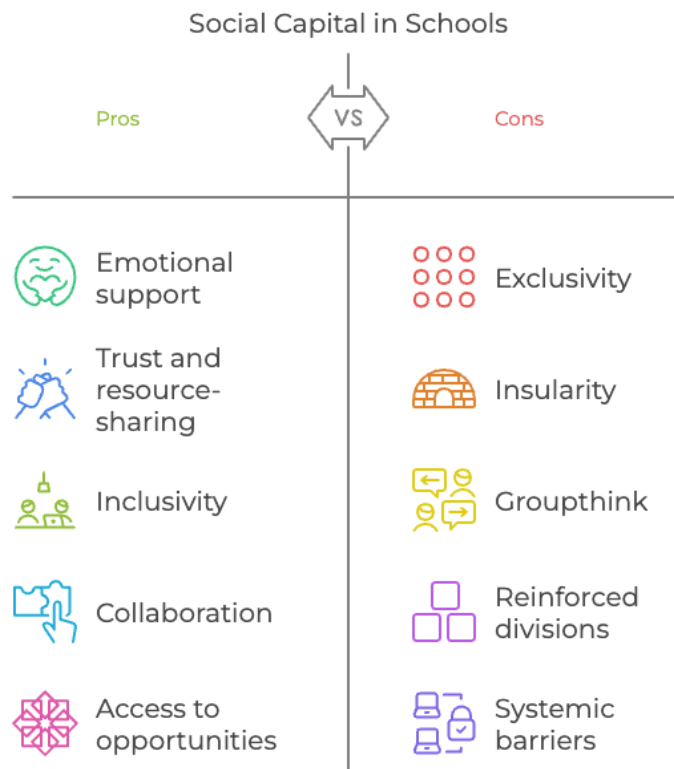


Figure 7 - Pros and Cons of Social Capital in Education (Ponsford, 2025)

The purpose of this study has been to explore how a social capital framework provides critical insights into the ways schools can foster inclusion, particularly for students and staff facing marginalisation. This research demonstrates that social capital plays a pivotal role in promoting equitable education by creating opportunities for individuals and communities. Drawing on the foundational works of Dewey (1930) and Bourdieu (2005), this research explores how social capital shapes power dynamics within schools, as well as the relationships that enable both personal and collective growth. These patterns were directly evidenced in the GEC staff and student survey findings (Interventions 1–4), where the quality of relationships often mirrored participants' feelings of safety, inclusion, and representation. For instance, where staff–student trust was reported as higher, indicators of student belonging and perceived voice were also stronger. This confirms that social capital is not simply a theoretical construct but a lived dynamic shaping inclusion outcomes. The interplay between personal connections and institutional structures highlights the need for a nuanced understanding of how social capital operates across diverse educational contexts.

Focusing on the concepts of 'Bonding, Bridging, and Linking' social capital, I have illuminated the multi-dimensional nature of social capital within educational settings. These dimensions not only break down barriers but also foster immediate collective action. Through surveys, I have identified the cognitive dimension of social capital — such as auditing shared language, narratives, and culture, all built upon a unified vision. By reframing the 'capital' or worth of staff and students —not in economic terms but as intellectual growth and societal membership—I have provided a more inclusive perspective on social capital. Figure 8 represents this conceptual expansion, showing how intersectional data enables leaders to diagnose and strengthen social capital in practice. Rather than a linear progression, the model emphasises how bonding, bridging, and linking capital interconnect dynamically to shape school culture.

This research emphasises that bonding capital, which is cultivated through close-knit relationships, offers vital support but can also unintentionally perpetuate exclusion. For example, some leadership teams reported flexible working as viable for senior roles while middle leaders perceived fewer options; students who self-identify as neurodivergent or as ethnic minorities also described feeling 'othered' outside their bonding groups. Conversely, bridging capital connects disparate groups, creating opportunities for inclusion and broader social engagement. This can be where people of an individual protected characteristic or community have intersectional identities or see benefits in working together. Linking capital extends beyond the school, enabling leadership teams to look to provide a school improvement framework, providing access to external networks that open doors to resources and opportunities otherwise unavailable.

A critical distinction between "bonding" and "bridging" social capital is evident. Bonding social capital operates within existing groups or communities that share similar lived experiences, while bridging social capital connects intersectional groups from diverse backgrounds. By adopting affirmative approaches—using positive language instead of deficit-based narratives—we enable individuals to be seen for who they truly are, supporting underserved communities to transition from 'outsiders' to 'insiders' within the educational system.

Social capital creates opportunities for both students and staff that extend beyond cultural and human capital. Students may feel more engaged in school because they feel safer with one particular teacher over another, see themselves in the curriculum, or have a trusted adult who will champion their voice. This exemplifies social capital—the relational networks that foster belonging and trust. At its core, social capital shifts the focus from “what you know” (academic knowledge and assessment skills) to “who you are” (personal identity) and ultimately to “who we are” (as an inclusive school community). It is well established that students thrive when they feel safe, have a sense of belonging, and identify with both their teachers and the curriculum content. Schools that prioritise social capital create environments where both students and staff are supported at both the micro (individual) and macro (institutional) levels. Evidence from Interventions 2 and 3 showed high-trust environments correlating with student motivation and staff retention intentions. One teacher reflected: “I stay because I know I matter here – not just for what I do, but who I am.”

Robert Putnam, who popularised the concept of social capital with his book *Bowling Alone*, defines it as “social networks and the norms of reciprocity associated with them” (Putnam, 2000). Putnam’s definition underscores that social capital is not merely about the quantity of relationships but also the quality and norms embedded within them. As a recent National Academy of Sciences report notes:

“Because the terms ‘social capital,’ ‘civic engagement,’ and ‘social cohesion’ refer to broad and malleable concepts that take on different meanings depending on the context, they are not amenable to direct statistical measurement. However, dimensions of these broad constructs—the behaviours, attitudes, social ties, and experiences—can be more narrowly and tangibly defined and are thus more feasibly measured.”

–National Academies of Sciences, Engineering, and Medicine (2021, p. 34)

By integrating theories of social capital, intersectionality, and the emerging role of EdTech, this work has provided both a conceptual and practical framework that blends these elements to enhance inclusive educational practices and outcomes.

In educational settings, social capital is not simply about the quantity of relationships but about the quality and diversity of those relationships. These relationships shape

opportunities for both students and staff, influencing school culture, curriculum delivery, and overall school improvement efforts. When schools prioritise the nurturing of social capital, they invest in creating supportive, dynamic, and inclusive environments that drive meaningful change, both for individuals and for the collective community.

The value of social capital in schools lies not only in the relationships themselves, but also in how these relationships are leveraged to foster inclusion and improve educational outcomes. This research reveals that sustained attention to social capital can positively impact both micro-level dynamics (individual student-teacher interactions) and macro-level systems (school-wide structures and policies). Leadership is critical in facilitating the development of bonding, bridging, and linking social capital and in ensuring that these relationships are harnessed to translate inclusion values into relational and systemic change, supporting long-term educational equity, staff wellbeing, and student success.

The intervention strategies outlined in this contribution focus on using data for inclusion tools to measure and enhance social capital within schools. By collecting intersectional data on relationships, trust, and community engagement, schools can generate data-driven insights that inform strategies for inclusive education. These digital tools enable the real-time analysis of social capital, helping schools identify gaps in relationships, areas for improvement, and opportunities for greater inclusivity.

A key finding of this research is that effectively measuring social capital requires a nuanced understanding of both the qualitative and quantitative aspects of relationships within schools. Data collected through EdTech platforms can capture cognitive dimensions of social capital —such as shared language, norms, and values—alongside the emotional and relational dimensions of social capital that are often overlooked in traditional assessments.

5.2 Inclusive Practices in Education: The Power of Social Ecologies and Parent-Carer Collaboration

Drawing on Cloanan et al. (2004) and Bronfenbrenner's *Ecological Systems Theory* (1979), schools can be understood as complex, dynamic ecosystems in which multiple layers shape inclusion. The diverse student population, with its varied backgrounds and learning needs,

intersects with teachers, each bringing unique teaching methods and relationship-building strategies. Together, these community interactions contribute to the school's collective social capital. Additionally, the physical environment, including the school's layout and facilities, interacts with the social environment, which is defined by the school's culture, vision, and values. For example, from the fourth intervention in this study, students reported feeling 'safer' in particular areas of a school—feedback directly linked to the school's culture and its influence on individual and group experiences. The involvement of the wider community—including parents, local stakeholders, and broader societal forces—also plays a crucial role in shaping a school's social ecology, significantly impacting educational outcomes and the dynamics within schools (Putnam, 2000; Bourdieu, 1986).

As explored in the literature review, factors such as socio-economic status, political influences, and cultural contexts significantly impact educational outcomes and the dynamics within schools. Viewed together, these elements form a dynamic and interconnected system that shapes both the atmosphere and the effectiveness of the school's educational processes.

The ability to map these layers and components, particularly through EdTech tools, offers invaluable insights into the school's social ecology. EdTech can support the identification of social capital networks by tracking relationships between individuals, communities, and broader systems. These tools can reveal the distribution of social capital within the school, highlighting both strengths and potential gaps. Adopting this holistic perspective enables schools to better understand the factors that contribute to an inclusive, positive, and supportive learning environment for all members of the school community. This aligns with research suggesting that digital tools, when ethically designed, can illuminate the presence and gaps in social capital networks across a school community (Williamson & Piattoeva, 2022).

A key finding of this thesis is the importance of lived experience in addressing the diversity, equity, and inclusion gaps in schools. The insights gathered from staff and students reveal hidden dynamics of inclusion, particularly in how intersectionality, social capital, and leadership practices shape perceptions of belonging and participation. However, a critical missing element in current school improvement strategies is the inclusion of Parent and Carer voice.

While educational research and policy have long prioritised the voices of students and staff, the experiences of parents and carers—especially those from marginalised groups—are often underutilised. Yet, parents and carers play a crucial role in shaping children's educational experiences, from supporting learning at home to advocating for their children's (or siblings' in the case of young carers) needs within the school system (Goodall & Montgomery, 2014; Vincent, 2001). As critical stakeholders, their perspectives offer valuable insights that are frequently overlooked in conventional school improvement strategies. Schools must not only understand but also align their communication with the diverse needs and experiences of their community, fostering both literal and metaphorical understanding. When people feel heard, they are more likely to engage. In short, schools must speak the same language as their community, speaking the same language—both literally and metaphorically—to create inclusive, safe spaces for all.

Engaging with parents and carers, particularly from marginalised communities, provides an opportunity to expand the understanding of how inclusion is experienced outside the classroom. While school leaders and staff might perceive inclusion through the lens of educational practices and policies, parents and carers experience inclusion in more varied and nuanced ways, shaped by their social position and interactions with the educational system. For example, parents of SEND (Special Educational Needs and Disabilities) students, parents from marginalised ethnic minorities, and homes experiencing a low socio-economic status often navigate complex social systems and face barriers that hinder their full participation in the school community.

Incorporating Parent and Carer voice into the research can thus enhance the understanding of intersectionality, as parents' own experiences of exclusion often mirror those of their children. Many parents and carers face challenges such as literacy and language barriers, cultural differences, and systemic biases that impede their ability to engage effectively with schools. By identifying these challenges and addressing them through inclusive school practices, schools can create more equitable educational environments for both students and their homes. For instance, underserved parents might experience educational systems as non-inclusive, with limited opportunities for engagement, particularly if school policies fail to consider diverse cultural norms or communication styles. The inclusion of Parent and

Carer voice will allow schools to re-evaluate existing engagement practices and tailor them to better meet the needs of these families. This approach can help build a more inclusive school culture, where all members of the community feel heard and valued.

For school leaders, it is crucial to understand not only how parents are fighting for inclusion, but also how they may be navigating cultural and societal barriers to engage with the school system. Parents from underserved and vulnerable communities often face complex challenges when attempting to work with schools, especially when they encounter phobic beliefs or discrimination. School leaders must be aware of these dynamics, as they may impact how parents perceive their ability to advocate for their children or engage with school activities.

Moreover, school leaders must understand the importance of legislation, particularly regarding inclusion and equal opportunities. They need to balance cultural beliefs within the school community with legal frameworks, ensuring that inclusion efforts align with national and international policies. When school leaders encounter phobic or discriminatory beliefs from staff, students, or parents, they need to recognise when to act decisively or when to seek external expertise. This includes knowing when to involve legal professionals or cultural experts to address such issues sensitively and effectively. By understanding the complexities of home-school engagement and recognising the barriers that parents face, school leaders can foster stronger partnerships with families, ultimately enhancing the school's approach to inclusion.

Future research will explore strategies for better engaging parents and carers in the co-creation of inclusive practices. This involves not only understanding the barriers that prevent their full participation but also identifying the opportunities and strengths they bring to the table. It is essential to recognise that while barriers such as literacy and language differences, cultural misunderstandings, and institutional biases might exist, many parents possess rich insights and knowledge about their children's experiences and needs. Participatory approaches—such as co-designing school events, shared decision-making processes, and regular feedback loops—can embed these voices into school culture. By creating a more inclusive dialogue, schools can better align their practices with the lived

realities of the communities they serve, ensuring that policies and interventions reflect the needs of all stakeholders.

Central to this discussion is the role of social capital in fostering inclusive practices within schools. Social capital refers to the networks, relationships, and trust that individuals build within their communities. EdTech, when used effectively, can help to strengthen these connections, providing a platform for marginalised voices to be heard. This is particularly important in addressing intersectionality, where students and staff may have complex, overlapping identities that are often overlooked in traditional data collection methods. EdTech tools, such as data collection tools and AI-powered platforms, can help uncover the “untold stories” of students and staff by providing a safe space for anonymous expression. By prioritising the collection of data that reflects the lived experiences of individuals, rather than solely focusing on performance metrics, schools can develop a more comprehensive understanding of the barriers to inclusion. In this way, EdTech can act as a tool for building social capital, creating spaces where diverse voices are valued, and ensuring that every member of the school community feels seen, heard, and included.

Incorporating Parent and Carer voice into school inclusion strategies also has significant implications for data-driven approaches to diversity and inclusion. While current EdTech solutions are primarily designed to capture student performance data, there is limited capacity to gather qualitative insights from parents and carers. This represents a gap in the current landscape of school improvement, as parental perspectives can illuminate the broader systemic issues that affect inclusion, beyond what is visible in student achievement data alone.

Future research will focus on adapting EdTech tools to capture more qualitative feedback from parents and carers, allowing for the creation of dynamic feedback loops that continuously inform and improve inclusion strategies. This might involve the development of digital platforms that facilitate ongoing communication between schools and families, enabling interactive surveys, focus groups, and community discussions that centre the voices of parents and carers. These platforms can serve as tools for not only tracking students' academic progress, but also assessing social capital, well-being, and the school climate, providing school leaders with a more holistic understanding of how inclusion is

perceived and experienced across the school community. This will also be able to utilise traditional static data that supports attendance, behaviour and looks to seek out support for students such as mental health appointments, mentoring and access to a wider curriculum.

Incorporating Parent and Carer voice into Kaleidoscopic Data strengthens schools' ability to design inclusion strategies that reflect the lived realities of the whole community. Expanding the participatory framework to include these stakeholders supports more sustainable, system-level improvements and builds stronger, more resilient communities where all voices are central to educational reform.

5.3 Expanding Horizons: Unforeseen Opportunities and Emerging Insights

Introduction: Beyond the Intervention — Unlocking New Possibilities

When the study was first conceptualised, the primary goal was to explore how a digital platform could support schools in closing Diversity, Equity, and Inclusion (DEI) gaps through actionable data insights. At its core, the EdTech platform aimed to simplify data collection and analysis, equipping school leaders with the tools to scale improvement efforts consistently and sustainably. However, one of the most significant insights from this intervention was the discovery that the platform's potential impact extended far beyond its original design.

What started as a solution to enhance intentional inclusion practices in schools has evolved into a tool capable of generating insights that could benefit a wide range of stakeholders—from policymakers and educational leaders to researchers and community organisations. The data collected, the intersectional trends uncovered, and the use of innovative data collection technologies have opened doors to new possibilities that were not part of the initial plan. These unforeseen opportunities highlight the evolving role of EdTech in addressing complex educational challenges, underscoring the need to adapt and broaden the platform's scope to fully leverage its potential.

In this chapter, I will examine the raw data and data-driven insights derived from the student surveys, focusing on the unexpected findings that emerged following Intervention 4. These insights are considered in the context of the prior interventions, which serve as a foundation for understanding the platform's potential. This chapter explores how the platform not only has the capacity to scale school improvement, but also functions as a catalyst for new research, influences policymaking, and fosters collaborative innovation. Additionally, the insights presented here offer valuable opportunities for external stakeholders—such as universities, think tanks, and other educational organisations—to contribute to the generation of new knowledge, thereby advancing the broader educational landscape.

Unpacking the Data: Analysing Racial and Ethnic Disparities in Education

This section delves into the data specifically focusing on racial and ethnic disparities within educational contexts. The evolution of the EdTech platform and the shift in focus after the tragic murder of George Floyd catalysed a crucial pivot during the second intervention, where the platform actively embedded Anti-Racism strategies into schools and curricula. This transformation reflects a deepening commitment to addressing racial inequities within the education system, an area that had often been overlooked or inadequately addressed.

The data reveals significant gaps in representation, inclusion, and engagement among students from diverse racial and ethnic backgrounds. These disparities not only hinder the educational experiences of students from marginalised communities, but also exacerbate systemic inequalities in achievement, well-being, and opportunities for advancement. For instance, students who self-identified as Black, Indigenous, from Arab backgrounds and mixed heritage reported feeling excluded from both curricular content and school environments, where their cultural identities and histories are often underrepresented. This lack of representation in the curriculum is a clear barrier to engagement and can lead to feelings of invisibility and alienation.

By analysing these racial and ethnic disparities, the data provides vital insights into how schools and educators can foster more inclusive environments. It also highlights the importance of curriculum diversification, which ensures that all students can see themselves reflected in their educational experiences. These findings offer an evidence-led foundation for advocating for systemic changes, such as revising curricula to reflect a more inclusive

and diverse range of cultural perspectives, and implementing policies that address the specific needs of racially marginalised students.

The expansion in the platform's focus to wider racial equity also emphasises the role of EdTech in influencing wider educational practices. As schools increasingly integrate these tools, there is an opportunity for EdTech and datafication to serve as a catalyst for broader policy changes, not only within individual schools or trusts, but across educational systems globally. By leveraging the insights gained from this data, policymakers and educators can better understand the scope of racial disparities in education and make informed decisions to promote equity, inclusion, and belonging for all students.

Intersectional Barriers to Inclusion and Engagement

The initial data highlights clear intersectional challenges faced by students from multiple marginalised groups. This underlines the compounded disadvantage that students encounter when their identities intersect along lines of ethnicity, race, religion and socioeconomic status.

For example, Arab students report some of the highest levels of dissatisfaction with their educational experiences, ranging from feeling unrepresented in the curriculum to a lack of support for their learning needs. A combined lack of both curriculum representation and support in their learning needs suggests a systemic issue that fails to address the complexities of their lived experiences. These findings demonstrate the urgent need for intersectionality-based approach to educational practice and policy, which consider how multiple layers of identity combine to shape students' educational experiences and outcomes.

Curriculum Representation and its Role in Student Identity

The data on religious representation in the curriculum reveals a complex and often uneven experience for students across different faith backgrounds. While some students feel represented, a significant proportion report a lack of visibility, indicating gaps in inclusion that require attention. Muslim students show a mixed experience, with 23% strongly agreeing that they feel represented, yet 13% strongly disagreeing, highlighting a disparity in how

inclusion is perceived. Christian students, the largest religious group in many educational settings, also report varied experiences, with only 15% strongly agreeing that they feel represented in the curriculum, while 9% strongly disagree, suggesting that even majority faiths do not always find their beliefs adequately reflected in educational content.

For Jewish students, the responses are notably polarised, with 17% strongly agreeing they feel represented, but an equal 17% strongly disagreeing, underscoring the stark contrast in individual experiences and the potential for underrepresentation or misrepresentation in certain contexts. Similarly, Buddhist students report that 19% strongly agree they feel seen in the curriculum, yet 15% strongly disagree, indicating a need for greater inclusion. Hindu students reflect a similar pattern, with 22% strongly agreeing that they feel represented, while 14% strongly disagree, suggesting that while some positive steps have been taken, there is still room for improvement. Sikh students demonstrate one of the lowest levels of strong agreement (13%), with 14% strongly disagreeing, pointing to a clear need for more inclusive content that accurately represents their faith and traditions.

The data also highlights challenges for students who do not identify with a specific religion. Among students with no religious affiliation, 11% strongly agree that they feel represented in the curriculum, but 9% strongly disagree, reflecting a range of perspectives on whether non-religious worldviews are acknowledged. Similarly, those who preferred not to disclose their religious identity report 16% strongly agreeing that they feel seen, while 15% strongly disagree, demonstrating a similarly varied experience. Finally, for students who identified with other religious groups, 17% strongly agree that they feel represented, but 16% strongly disagree, reinforcing the broader issue of inadequate representation across diverse belief systems.

These findings underscore the urgent need for a more intentionally inclusive approach to religious representation in the curriculum. A significant proportion of students across all faith and non-faith backgrounds do not feel adequately seen, suggesting that current educational content does not fully reflect the pluralistic nature of society. Addressing these disparities requires a more nuanced, intersectional approach to curriculum design, ensuring that all students see their identities, beliefs, and lived experiences meaningfully represented in their education.

When it comes to gender in traditional research, boys are often cited as feeling the least represented. However, participants from this data set illustrated that boys feel more represented in the curriculum, with 41% agreeing or strongly agreeing that they feel seen. Girls show slightly lower levels of agreement, with 37% feeling represented. However it was non-binary and intersex students that reported the highest levels of feeling unseen, with significant percentages strongly disagreeing that the curriculum represents them.

A recurring theme in the data is the lack of representation of marginalised ethnic groups in the curriculum where students also report mixed levels of satisfaction in this area. The findings suggest that when students do not see themselves reflected in the curriculum, it can significantly hinder their sense of belonging and engagement with learning. For example, 23.29% of Black students stated the highest levels of enjoyment in learning, (strongly agree), illustrating that successful strategies could be expanded to other demographic groups. But, Mixed Heritage students reported the lowest levels of satisfaction with curriculum representation (10.29% strongly agree), signalling that a more inclusive and representative curriculum is needed across ethnic groups, not just for historically underrepresented communities.

These gaps in representation not only affect how students perceive their place within the education system, but they also impact their academic success. Students who feel "seen" and validated through curriculum content are more likely to engage in their learning and perform well. Understanding and listening to the voices, and the identities, of the students is key to supporting school leaders to target their resources, time, and funding, to close these gaps and create fully inclusive curriculums. Benchmarking this data then enables review and reflection on what is working and what lessons can be learnt.

The Impact of School Climate on Inclusion and Well-Being

The sense of belonging is a critical factor influencing both student engagement and academic performance. Data from this study clearly shows that ethnically marginalised students report the lowest levels of feeling welcomed in school, with 17.42% strongly disagreeing with the statement that they feel included. This is in stark contrast to the higher levels of positive responses from White (31.86%) and Asian students (30.69%) and raises

serious questions about the inclusivity of school cultures, climates and the environments experienced by students from underserved backgrounds.

The findings indicate that a lack of belonging is not only tied to feelings of exclusion, but also to poor academic engagement, as evidenced by the significant dissatisfaction with enjoyment of learning reported by these groups. This suggests that fostering a school culture that promotes inclusion is vital, with schools needing to adopt practices that encourage acceptance, representation, and belonging for all students, regardless of their ethnic or cultural background.

Teacher-Student Interactions: A Critical Area for Improvement

The data on teacher-student interactions reveals a concerning trend: Arab students report feeling the least heard by their teachers. Notably, 21.21% of Arab students strongly disagree that their teachers listen to them, highlighting the critical role that teacher-student relationships play in fostering a sense of inclusion and engagement. This aligns with broader research on the importance of teacher cultural competence and the need for educators to interact with students in ways that acknowledge and respond to their diverse experiences.

In contrast, Asian students report more positive interactions with teachers, with 33.99% strongly agreeing that they feel heard. This disparity suggests that culturally responsive teaching practices may already be benefiting some student groups while leaving others underserved. Addressing these inconsistencies requires targeted professional development to equip educators with the skills needed to engage all students equitably, affirming their identities and meeting their learning needs.

Beyond interactions, representation within the teaching workforce remains a significant issue. A majority of students (54%) either strongly disagree or disagree that there is a teacher who resembles someone in their family, while only 28% strongly agree or agree with this statement. Significant groups - boys (43%), Muslim (43%), students with invisible disabilities (37%), neurodivergent students (21%) and students from single-parent families — all strongly disagree that there is a teacher who looks like someone from their family. This indicates a lack of relatable role models.

These gaps underscore the urgent need for more inclusive recruitment and retention strategies to ensure students see themselves reflected in the educators who shape their learning environments. Increasing teacher diversity is not just about representation—it is essential for fostering belonging, improving student outcomes, and strengthening trust between students and educators.

Belonging and Well-Being: A Pathway to Engagement

The importance of belonging in shaping students' academic outcomes is clear in the data, with 25% students reporting very lowest levels of enjoyment in learning and the highest levels of disengagement. When students do not feel welcomed or included, their academic engagement falls and well-being suffers.

Interestingly, Black and Asian students report more positive experiences in this area, with 26.07% of Asian students strongly agreeing that they enjoy learning. This pattern likely reflects supportive school environments and offers a replicable model for fostering engagement. The contrast between Indigenous students and their peers underscores the need for targeted interventions that specifically address the barriers to belonging for marginalised ethnic groups.

The Need for Systemic Change: Data-Driven Insights for Policy and Practice

These findings highlight the deep-rooted inequities that persist within the education system, particularly along racial and ethnic lines. Students' experiences of exclusion and lack of representation in both the curriculum and school climate point to systemic barriers required concerted action. The data also raises important questions about how well current educational practices meet the needs of students from diverse ethnic backgrounds. The data on teacher-student interactions and curriculum representation underscores the need for policy reform to promote inclusive education practices, such as culturally relevant pedagogy, curriculum diversification, and teacher training in cultural competence.

Educational leaders and policymakers must ensure that schools are equipped with the resources and support necessary to create environments where all students feel included, valued, and empowered to succeed.

Too Much Data: Challenges of Scalability and Regional Variations

A primary goal of exploring digitisation in school improvement was to address scalability—enabling a solution that scales while remaining context-relevant.. As expected, the uptake of the platform across England has been varied, with schools and trusts from both rural and urban areas participating. However, this adoption has not been evenly distributed, and the resulting data highlights several key insights into regional engagement and the broader dynamics at play:

a. Uptake Across England: A Varied Landscape: The platform's uptake has reflected the broader distribution of primary and secondary schools in England, with primary schools representing a larger proportion of participants. This is in part due to the higher number of primary schools in the country. However, the distribution of participants has revealed some notable regional variations in engagement, which point to underlying socio-cultural and institutional factors. For example, the south-west of England has seen a notably lower level of engagement with the platform, which is of particular interest. In areas with predominantly white communities, school leaders and local educators may feel less equipped or motivated to engage with diversity and anti-racist approaches—areas of focus for the platform. A perceived disconnect between the effort required to implement inclusive practices and local demographic profiles may further depress engagement.

In contrast, regions such as the Midlands, where there is more demographic diversity, have shown higher levels of engagement. Schools in these areas are particularly focused on recruiting staff that reflect the diversity of their communities and are more likely to engage in efforts to foster community cohesion. These schools are also addressing the challenges of overcoming traditional leadership structures—particularly the predominantly white, male leadership structures that dominate the education system. By embracing more diverse leadership teams, schools in these regions are looking to create inclusive environments that cater to the needs of their diverse student populations.

b. State Schools vs. Independent Schools: A significant portion of the platform's uptake—approximately 80%—comes from state schools and trusts. This mirrors the overall composition of the UK education system, where state schools represent the majority. The remaining 20% comes from independent and international schools, which are typically less reliant on affordable, scalable solutions like the platform.

Independent schools, which often have access to more substantial resources, might not initially appear as candidates for this kind of intervention. However, progressive independent schools have embraced the platform, eager to set the pace in their Diversity, Equity, and Inclusion (EDI) efforts and to position themselves as leaders in the field. These schools are driven, in part, by parent expectations for inclusivity and a commitment to establishing practices that reflect contemporary societal values. While independent schools are often seen as less reliant on public sector resources, this demographic's engagement with the platform signals an important shift. These schools are increasingly aware of the importance of inclusivity—not just as a value but as a practical necessity for thriving in the modern educational landscape. By adopting the platform, these schools are aligning themselves with the growing call for inclusive education and social responsibility. Their engagement signals a shift from optional to strategic adoption of inclusion tools.

c. EdTech Expansion: Scaling from Schools to Trusts and Regions: The expansion of the platform from individual schools to networks—trusts—and regions represents a significant step in scaling its impact. This evolution allows the platform to cater to the needs of multi-academy trusts (MATs) and larger educational systems, providing a uniform user experience across different levels while enabling personalised support for each individual institution within the network. By enabling this type of scalable solution, the platform has the potential to reach a wider range of schools and educational contexts, from urban to rural settings, and to adapt to the unique needs of each school or trust. This broadens reach across urban and rural settings without sacrificing relevance. This was a critical aspect of the platform's design, to ensure that all schools—regardless of size or location—can access tools and insights that are relevant to their specific diversity and inclusion goals. This scalability opens up the possibility of a regionally tailored approach, allowing schools to adapt the platform's functionalities to reflect their local demographic needs. A customisable interface

that supports effective use across diverse geographies, overcoming differences in structures, leadership, and community composition.

d. Data Overload: Balancing Scale with Insight: While the platform's ability to gather and analyse vast amounts of data is a strength, it also raises the issue of data overload. With over 1.8 million data points now available, it is essential to ensure that the sheer volume of data does not overwhelm the decision-making process. The data collected is rich and comprehensive, but to make it actionable, it must be organised, prioritised, and analysed in ways that lead to clear, focused insights. One of the platform's ongoing challenges is filtering and synthesising data into formats that are digestible and actionable for school leaders, policymakers, and researchers. With numerous variables—socioeconomic status, Special Educational Needs and Disabilities (SEND), neurodiversity, gender, race, and ethnicity—ensuring data accessibility while retaining its depth and complexity is crucial.

It also has to be noted that leveraging Artificial Intelligence (AI) presents an opportunity to both identify trends and generate insights that highlight key priorities for schools and trusts. By employing AI, the platform can assist users in navigating data efficiently, offering actionable recommendations based on specific needs and regional contexts. However, integrating AI into educational data analysis necessitates critical reflection, as research has highlighted biases in AI's interpretation of racial inequality and systemic discrimination (United Nations, 2024).

A study by the Berkeley Haas Center for Equity, Gender and Leadership, which analysed 133 AI systems across different industries, found that approximately 44% of them exhibited gender bias (Berkeley Haas, 2024). Because models can mirror biased training data, risks include skewed assessment, resource allocation, and prediction. Recognising these challenges, several governmental and international bodies have introduced legislation and frameworks to mitigate AI bias:

- United Kingdom: The Department for Education (DfE) acknowledges AI's transformative potential in education while emphasising the need for safe, effective, and transparent AI use to ensure equitable outcomes for all students (DfE, 2025).
- United States: The Department of Education has published *Artificial Intelligence and the Future of Teaching and Learning*, highlighting the importance of ethical,

responsible, and non-discriminatory AI use in education (US Department of Education, 2024).

- European Union: The EU's proposed Artificial Intelligence Act includes provisions mandating high-quality datasets for AI systems, particularly in high-risk areas such as education, to minimise discriminatory outcomes (European Commission, 2024).
- International Standards: The International Organization for Standardization (ISO) has developed guidelines on managing bias in AI systems, ensuring fairness in AI-driven decision-making (ISO, 2024).
- United Nations Educational, Scientific and Cultural Organisation (UNESCO): UNESCO's *Recommendation on the Ethics of Artificial Intelligence* calls for AI systems to promote social justice, fairness, and non-discrimination, ensuring AI benefits are accessible to all and do not perpetuate existing inequalities (UNESCO, 2024).

To align with these legislative and ethical standards, the platform must incorporate rigorous oversight, transparency, and continuous auditing to detect and address potential biases. This requires intentional dataset curation, participatory design with marginalised groups, and built-in fairness metrics. While AI presents opportunities for making complex data more accessible, its application should be explicitly governed to enhance equitable decision-making in education, ensuring compliance with evolving legal and ethical frameworks.

5.4 The Unexpected Upside of Intersectional Data: Harnessing the Power of EdTech for Policy Advocacy

While the primary focus of the platform was to explore how EdTech could support inclusion, well-being, and diversity within schools for this research, the intersectional data collection and analysis have emerged as an unexpected yet invaluable asset. The platform was initially designed with an emphasis on academic organisations and UK government-level data collection. However, its capacity for in-depth intersectional data analysis has far exceeded expectations, revealing significant potential to influence policy and practice in education.

1. Unlocking the Power of Intersectional Data: One of the most striking aspects of the platform's impact has been its ability to gather and analyse intersectional data. Rather than

simply aggregating demographic data, the platform delves into how multiple factors—such as socioeconomic status, disability, gender, race and ethnicity, and religious identity—interact and influence students' educational experiences. This multi-dimensional approach has proven essential in uncovering complex patterns and barriers that would otherwise remain hidden in isolated datasets. For example, when examining the experiences of socioeconomically disadvantaged students (those who self identify as being of low socio-economic status), it became clear that 23.48% of these students reported strong dissatisfaction with the support they received, with a significantly higher percentage of them strongly disagreeing that their learning needs were adequately met. The data revealed how socioeconomically disadvantaged students felt particularly excluded from classroom discussions, with 18.96% of these students feeling that all students were not included in the curriculum, compared to 30.93% of their more affluent peers.

The platform's data also highlighted the complex intersectionality between SEND (Special Educational Needs and Disabilities) students and other socio-demographic factors. Among SEND students, 19.27% strongly disagreed that teachers listened to them, compared to just 5.12% of non-SEND students. In particular, the data showed how SEND students, particularly those with invisible disabilities (a sub-group of SEND which includes self-identified neurodivergent students), reported a high level of disengagement with school and a lack of representation in the curriculum. Over 20% of students with invisible disabilities (including physical, mental and cognitive) felt that they were not seen in the curriculum, revealing the extent of underrepresentation that exists within the educational system.

Additionally, when considering the religious identity of students, the data revealed troubling disparities in how different religious groups felt included. For instance, 21.05% of Buddhist students strongly disagreed that they felt included in school, reflecting the challenges faced by students from minority religious backgrounds in predominantly non-representative school environments. These intersectional insights would have been largely hidden if the data had not been captured and analysed from a holistic, multi-dimensional perspective.

The platform's ability to analyse this data is not just a technical achievement—it represents a transformative shift in how we understand educational inequality. By revealing how different identity factors intersect, the platform provides a much richer, more nuanced understanding of how students experience inclusion and exclusion within the education system. These

insights are crucial for identifying the root causes of disengagement and persistent absenteeism, allowing for the development of targeted interventions that can address the needs of students at multiple points of intersection.

2. Scale and Impact of Data Collection: The scale of the data collected by the platform is one of its most exciting features. With over 1.8 million rows of data gathered across (to date) 26,000 students, teachers, and school staff, the platform has amassed a dataset of unprecedented scope in the field of education research. This vast collection spans multiple years, capturing data from a broad range of schools across the country, including primary, secondary, and independent institutions.

The data breakdown includes significant engagement from diverse school populations, including 22.28% non-binary students who reported that they felt significantly excluded compared to their male peers (3.71%) , with 22.28% of non-binary students strongly disagreeing that their school feels welcoming.

Across all topics, despite the historic data on boys' lack of engagement with education, as a demographic group in this data set, they consistently reported the most positive experiences, while non-binary and prefer not to say groups reported significant challenges, particularly with inclusivity, support, and representation. Girls fell in between, with moderate levels of satisfaction. These disparities highlight systemic gaps in addressing the needs of non-binary and non-disclosed students, underscoring the need for more inclusive practices. This volume of data provides comprehensive insight into systemic inequities across school settings.

3. Practical Application by School Leaders

However, turning this data into meaningful change requires more than access—it demands capacity, confidence, and structure. A real-world example comes from one Primary School and Nursery, who helped pilot the platform and continued with each intervention to support their inclusion strategy. The leadership described the surveys as "a great starting point for DEI leads in senior leadership to understand their staff body using an intersectional lens" and noted that the platform "fostered better understanding between us as international educators and community members".

At this school, survey insights were integrated into their School Improvement Plan, prompting targeted CPD in cultural competence and inclusive language, alongside updates to behaviour and equity policies. Staff accessed CPD modules via the GEC Library (Appendix 4.ii) to build capacity in interpreting intersectional metrics. They also used a phased annual feedback model: survey, action, reflect, and resurvey—allowing time for interventions to take effect and generating trust without overburdening participants. As a result, staff-reported sense of belonging improved by over 10% in the following survey cycle. This case demonstrates how a school can move from insight to action: using Kaleidoscopic Data not simply to describe gaps, but to drive targeted, values-based change rooted in social capital and inclusive school leadership.

This data also paints a clear picture of how identity intersects with feelings of exclusion and impacts student experiences. The sheer volume of data provides a comprehensive view of the challenges faced by students from diverse backgrounds, as well as the systemic inequities that persist within the educational system. However, the practical application of this data by school leaders requires more than access—it demands the capacity to interpret and act on complex, intersectional insights. As the dataset grew, so too did the demand for professional learning that could support data literacy and inclusive decision-making. To address this, many school leaders involved in the interventions embedded the platform's dashboards and reports into their School Improvement Plans (SIPs), using annual surveys to inform targeted action plans. For example, schools where non-binary students reported high levels of exclusion used the data to revise anti-bullying policies, train staff on gender-inclusive language, and introduce identity-affirming resources into the curriculum.

Several leaders also reported the use of CPD modules from the GEC Library (see Appendix 4.i-iii) to support staff in building confidence and competence around inclusive practices. In some cases, schools created new student-led inclusion groups, informed by the themes raised in the data. These actions were not only tracked through internal monitoring but revisited through follow-up surveys in the next academic cycle, creating an ethical and intentional feedback loop. Unlike ad hoc or high-frequency 'pulse' surveys, this annual approach was deliberately chosen by participating school leaders to align with existing improvement planning cycles. This model reduced survey fatigue (Roberts et al., 2021), supported deeper engagement with findings, and ensured time for reflection, action, and

review. In doing so, the data collection process was positioned not as a one-off diagnostic but as a cyclical tool for sustainable change.

4. Data as a Foundation for Policy Advocacy: This data is now a critical tool for driving policy changes and generating actionable insights that can lead to tangible improvements in diversity, equity, and inclusion within schools. One of the most promising aspects of this unexpected benefit is how the platform's data can be used to advocate for systemic change at the policy level. With intersectional data at its core, this research can offer insights that are uniquely positioned to influence government policies and educational reforms aimed at improving inclusion.

For example, the data revealed that SEND students and socioeconomically disadvantaged students are the groups most likely to report lower engagement with school, which contributes to persistent absenteeism. By leveraging such data, the platform can advocate for policy reforms that ensure teachers are better trained in understanding and responding to the needs of students with disabilities, as well as promoting strategies to increase the inclusion of socioeconomically disadvantaged students in mainstream classroom activities.

The data can also serve as a tool for lobbying for more inclusive curricula, with research showing how students from religious minorities—such as Buddhist and Jewish students—report feelings of exclusion and a lack of cultural representation in curricula that are predominantly shaped by Christian perspectives. These findings can be used to push for policies that address these disparities, such as inclusive teacher training and the incorporation of multicultural content in the national curriculum.

5. The Global Potential of EdTech as a Policy Leader: Perhaps the most significant insight from this unexpected upside is the global potential of EdTech to play a leading role in data-driven policy advocacy. With its capacity to collect and analyse intersectional data, the platform is not just a tool for individual schools and trusts; it has the potential to position EdTech as a global leader in promoting positive change within education systems worldwide. This is further reinforced by the fact that international schools have also signed up to use the platform, expanding its reach and impact beyond national borders.

The insights gained from the platform's data, such as the fact that 24.34% of Buddhist students and 16.77% of Jewish students strongly disagreed that they enjoyed learning, can be used to highlight how intersectionality (socioeconomic status, ethnicity, and religion) affects engagement levels and attendance. Research exposing the juxtaposition of school experience, just based on who they were with students with invisible disabilities and chronic conditions, reported the highest dissatisfaction, with 20% and 19.87%, respectively, strongly disagreeing that they feel "seen" in the curriculum. In contrast, only 5.6% of students without disabilities strongly disagree, highlighting a stark gap in perceived representation.

These types of data points offer actionable recommendations for improving teaching practices and addressing the specific barriers that these specific students face. This can make the platform a central resource for educational researchers globally, offering them a robust data set to use in studies related to anti-racist education, diversity in the curriculum, and flexible working policies in education. As a result, the platform has the potential not only to influence national policies, but also to contribute to the global discourse on educational equity and inclusion.

6. A Compelling Call for Action: The findings provide a clear and compelling argument for systemic change within the education system. The platform's ability to capture the complexities of students' lived experiences and provide insights into the interplay between various identity factors represents a powerful tool for shaping the future of education. This data-driven approach is particularly valuable in a field where data has often been siloed or inadequately analysed, leading to missed opportunities for inclusive practice and policy development. For example, the data highlights persistent disparities that leave many students feeling excluded and underrepresented.

This dissatisfaction, which aligns with national trends, identified in the literature review, linking socioemotional factors to absenteeism, suggests that a lack of support and a feeling of not belonging contribute to disengagement and poor attendance. By fostering an environment where students feel seen, supported, and heard, schools can begin to dismantle the barriers that perpetuate inequality, ultimately contributing to better engagement, improved attendance, and more equitable educational outcomes for all

students. This can also be experienced by school staff including headteachers as we have seen.

Comparisons can also be seen with differing lived experiences and social capital. This disengagement, in particular for students, compounded by unmet learning needs, often translates into persistent absence—an issue that can be addressed by data for inclusion as seen in the interventions. Additionally, the findings from the data underscores the need for culturally responsive teaching and curriculum representation. Students want to feel 'safe' at school, to have a sense of belonging.

"i also feel safe in my house and during after school clubs because i have friends that i can really trust and when ever i struggle with anything a adult or friend will help me when ever i struggle. i feel safe during lessons because there will be friends that will help me with anything even if it is during lessons outside i will feel safe because i have my best friends around me and it make me feel like we are siblings and the whole entire class will help and i feel like we are a whole entire family even the the teachers feel like my mother also anytime i will evr struggle in lessons like english i would ask the teacher to repeat what they said and i would understand what they are talking about even when it is editing i would ask the people around me for help" – Student Survey response.

School leaders want to link data and actionable change to make this happen to improve their accountability. As one headteacher said, *"It helps with strategic decisions and helps to understand local community needs"*. These findings demonstrate that intersectional disadvantages as surfaced in the literature review—where socioeconomics, SEND, and religion overlap, for example—create complex challenges that contribute to disengagement and poor academic outcomes. Moreover, as identity continues to shape students' experiences, with some students facing higher levels of exclusion than others. Staff are given training but are not always sure with how to apply it. As one staff member said as a survey response, *"Although trained to which level is difficult to answer. All staff are trained but are not confident yet"*.

This further illustrates the need for inclusive policies that acknowledge and address the unique needs of students with multiple and interlocking diverse identities. Another staff

member expressed this further: *"I feel uncertain about how to tackle gender/sexuality issues with certain students for whom this goes against their religion."* These insights are critical for designing targeted interventions that address the unique needs of these students within a school, trust, region, national or global context.

As a result, the platform's intersectional data analysis has proven to be an invaluable asset, not only for schools and trusts but could also be an opportunity potentially for policymakers, researchers, and educational leaders. The interventions have illustrated unprecedented opportunities to advocate for meaningful reforms by providing actionable insights that address the systemic inequities in the education system. Not just the scale of the complexity of data for inclusion but the opportunity for a live dashboard for national and international indexing. It has the potential to become a tool for lobbying and influencing policy, creating a compelling case for investment in inclusive practices. Ultimately, the EdTech platform's ability to integrate and analyse diverse data points offers a powerful foundation for driving change. It positions EdTech as a leader in data-driven policy advocacy, driving efforts to enhance diversity, equity, and inclusion within schools.

The scale of the data collected provides a solid basis for effecting real change at the systemic level. This is not just about improving recruitment and retention for staff; it is about creating positive and inclusion workplace cultures. It is not just about increasing attendance levels and educational outcomes for students; it's about creating a culture of belonging and inclusivity that ensures all students, regardless of their identity, have the opportunity to thrive. Through its use of intersectional data and its capacity to engage diverse stakeholders, the platform represents a game-changing shift in how data can be leveraged to drive inclusive education. This is a call to action for educational leaders, policymakers, and researchers to invest in evidence-based reforms that promote equity and support the holistic development of every student.

5.5 Unlocking New Frontiers in Educational Research: The Role of Intersectional Data in Shaping Inclusive Practices

Building on the findings presented in Section 4.3 on the role of EdTech in advancing Kaleidoscopic Data, this section extends the analysis to consider the implications for future educational research and praxis. Whereas Chapter 4 demonstrated how digital tools can

re-centre hidden voices in school practice, here the focus is on how such intersectional data infrastructures can reshape research agendas, inform policy, and challenge reductive traditions in datafication. A new, ethically designed way of capturing data for inclusion offers a unique opportunity for higher education institutions and educational researchers to explore new knowledge in the field of inclusion and intersectionality, contributing to a growing body of work on diversity, equity, and inclusion (DEI) in education. By providing comprehensive, real-time data that captures the complexities of students' lived experiences and their sense of belonging, this approach acts as a critical resource for shaping future research agendas and driving evidence-based reforms.

Importantly, the collection of intersectional data marks a deliberate departure from traditional tools and metrics that often render complexity invisible. As Guyan (2022) highlights in *Queer Data*, dominant data practices in education have historically misrepresented or excluded LGBTQ+ and other minoritised groups. Similarly, D'Ignazio and Klein (2023) warn that existing data infrastructures reflect dominant norms and epistemologies, reproducing exclusion by prioritising what is easy to measure over what is meaningful. Gray, Gerlitz, and Bounegru (2018) argue for a more critically literate approach to data infrastructure—one that challenges who defines the categories and what knowledge is considered valid. This thesis responds directly to such calls by creating a platform that enables participants to self-define and narrate their own experiences of marginalisation, rather than forcing them into pre-set demographic boxes.

This intersectional data collected opens up a wealth of opportunities for further inquiry, allowing researchers to delve deeper into the systemic barriers that affect students from diverse backgrounds. These data points not only provide insights into the unique challenges faced by students from marginalised groups but also highlight potential strategies for overcoming these barriers. The following areas represent promising avenues for future research:

- **Inclusion, Belonging and Well-Being:** The data highlights disparities in students' experiences of inclusion, with specific focus on socioeconomic status, neurodiversity, SEND needs, gender identity, and race. Further research could investigate the links between students' sense of belonging, mental health, and academic performance, offering a better understanding of how to support students holistically. Additionally,

exploring the impact of flexible working practices in schools, particularly for teachers, could provide insights into how systemic changes can benefit the well-being of both staff and students.

- **Anti-Racist Attitudes and Policies:** With growing societal calls for anti-racist reform, the intersectional dataset can be used to explore the impact of anti-racist policies and practices within schools. Researchers could examine the effectiveness of diversity training, curriculum diversification, and other initiatives aimed at reducing racial inequalities. Comparative studies could also assess the impact of various anti-racist interventions across different school settings, identifying best practices for creating more inclusive learning environments.
- **Curriculum Diversity from the Perspectives of Students and Staff:** One of the critical findings is the lack of cultural and racial representation in the curriculum. Research could further explore how curriculum diversity—across both content and teaching practices—impacts students' sense of belonging and engagement. This could involve studying the perceptions of both students and teachers, examining how different demographic groups experience and interact with a diverse curriculum, and assessing the barriers that prevent its full integration.

By making this intersectional dataset available to researchers, this approach can significantly advance academic inquiry in these critical areas, offering an evidence-based foundation for policy advocacy and the development of new strategies for inclusive practice. This rich, data-driven resource can help to shape a future where educational systems are better equipped to meet the needs of all students, regardless of their background. While the case studies and findings show the potential of data for inclusion in driving inclusive school reform, successful implementation requires specific leadership literacies. These include critical data literacy (Williamson et al., 2020), confidence in interpreting intersectional patterns, and the capacity to lead values-driven change aligned with equity goals (Khalifa et al., 2016). To act effectively on these insights, leaders also need scaffolded support—such as CPD pathways, coaching from lived-experience experts, and resources tailored to their school's context. These structural supports will be explored in more depth in Chapter 6, where a realistic CPD framework and partnership model is proposed to sustain intentional inclusion through data-driven leadership.

As explored in Chapter 2, Critical Data Studies scholars have compellingly shown how datafication in education often reproduces surveillance, extractivism, and entrenched power imbalances, reinforcing rather than dismantling inequities (Williamson, 2017; Van Dijck, 2014; Eubanks, 2018). These critiques are particularly salient in contexts where quantitative indicators are prioritised over lived experience, leading to reductive portrayals of learners and communities. In such contexts, a purist response would be to reject school-based data interventions altogether, advocating instead for entirely qualitative, relational approaches to inclusion. As a practitioner-researcher, I do not share that purist stance. My aim was to develop something that could work in the complex realities of schools — balancing ethical integrity with practical utility.

Yet, the findings from this study suggest that a pragmatic middle path is both possible and necessary. By embedding ethical design principles, ensuring participant-led co-creation (via the GEC Circle and participating schools), and applying manual, researcher-guided interpretation, Kaleidoscopic Data shows how the same data infrastructures can be repurposed to amplify lived experience rather than flatten it. This approach prioritises meaning before metrics, resisting the automated production of decontextualised dashboards in favour of nuanced, context-sensitive interpretation that remains accountable to participants. This “slow creep” toward humanised data does not ignore the dangers identified by critical scholars—rather, it actively counteracts them. This is achieved through equity-centred data literacies, scaffolded support for school leaders, and relational leadership practices that frame data not as a neutral truth, but as one perspective in an ongoing dialogue with the communities it represents. Such praxis also demands ongoing reflexivity about the researcher’s role in mediating meaning, the limits of data representations, and the power structures that shape interpretation. In doing so, this work charts a third way between data-driven oppression and wholesale techno-abandonment. It offers a theoretically grounded and practically tested blueprint for schools to harness EdTech for genuine social justice, informed by real-world application – achieved not through uncritical techno-solutionism, but through intentional, ethically aware design and leadership. In this way, the future research directions identified here extend my findings, showing how EdTech-enabled humanised data can open new possibilities for inclusion.

Chapter 6: Recommendations

This chapter acts as the bridge between the evidence presented in Chapters 4 and 5 and the actionable changes schools can implement. It takes the tested findings of this study and translates them into strategies that are both ethically grounded and workable within the constraints of real-world schools and trusts. The aim is not to present aspirational ideals but to offer practical, phased approaches that can be scaled for different contexts, age phases, and resource levels.

The research highlights the crucial role of data-driven, inclusive practices in addressing diversity and inclusion (D&I) gaps within schools. The findings in Chapter 4 demonstrated that traditional inclusion data—attendance figures, attainment scores, or behaviour logs—fail to capture the lived realities and systemic barriers experienced by students and staff. To address this, the study introduced the **Data for Inclusion Framework**, grounded in the concept of **Kaleidoscopic Data** and informed by **social capital theory**.

This framework enables schools to integrate both quantitative metrics and anonymised qualitative voice, surfacing nuanced, intersectional insights in a protected, ethical manner. Applied through the lenses of bonding, bridging, and linking social capital, the framework functions as both a diagnostic tool—identifying strengths and gaps in inclusion practice—and a developmental tool—guiding the co-design of targeted, context-specific interventions. By combining performance data with human narratives, leaders can identify where inclusion is working, where it is blocked, and how to address inequities in a sustainable way. This approach shifts the role of data from a compliance exercise to a catalyst for intentional inclusion. By embedding Kaleidoscopic Data principles into improvement planning, schools can ensure that policy is informed by authentic voice, that interventions are intersectionally aware, and that decision-making is supported by robust evidence capable of driving systemic change.

It is evident that schools and trust leaders must adopt a continuous, reflective approach to D&I efforts, using both qualitative and quantitative data to inform their strategies. Central to this process is the development of *leadership literacies*—the knowledge, skills, and dispositions that enable leaders to interpret intersectional data, act on it with confidence,

and sustain change through collaborative culture-building. This is particularly important in relation to the cultural health of a school, or across schools, with a focus upon the social capital of disadvantaged and marginalised groups.



Figure 8: Leadership Literacies for Enhancing D&I Practices in Schools (Ponsford, 2025)

EdTech platforms, such as the GEC Platform, offer significant potential in this regard, providing real-time, intersectional data that can guide targeted interventions. However, it is not enough to simply collect data; schools must also ensure that D&I practices are embedded across the entire school ecosystem, involving staff, students, and external stakeholders. This requires comprehensive training, strategic leadership, and a commitment to creating welcoming, inclusive environments that reflect the diverse backgrounds of all members of the school community.

The recommendations outlined in this section build on the findings of this research, offering practical steps for school leaders to implement in order to close D&I gaps, expand a culture of inclusion, and ensure that both staff and students are supported in their educational journey (Figure 10). Each recommendation is grounded in the findings from the interventions and data analysis chapters, responds directly to the three research questions, and is framed with explicit attention to *feasibility*. Leadership literacies, implementation resources, and existing system challenges are considered throughout, ensuring that Kaleidoscopic Data is not only theoretically robust, but also practically actionable in everyday school settings.

6.1 Recommendations for RQ1: How are school leaders addressing D&I gaps for staff and students?

Continuous Assessment Through Data: The findings demonstrate that schools and trust leaders must take a continuous, data-driven approach to diversity and inclusion (D&I) efforts. Rather than treating data as a compliance exercise, leaders should view it as an active catalyst for intentional inclusion, using it to inform decisions and spark dialogue. EdTech platforms like the GEC Platform can support this by integrating intersectional data analytics to monitor progress over time. This reflects an explicit shift from traditional, siloed metrics to holistic, Kaleidoscopic Data approaches that combine both quantitative and qualitative insights. This approach is particularly urgent given the forthcoming Ofsted inclusion metrics, which will require schools to evidence their commitment to creating inclusive environments.

Regular biannual surveys and feedback sessions, as indicated by the study's findings, provide a mechanism for schools to continuously assess and adapt their D&I initiatives, ensuring alignment with evolving needs.

Teacher Training and CPD: The research highlights a need for teacher training that directly addresses the lived experiences of underrepresented students. For example, the platform's data shows that underserved students consistently report feeling excluded or unsupported. Schools should provide specific CPD (continued professional development) focused on culturally responsive teaching and Anti-Racist education. This CPD should also develop leaders' and teachers' confidence in interpreting intersectional data and embedding these insights into everyday practice. This training should also emphasise the use of EdTech tools

to analyse D&I data and implement evidence-based strategies to promote inclusivity. Additionally, the use of EdTech and online resources that include diverse lived experience materials can ensure consistency and a quality-assured approach for school and trust leaders.

Edtech for Educating Educators: Digital tools and platforms can address several of the barriers. For example, lack of clarity and consensus on objectives can be mitigated by providing school leaders with clear, data-driven insights that align with their strategic goals for inclusion, helping them set actionable, measurable objectives. Resistance and backlash can be countered by creating transparent, accessible data that shows the tangible benefits of inclusive practices, fostering a culture of trust and accountability. Furthermore, insufficient training and resources can be addressed by using digital platforms to offer accessible, high-quality professional development that is both scalable and cost-effective, moving beyond traditional, offline models like ineffective INSET days. These tools also enable schools to normalise inclusion as a leadership literacy—an everyday, non-negotiable competency rather than an optional add-on.

Technology for Accountability Mitigation: EdTech can also address measurement and accountability issues by providing school leaders with real-time, actionable data on inclusion metrics. This can include data on staff training completion rates, student participation in extracurricular activities, and the diversity of curricula and after-school programs. The integration of these tools allows for a more dynamic, responsive approach to addressing issues of inclusion and well-being. Tokenism and superficial changes can be avoided by ensuring that the interventions are comprehensive and data-backed, allowing school leaders to move beyond performative acts of inclusion and towards lasting, systemic change. By collecting both qualitative and quantitative data, *Kaleidoscopic Data* can help school leaders implement and track real, meaningful changes that reflect the lived experiences of both staff and students.

Whole-School Ecosystem Training: The findings underscores the importance of adopting a whole-school approach to inclusion, diversity, and well-being training. While much focus is often placed on teaching staff, it is essential to extend training to all members of the school ecosystem, including governance, trustees, administration staff, site teams and volunteer

staff. For example, administration staff are often the first point of contact; for students and families, and their attitudes and behaviours directly contribute to whether the school feels like a welcoming and inclusive space. Similarly, site teams and facilities staff often interact with students in informal settings and often unsupervised physical environments, which can shape students' sense of belonging and safety in the school environment. These school community members play critical roles in shaping the school's culture and daily interactions. Embedding intersectional awareness and bias recognition across these groups strengthens the entire school's social capital—bonding, bridging, and linking connections between diverse individuals. Training on recognising and addressing bias, creating welcoming environments, and understanding the importance of intersectionality should be embedded into professional development frameworks for all staff. Findings from the platform illustrates that a sense of belonging is a collective effort, requiring input from everyone in the school community. Creating tailored EDI training for non-teaching staff ensures that every interaction within the school supports an inclusive culture. This also aligns with the platform's ethos of humanising data, ensuring that all staff understand their role in fostering a safe and welcoming environment for students from all backgrounds.

Addressing Bias in Leadership: The findings also highlight the importance of supporting school leaders in recognising and addressing their own biases. Leadership teams should be equipped with the tools and knowledge to reflect on their practices, particularly in recruitment and promotion processes. The study shows disparities in leadership representation across ethnic groups, suggesting that schools need to actively recruit and support diverse leaders. Mentorship programmes—both traditional and reverse—should be established to provide ongoing support for diverse staff members, ensuring they feel valued and have clear pathways to leadership positions. This requires deliberate planning within School Improvement Plans and measurable milestones to track equity in leadership progression.

Engaging External Stakeholders: Collaborations with universities, think tanks, and educational organisations can help interpret data insights and implement best practices for D&I. These stakeholders can also conduct their own research, leveraging the data to influence policy, refine educational models, and engage in international discussions on diversity in education. Schools can be a part of this larger ecosystem, contributing

data-driven evidence that can support ongoing academic inquiry and inform educational reforms across different regions. This also positions schools not only as beneficiaries of research but as active co-creators of new knowledge.

Highlighting Success Stories: Document and disseminate case studies of successful D&I initiatives, supported by robust data collection and analysis. These stories can inspire and provide actionable insights to other institutions within and beyond the UK.

Understanding and Acting on Kaleidoscopic Data: Leadership Literacies and Realistic Implementation: The implementation of Kaleidoscopic Data requires more than a platform—it demands a specific set of leadership literacies and the right enabling conditions. Leaders need to develop critical data literacy (Williamson et al., 2020), including the ability to interpret intersectional patterns and evaluate qualitative and quantitative insights together. This goes beyond technical competence and involves cultural responsiveness, ethical data interpretation, and the confidence to lead change in emotionally and politically complex areas (Khalifa et al., 2016). In practice, school leaders who used KD successfully embedded it into their School Improvement Plans, supported staff to analyse their own CPD data, and facilitated whole-school conversations around curriculum gaps, flexible working, and belonging. As one leader explained, “It helped me look across the school more holistically. I could see where we were missing voices and what to do next.” However, this work must be realistic. Leaders are often time-poor, and not all feel confident with data or inclusion. To make action on KD feasible, schools need scaffolded support—including coaching from DEI specialists, on-demand CPD (such as the GEC Library), and decision-making tools tailored to context. Annual surveys and feedback loops aligned with improvement cycles help manage workload and build trust (Roberts et al., 2021). The findings presented here show that while KD is powerful, it only leads to change when accompanied by structured pathways, relational support, and leadership development. Section 6.4 expands on the support needed across stakeholder groups, while Section 6.5 explores policy-level scaffolds to embed these practices system-wide.

6.2 Recommendations for RQ2: How can insights into social capital and intersectionality, along with attitudes and values towards D&I, help schools explore innovative pathways for intentional inclusion and improvement?

Building Inclusive Social Networks within Schools: The research highlights the importance of applying social capital in fostering inclusion and improving educational outcomes. Schools should facilitate structured, intentional opportunities for students and staff from diverse backgrounds to build social capital through collaborative spaces such as extracurricular activities, mentorship programmes, and peer support groups. These efforts should promote *bonding social capital* by ensuring that students from similar backgrounds connect and share experiences. At the same time, schools should promote *bridging social capital* by fostering cross-cultural interactions, such as cross-group collaborative projects and community service initiatives, that build trust and mutual respect between students from different backgrounds. *Linking social capital* can be enhanced by connecting students and staff to external networks, such as mentorship opportunities with professionals from various industries or partnerships with local universities. By promoting these varied forms of social capital, schools can ensure that all members of the school community have equitable access to resources, opportunities, and networks that promote personal growth, academic success, and social cohesion.

Inclusivity in Content: The research highlights the need for curriculum and professional development materials that are inclusive and reflective of the diverse backgrounds of both students (and their families) and staff. For students, this includes offering culturally relevant, multi-lingual and identity-affirming learning materials that reflect their identities and experiences. For staff, it entails providing professional development that acknowledges and addresses diverse teaching styles, experiences, and perspectives, ensuring that CPD is itself inclusive.

Beyond Curriculums: Schools should prioritise curriculum diversity that goes beyond just academic content, explicitly embedding diversity and inclusion into professional learning, school culture, and pastoral systems. This means offering resources that reflect the lived

experiences of marginalised groups and creating an environment where both students and staff can see themselves represented. For example, ensuring that neurodivergent students and teachers from minority backgrounds have access to materials and resources that reflect their needs will create more inclusive, supportive environments for everyone.

Clear Communications: Kaleidoscopic Data can illuminate bonding capital (trust within staff groups or student groups), bridging capital (connections between different identity groups), and linking capital (relationships between individuals and those in power, e.g. senior leaders and students). School leaders can use these insights to identify gaps, foster dialogue, and co-create solutions across stakeholder levels. Furthermore, these efforts should be extended beyond the classroom. Schools should leverage various communication channels, such as websites, school newsletters, and other digital platforms, to share resources, updates, and strategies related to inclusion and diversity. By making these resources accessible to both the school community and wider stakeholders, schools can further ensure that inclusive practices are embedded into everyday interactions and operations. This fosters a culture of inclusion that reaches every member of the school ecosystem, from students to staff and even parents.

Creating Welcoming Cultures: The data indicates that a lack of welcoming and inclusive cultures can lead to disengagement and absenteeism among students from marginalised groups. Schools should prioritise the creation of authentic, psychologically safe environments that foster a sense of belonging for both students and staff. This includes addressing barriers to inclusion and ensuring that all members of the school community, regardless of their identity, feel valued and respected.

Practical Mechanisms for Capturing and Applying Social Capital Insights

Schools need realistic mechanisms for capturing and applying social capital insights. These could include:

- School-wide mapping of voice and belonging across roles/phases
- Use of focus groups to explore weak or absent links in the school ecosystem

- Leadership workshops on reading data intersectionally and interpreting Warm Data holistically

Leadership policies and practices should drive these changes, with a focus on embracing and affirming intersectional identities within the school ecosystem. Practical steps to achieve this could involve adapting school policies to reflect cultural and linguistic diversity, ensuring that celebrations and traditions are inclusive, and promoting mentorship programmes that build and link social capital within the school community. Additionally, schools should establish safe spaces for students and staff to express their experiences and concerns, which can provide valuable insights into the barriers they face. This approach not only creates a more inclusive environment but also strengthens the social capital that supports academic, social, and professional success.

6.3 Recommendation for RQ 3: In what ways could EdTech enable schools to explore new opportunities for addressing intersectionality and advancing D&I practices?

Utilising Data to Identify Gaps in Social Capital and Targeted Interventions: The data collected through inclusive data platforms can help identify gaps in social capital within school communities, particularly for students from marginalised groups. Schools should use intersectional data to highlight areas of exclusion, such as race, socioeconomic status, or disability, and use this information to create targeted interventions. These might include mentorship programmes or affinity groups that foster bonding social capital, allowing students to form meaningful connections with peers who share similar experiences.

Beyond student-focused interventions, schools should aim to build bridging social capital by pairing students with mentors from diverse backgrounds or engaging in initiatives that promote collaboration across different groups. Linking social capital can also be enhanced by connecting students and staff with external networks, such as community organisations or universities, providing further support and opportunities. By utilising the platform's data, schools can design targeted interventions that strengthen social capital at all levels, fostering a more inclusive and supportive school environment for both students and staff.

While EdTech offers powerful mechanisms for surfacing intersectional insights, school leaders must be supported to critically interpret data outputs. This means not just consuming dashboards, but having the digital and ethical literacy to interrogate what's missing, whose voices are underrepresented, and how biases may be encoded. As recommended in the literature (Williamson et al., 2020; Selwyn, 2016), professional learning should include data ethics, qualitative sense-making, and trauma-informed analysis when reviewing anonymous student/staff feedback. This aligns with calls for critical data literacy in school leadership.

Collaborative Product Design Education Focus: To foster innovation in inclusion and improve D&I practices, EdTech tools should be developed through co-design with input from a wide range of stakeholders, including students, staff, and school leaders. The research suggests that this collaborative approach helps ensure that these tools are directly aligned with the needs of both the student body and teaching staff, promoting equity and engagement for all. Co-designing EdTech tools with students and staff from diverse backgrounds ensures that both groups' experiences and perspectives are embedded into the development process. This increases the likelihood that the tools will address key issues related to representation and inclusive practices, ultimately contributing to a more supportive and inclusive school culture.

UDL and Accessibility: Creating inclusive learning environments extends beyond the curriculum to the digital tools used to support teaching and learning. The research indicates the need for EdTech platforms to integrate features that enhance accessibility for all students and staff, including those with different abilities or learning needs. Universal design for learning (UDL) principles should be embedded into EdTech products to ensure they are usable by a diverse school community.

- a. Key accessible technology features, such as text-to-speech functionality, adjustable text sizes, and multilingual support, should be prioritised to accommodate students with a range of abilities.
- b. For staff, particularly those in leadership or support roles, providing tools that ensure equal access to training and professional development resources is equally important. This can include neurodivergent teachers and accessible literacy levels for non-academic staff.

- c. Moreover, cloud-based solutions should be considered to ensure these tools are accessible across various devices, removing barriers to access for both students and staff, regardless of their background or resources.

Surveys and Online Training: The study underscores the importance of regular, anonymised surveys to capture insights on attitudes towards diversity, inclusion and well-being among students and staff. EdTech platforms should provide 'safe spaces' that are free from human bias to ensure these surveys are conducted in a psychologically safe and confidential manner. By embedding these tools into routine school practices, leaders can collect real-time feedback, allowing for timely adjustments to their strategies and interventions.

In addition to surveys, ongoing online training should be prioritised to complement the data collected. Online training platforms provide flexible, accessible learning opportunities, enabling schools to deliver targeted content on topics such as intersectionality, inclusive teaching, and culturally responsive leadership, drawing on diverse lived experiences. These platforms can incorporate interactive features, such as videos, quizzes, and discussion forums, to promote engagement and deepen understanding among both staff and students.

Online training modules can be tailored based on the findings from surveys, addressing specific challenges or concerns raised by the school community. For instance, if surveys reveal gaps in inclusion or belonging, tailored online learning modules can be developed to address those needs directly. This continuous learning model ensures that diversity and inclusion is embedded into the everyday practice of the school, promoting an inclusive culture that adapts in response to real-time feedback. To ensure the training is relevant and effective, participatory design should be incorporated into the development of these online modules. Involving experts in the field as well as students and staff from diverse backgrounds in the design process ensures that the content is culturally responsive, directly addressing the challenges they face. This collaborative approach strengthens the school's D&I efforts, creating a culture where everyone is actively involved in shaping the school's inclusive practices.

Transparency and Engagement: Share survey results and action plans with the school community to enhance transparency and build trust. Utilising intersectional data ensures a

comprehensive understanding of community dynamics, supporting targeted interventions, such as addressing the disparities in teacher representation perceived across ethnic groups.

Data-Driven Leadership: To effectively use EdTech for data-driven decision-making, school leaders must be equipped to analyse and interpret data. HR and leadership teams should receive training in data literacy and strategy, focusing on both qualitative and quantitative methods to extract actionable insights from staff and student sentiment. This training should also highlight intersectionality and how data can be used to design personalised learning interventions and inclusive policies.

Manage Data Fatigue: To prevent data fatigue, data collection should be streamlined, focusing on key, relevant data aligned with specific goals. Dashboards and automated tools can simplify interpretation and reduce administrative burdens. Professional development should build staff confidence in using data, ensuring it becomes a tool for improvement. A balanced approach, integrating both quantitative data and qualitative feedback, provides a holistic view of progress and challenges.

Data Literacy and Maturity Models: Leaders should foster a culture of continuous improvement, where data-driven decision-making is an ongoing process. Regular data reviews, supported by dashboards, help leaders track progress on inclusion goals, identify areas for intervention, and adapt strategies to address emerging challenges.

Implementing Student-Centred Interventions for Attendance: To create an inclusive approach to attendance, school leaders must prioritise targeted interventions informed by an intersectional understanding of student experiences.

Key strategies include:

1. Embedding Psychological Safety in School Culture:
 - Conducting regular student voice surveys to understand safety concerns.
 - Implementing trauma-informed practices and restorative justice approaches.
 - Providing visible representation of diverse identities within the school environment.

2. Developing Identity-Affirming Support Systems:
 - Establishing affinity groups for marginalised students.
 - Training staff on intersectional inclusion and unconscious bias.
 - Adopting flexible learning models for students experiencing chronic anxiety or school refusal.
3. Enhancing Data Collection Through Kaleidoscopic Data Approaches:
 - Moving beyond binary attendance tracking to capture qualitative insights.
 - Using disaggregated data to identify patterns of exclusion among different student groups.
 - Leveraging EdTech tools to provide real-time feedback on student engagement.
4. Strengthening Relationships and Mentorship:
 - Implementing peer mentoring programmes to build student connections.
 - Ensuring all students have a trusted adult within the school community.
 - Encouraging participatory decision-making to empower students in shaping school policies.

At the outset of this study, it became clear that the ways in which schools collect and analyse data are heavily shaped by the Department for Education's (DfE) accountability frameworks, which prioritise performance outcomes over well-being and inclusion. Data practices in schools are typically structured around quantifiable performance indicators such as attendance, academic attainment, and behavioural incidents, alongside basic demographic categories like gender, ethnicity, and socio-economic status (e.g., Free School Meals eligibility). While these data points provide a broad overview of student engagement and achievement, they often fail to capture the complex, lived experiences of students and staff, particularly those from marginalised or intersectional identities. This limitation of traditional data practices has significant implications for schools striving to foster equity, diversity, and inclusion (EDI). Findings from this contribution suggest that schools too often use data for surveillance and compliance rather than as a tool for understanding the barriers to engagement, belonging, and well-being. As highlighted by Braunack-Mayer et al. (2020), in educational contexts, data often serves as a mechanism for tracking performance rather than a means for uncovering opportunities for personalised support. The result is that students who are disengaged or at risk of exclusion remain hidden within the data, leaving school leaders with an incomplete understanding of their communities. Throughout this

study, the use of anonymous digital surveys created a safe, confidential space for participants to share their lived experiences in ways that traditional methods could not facilitate. The combination of anonymity and intersectional data collection proved invaluable in surfacing the hidden truths about students' and staff members' experiences. These insights were crucial for fostering intentional inclusion and challenging existing norms in data-driven school leadership.

This research reveals that traditional data practices often marginalise the very individuals the education system aims to support. For example, while attendance data may indicate that a student is frequently absent, it rarely provides context for understanding the underlying causes. Without qualitative insights that capture the reasons behind disengagement—such as experiences of exclusion, a lack of belonging, or perceptions of bias—school leaders risk misinterpreting the data and implementing interventions that do not address the root causes. In this sense, students may be reduced to data points rather than recognised as individuals with complex, intersecting needs. Quantitative data may highlight disparities across student groups, but without intersectional and lived-experience-informed insights, schools are left without the tools to identify or address the structural barriers that underpin these patterns. This absence creates what I described earlier as an *intersectional data gap*—a systemic blind spot that prevents leaders from seeing how overlapping inequalities compound exclusion. Furthermore, without embedded equity and accessibility principles, even well-intentioned digital tools can perpetuate digital divides. Against this backdrop, this thesis offers Kaleidoscopic Data as a practical and theoretical framework for humanising educational data and supporting intentional inclusion. Yet, the implementation of this approach must be situated within systemic constraints: limited resources, policy misalignment, and the risk of commercial appropriation all pose barriers. Recognising these challenges ensures that the recommendations remain both ambitious and feasible, while demonstrating that meaningful change is achievable when systemic risks are confronted rather than ignored.

6.4 Recommendations for Various Educational Stakeholders

For Kaleidoscopic Data to influence national change, system actors — including MATs, DfE, Ofsted, unions, and CPD providers — must co-construct a shared framework of ethical, inclusive data use. This involves:

- Curated, phased CPD pathways on equity analytics, cultural humility, and intersectional leadership
- Coaching hubs (drawing from lived experience experts) embedded within regional MAT structures
- Peer-review and trust-level inclusion reviews, aligned with Ofsted inclusion metrics and Equality Act 2010 compliance

For Nurseries and Primary Schools: It is recommended that nurseries and primary schools adopt a data-informed approach to inclusion by ethically utilising platforms like the GEC Platform to identify and address well-being, diversity and inclusion gaps at an early stage. Early interventions, informed by intersectional and Kaleidoscopic Data, are critical for fostering inclusive environments that support the social and academic development of young children. By embedding inclusive practices from the outset, schools can lay the groundwork for students to experience a sense of belonging and fair opportunity throughout their educational journey. It is crucial for primary education leaders to ensure that efforts are reflected in both curricula and everyday interactions, promoting inclusivity and a deeper understanding of diverse backgrounds among young learners.

For Secondary Schools and Further Education (FE) Colleges: Secondary schools and FE colleges should leverage longitudinal data provided by EdTech platforms such as the GEC Platform to monitor and address the evolving needs of students, particularly those from underrepresented or marginalised backgrounds. These educational settings must prioritise the use of data to track students' progress, engagement, and well-being, enabling leaders to identify achievement gaps, exclusionary practices, and disengagement early. In addition, it is recommended that secondary schools and FE colleges integrate strategies that prepare students for global citizenship. By embedding intersectional and cross-cultural competencies within the curriculum and extracurricular activities, these institutions can better equip students with the skills required to thrive in diverse societal contexts.

For Trusts and Regional Leads: Leaders overseeing multiple schools are encouraged to utilise the GEC Platform to ensure consistency and coherence in inclusion, diversity and

well-being practices across their institutions. The aggregation of data from across multiple schools provides an invaluable resource for setting strategic priorities, measuring collective progress, and sharing best practices among schools. Leaders should use this data to drive evidence-based decisions regarding resource allocation, identify underperforming areas, and implement system-wide initiatives aimed at addressing D&I disparities. A unified approach to inclusion across all schools will ensure that cultural health strategies are embedded in the ethos and ecosystem, and that each individual school has the tools to address specific challenges related to student inclusion and equity.

For Independent Schools: Independent schools should consider integrating platforms like the GEC Platform into their existing systems to monitor and address the diverse needs of their students. While independent schools often serve varied demographics, it is essential to utilise data to ensure that D&I initiatives are tailored to meet the specific needs of each school's student body. The use of intersectional data enables leaders to track patterns of exclusion and disengagement, ensuring that all students are supported and included. Furthermore, independent schools are encouraged to champion inclusive educational practices, promoting equity not only within their own institutions, but also in the broader educational landscape.

For International Educational Leaders: International educational leaders are advised to leverage the scalability of platforms like the GEC Platform to foster a global exchange of best practices in D&I. The platform's adaptability to various educational contexts makes it an invaluable tool for enhancing global efforts to close inclusion and well-being gaps. Educational leaders in international settings should use the data provided to inform local and regional policy-making, ensuring that D&I practices are culturally relevant and contextually appropriate. Furthermore, international collaboration should be promoted, with schools and educational bodies sharing data-driven insights to refine strategies and contribute to a broader global conversation on inclusive education. The platform provides an opportunity for educational leaders to take part in shaping global educational reforms and contribute to an international movement for educational equity and inclusion.

All stakeholders must also prioritise investment in digital access and infrastructure, particularly for rural, low-income, and SEND-heavy schools. Equity must be built into the design and delivery of EdTech deployment itself.

6.5 Recommendations for Addressing Leadership and Policy Gaps in Inclusive Education: A New Systems Approach to Inspections in the English State Sector

Building on the findings presented in earlier sections, particularly those highlighted in the literature review and the interventions, it is evident that there is a critical need for comprehensive leadership and data-driven interventions to address the persistent gaps in diversity, equity, and inclusion (DEI) within state schools and trusts. This underscores the importance of examining the policy landscape, particularly the evolving requirements set out by Ofsted. With the release of the new 2025 framework, Ofsted introduces a pivotal shift in the approach to educational improvement. However, as this research demonstrates, schools continue to encounter significant barriers in translating these policies into meaningful practice - moving from inclusion provision to tangible outcomes. This is particularly evident in meeting the diverse needs of students with Special Educational Needs and Disabilities (SEND), disadvantaged students, and other marginalised groups, all of whom remain central to the priorities outlined in the new inspectorate toolkit.

EdTech, such as the GEC Platform as outlined in this multi-intervention study, offers a timely and effective solution to bridge these gaps. By providing a data-driven framework that centralises student voice, staff insights, and real-time feedback, the platform not only meets the Ofsted inspection criteria but also offers schools a robust mechanism to implement ongoing, data-informed improvements in inclusion practices. While I am not a purist in methodology, my approach in this thesis prioritises tools and processes that work in practice, rather than remaining purely theoretical. This section illustrates how the GEC Platform functions as a key tool for addressing the policy gaps, leadership deficits, and inclusion challenges identified in the research findings, all while providing school leaders with actionable insights that directly align with both Ofsted's evolving standards and best practices in DEI leadership.

Moreover, this research aligns with wider critical data scholarship, particularly the need to reframe how educational data is collected, interpreted, and applied. Drawing on insights from *Data Feminism* (D'Ignazio & Klein, 2023), it acknowledges that dominant data practices

often reinforce exclusion by limiting how lived experiences are categorised or valued. The Kaleidoscopic Data approach challenges these constraints by using participant-led, intersectional methods that surface diverse perspectives—particularly from those historically marginalised in educational settings. In doing so, it not only strengthens school-level decision-making but also critiques the assumptions embedded in traditional educational metrics.

1. Quality of Education: Responding to the Curriculum and Pedagogical Gaps and Building on Literature on Inclusive Curriculum Design

A central theme in the literature review was the persistent challenge of inclusivity within the curriculum, particularly for SEND students and those from disadvantaged backgrounds. As my research findings demonstrate, 33.2% of students (approximately 12,000 students) said they feel unseen in the curriculum, while 20.65% of students with invisible disabilities reported insufficient support for their learning needs. This points to a significant disconnect between policy intentions around inclusive pedagogy and the lived experiences of students.

The GEC Platform addresses this gap by offering real-time data on student engagement and learning progress across diverse student groups, enabling school leaders to identify where the curriculum is not meeting students' needs. For example, by aggregating data on student feedback regarding how inclusive they perceive their lessons to be, the platform provides leaders with a clearer picture of where curriculum adjustments may be necessary. Through continuous feedback loops, leaders can refine teaching practices, better support SEND learners, and ensure that all students are represented within the curriculum. In doing so, the platform directly responds to the DfE and Ofsted's growing emphasis on inclusivity within educational practice, moving beyond rhetoric into actionable steps.

2. Behaviour and Attitudes: Enhancing School Culture for Inclusion

The literature review highlighted school climate as a critical factor in supporting positive student behaviour and attitudes, particularly for students from SEND and disadvantaged backgrounds. The GEC findings reinforce this, with data showing that only 12% of students report feeling fully included within their school environment. These findings directly reflect a leadership gap in fostering an inclusive school culture where all students feel safe, heard, and valued.

The GEC Platform therefore provides a powerful tool to enhance the school climate by tracking student well-being and engagement levels. Through student 'voice' surveys and staff culture insights, the platform captures nuanced data about how students feel about their school environment, including issues such as bullying, peer relationships, and teacher-student interactions - as well as how staff and leadership teams might experience this in very different ways. This 'fishbowl' style, granular data allows school leaders to identify issues in school culture that may be contributing to disengagement or negative behaviours. In response, leaders can tailor interventions to improve inclusion and build a culture where positive behaviour is supported and reinforced by inclusive practices. This aligns directly with Ofsted's growing focus on behaviour and attitudes, ensuring that school leaders have the tools necessary to enhance school climate and foster student well-being.

3. Personal Development: Prioritising SEND and Disadvantaged Learners' Well-Being

The literature review clearly articulated the need for holistic approaches to supporting SEND and disadvantaged learners, emphasising the importance of addressing students' personal development, well-being, and social-emotional learning. Yet, as identified in the GEC research, a large proportion of SEND students—34%—report that their needs are not adequately supported within the classroom, creating a barrier to both personal development and academic achievement.

The GEC Platform supports a holistic approach to SEND students by providing well-being tracking and personal development metrics. By capturing both academic performance and well-being indicators, the platform helps school leaders monitor the social-emotional development of SEND students and identify areas where targeted interventions are needed. This feature aligns with Ofsted's focus on personal development and ensures that students' holistic needs—academic, social, and emotional—are considered in tandem, promoting a more inclusive educational experience.

4. Leadership and Management: Empowering Inclusive Leadership Practices

A key theme identified in the literature review was the critical role of leadership in driving inclusive practices within schools. Yet, as evidenced by the GEC's findings, only 21.2% of students from non-disclosed backgrounds feel heard by teachers, indicating a leadership gap in addressing the needs of marginalised students. This gap is compounded by a lack of

tools for data-driven decision-making, leaving many leaders unable to identify and address inclusion gaps in real-time.

The GEC Platform offers a data-driven solution to this leadership gap. By integrating feedback from both staff and students, the platform provides school leaders with a comprehensive view of their school's inclusion practices. The ability to track and analyse staff perceptions of inclusion, coupled with student feedback, helps leaders understand their strengths and areas for growth in fostering an inclusive school culture. This real-time data empowers leaders to make evidence-based decisions and refine their leadership strategies to ensure that all students, particularly those from SEND and disadvantaged backgrounds, are supported effectively. This aligns with Ofsted's growing emphasis on inclusive leadership and accountability, providing leaders with the tools needed to create and sustain an inclusive school environment.

5. Safeguarding: Enhancing Support for Vulnerable Students

Finally, this research has highlighted the importance of effective safeguarding measures for SEND and disadvantaged students, particularly in response to concerns that these students may be more vulnerable to discrimination, exclusion and harm. The findings reinforce this, revealing that many students feel their needs are not being met in a safe and supportive manner, with 20.65% of students with invisible disabilities (including mental health concerns, chronic illnesses and a range of neurodiversity identities) reporting a lack of support.

By using data for inclusion to directly address these safeguarding concerns, we can enable schools to track students' safety perceptions and support needs in real-time. By capturing both quantitative data and qualitative insights on student experiences, ethically designed EdTech designed with participants, putting disadvantaged students front and centre, helps leaders identify areas where intersectional safeguarding practices may need strengthening. This allows for proactive interventions to ensure that all students, particularly disadvantaged and vulnerable groups, are supported in ways that prevent harm and promote a safe learning environment.

The GEC Platform offers a unique and comprehensive solution to the leadership and policy gaps identified in this research, enabling school leaders to move from theory to action in addressing the Ofsted inspection criteria on inclusion, behaviour, and leadership. By

providing real-time, intersectional data that captures the experiences of both students and staff, the platform empowers leaders to make data-driven decisions that align with national policy goals while meeting the unique needs of their school communities. As the findings of this research have shown, effective leadership is critical to closing the gaps in inclusion, and the GEC Platform is an invaluable tool in driving intentional inclusion practices across schools.

Kaleidoscopic Data aligns with evolving inspection expectations, particularly Ofsted's new emphasis on inclusion metrics, curriculum equity, and safeguarding. By embedding KD within School Improvement Plans and leadership review cycles, schools can evidence not only intent, but implementation and impact. To embed this systematically, inspection bodies could include a qualitative inclusion narrative requirement, drawn directly from lived experience voice.

These recommendations represent a shift from performative inclusion to systemic, evidence-informed reform. The Kaleidoscopic Data framework offers a pragmatic, ethical model for schools to humanise their data use, centre lived experience, and build truly inclusive learning communities. Future work must focus on scaling support, refining toolkits, and ensuring every school has the capacity and courage to act.

Chapter 7: Conclusion

The Kaleidoscope Inclusion Framework: Harnessing Intersectionality and Social Capital for Data-Driven Educational Equity

This study has shown that EdTech, when ethically designed and purposefully implemented, can move far beyond its common use as an administrative tool to become a catalyst for systemic inclusion. Through multi-point interventions, the research demonstrates that integrating intersectional data collection, participant-led co-creation, and researcher-guided interpretation enables school leaders to see and respond to the nuanced realities of their communities.

The Kaleidoscopic Data framework advances existing approaches by humanising educational data. It captures the lived experiences of students and staff, revealing patterns across socioeconomic status, disability, family context, mental health, lived care experience, gender identity, neurodiversity, race/ethnicity, and religion. By doing so, it equips leaders to address structural barriers and align practice with the lived realities of their communities.

Drawing on the work of Bourdieu, Coleman, Putnam, and Woolcock, this research extends social capital theory into the EdTech domain by showing how leaders can activate:

- **Bonding capital** – building trust within identity groups.
- **Bridging capital** – fostering cross-group collaboration.
- **Linking capital** – connecting schools to external networks, resources, and policy arenas.

In combining social capital with Kaleidoscopic Data, this thesis offers a third path between data-driven surveillance and wholesale rejection of technology. It demonstrates how relationships and networks can be mobilised alongside ethically gathered insights to deliver sustained, evidence-based inclusion.

Key Contributions:

- **Kaleidoscopic Data** – A new, co-created data paradigm combining quantitative and qualitative insights to expose intersectional patterns missed by traditional metrics.
- **Social Capital Activation** – A model for using bonding, bridging, and linking capital to turn data into inclusive leadership action.
- **Ethical EdTech Blueprint** – A replicable framework for deploying technology that honours participant agency, contextual relevance, and cultural responsiveness.

This research responds directly to **RQ1** by showing how school leaders can close D&I gaps for staff and students through targeted, evidence-based interventions. It addresses **RQ2** by demonstrating how insights into social capital and intersectionality can create innovative, intentional pathways for inclusion, grounded in the lived experience of the school community. It also meets **RQ3** by evidencing how a new, ethically grounded data framework can be scaled and adapted to diverse educational contexts while retaining participant trust and relevance.

By resisting the extremes of techno-solutionism and techno-abandonment, this contribution charts a path of “slow creep” toward humanised data practices—where every dashboard click and charted trend remains anchored in ethical stewardship, cultural responsiveness, and participatory leadership.

As school and trust leaders adopt these evidence-based strategies, they position themselves at the forefront of educational innovation, meeting regulatory expectations while driving systemic change. Scalability across diverse contexts—from nursery settings to international schools—enables the creation of a global repository of successful D&I interventions, amplifying this ethical, intersectional, data-driven ethos worldwide.

Ultimately, this research underscores that inclusive education is neither an optional add-on nor a one-size-fits-all programme. It is a dynamic, ongoing process—much like a kaleidoscope—that relies on each fragment of lived experience, every form of social capital, and the thoughtful integration of technology to build learning communities where every voice is seen, heard, and empowered to thrive.

Future Directions:

- **Scaling Support** – Regional coaching hubs and peer-review networks to sustain leadership literacies in ethical data use.
- **Policy Integration** – Advocacy for inspection frameworks that value lived-experience narratives alongside numeric indicators.
- **Research Extension** – Longitudinal studies of Kaleidoscopic Data's impact across varied cultural and policy environments.

In the end, this thesis offers both a **lens** and a **lever**: a lens to see the hidden fragments that make up the full picture of a school community, and a lever to shift systems toward equity. Like the turning of a kaleidoscope, each new perspective brings fresh possibilities, yet the beauty lies in the whole image—where every fragment matters. By embedding Kaleidoscopic Data within the fabric of educational leadership, schools can move beyond compliance toward transformation, creating environments where diversity is not just recorded, but respected; not just respected, but celebrated; and not just celebrated, but used as the foundation for collective success.

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Appendices

Appendix 1 – Recorded Literature Review and Annotated References

This appendix presents a 22-minute recorded literature review film and its accompanying reference list, which formed part of the early framing for the thesis and its evolving theoretical foundation. These readings shaped the conceptual positioning of the GEC Platform, particularly in relation to inclusion, social capital, intersectionality, and the ethics of educational data.

Appendix 1.i – Literature Review Film Title: *Repositioning Leadership for Inclusion*

Format: 22-minute narrated presentation

Access Link: [Literature Review \(recorded film- 22 minutes\)](#)

Appendix 1.ii – Annotated Reference List

This annotated reference list supports the 22-minute recorded literature review (Appendix 1.i). It captures the key texts that underpin the conceptual foundations of the research, linking them to the researcher's positionality, professional practice, and the design of the GEC Platform. The annotations illustrate how each source contributed to the development of the research questions, theoretical framing (intersectionality, social capital, and inclusive pedagogy), and the Kaleidoscopic Data framework.

Wallace, D., & Joseph-Salisbury, R. (2021). How, still, is the Black Caribbean child made educationally subnormal in the English school system? *Ethnic and Racial Studies*, 45(8), 1426–1452.

This article provides essential context on structural racism in education, informing the researcher's understanding of how exclusion and marginalisation manifest in current systems of tracking, discipline, and expectation.

Strand, S. (2014). Ethnicity, gender, social class and achievement gaps at age 16: intersectionality and "getting it" for the white working class. *Research Papers in Education*, 29(2), 131–171.

Strand's use of intersectional data is foundational to the research design. His findings show how gaps differ across SES, ethnicity, and gender, and point to the limitations of current national datasets. This strengthens the argument for a new inclusion-focused data framework.

Aaronson, D., Barrow, L., & Sander, W. (2007). Teachers and student achievement in the Chicago public high schools. *Journal of Labor Economics*, 25(1), 95–135.

This research reveals that demographic data alone cannot explain teacher effectiveness. This supports the researcher's emphasis on inclusive recruitment, retention, and CPD strategies to diversify and empower the workforce.

Elwood, J. (2016). Gender and the curriculum. In Wyse, D., Hayward, L., & Pandya, J. (Eds.), *The SAGE Handbook of Curriculum, Pedagogy and Assessment* (pp. 247–262). London: SAGE.

Elwood critiques the curriculum's role in perpetuating gendered and cultural norms. The researcher's platform responds to this by enabling schools to audit and adapt curriculum content for greater equity.

Paechter, C., Toft, A., & Carlile, A. (2021). Non-binary young people and schools: Pedagogical insights from a small-scale interview study. *Pedagogy, Culture & Society*, 29(5), 695–713.

This article shows the lack of school-based support for non-binary students and calls for co-designed inclusive practices. The researcher's pilot studies and student advisory work are shaped by this call to action.

Additional Key Reading

Blandford, S. (2019). *Social Mobility: Chance or Choice*. Woodbridge: John Catt.

Pinkett, D., & Roberts, M. (2019). *Boys Don't Try*. London: Routledge, pp. 24–45.

Syed, M. (2019). *Rebel Ideas: The Power of Diverse Thinking*. London: John Murray, pp. 43–81.

This annotated list highlights the multidimensional theoretical influences that shaped the research design and practical application of Kaleidoscopic Data. It bridges academic literature with lived realities in schools, affirming the study's ambition to humanise data and centre inclusion in educational improvement strategies.

Appendix 2 – Thought Leadership 'Circle' Webinars

This appendix contains links and reference to the GEC 'Fight for Inclusion' webinar series. These thought-leadership events featured members of the GEC Circle—practitioners, academics, and school leaders—discussing key issues in inclusion, data, and equity in education. The webinars informed the design of the GEC Platform and its intersectional, data-driven framework for inclusion.

Reference: Vimeo User 110168040. (n.d.). *GEC 'Fight for Inclusion' series of webinars with the GEC Circle* [video playlist]. Vimeo. Available at: <https://vimeo.com/user/110168040/folder/20627634>

Appendix 3 – MVP Research and Survey Design

Appendix 3i. MVP Questionnaire- (exploratory factor analysis results) 2020

(Dr Lauren Spinner and Dr Aife Hopkins-Doyle)

Notes: There are 5 different sub-scales - each heading is in a different colour. The headings are descriptions of what each sub-scale is measuring, but you can give these shorter names. - The phrasing of the questions and the scale is set up so that a higher score = <i>greater</i> equality. Items which need to be reverse-scored are indicated in the adjacent column with an 'X'. Therefore, low scores on any of the sub-scales would suggest need for intervention/support in these areas. - Any statements highlighted in yellow could be removed from the questionnaire without affecting its reliability, so if you want to make the questionnaire shorter then these would be the ones to take out (in addition to the 31 we have already removed) - we'll leave this up to you. The demographic questions included on the original version of The Voice should be included at the end of the survey (not at the start, to prevent triggering stereotypes/biases). The number in the final 'Alpha' column indicates the reliability, or 'factor loading', as we have been calling it, of the item/statement. Scores can range between 0 and 1, and a higher score (e.g. 0.8) is better as it indicates greater reliability - all of the items included below are 0.4 or above; we removed any that had a lower alpha than this. If you wanted to make the questionnaire shorter, you might want to look at the items with the lowest alpha as a starting point.								
Sub-scale							Reverse-scored item?	Alpha
1: Indicates awareness of practices/policies and a culture of equality within the organisation/with partner organisations								
		Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree		
1.1	My organisation's equality policies and practices are incorporated into all leadership training programmes.							0.841
1.2	My organisation has a Gender Bias training programme which is available to all staff.							0.834
1.3	My organisation has a Diversity and Inclusion training programme which is available to all staff.							0.826
1.4	My organisation's equality policies and practices are incorporated into all induction training programmes.							0.798
1.5	My organisation seeks to promote gender equality education and CPD to its partner organisations/ businesses.							0.783
1.6	Gender equality/gender bias training is part of staff induction at my organisation.							0.772

Figure 3i.i Screen shot of initial survey design

Participants

Participants were 302 UK adults (Male = 104, Female = 198). Participants identified as mostly female (n = 197, 65.2%), then male (n = 103, 34.1%), and finally trans-male and non-binary (each n = 1, 0.3%). All participants were in employment (Full time: n = 237, 78.5%; Part-time: n = 65, 21.5%). Participants reported a wide range of industries including accountancy, legal services, banking, charity sector, education, government, healthcare, manufacturing, and retail. The majority of participants (n = 194, 64.2%) worked in a large company (i.e. > 250 employees), followed by medium (n = 59, 19.5%) and small (n = 40, 13.2%) businesses (i.e. between 50 and 250 employees, or 10 to 50 employees respectively). Only 9 participants

worked in a company with less than 10 employees (3%). Analyses were conducted with (and without) these 9 participants. This is because employees or smaller companies are less likely to have the formal policies/procedures surrounding gender equality in place and this might result in floor effects on some items for these participants. Participants who completed the survey in an unfeasible amount of time (i.e. < 7 minutes) were excluded from analyses (n = 4). This left a final sample of 298 to be analysed.

Measures

Participants completed eight sets of questions measuring Inclusivity and Diversity (24 items), External communications (6 items), Training (10 items), Equality in Action (25 items), Employee engagement (9 items), External collaborations (4 items), Leadership (17 items), and sexual misconduct/harassment (21 items).

Analysis Strategy

Exploratory factor analysis with all questions was conducted to examine if the eight sets of questions spontaneously appear as subfactors or whether we have a different underlying factor structure. Following analysis of the Scree plot we will run a series of EFAs extracting the number of factors indicated by the Scree plot. Comparison of these different factor models will be conducted and the factor structure which best fits the data will be retained. Following this, a reliability analysis of the items in each of the factors will be conducted, and further items removed.

Appendix 3ii. Results

Notes of EFA best practice.

Factor loadings should be > .40. Each factor should have 3 plus items. Five or more strong loadings items (i.e. .50 or above) constitutes a strong factor.

A cross loading is a factor that loads at .32 or above on more than two factors. Should consider dropping these items especially if there are several adequate to strong loaders on each factor (i.e. .50 or above). If there are several cross loading factors it is usually an indication that they are poorly written

Use Promax rotation (oblique rotation which allows factors to be correlated)

Factor 1	32 items
Indicates awareness or practices/policies and a culture of equality within the organisation	All 10 training items
	5 equality in action items
	3 ex collab items
	5 Ex communication
	6 employee engagement
	2 inclusivity and diversity
	1 values and leadership
Factor 2	24 items
Indicates employees experiences, including sense of belonging, value and empowerment within the organisation	22 Inclusivity and diversity items
	1 equality in action
	1 employee engagement
Factor 3	33 items
Experiences of gender inequality in the work place (including sexual misconduct, unfair treatment based on gender)	11 values and leadership items

	13 sexual harassment items
	9 equality in action items
Factor 4	
Awareness of policies related to gender equality	7 sexual harassment items
Total Items to be dropped in this model:	27
Cross loadings > .32 on one or more items:	6
Items did not load sufficiently (i.e. .40 or above) on to any factor:	21

Figure 3.ii.2 4 factor model (Total: 124 items)

Appendix 3.iii Development of the Staff Survey

A central component of the GEC platform is the core staff survey which will be completed by all staff using the GEC resources. As such, the accurate development and validation of the core questionnaire is critical for the success of the GEC initiative. Researchers in the social and behavioural sciences have identified a number of best practices for the development of reliable and valid questionnaires [1]. These are organised into three stages, each with multiple steps. The three phases are: question development, scale development, and scale evaluation (see infographic copied from Boateng and colleagues).

The first phase – question development – entails creating an initial set of questions which are capturing specific domains of interest (i.e., workplace practices, attitudes to equality in action). The second phase – scale development – involves testing and refining this initial pool of questions into a harmonious measurement tool. This phase consists of pre-testing

questions for semantic clarity and meaningfulness, questionnaire administration, statistical testing of the underlying factor (or construct) structure of the questionnaire, and reduction of the number of questions. The final phase – scale evaluation – tests the reliability and validity of the questionnaire.

Currently, the core questionnaire is in stage two. A previous version of the questionnaire has been through the process of being evaluated for clarity, meaningfulness and underlying statistical structure as well as being validated (i.e., Pilot 1); now the current version of the questionnaire has been put through the same process again (i.e., Pilot 2). To examine the underlying factor structure (i.e., the extent to which the questions are measuring what we think they are) of the questionnaire and which questions can potentially be removed from the questionnaire without compromising its quality we ran another study. With the results from the new data, we were able to advise on 1) whether the questionnaire is accurately capturing its intended constructs (e.g., attitudes to workplace practices) and 2) whether there is a simpler (i.e., fewer questions) way to measure this. Ideally, we would later replicate the findings in an independent sample of workers from one of the GEC partner organisations (i.e., Pilot 3). At this point, we can evaluate the validity and reliability of the core questionnaire fully.

For Pilot 2, the goal was to independently sample participants from the population of interest. Participants who were recruited were in part-time or full-time employment (or had been so previously) and residents of the UK from the crowd sourcing website Prolific (www.prolific.co). Academic researchers in the social and behavioural sciences regularly use this crowd sourcing platform for data collection and publication. The size of the participant samples is critical to achieving accurate findings. Having a sample that is too small will increase the measurement error and the likelihood of finding an unreliable factor structure and poorer generalizability of the findings. Comrey and Lee suggest a graded scale of sample sizes for questionnaire development: 100 = poor, 200 = fair, 300 = good, 500 = very good, $\geq 1,000$ = excellent [2]. In short, the bigger the participant sample the better. That being said, a sample of 300-450 has been independently identified as the minimum threshold to achieve accurate statistical power for analyses.. As such, we aimed for a minimum sample of 300. The final sample consisted of 428 participants.

As the core questionnaire was already divided into several sections after Pilot 1, factor analyses were conducted separately for each of the questionnaire's sections, to test the underlying factor structure statistically. Statistical analyses were conducted in IBM Statistics SPSS 27, a statistical software that is frequently used in social sciences [5]. Analyses used principal axis factoring as the extraction method, in a few exceptions, principal component analysis was used as the extraction method (these exceptions are highlighted in the FA spreadsheet). Promax rotation was used as the rotation method, an oblique rotation which allows factors to be correlated. In a first step, factors were extracted based on Eigenvalues greater than 1. Where appropriate, a second factor analysis was conducted based on the results of this first analysis and examination of the scree plot, extracting a fixed number of factors and using Promax rotation. Reliability analyses, specifically Cronbach's alpha, were conducted for all factors identified in the factor analyses [6]. Cronbach's alpha is used to assess the internal consistency of scale items [5]. Generally, an alpha level of 0.7 or higher is considered acceptable as the threshold for reliability. Ideally, for psychometric quality of scales, the alpha level should be above a threshold of 0.8 or 0.9 [5]. The results of the analyses mentioned above can be found in the spreadsheet Final GEC FA.

Please note: Factor analyses were also performed with some of the additional questions based on protected characteristics (specifically, sex, race/ethnicity, age and LGBTQ+/gender variant identity were included in Pilot 2) in Section 1 and 2. The sample size was below 100 for all of these analyses; therefore, results of the analyses need to be interpreted with caution. Additional analyses with larger samples are strongly recommended for the additional questions in Section 1 and 2.

As pointed out before, in order to fully assess the validity of the core questionnaire, further data and analysis is necessary (e.g., independent sample of workers from one of the GEC partner organisations). This particularly applies to the additional questions related to protected characteristics: larger samples for all characteristics are needed here.

Appendix 3.iv Research Participants (Academic)

Participants

Participants were 428 adults who currently reside in the UK ($M_{\text{age}} = 40.11$, $SD = 11.07$). The majority of participants identified as cis female ($n = 246$, 57.5%); participants also identified as

cis male ($n = 164$, 38.3%), trans male ($n = 4$, 0.9%), trans female ($n = 1$, 0.2%), non-binary ($n = 7$, 1.6%) and other ($n = 5$, 1.2%). One participant did not complete the demographics section. The majority of participants were in employment (Full-time: $n = 330$, 77.1%; Part-time: $n = 92$, 21.5%). A few participants were not currently in employment (Not employed: $n = 4$, 0.9%; Other circumstance: $n = 2$, 0.5%), these participants were instructed to complete the questionnaires as they applied to their previous place of employment. Participants were employed in a wide range of industries such as retail, manufacturing, healthcare, IT, charity sector, service industry and government. Most participants ($n = 274$, 64.0%) worked in a large company (i.e., > 250 employees), followed by medium ($n = 79$, 18.5%) and small ($n = 57$, 13.3%) businesses (i.e., between 50 and 250 employees, or 10 to 50 employees respectively). Seventeen (4.0%) participants were employed in businesses with less than 10 employees; one participant (0.2%) did not report their organisation size. All participants were included in the analyses.

Analyses were conducted with (and without) the 17 participants who were employed in organisations with less than 10 employees. This is because employees or smaller companies are less likely to have the formal policies/procedures surrounding gender equality in place and this might result in floor effects on some items for these participants. Results for the factor analyses without the 17 participants can be found in a separate spreadsheet, however, the main factor structures did not change when these participants were excluded from analyses.

Measures

Participants completed 10 sets of questionnaires measuring 1) Inclusion and belonging (26 items); 2) Professional opportunities (26 items); 3) Values and leadership (28 items); 4) Actions towards diversity and inclusion (20 items); 5) Training (12 items); 6) Perks, benefits and employee provisions (4 items); 7) Flexible working (5 items); 8) Beliefs (12 items); 9) Harassment, discrimination and victimisation (12 items); and 10) Social and environmental sustainability (17 items). For sections 1 and 2, some participants also completed additional questionnaires based on discrimination experiences due to sex, race, age or LGBTQ+/gender variant identity.

Analysis Strategy

Individual exploratory factor analyses were conducted for each section and the additional characteristic-related items to examine if the sets of questions load onto the same factor, i.e., measure the same construct. Following analysis of the Scree plot we ran a series of EFAs extracting the number of factors indicated by the Scree plot for each section. Following this, reliability analyses of the items in each of the factors were conducted, and further items removed. Factor analyses were conducted with principal axis factoring unless otherwise stated in the spreadsheets. Promax rotation was used, an oblique rotation technique which allows factors to be correlated.

Results

Notes of EFA best practice

Factor loadings should be $> .40$. (Please note: factor loadings below $.30$ were not included in tables in the excel spreadsheets). Each factor should have 3 plus items. Five or more items with strong loading (i.e., $.50$ or above) constitute a strong factor.

A *cross-loading* is a factor that loads at $.32$ or above on more than two factors. Dropping these items should be considered, especially if there are several adequate to strong loaders on each factor (i.e., $.50$ or above). If there are several cross-loading factors it is usually an indication that the items are poorly phrased.

Section 1: Inclusion and belonging

Note: Items 1.21 through 1.28 were not included in the factor analysis, as their main purpose in this study was to unlock the additional characteristic-related items. When included in the analyses, these items form a separate subscale, as they all measure concrete exclusion experiences due to a protected characteristic.

When looking at the rotated factor matrix, all 18 items load onto Factor 1 above $.40$. Item 11 had the lowest factor loading with $.493$. Three items (1.13, 1.16, 1.17 and 1.18) also load onto Factor 2 above $.32$; for items 1.16, 1.17 and 1.18, these factor loadings are above $.40$. All of these items relate to comfort with reporting exclusionary behaviour in the organisation. When looking at the pattern matrix, items 1.13 through 1.18 all load onto a second factor as well. All of these items relate to exclusionary behaviour: either challenging or reporting it. You could consider treating these items as a subscale; in that case, Cronbach's alpha for Factor 1 is $.940$ and for Factor 2 it is $.907$. Both of these alpha values can be considered excellent. Cronbach's alpha for the entire scale is also high: $.949$.

A note on the results for all protected characteristics subscales in Section 1 and 2: The results from these analyses should be taken with caution, as the sample size was below 100 for every subscale. According to Comrey and Lee's graded scale of sample sizes, a sample size of 100 is considered poor. Ideally, more analyses would be conducted with a larger data set for these sections at a later time point.

Sex-related subscale (N = 64)

Of the 12 items, all but one item (1.22.10) load onto Factor 1 above .50. Item 1.22.12 has the lowest factor loading with .519. Item 1.22.10 (*I have been excluded from the social scene at this organization because of my sex.*) only loads onto Factor 2 at .381. Item 1.22.12 also loads onto Factor 2 with a higher factor loading compared to Factor 1 (.811 vs. .519). Both item 1.22.10 and 1.22.12 refer to exclusion experience due to the characteristic sex while the remaining items refer to inclusion and acceptance of the characteristic sex in the organisation. Some items also load onto a Factor 2 and a third factor, but the cross-loadings are all below .50 (see spreadsheet 1). Cronbach's alpha for the complete scale is .875. When items 1.22.10 and 1.22.12 are removed from the reliability analysis, Cronbach's alpha increases to .888. When looking at the pattern matrix, items 1.22.2, 1.22.3 and 1.22.11 load onto Factor 2 above .32 and items 1.22.9, 1.22.10 and 1.22.12 load onto Factor 3 above .32. In both cases, the three items loading onto the factor are not enough to consider treating this as a subscale and the alpha levels are only acceptable and questionable (.761 and .638 respectively).

Recommendation: If all items are included as one scale in this section, the differentiation between inclusion and exclusion items would need to be highlighted in the evaluation of results. In order to be considered a subscale, more items would need to be added for either Factor 2 or 3 in the pattern matrix.

Race/ethnicity-related subscale (N = 45)

Similar to the sex-related subscale, all but one item (1.21.12) load onto Factor 1 with factor loadings above .40. Item 1.21.8 has the lowest factor loading with .481. Item 1.21.12 (*I have sometimes felt that because of my race/ethnicity, I am not always actively included by my direct team and/or colleagues.*) only loads onto Factor 2 with a loading of .324. Item 1.21.10 loads onto Factor 1 at .510 but also onto Factor 2 at .605 and Factor 3 at .521. These two items measure exclusion due to race/ethnicity rather than inclusion as the remaining items do. Other items also have cross-loadings onto Factor 2 and 3 but these are all below .50 (see

spreadsheet). When looking at the pattern matrix, the results are a bit more complicated, but items 1.21.10 and 1.21.12 both load onto Factor 3 and not on either Factor 1 or 2.

Cronbach's alpha for the complete scale is .876. If items 1.21.10 and 1.21.12 are removed from the reliability analysis, alpha increases to .892.

Recommendation: Again, if all items are included as one scale, the differentiation between inclusion and exclusion items would need to be highlighted in the evaluation of results. Alternatively, these items could be included in a new subscale that measures exclusion experiences, if more items are added (i.e., 5+ items in total).

Note: *As can be seen in the demographics section, the majority of participants who completed the race/ethnicity-related questions indicated their ethnicity as white. It is therefore important to ensure that participants only complete this section when they have experienced legitimate racism (and do not mistakenly believe that racism against white individuals exist) and to also capture experiences of xenophobia.*

Age-related subscale (N = 71)

All 12 items load onto Factor 1 with factor loadings above .40. Items 1.24.9 and 1.24.10 have the lowest factor loading with .489. Two items, 1.24.10 and 1.24.12 both load onto Factor 2 above .50 as well. For both items, the factor loadings onto Factor 2 are higher than those onto Factor 1 (1.24.10: .620 vs. .489 and 1.24.12: .566 vs. .521). Just as it was the case in the sex-related and race/ethnicity-related sections, these two items both measure exclusion due to age rather than inclusion. Two other items also cross-load onto Factor 2, but the factor loadings are below .50 (see spreadsheet). When looking at the pattern matrix, items 1.24.9, 1.24.10 and 1.24.12 are the only items that load onto Factor 2 above .32. As is, these three items could not be considered a subscale, but Cronbach's alpha for these items is .770. Cronbach's alpha for the complete scale is .882. The alpha level decreases to .879 when items 1.24.10 and 1.24.12 are removed from the reliability analysis but increases to .885 if 1.24.9 (the third item with a cross-loading above .40) is also removed from analysis.

Recommendation: Again, if all items are included as one scale, the differentiation between inclusion and exclusion items would need to be highlighted in the evaluation of results. Alternatively, these items could be included in a new subscale that measures exclusion experiences, if more items are added (i.e., 5+ items in total).

LGBTQ+ and gender variant identity-related subscale (N = 13)

Of the 17 items included in this subscale, all but two (1.27.9 and 1.27.11) load onto Factor 1 above .30. However, the factor loading of item 1.27.12 is only .307 (all other factor loadings are higher than .40). Items 1.27.9 (*I feel as though if I didn't identify as LGBTQ+ I have a gender variant identity, I might feel a greater sense of belonging at this organisation.*) and 1.27.11 (*The way people socialise here aligns well with how I generally prefer to socialise. (i.e., My social norms match with how people socialise here.)*) load onto Factor 2 and 3, but not onto Factor 1.

Items 1.27.13 through 1.27.17 are unique to the LGBTQ+ and gender variant identity subscale. Here items 1.27.15 (*When I joined this organisation it was already set up for me to transition/ live according to my LGBTQ+ / gender variant identity.*) and 1.27.16 (*The organisation has made all the necessary workplace adjustments I needed in order to transition/ live according to my LGBTQ+ / gender variant identity.*) load onto Factor 2 with factor loadings above .70 in addition to loading onto Factor 1 above .40. These items relate to accommodations necessary for transition made within the organisation.

Cronbach's alpha for all 17 items is .914. The alpha level increases when the items discussed above are removed from the scale, alpha is highest at .933 when items 1.27.9, 1.27.11 and 1.27.12 are removed from the reliability analysis.

Recommendation: Just as with the previous subscales, it is important to highlight the difference between exclusion and inclusion items in the explanation of results for this section. It would likely also be a good idea to repeat the factor analysis process for this section with a larger sample size for less ambiguous results.

Section 2: Professional opportunities

Note: Items 2.20 through 2.27 were not included in the factor analysis, as their main purpose in this study was to unlock the additional characteristic-related items. When included in the analyses, these items form a separate subscale, as they all measure concrete exclusion experiences due to a protected characteristic.

All 18 items load onto Factor 1 with factor loadings above .50. Four items (2.8, 2.9, 2.10 and 2.16) all cross-load onto Factor 2 as well, but the factor loadings are lower than those onto Factor 1 (although factor loadings are above .50 for items 2.9, 2.10 and 2.16). All four items relate to non-pay benefits and included a 'not applicable' answer option (i.e., were answered

by less participants than the remaining items in this section). Cronbach's alpha for the complete scale is high: .958.

When looking at the pattern matrix, items 2.8, 2.9, 2.10 and 2.16 all load onto Factor 2 rather than Factor 1. Alpha levels for both factors are excellent as well: for Factor 1, Cronbach's alpha is .948 and for Factor 2, it is .939.

Recommendation: You can leave this section as is but can consider presenting items 2.8, 2.9, 2.10 and 2.16 as a subscale measuring fairness of non-pay benefits in the evaluation of results. Although this subscale does not consist of five or more items as usually recommended for a strong factor, the alpha level is still excellent.

Sex-related subscale (N = 42)

All five items in this subscale load only onto Factor 1 above .60. Cronbach's alpha for this scale is .844. This subscale constitutes a strong factor.

Race/ethnicity-related subscale (N = 26)

All five items in this subscale load only onto Factor 1 above .50. Cronbach's alpha for this scale is .829. This subscale constitutes a strong factor.

Age-related subscale (N = 52)

All five items in this subscale load only onto Factor 1 above .40. Item 2.23.2 has the lowest factor loading with .421. Cronbach's alpha for the complete scale is .805, when 2.23.2 is removed from reliability analysis the alpha level increases to .823.

LGBTQ+ and gender variant identity-related subscale (N = 5)

All five items in this subscale only load onto Factor 1 above .90. Cronbach's alpha for the complete scale is .962. This subscale constitutes a strong factor.

Section 3: Values & Leadership

All 28 items load onto Factor 1 above .60. Item 3.23 has the lowest factor loading with .640. Items related to the values and leadership of the manager (3.4 through 3.9) also load onto Factor 2; these factor loadings are below .60. Items related to beliefs about active steps by the organisation's leadership also load onto Factor 3; these factor loadings are all below .50. Cronbach's alpha for the complete scale is high with .979.

When looking at the pattern matrix, the first three items and all items related to participants' manager load onto Factor 2 and the items related to the executive leadership level load onto Factor 3. The remaining items all load onto Factor 1. The alpha levels for all three

factors are excellent: Cronbach's alpha for Factor 1 is .980, for Factor 2 it is .952 and for Factor 3 it is .918.

Recommendation: Technically, this section already consists of multiple subscales as participants are only shown the questions relating to manager and director if they agree that they have one or the other in their organisation. In your evaluation of results, you can present these as separate subscales but all items are clearly related to the same overall concept.

Section 4: Actions towards diversity & inclusion

Of the 20 items in this section, 18 items load onto Factor 1 with factor loadings above .60. Item 4.14 (*This organisation's external output is sometimes in conflict with its internal narrative about supporting diversity and inclusion.*) does not load onto any factor above .30. Item 4.15 (*I would worry about being negatively judged if I challenged something this organisation was doing which I believed was harmful to achieving diversity and inclusion.*) does load onto Factor 1 but the factor loading is below .40 (.330). In addition to Factor 1, 4.15 also loads onto Factor 2 but the cross-loading is also below .40 (.371). Both item 4.14 and 4.15 refer to conflict within the organisation regarding diversity and inclusion while all remaining items refer to positive, concrete actions towards diversity and inclusion. Some items (4.5, 4.10 and 4.11) also load onto Factor 2 with cross-loadings below .50. Cronbach's alpha is .944 when all 20 items are included in the reliability analysis. When 4.14 and 4.15 are removed from reliability analysis, alpha increases to .956.

When looking at the pattern matrix, three factors form. Items 1 through 7 load onto Factor 1, items 8 through 13 load onto Factor 2, items 16 through 20 load onto Factor 3. Items 14 and 15 only load negatively onto Factor 3. All three factors have high alpha levels: Cronbach's alpha is .921 for Factor 1, for Factor 2 it is .908 and for Factor 3 it is .911 (without items 14 and 15). Items loading onto Factor 1 appear to relate to internal diversity and inclusion, Factor 2 appears to relate to diversity and inclusion in practice and materials and Factor 3 appears to relate to diversity and inclusion in external relations.

Recommendation: It would likely be best to remove items 4.14 and 4.15 from this scale. If they should be included in the questionnaire for content purposes, the recommendation is to create a separate subscale measuring conflict/issues within the organisation with additional measures (i.e., 5+ items). In your evaluations of the results, you could also present the results in the three subscales as identified in the pattern matrix.

Section 5: Training

All 12 items in this section load only onto Factor 1 with factor loadings above .70. Cronbach's alpha is high: .957. This scale constitutes a strong factor.

Section 6: Perks, benefits and employee provisions

Of the four items in this section, items 6.1 through 6.3 all load onto Factor 1 with factor loadings above .60. Item 6.4 loads onto Factor 2 with a factor loading of .545. This item differs from the other three items in terms of content; it measures reasons for potentially leaving the organisation. Cronbach's alpha for items 6.1 through 6.3 is .775, which constitutes an acceptable alpha level. When item 6.4 is included in the reliability analysis, the alpha level is questionable: .670.

Recommendation: Create a separate section with items that measure turnover reasons/reasons for considering leaving the organisation and include item 6.4 in this new section. Section 6 could potentially be expanded to 5+ items to increase factor strength and alpha level.

Section 7: Flexible working

All five items in this subscale load onto Factor 1 with factor loadings above .30. Item 7.5 has the lowest factor loading with .314, all other items' factor loadings are higher than .80. Similar to Section 6, item 7.5 measures reasons for potentially leaving the organisation. Cronbach's alpha for items 7.1. through 7.4 is .899. When item 7.5 is included, the alpha level decreases to .841.

Recommendation: Create a separate section with items that measure turnover reasons/reasons for considering leaving the organisation and include item 7.5 as well as 6.4 in this new section.

Section 8: Beliefs

All 12 items load onto Factor 1 with factor loadings above .50. Three items (8.2, 8.11 and 8.12) also cross-load onto Factor 2 with factor loadings below .50. When looking at the pattern matrix, the items load onto two factors, but surprisingly the split is not along the lines of racism and sexism as was to be expected. Cronbach's alpha for the complete scale is good

with .855. As this section is based on an existing scale, it makes sense to continue using this section as it is.

Section 9: Harassment, discrimination & victimization

Items 9.2 through 9.12 all load onto Factor 1 with factor loadings above .60. Item 9.1 only loads onto Factor 2 with a factor loading of .942. This item measures participants' knowledge of who to approach in case of harassment, discrimination or victimization within the organisation rather than personal experience reporting or experiencing such events. Cronbach's alpha for the scale consisting of items 9.2 through 9.12 is excellent: .919. The alpha level decreases to .889 when item 9.1 is also included in the analysis.

Recommendation: Create a separate section that measures knowledge and awareness of organizational policies and responsible contact persons and include item 9.1 in this new section. Additionally, we recommend 9.1 be measured as yes/no/unsure rather than on a Likert scale.

Section 10: Social and environmental sustainability

All 17 items in this section only load onto Factor 1 with factor loadings above .50. Item 10.1 has the lowest factor loading with .577. Similar to item 9.1, this item measures knowledge of organizational policies rather than assessment of actions taken towards social and environmental sustainability. Cronbach's alpha for this scale is high: .968 when item 10.1 is included and .971 when 10.1 is excluded. This section constitutes a strong factor.

Recommendation: Just as recommended in section 9, it would be beneficial to create a separate section that measures knowledge and awareness of organizational policies and responsible contact persons and include item 10.1 as well as 9.1 in this new section. Additionally, we recommend that 10.1 should also be measured as yes/no/unsure rather than on a Likert scale.

Appendix 4 – GEC Platform Interface – Researcher-Led Digital Tools (Screenshots)

This appendix provides visual evidence of the GEC Platform as used during the three intervention phases. It includes screenshots of survey design, dashboards, data visualisation tools, and CPD features, illustrating how the platform supported ethically collected data for researcher-led analysis and school-based inclusion planning.

Appendix 4.i Screenshots

These screenshots document the original MVP (Minimum Viable Product) version of the GEC Platform, showing foundational interface design and early-stage user experience.

Fig 4.1 and 4.2: Survey design interface for both leader and staff modules, with colour-coded input and user prompts.

Fig 4.3: Insights interface: GEC Platform dashboard (leader view) including early 'GEC Marks' award feature, coaching recommendations ('Report to Support'), and mobile-responsive layout.

Fig 4.4: Staff Self-Assessment Tool: Screenshot of Self-Assessment results (RAG analysis and 'n/a' options).

Fig 4.5: Launch screen of staff surveys from dashboard (survey dashboard - staff)

Fig 4.6: Survey builder and Action Planning Tool: Staff survey report example – thematically organised data with tick-box filters and support links.

Fig 4.7: CPD Library: MVP view of the GEC eLearning hub with example CPD tiles.

Fig 4.8: Variety of materials featured in the MVP training hub – slides, frameworks, and guidance.



Fig 4.1

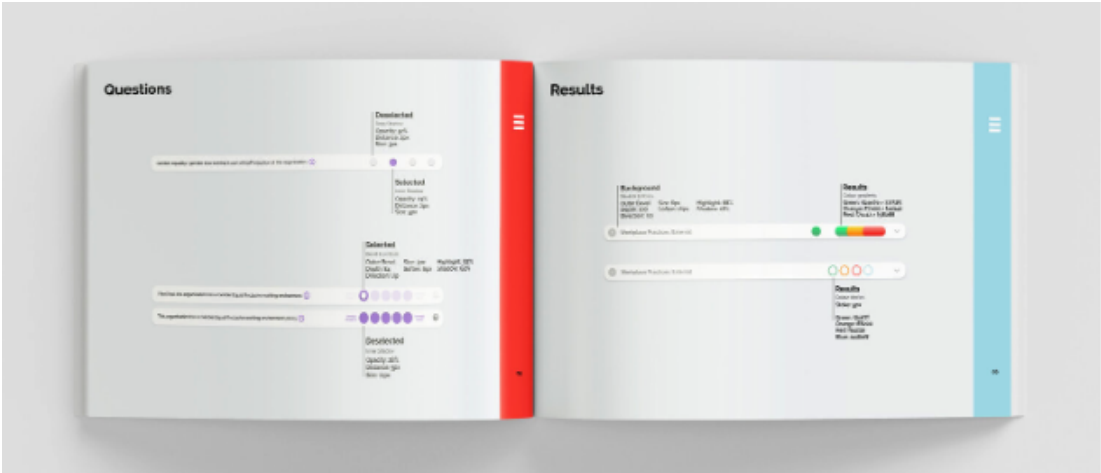


Fig 4.2



Fig 4.3

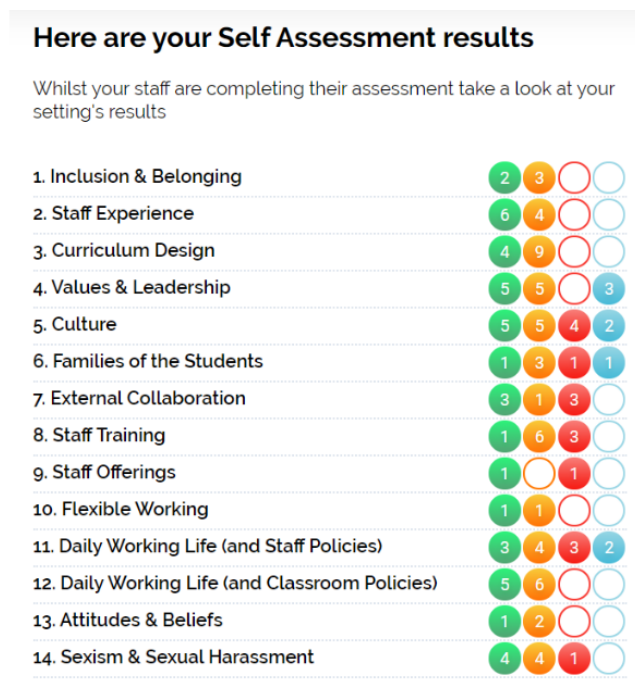


Fig 4.4

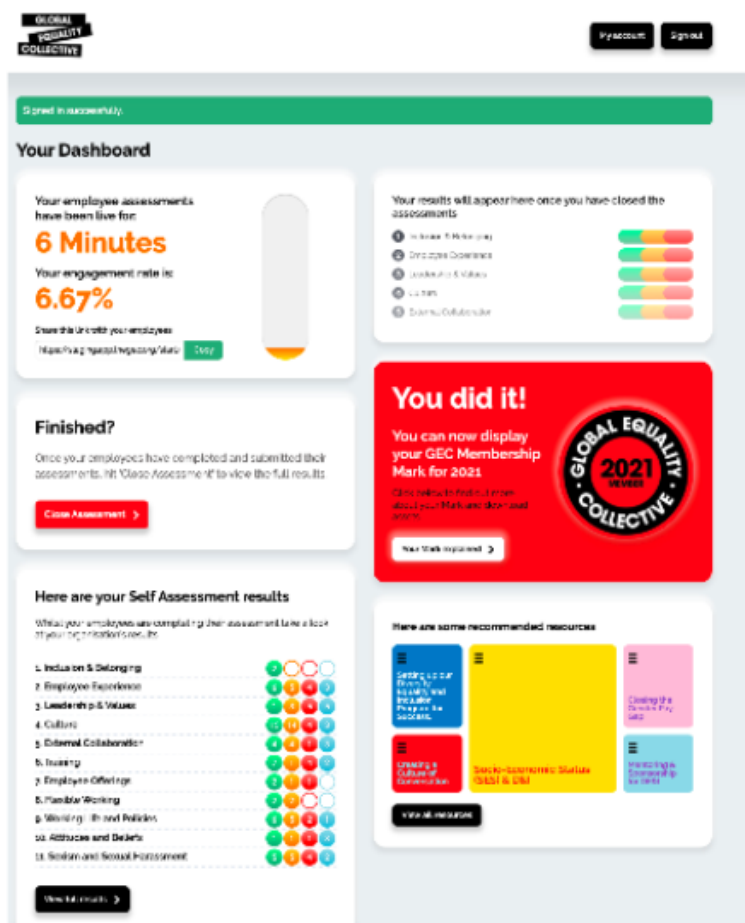


Fig 4.5

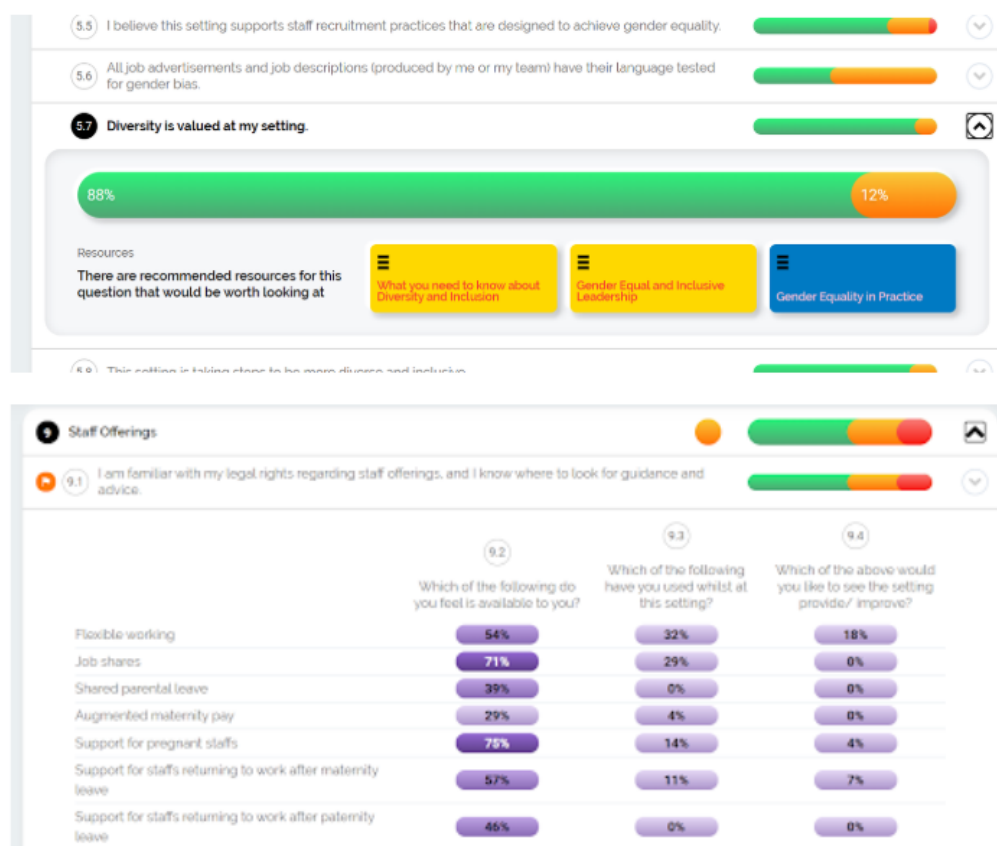


Fig 4.6

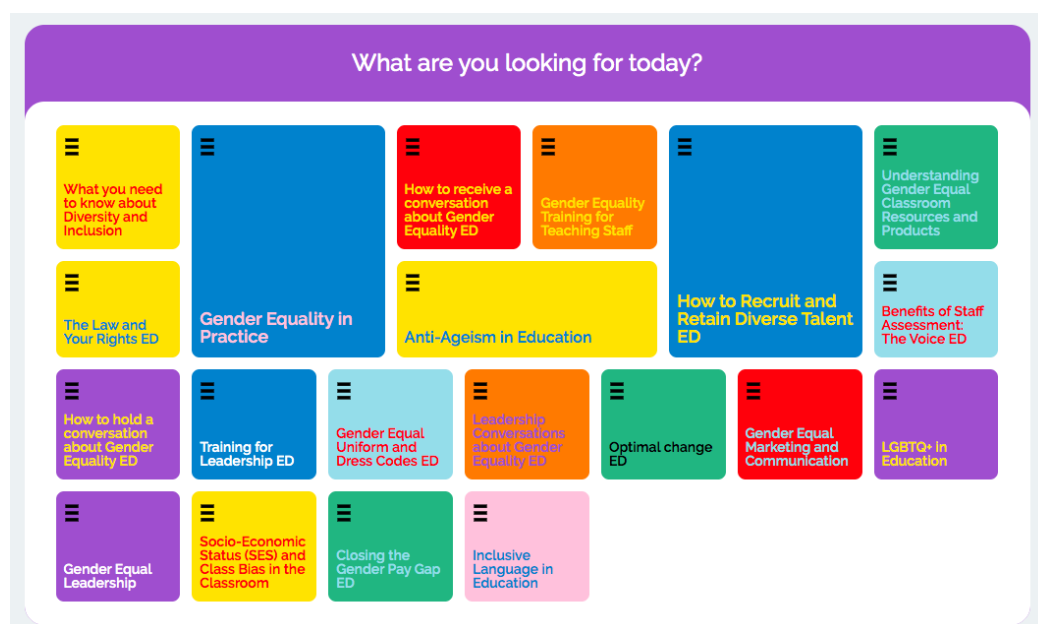


Fig 4.7



Fig 4.8

Appendix 4.ii: Intervention 2 – Staff and Leadership Module

This phase introduced improved data visualisation, action-planning, and new leadership-focused functionality.

- **Fig 4.8:** Initial staff onboarding screen (survey invitation).
- **Fig 4.9:** Staff survey interface with improved UX.
- **Fig 4.10:** Survey results with applied filters and direct coaching prompts.
- **Fig 4.11:** Survey results with applied filters and direct coaching prompts.
- **Fig 4.12:** Screenshot of the Action Plan tool (task completion progress).
- GEC Playbooks and CPD support tiles accessed from the leader dashboard.
- **Fig 4.13:** Range of EDI themes available for leader and staff training, added in this version.
- **Fig 4.14:** Updated dashboard with visual heatmaps, bar charts, and live progress indicators (e.g., % survey completion, EDI status).

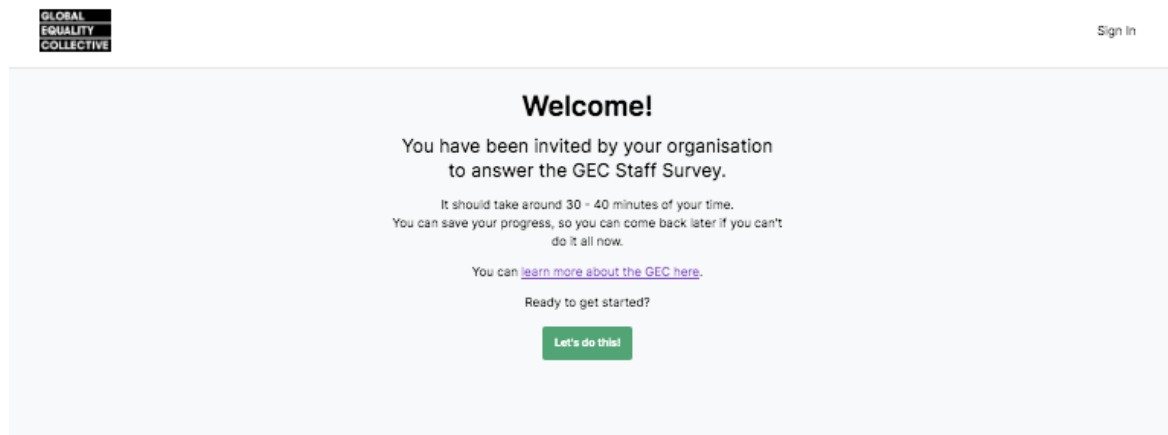


Fig 4.8

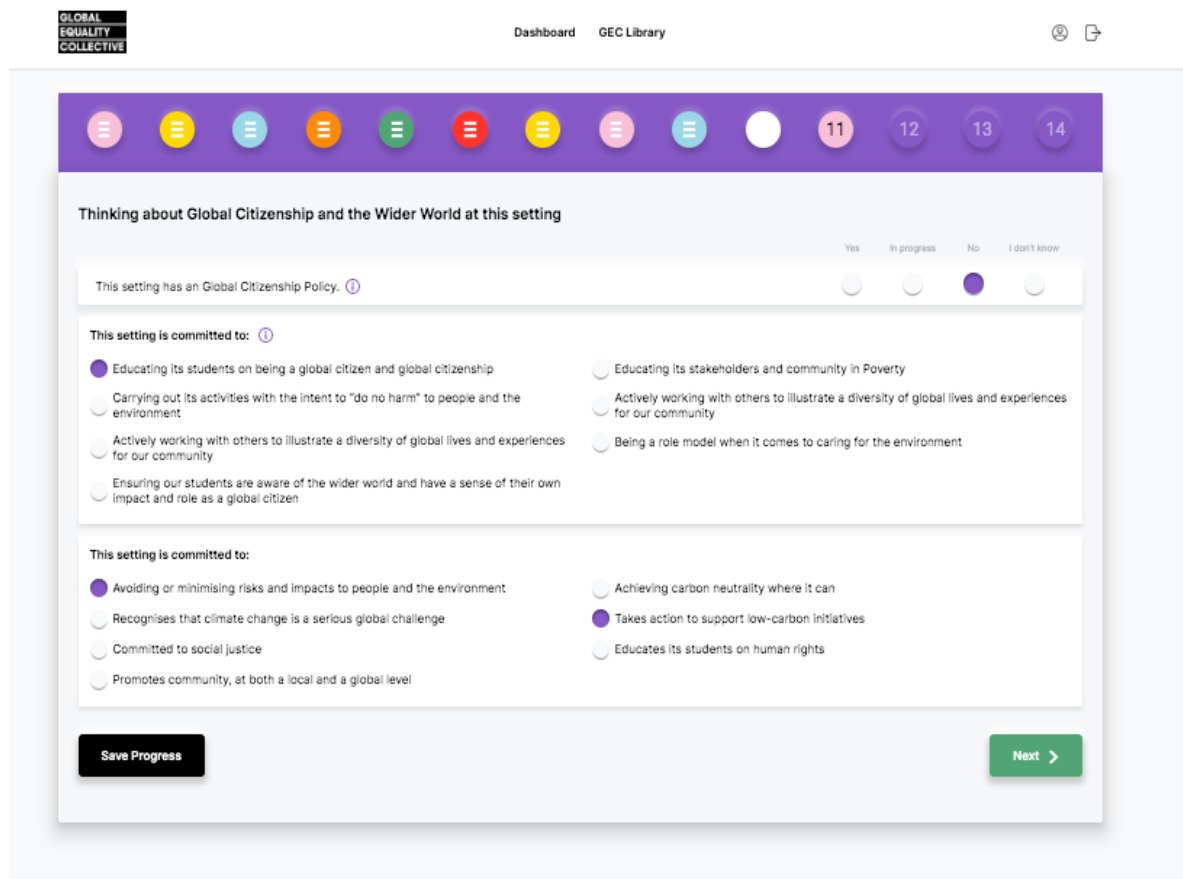


Fig 4.9

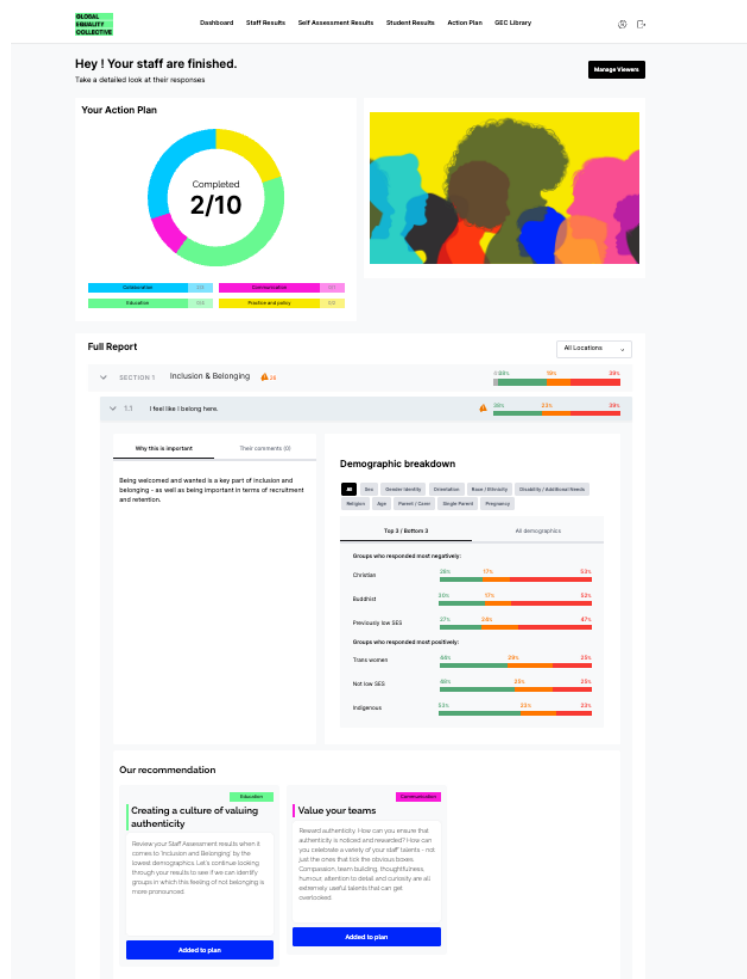


Fig 4.10

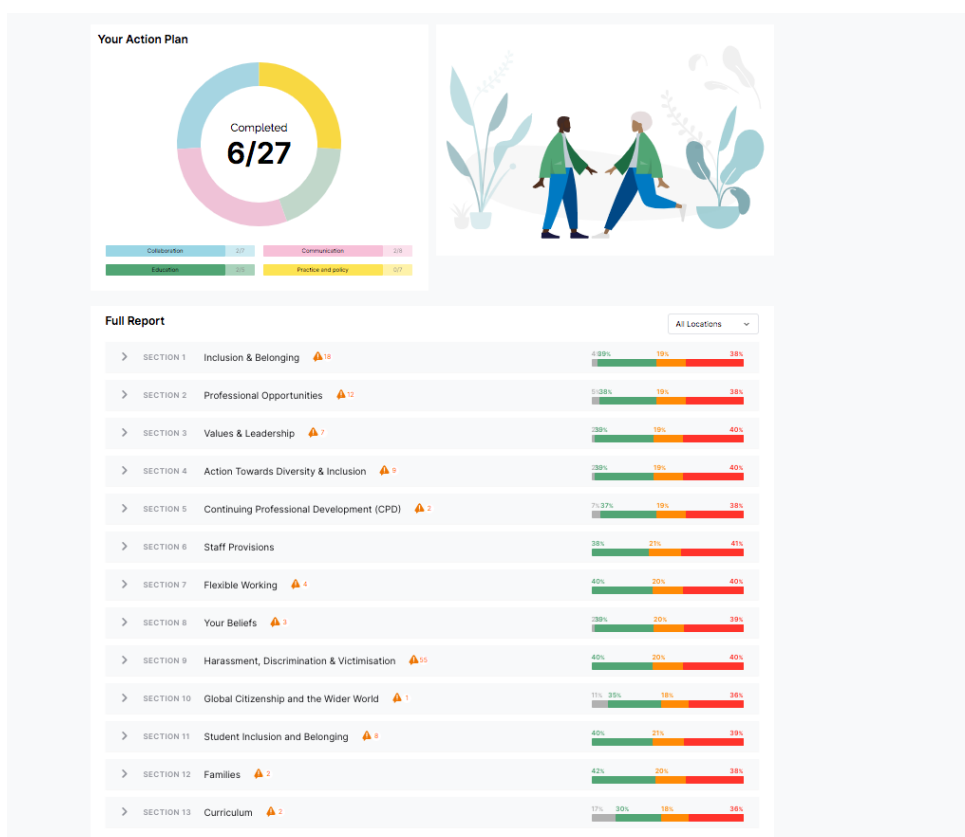


Fig 4.11

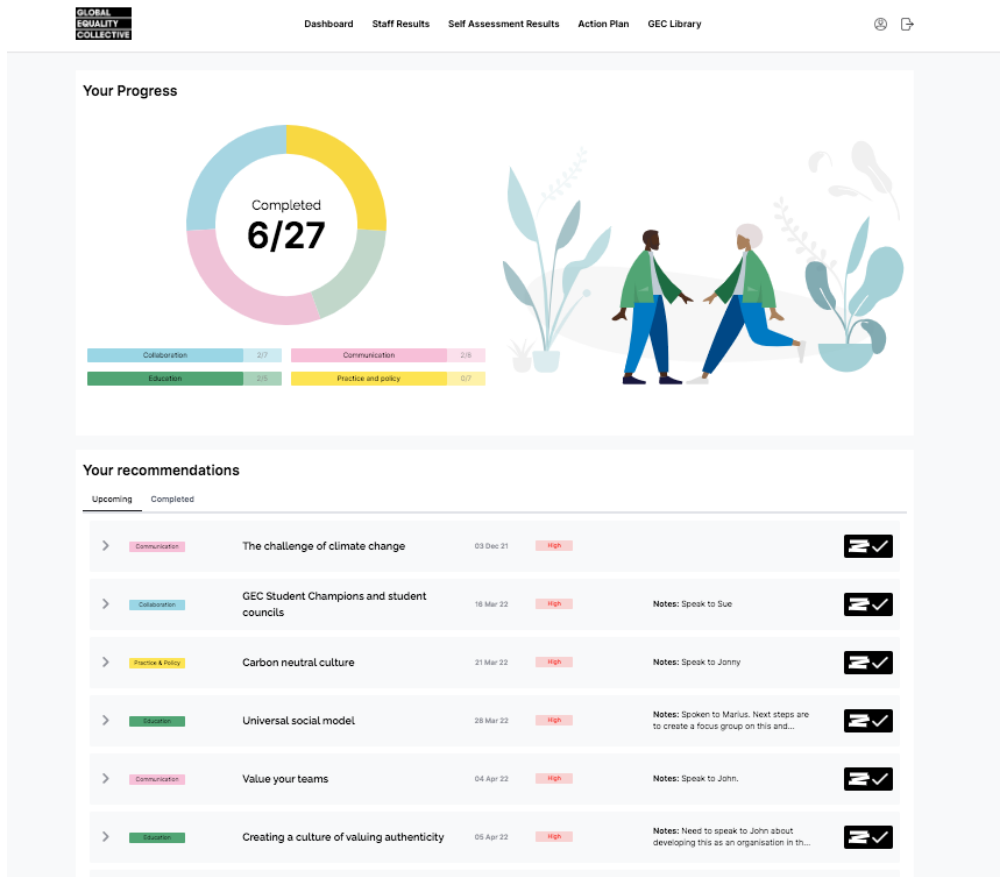


Fig 4.12

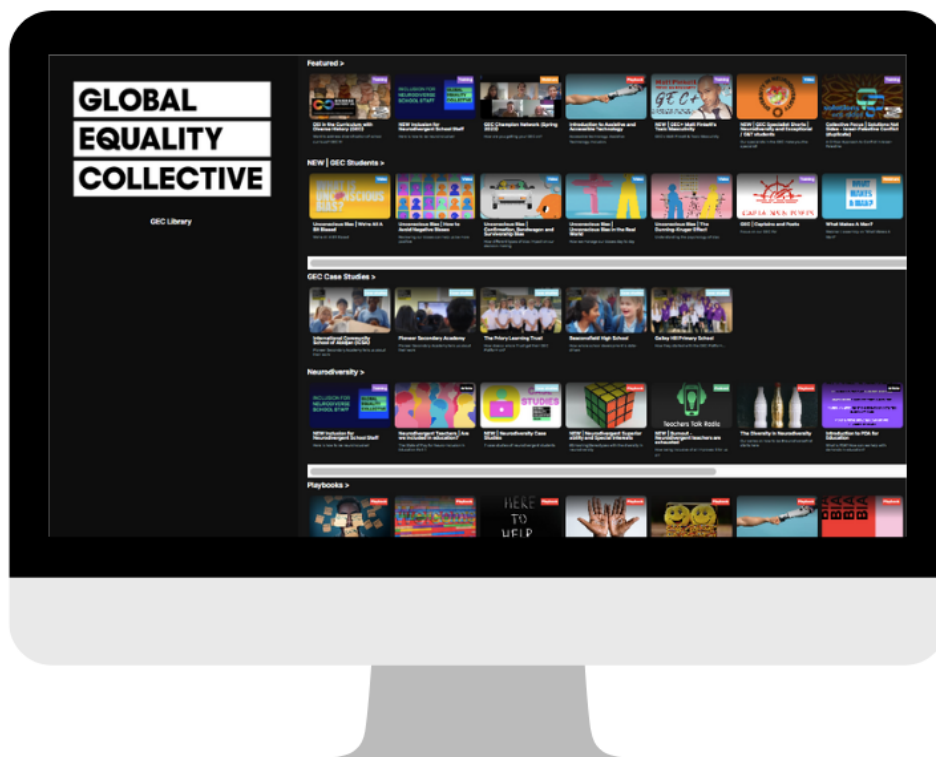


Fig 4.13

Appendix 4.iii: Student Module Screenshots

This final phase showcases the inclusion of student voice through the dedicated student module.

- **Fig 4.15:** Screenshot of the student survey interface, showing accessible question structure.
- **Fig 4.16:** Student module launch screen, with 'magic link' for ease of deployment across schools.
- **Fig 4.17:** Gamified GEC Badges view – awarded based on staff survey responses to boost leader engagement (survey dashboard - students)
- **Fig 4.18:** Example of student results dashboard with graphical breakdown by theme and demographic.
- **Fig 4.19:** Student CPD materials added to the GEC Library – including frameworks, interactive lesson content, and visual support tools.

Belonging and Wellbeing

I feel I belong here. * ⓘ

Strongly Disagree Strongly Agree

I can be myself here. * ⓘ

Strongly Disagree Strongly Agree

I enjoy being a student here. * ⓘ

Strongly Disagree Strongly Agree

I have at least one adult I can speak honestly to here. * ⓘ

Strongly Disagree Strongly Agree

The adult I can speak honestly with is: ⓘ

☐ My current teacher ☐ My previous teacher

☐ Our class teaching support ☐ My head of year

☐ My head of house ☐ A member of leadership team

☐ My headteacher or principal ☐ Someone else

☐ None of these

Let us know if there's anything you would like to add to this question to clarify your answer

Fig 4.15

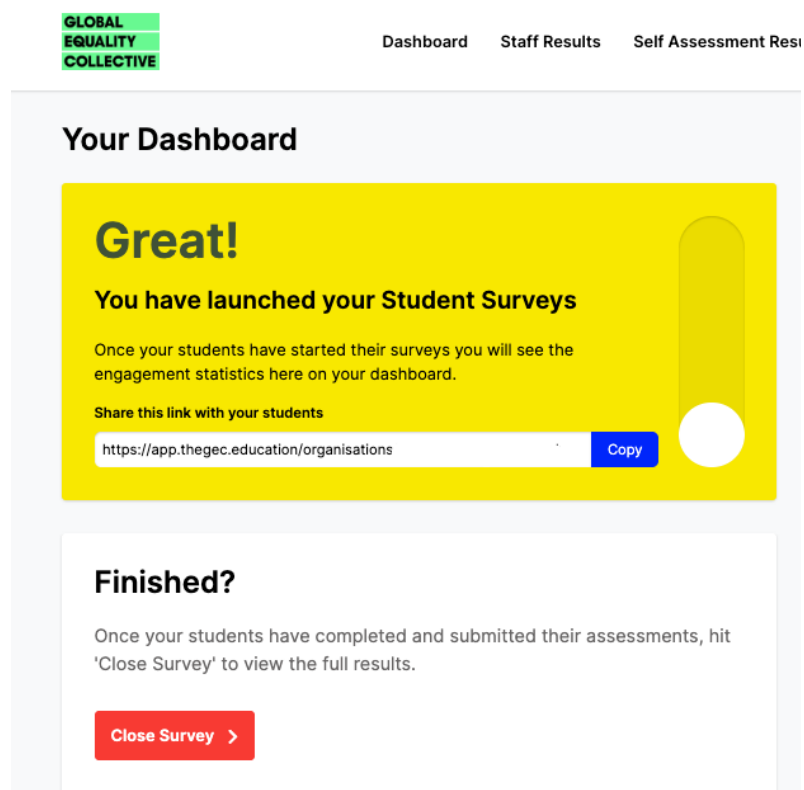


Fig 4.16

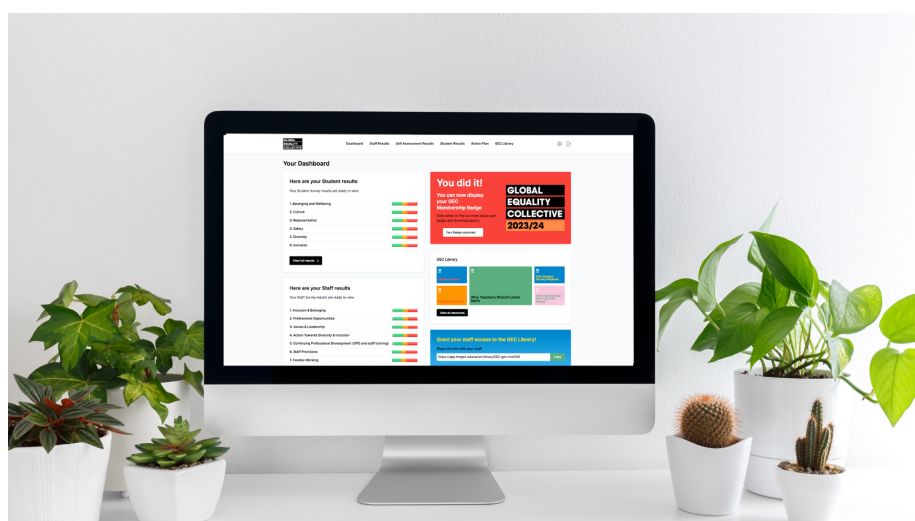
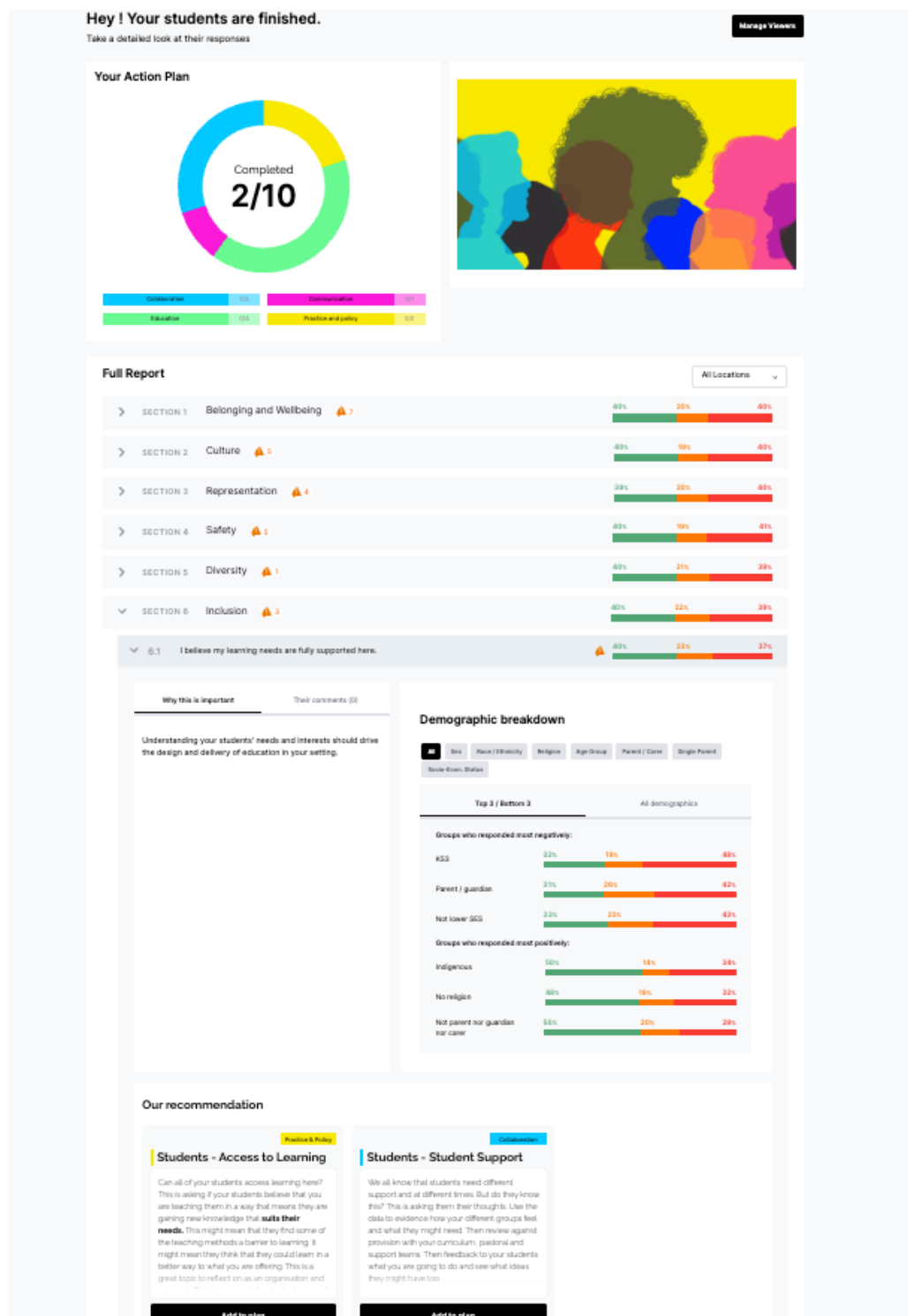


Fig 4.17



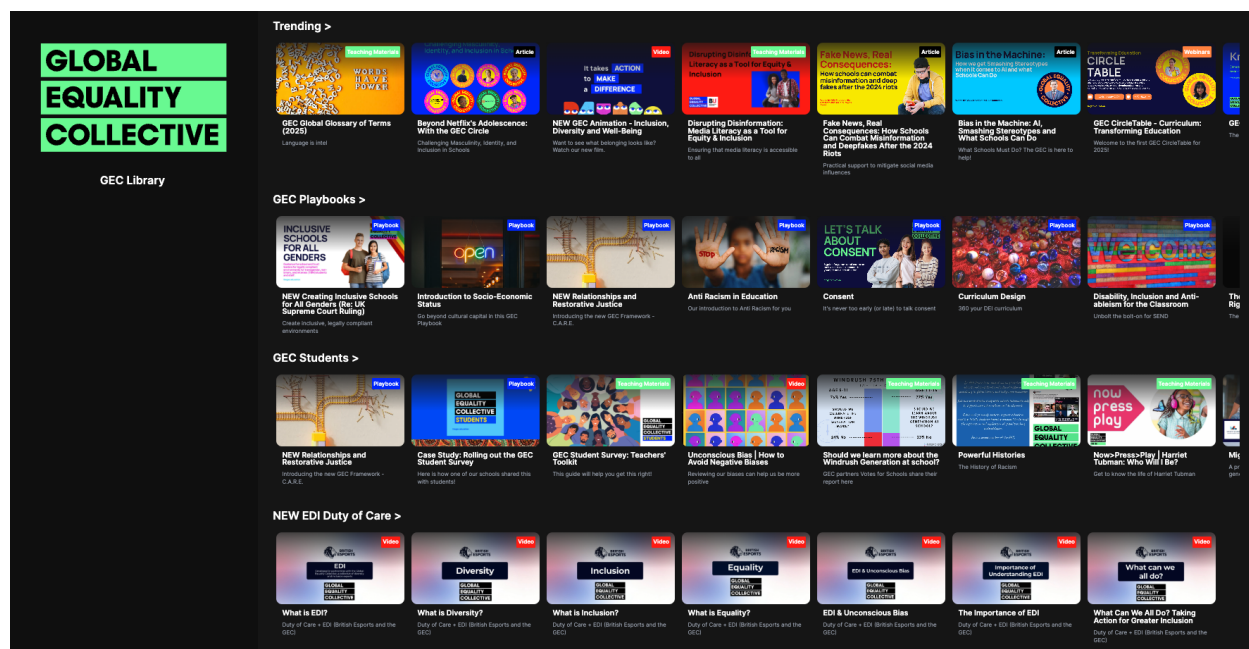


Fig 4.19

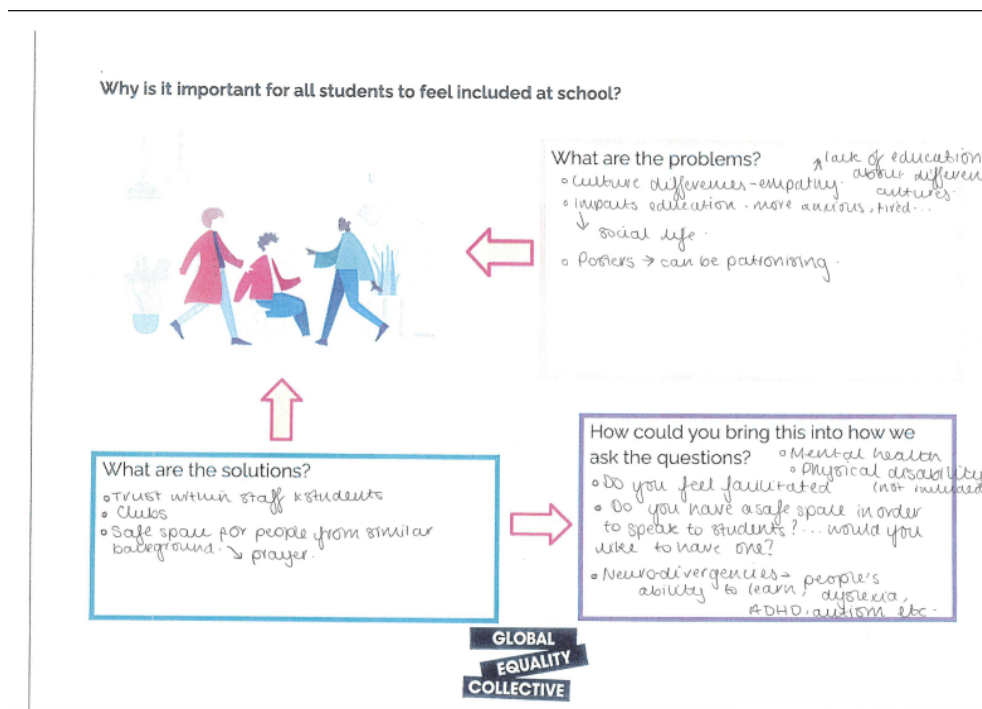
Appendix 5 – Intervention 4: In-Person Student Workshops and Workbook Feedback

This appendix contains images from secondary student workshops. These sessions informed the design of student-facing elements within the GEC Platform, especially the Student Module, survey accessibility options, and question wording, following the input of Goldsmiths University, London (Teachers' centre). The screenshots showcase authentic student input into the ethical co-design process, in line with the participatory framework used in this study.



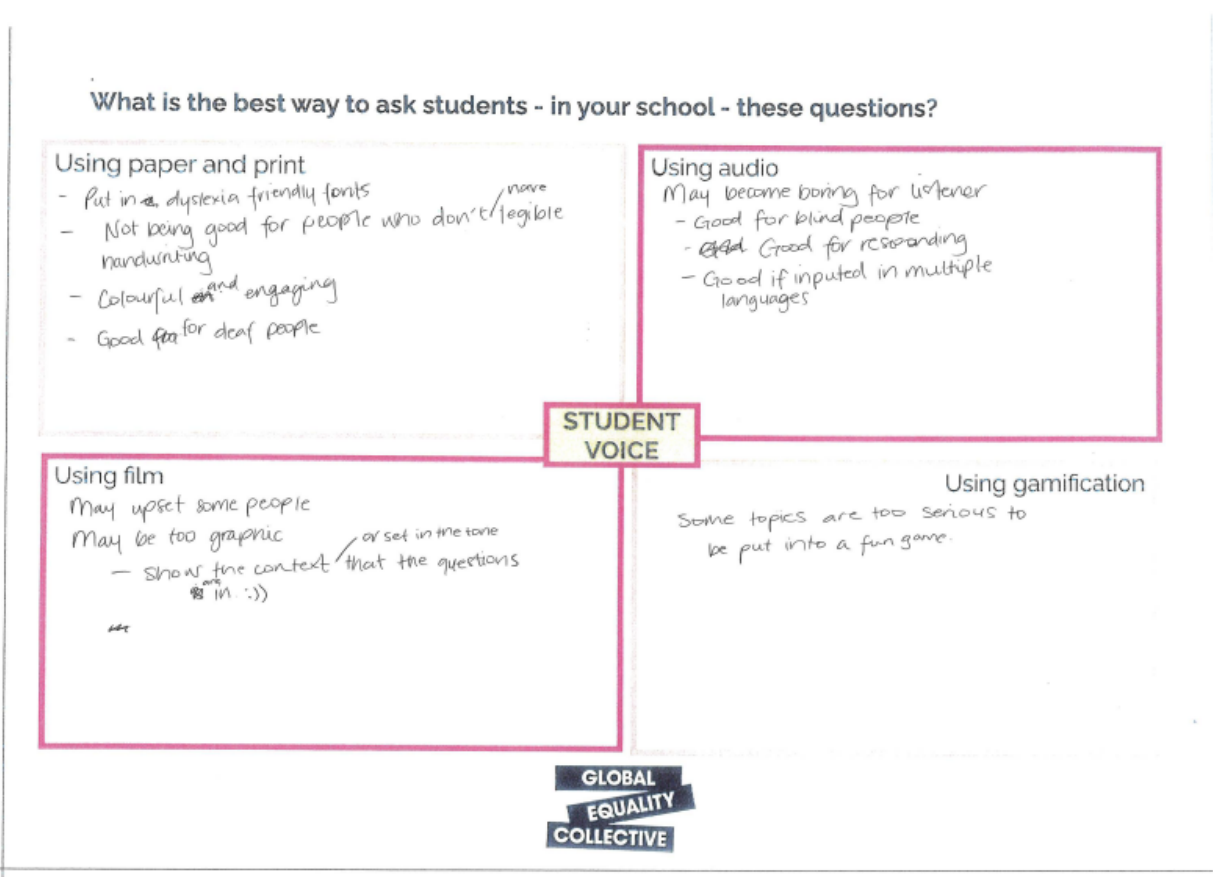
Appendix 5.i – Student Voice: “Why is it important for all students to feel included?”

- Annotated feedback on the problems, solutions, and approaches to inclusive questioning, including the role of trust, safe spaces, and lived experience.
- Illustrates how student voice shaped the priorities and structure of inclusion metrics within the GEC Platform.



Appendix 5.ii – Student Voice: Preferred Methods for Engagement

- Students provided feedback on multiple modes of engagement (print, film, audio, gamification).
- Their preferences informed the GEC Platform's accessibility features and UX design, including dyslexia-friendly fonts, multilingual options, and tone-aware language.



What is the best way to ask students - in your school - these questions?

Using paper and print

→ answer may be affected by people next to you seeing answers.

↳ might lose student's interest

↳ something but digital ~~may~~ will work better.

↳ Needs to be Pyridine friendly ~~fast print~~ fertilizer.
2nd of answer: fast print

- style of answer -

↳ Check bones

49 J. Agruc 2. Di...

→ convert to

→ test not finished after space.
→ consider time consuming

→ ALSO NOT PERFECTING to gather info

STUDENT VOICE

Using audio

↳ It using an app than reading out as form
form makes questionnaire more accessible.

↳ have to go back & check question again, ~~either~~ text would be either at this.

- ↳ could be more engaging (especially w/ kids)

↳ organelle for the water outside medium
however: it adds to a digital form
it makes it more occurent.

Using film

→ could be very useful to POLE THE QUESTIONS but not to receive the answer.

↳ would be a lot more engaging for students.

↳ would take up a lot more time to complete

↳ easier to have
definitions to govern
the process.

↳ easier to have definitions to questions that need them.

↳ Good split over 15 m's before school
over a few days/weeks.

- Using gamification,

2000

↓

defn 7-2 ✓
form is correct.

↳ Werbung ←

→ anything ~~possible~~

digital
2
↓
analog

media strategy
have an IT support Eng kids
have a device.

lockdown proof

U.S. CHINE

delivered to date
cost to date

of a series

o type 1 dm

OUR PREFERENCE: Digital form + Film

A BEST IDEA

↳ short video for every question

Can give definition

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→ have this on an app.

Appendix 5.iii – The Questions: Student Review of Survey Wording

- Students annotated and evaluated draft survey statements intended to measure belonging, representation, and inclusion.
- Their comments directly influenced the refinement of survey language to ensure cultural and age-appropriate sensitivity, clarity, and engagement.

The Questions

I feel that I belong here. *← good opening*
 I can be myself here. *← bit more : njo needed → sub q's*
 I am encouraged to be myself here.
 I am encouraged to consider that I might have privileges that others might not have.
 I have been encouraged to think about and understand how my privileges compare to others. *← more subquestions eg in class*
 I feel comfortable when expressing my opinions to others here. *← better wording - specific to bullying.*
 I feel confident enough to challenge other students if their comments upset others.
 If I don't feel confident enough to challenge others, I have a trusted adult or student group to tell who will support me. *→ Join Q's.*
 I feel supported here if I challenge exclusionary or offensive comments.
 I know I can report my concerns to staff members, without fear of retaliation. *← more targeted but better to keep it in.*
 Teachers encourage us to think about the wider world and how other people live in it. *→ Near 4% world know - more emphasis on effect.*
 I know what stereotypes are. *→ expansion perhaps after.*
 I know what gender equality is. *→ explain differences.*
 I know what racism and anti-racism is. *→ explain differences.*
 In our school we learn about our community and communities across the world without stereotyping them. *←*
 At school I have opportunities to learn about diversity and inclusion.
 This school is really good at showing us a mix of role models. *← not easily understood*
 If my school does not have a diverse staff team, they bring in people to help us learn about others - in real life and online too. *← can't imagine them. (without could provide) should be added*
 Invited guest speakers and our student workshops are chosen by the teachers to help us learn more about other cultures. *←*
 I have observed or know about other students here being left out of things at school because of things like the colour of their skin, where their family lives, how they talk or if they get extra help at school. *← very chunky question, rather simplified into subjects*
 I want to learn more about:
 What stereotypes are - How to be more inclusive - How to be a good ally - How to challenge inappropriate behaviour - How to have difficult conversations - Role Models who are like me *← formalizing*
 I would like to see my school do more to:
 • Use more books and worksheets with images of people who look like me *← I would like my school to: should promote people who look like me.*
 • Have more teachers that looked like me and my family *← move diverse rather than who look like me.*
 • Ensure that lessons included role models of more people like me *← Move diversity rather than use me.*
 • Taught us more about people with different lived experiences than me *← included more examples of stories from our local communities*
 It is important to me that my school focuses on diversity, equality and inclusion. *← good summary question - not necessary.*

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The Questions

I feel that I belong here.
 I can be myself here.
 I am encouraged to be myself here.
 I am encouraged to consider that I might have privileges that others might not have.
 I have been encouraged to think about and understand how my privileges compare to others.
 I feel comfortable when expressing my opinions to others here.
 I feel confident enough to challenge other students if their comments upset others.
 If I don't feel confident enough to challenge others, I have a trusted adult or student group to tell who will support me.
 I feel supported here if I challenge exclusionary or offensive comments.
 I know I can report my concerns to staff members, without fear of retaliation.
 Teachers encourage us to think about the wider world and how other people live in it.
 I know what stereotypes are. *Have I experienced*
 I know what gender equality is.
 I know what racism and anti-racism is. *← negative - too specific*
 In our school we learn about our community and communities across the world without stereotyping them.
 At school, I have opportunities to learn about diversity and inclusion.
 This school is really good at showing us a mix of role models!
 If my school does not have a diverse staff team, they bring in people to help us learn about others - in real life and online too.
 Invited guest speakers and our student workshops are chosen by the teachers to help us learn more about other cultures.
 I have observed or know about other students here being left out of things at school because of things like the colour of their skin, where their family lives, how they talk or if they get extra help at school.
 I want to learn more about:
 • What stereotypes are - How to be more inclusive - How to be a good ally - How to challenge inappropriate behaviour - How to have difficult conversations - Role Models who are like me
 I would like to see my school do more to:
 • Use more books and worksheets with images of people who look like me
 • Have more teachers that looked like me and my family
 • Ensure that lessons included role models of more people like me
 • Taught us more about people with different lived experiences than me *← included more examples of stories from our local communities*
 It is important to me that my school focuses on diversity, equality and inclusion.
 More questions about racism/sexism, etc. + experience with them and how they were overcome.

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Appendix 5.iv Student Build Feedback by Year Group

These Google Docs contain live written feedback from student groups involved in the iterative design of the GEC Student Module, broken down by year group:

- **Year 7 Feedback**

[View Document](#)

- **Year 8 Feedback**

[View Document](#)

- **Year 9 Feedback**

[View Document](#)

- **Year 10 Feedback**

[View Document](#)

- **Year 11 Feedback**

[View Document](#)

Appendix 5.v - Miro Board Snapshots: Student and Staff Workshops

Visual evidence of co-design methodology in action. Screenshots from Miro boards used during live collaborative sessions with:

- Students – exploring themes, question wording, and engagement formats
- School Staff – reviewing staff survey language, accessibility needs, and training content

Students Workshop

[illegible]

Figure A: Student Miro board, Inclusion Themes

Teachers Workshop

[illegible]

Figure B: Staff Miro board, CPD Content Review

Appendix 5.vi EdTech Stakeholder Review

Summary of feedback from platform and safeguarding experts on ethical UX/UI, student safety, and data analysis readiness. Comments helped shape the final version of the GEC platform.

Questions	Answers (Donna - Cognita)	Answers - (Becki Bawler - Votes4Schools)
Is there a best practice when designing surveys/questions for young children, considering that the age range is between 4-11 for primary schools? Does the design need to change depending on the ages in this range?	- Ideally there would be a natural split at the end of Y2 - I have always found that there is a level of dependence with the younger pupils, especially when it comes to surveys. - They often get 'click happy' without actually taking the time to consider their responses. - I guess the design would need to consider the method of sharing - is it intended to be completed 'as a class' with the adults in class taking a lead, or perhaps shared with students in a similar way to Nearpod - where the adult controls what is viewed on the class display, can talk about this and explain concepts, then students respond on their own device	- I am not sure if there is strictly a best practice model however, limiting the amount of text they need to write and the amount of options on a multiple choice is a good start, primary students, particularly foundation phase will also struggle with like scale type questions as it is hard to quantify where you are on a scale. - Lots of visual cues here really help out where possible and also having the options to both have the question read to you by a teacher or by the computer (audio) and then being able to record an answer is a great option. - Flipgrid for example integrates into forms so students can give a sort of VoxPop / talking heads style answer to questions and younger students particularly like this as they can see their answers as a video. - The design should change between foundation phase and KS2 but with options for staff to select the most appropriate, particularly in special school settings or in those tricky Y2/3/4 where children are progressing at different speeds!
How do you approach accessibility needs in your products when you use them?	- We introduce students of all ages to the immersive reader tools on any Microsoft and 3rd party tools which has this, the same for any browser based content - read aloud is a key feature. - Where possible, when creating content for students I will include different media as appropriate such as an audio note or video, icons which run through content, such as a 'submit' arrow or a help option. - Providing options for responses to be submitted using different methods too is also used in our classes: speech to text, audio notes and/or video responses	- Text to Speech and Speech to Text are the most useful ones here, Microsoft tools are really good quality now and students seem to know how to use them really efficiently. - The use of iPad tools as well seems to work well with younger students - purple mash do some good stuff letting them create surveys I think, as do J2E so they may be familiar with the creation & completion of them for pupil voice activities in school anyway.
What devices do you like the design for? Mobile devices or desktops? Or both?	Browser based would be my preferred option as the Edge learning tools could be accessed, and content can be accessed via a QR code scanner if using a mobile device.	- Browser is best, lots of schools have Chromebooks now following investment during Covid (particularly in Wales) and of course there are many primaries with iPads as well as desktops, so browser based would work well. - Students wouldn't need to work off-line for this so keep it to a web-based set up
What is your approach to data quality (e.g. ensuring students provide honest answers) - in the classroom or what you would an edtech product to do?	- This is a tricky one, especially for younger students unless they approach the questions in small groups. - Restricting answering a question until any text/media has been accessed is one way to try and ensure data quality. - Means that students cannot be too hasty with responses. - As earlier, using a presenter tool in front of class and the teacher 'releasing' the question for answering only once any class discussion has occurred to clarify/explain terms etc. - It would be amazing if a learners' response could be 'read back' to them once submitted to double check that they had selected the correct response, with an option to edit if needed.	- It would be good to randomise the questions for the older students, making sure they know clearly and simply about what the survey is for, not just relying on the teacher to introduce it - perhaps the first part could be a short 'to talk' style video of yourselves telling why this is important in child friendly language. - Then, those who can manage alone can get on with it, those who need support will ask for it (maybe a check box at the end to say if the teacher/TA helped with their answers?) - Or, running it question by question for very young children, like Nearpod style, but the downside with that is the teacher could lead them more rather than just support by reading it out. - It depends on how valid / reliable the data needs to be I guess.
Is there any difference in the effectiveness of using either digital or paper surveys for different primary age groups?	- If I am honest, I made an assumption that this was digital, and in so utilising the learning tools for access. - With any surveys, I have always found restricting the questions to the adults only helps with focus for learners on the question and their responses. - This could be paper or digital	- I think digital is the way forward, paper has added pressures for teachers - distribution, collection, sending back, then reading the handwriting... young people even from a young age are more geared up to be digital in terms of writing and recording voice messages with ease. - Most surveys now that come nationally (in Wales at least) are digital including all of our national standardised tests and ones from Public Health Wales that many schools do annually - everything through the Hwb log in for ease of access
Do you have any studies you could share with us?	Sorry, no	No studies I can think of but might be worth looking at the national data collected in the Wales health study (https://www.gov.wales/student-health-and-wellbeing-survey-september-2021-january-2022) for some ideas... and the contact there, Eleri Jones, might have some insight into how they tackle these sort of methodological questions

Appendix 5.v Drafts of Student Module evidence based statements

This section evidences the co-construction process behind the final student survey questions. It includes screenshots and links to early drafting stages, showcasing student-led edits and suggestions gathered during in-person and virtual workshops.

a) Drafting Phase – Google Sheets Versions

The following two collaborative Google Sheets screenshots demonstrate the working drafts of student survey questions. These were developed iteratively through co-design sessions with students and refined with feedback from Goldsmiths University and the GEC Circle.

- **Fig 5.v.1 -Language Review and Framing Adjustments**
- **Fig 5.v.2 – Inclusion and Wellbeing Focus**

Each version was annotated collaboratively with student comments and feedback, focusing on clarity, accessibility, relevance, and age-appropriate language. Revisions included the removal of jargon, better representation of intersectional identities, and adaptation to a tone more relatable for secondary students.

b) Final Live Survey Screenshot

The following screenshot illustrates the final, platform-integrated version of the student survey, including the questions refined from the drafts. This version reflects both ethical UX principles and lived experience framing, aligning with the Kaleidoscopic Data methodology.

DRAFT Student Assessment 2022									
File Edit View Insert Format Data Tools Extensions Help Accessibility									
Q Menus 100% 123 Raleway 10									
	A	B	C	D	E	F	G	H	I
1	have	Score	Section Title	Question Number	Question Text	Insights	V1	Options	V2 (older language)
6	1	2	Inclusion and Belonging	NEW	1.5		I am encouraged to talk about what I have, compared to others.	likert	I have been encouraged to think about and uncompare to others.
7	1	3	Student Inclusion and Belonging	NEW	1.6	X Culture	I can talk to anyone in the classroom.	likert	I feel comfortable when expressing my opinion
8	1	2	Student Inclusion and Belonging	NEW	1.7		I know that other students will look out for me if someone says something unkind to me.	likert	I feel confident enough to challenge other students who upset others.
9	1	3	Student Inclusion and Belonging	NEW	1.8	X Safety	I know who I can go to if I need help with friendships.	likert	If I don't feel confident enough to challenge other students or student group to tell, who will support me.
10	1	3	Student Inclusion and Belonging	NEW	1.9	X Safety	If someone is not being kind to me, I know that someone here will help me.	likert	I feel supported here if I challenge exclusionary behaviors.
11	1	3	Student Inclusion and Belonging	NEW	1.10	X Safety	I can tell an adult when I see something that is unkind.	likert	I know I can report my concerns to staff members if I feel unsafe.
12	1	2	Student Inclusion and Belonging	NEW	1.11		Teachers encourage us to think about the whole world and how other people live in it.	likert	Teachers encourage us to think about the wide world and how people live in it.
13	1	2	Student Inclusion and Belonging	NEW	1.12		I know what stereotypes are.	likert	I know what stereotypes are.
14	1	2	Student Inclusion and Belonging	NEW	1.13		I know what gender equality is.	likert	I know what gender equality is.
15	1	3	Student Inclusion and Belonging	NEW	1.14		I know what racism and anti-racism is.	likert	I know what racism and anti-racism is.
16	1	2	Student Inclusion and Belonging	NEW	1.15		I feel safe at school.	likert	I feel safe at school.
17	1	3	Student Inclusion and Belonging	NEW	1.16		I learn about people who are different to me.	likert	At school, I have opportunities to learn about different people.

A	B	C	D	E	F
Section Title	Section Number	Question number	Standards	Type	Tickbox notes
Wellbeing	Section 1	1.1	I feel I belong here.	Likert	
		1.2	I can be myself here.	Likert	
		1.3	I enjoy being a student here.	Likert	
		1.4	I have at least one adult I can speak honestly to here.	Likert	
		1.5	Teachers here help me to do my best.	Likert	
		1.6	I enjoy learning here.	Likert	
Culture	Section 2	2.1	I am encouraged to be myself here.	Likert	
		2.2	I am encouraged to think about what I have - compared to other students.	Likert	
		2.3	I can talk to anyone in the classroom.	Likert	
					Race/ ethnicity Disability Learning needs Neurodiversity Pronouns Who they live with (family) Parents or carers Socio-economic status Age Religion/ beliefs None of these
		2.4	I have observed or know about other students here being left out of things at school because of their:	Tickbox	
		2.5	I have been left out of things here, just because I am 'me'.	Likert	
		2.6	In lessons, teachers listen to what I have to say.	Likert	
		2.7	The behaviour of other students here is good.	Likert	
		2.8	I am encouraged to be independent here.	Likert	
		2.9	I have observed or know about other students here being left out of things by teachers because of their:	Tickbox	