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OF EDUCATION

The Science of Belonging

*Exploring the Concept, Drivers, Barriers, and
Evidence-based Solutions to Cultivate
Belonging in K–12 Education*



“Belongingness entails an unwavering commitment to not simply tolerating and respecting difference, but to ensuring that all people are welcome and feel that they belong.”

john a. powell

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Exploring the Concept, Drivers, Barriers, and Evidence-based Solutions to Cultivate Belonging in K–12 Education

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Executive Summary



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EXECUTIVE SUMMARY

School belonging refers to students feeling accepted, respected, included, safe, and comfortable in their learning environment (Goodenow, 1993). Research consistently links school belonging to lower rates of mental health problems (Allen, Kern et al., 2018; Allen, Greenwood et al., 2024; Arslan et al., 2020), greater academic motivation (Allen, Kern et al., 2018), improved wellbeing (Arslan et al., 2020; Rincon et al., 2024), and positive life outcomes that extend well into adulthood (Anderman, 2002; Boston & Warren, 2017). At the same time, the evidence indicates that wellbeing and flourishing are not only outcomes of belonging, but also conditions that shape it. This explains why belonging is positioned as a core relational condition that both supports and is supported by student wellbeing and flourishing, as many scholars have stated (Allen, Kern et al., 2018; Allen, Greenwood et al., 2024). This report treats the relationship as bidirectional: stronger belonging can promote wellbeing and flourishing, while students' wellbeing and flourishing also shape how belonging is experienced and sustained over time. In practice, this means schools support flourishing not only by “building belonging,” but also by reducing threats to wellbeing that make belonging difficult to access (e.g., fear, distress, exclusion, chronic stress).

Because children and young people spend much of their lives at school, creating a strong sense of belonging has been considered a foundation for healthy development and, as a consequence, has become a key priority for education systems (Allen, Kern et al., 2018; Allen et al., 2021). However, belonging has been declining in many Organisation for Economic Co-operation and Development (OECD) countries over the past two decades (OECD, 2017, 2019, 2021). Increasing numbers of students report feeling lonely, excluded, or disconnected from their peers and schools (Allen et al., 2021). This trend matters for flourishing and wellbeing because belonging and wellbeing can reinforce each other over time: prolonged non-belonging can undermine wellbeing, and compromised wellbeing can reduce participation and trust, making it harder to rebuild belonging. This downward trend, together with the immense benefits documented in the empirical literature, suggests an urgent need to better understand how schools can effectively nurture school belonging.

A key gap is intervention related. Although many school-based programs and initiatives report improvements in belonging, belonging is rarely the primary objective of the intervention itself. In much of the intervention literature, belonging (or school belonging) is measured as one outcome among many (e.g., alongside wellbeing, engagement, behaviour, or achievement), rather than being the central design target with a clear theory of change and belonging-specific mechanisms. As a result, there are relatively few well-specified, belonging-first interventions in K–12 education, and even fewer with rigorous causal designs or long-term follow-up. This limits what schools can confidently “pick up and implement” if their explicit goal is to strengthen belonging, and it constrains the field's ability to build scalable interventions designed specifically for belonging. Where more targeted work exists, it often appears in narrower strands such as social belonging interventions (e.g., brief belonging-uncertainty or values-affirmation approaches; Walton & Cohen, 2011; Cohen et al., 2006) and select school-based programs that explicitly aim to reduce exclusion and strengthen peer relations (e.g., You Can't Say You Can't Play; Paley, 1993). These examples are promising, but they remain exceptions rather than the norm, reinforcing the need for more intentional, belonging-centred intervention development and evaluation.

Despite the importance of belonging, research still lacks clarity on how to foster it across different contexts and developmental stages. This gap limits schools' ability to implement

targeted, evidence-based strategies, leaving many students without adequate support. Addressing this gap is essential to ensuring schools can respond fairly and effectively, enabling all students to feel valued members of their school community. It is also essential for wellbeing and flourishing agendas because the conditions that support belonging (safety, recognition, meaningful participation, and reliable support) are closely tied to students' flourishing in school.

This report seeks to address the gap by:

- Consolidating and interpreting recent evidence (e.g., peer-reviewed literature, meta-analyses, systematic reviews, grey literature, and policy documents) from research and policy to provide a clear understanding of school belonging in K–12 education and what practical lessons can be drawn for schools.
- Outlining specific pathways and practical strategies that schools can adopt to strengthen students' sense of belonging.
- Clarifying what the current evidence can and cannot support about interventions, including the mismatch between how often belonging is measured and how rarely it is the primary intervention target.
- Giving school leaders, teachers, and other education stakeholders clear evidence they can use to act quickly and effectively, so that more students feel a stronger sense of belonging.
- Structuring the discussion into four key areas: conceptualising belonging; identifying drivers and barriers in both school and digital contexts; exploring interventions and implementation; and examining issues of measurement and ethics.

METHOD

This review uses a narrative synthesis approach, drawing together evidence from peer-reviewed studies, meta-analyses, and systematic reviews in psychology, education, and wellbeing. Targeted searches were conducted in major academic databases, including ERIC, PsycINFO, Scopus, Web of Science, APA PsycArticle, ProQuest Education (Education Databases), and Google Scholar. These were supplemented by specialised repositories, including EdInstruments and the Global Belonging Collaborative, as well as selected grey literature from organisations such as the OECD and UNESCO. Studies were included if they focused on K–12 education and examined how belonging is defined, what factors support or hinder it, which interventions are effective, or how it can be measured. Priority was given to large-scale and high-quality studies. The evidence was then synthesised thematically to clarify key concepts, map findings across contexts, and identify practical lessons for schools and policymakers. A detailed account of the methodology, including the search strategy and inclusion criteria, is provided in Appendix A.

KEY FINDINGS

CONCEPTUALISATION OF SCHOOL BELONGING

- **A shared definition is essential for action:** Without a common language, schools risk running disconnected activities rather than a coherent approach that changes students' day-to-day experience.

- **The field still relies on a classic relational definition, but current views are broader:** The traditional focus on feeling accepted, respected, included, and supported remains influential, yet more recent work treats belonging as also involving identity, feeling valued, and opportunities to participate, and as something that can shift across contexts.
- **Belonging is treated as both a basic human need and a situation-based experience:** It is widely understood as a fundamental drive for connection that supports motivation and wellbeing, while also being sensitive to day-to-day experiences, settings, and time.
- **Safety is a core part of belonging:** Physical and psychological safety are often described as prerequisites; experiences of threat, bullying, or humiliation can quickly undermine belonging. This may be especially important in contexts shaped by conflict, displacement, political instability, or ongoing insecurity.
- **Feeling valued (“mattering”) strengthens belonging beyond:** Belonging involves feeling socially valued and respected, with social value playing an important protective role for wellbeing. This is much more than being accepted alone.
- **Belonging is shaped by systems and conditions and is beyond individual feelings:** It is co-produced through classroom practice, peer culture, school structures, families, and wider social conditions.
- **Culture and history influence who can belong “on their own terms”:** Belonging is affected by norms, recognition, and power, by whose identities and histories are treated as “normal,” and by whether students can be visible without having to suppress who they are. Place-based understandings of belonging also matter in many communities.
- **Conceptual overlap remains a major problem:** There are many examples in the literature where belonging is used interchangeably with connectedness, engagement, attachment, and loneliness. This overlap can be seen to weaken measurement, interpretation, and evaluation, as well as research and its application in schools.
- **Adjacent constructs can be distinguished by what they emphasise:** Connectedness is about networks of ties; engagement is about participation; relatedness is a general psychological need; identity concerns group membership and social evaluation; and relationship quality often functions as a pathway into belonging rather than belonging itself.
- **Belonging offers a practical lens for equity because it reflects lived inclusion:** It helps show whether “inclusion” is experienced in terms of respect and value in everyday school life.

DRIVERS AND BARRIERS IN SCHOOLS AND DIGITAL ENVIRONMENTS

- **Consistent links to outcomes:** In K–12 education, stronger school belonging is consistently associated with better mental health, stronger engagement, and more positive learning outcomes, in both in-person and digital learning environments.
- **What shapes belonging:** Belonging is shaped by (a) students’ day-to-day perceptions of being known, valued, and supported; (b) the skills and responses of adults and students; (c) motivations to connect and participate; and (d) real opportunities to take part, within the constraints of school, community, and policy contexts.
- **Strongest evidence base:** The strongest empirical support is for relational and opportunity-based drivers (e.g., warm teacher-student relationships, supportive peer

cultures, inclusive classroom and school climates, and structured opportunities for participation), including in online and hybrid settings.

- **Key barriers:** Barriers are often structural and systemic, including racism and exclusionary norms, deficit views, unsafe climates, bullying and cyberbullying, cumulative disconnection and loneliness, and digital exclusion or inconsistent support during remote learning. Barriers can also include limited access to technology, unreliable internet, or poorly maintained, unhygienic school environments in some contexts.
- **Risk of “downward spirals”:** Evidence suggests negative cycles can occur: repeated non-belonging undermines trust and motivation, reducing participation and making later relationship-building efforts less effective.

INTERVENTIONS AND IMPLEMENTATION

- **Where the work is focused:** Belonging-focused efforts span early childhood, K–12, and non-formal settings, and most often target students whose belonging is most fragile (e.g., disabled students, migrant, and refugee learners, racially minoritised students, LGBTQ+ young people, and highly gifted learners).
- **What effective approaches have in common:** Across settings, more effective approaches tend to include three shared features:
 - relational safety and respect
 - identity-affirming and culturally sustaining practice
 - real opportunities for student agency, voice, and strengths-based participation
- **Multi-level designs are stronger than one-off activities:** Strategies operate across connected layers, for example, classroom pedagogy, physical and digital spaces, school climate and leadership, and partnerships beyond the school. Multi-level designs appear more promising than isolated classroom activities.
- **Promising practices, with limits:** Practitioner-led approaches (e.g., restorative circles, digital storytelling, arts-informed pedagogy, Gender-Sexuality Alliances (GSAs), identity projects, multilingual teaching, strengths-based programs) often show local improvements in inclusion and belonging. However, they typically require intensive relational work and are highly context dependent.
- **Implementation is the make-or-break factor:** Impact depends as much on how approaches are implemented as on what is implemented. Enablers include shared, equity-focused leadership; supportive policy; sustained resourcing; ongoing professional learning; and student co-design. Common constraints include high-stakes accountability pressures, structural racism and ableism, and over-reliance on individual “hero teachers.”
- **Overall strength of evidence:** There is coherent conceptual and moderate empirical support that intentionally designed instructional and leadership practices can strengthen belonging, especially for marginalised students, yet stronger cause-and-effect and long-term evidence is still needed.

MEASUREMENT AND ETHICAL CONSIDERATIONS

- **Multiple ways of measuring belonging:** Belonging is measured using quantitative, qualitative, and mixed-methods designs, each capturing different aspects of students' experiences.
- **What dominates large-scale evidence:** Standardised self-report surveys are the most common approach in large studies and typically show acceptable reliability and clear factor patterns.
- **Validity evidence is promising but uneven:** Evidence supports expected links with wellbeing and engagement, but there is limited test-retest evidence and little direct work on content validity (whether items fully reflect what “belonging” means in context).
- **Fair comparisons are not guaranteed yet:** Work on cross-cultural and subgroup comparability is growing but still incomplete, which raises fairness concerns when comparing groups, schools, or systems.
- **What qualitative work adds (and what it cannot do alone):** Qualitative and participatory approaches surface nuanced experiences, especially for marginalised students, but usually lack standard measures that allow straightforward comparisons across settings.
- **A practical middle ground is emerging:** Co-designed and culturally grounded tools offer a promising balance: they can retain psychometric quality while ensuring items reflect locally meaningful forms of belonging.
- **Ethics reporting is common, reflection is thinner:** Studies usually report ethics approval, consent, and anonymity, but the depth varies and there is limited discussion of schools' and researchers' responsibilities to respond when low belonging is identified.
- **“Instrument ethics” matters:** Measures can embed cultural and normative assumptions, so ethical measurement requires attention to what items assume, who helped shape them, and how they are adapted with students and communities.
- **Data can do harm if misused:** Belonging data may reinforce deficit narratives or be turned into punitive accountability unless interpreted with structural context and safeguards.
- **Promising school-use model:** More defensible monitoring approaches use brief, validated measures at repeated time points, combined with qualitative reflection, and often embedded into existing wellbeing or digital-skills surveys to reduce burden and improve follow-through.

A FRAMEWORK OF BELONGING

Research on school belonging draws on several theoretical traditions. Need-based perspectives view belonging as a fundamental human requirement that underpins motivation and wellbeing; classic formulations such as Maslow's hierarchy and Glasser's Choice Theory position belonging alongside basic needs like safety and love. Self-Determination Theory offers more granular mechanisms for education by coupling students' need for relatedness with their needs for autonomy and competence; needs-supportive teaching, characterised by warmth, structure and high expectations, fosters autonomous motivation and engagement, whereas needs-thwarting practices undermine both motivation and belonging. These accounts stress that belonging cannot be treated as a “nice-to-have” feature of schooling: it is a

motivational and developmental condition that shapes how students engage with school and with others.

Contextual and ecological frameworks expand the focus from individual relationships to the multiple systems that influence belonging. Socio-ecological models explain belonging as the product of interconnected contexts including personal experiences, classroom climate, neighbourhood conditions and broader structural factors. For example, peer acceptance can protect students from the negative effects of living in disadvantaged neighbourhoods, illustrating how belonging is simultaneously shaped at individual, relational, school and community levels. This systems view emphasises that school belonging is co-constructed across classrooms, peer networks, families, and community environments; it cautions against attributing students' sense of fit solely to personal attributes.

Building on these strands, Allen's (2025) Integrative Framework of School Belonging provides a comprehensive basis for which research findings can be synthesised to demonstrate how belonging is conceptualised as an ongoing, negotiated process shaped by four types of antecedents:

PERCEPTIONS (STUDENTS' DAY-TO-DAY INTERPRETATIONS)

Belonging strengthens when students repeatedly receive clear signals that they are safe, respected, and valued, and that adults and peers will respond fairly when problems occur. These signals can be small (being greeted, being listened to, being treated as capable), but they accumulate into a stable sense of "people notice me here" (Goodenow & Grady, 1993; Flett, 2022).

COMPETENCIES (SKILLS AND CAPACITY TO BUILD RELATIONSHIPS AND INCLUSION)

Belonging is easier to build when teachers and staff practice in ways that are relational and inclusive, and when students have support to develop social and emotional skills for working with others. This also requires cultural competence and congruence, including the ability to recognise cultural histories and power relations, and to respond in ways that represent and affirm students' identities through a strength-based lens. In practice, this means adults can prevent and respond to exclusion, use routines that include quieter students, and adapt participation so that disability, language, or anxiety do not become barriers to membership (Ryan & Deci, 2000; Allen et al., 2018).

MOTIVATIONS (THE WILLINGNESS TO PARTICIPATE AND RISK CONNECTION)

Even when opportunities exist, students may hold back if they expect rejection or humiliation. Belonging can therefore be challenged during transitions or periods of stress, when students become more alert to cues of acceptance and exclusion. Research on social-evaluative processes shows why confidence about "fit" matters: students regulate their participation based on perceived relational value, and uncertainty can magnify the impact of setbacks (Leary, 2005; Walton & Cohen, 2007, 2011).

OPPORTUNITIES (STRUCTURED, MEANINGFUL CHANCES TO CONNECT AND CONTRIBUTE)

The strongest evidence suggests that belonging improves when schools provide reliable, inclusive opportunities for students to participate through relationship-rich classroom routines, peer collaboration, clubs and activities, student voice roles, and supportive online interaction in digital or hybrid contexts. These opportunities work best when they are built into everyday school life rather than offered as one-off events (Allen et al., 2018; Korpershoek et al., 2020).

These antecedents are embedded in cultural, political, and historical contexts – including colonisation, school structures, leadership, transitions, and intersecting identities (Allen, 2025; Walton & Cohen, 2007). The framework connects micro-level psychological processes with meso- and macro-level conditions, distinguishing between trait belonging (a stable sense of being connected) and state belonging (context-specific feelings). It also incorporates mechanisms from sociometer theory, where self-esteem functions as an internal gauge of relational value, explaining why everyday interactions can cause rapid shifts in belonging, and from belonging-uncertainty research, which shows that students who doubt their social fit are more attuned to cues of acceptance or rejection and may withdraw when faced with adversity. By situating individual experiences within wider systems and by highlighting both psychological and structural levers, this integrative framework offers a practical guide for designing interventions, policies and leadership practices that foster belonging for all students.

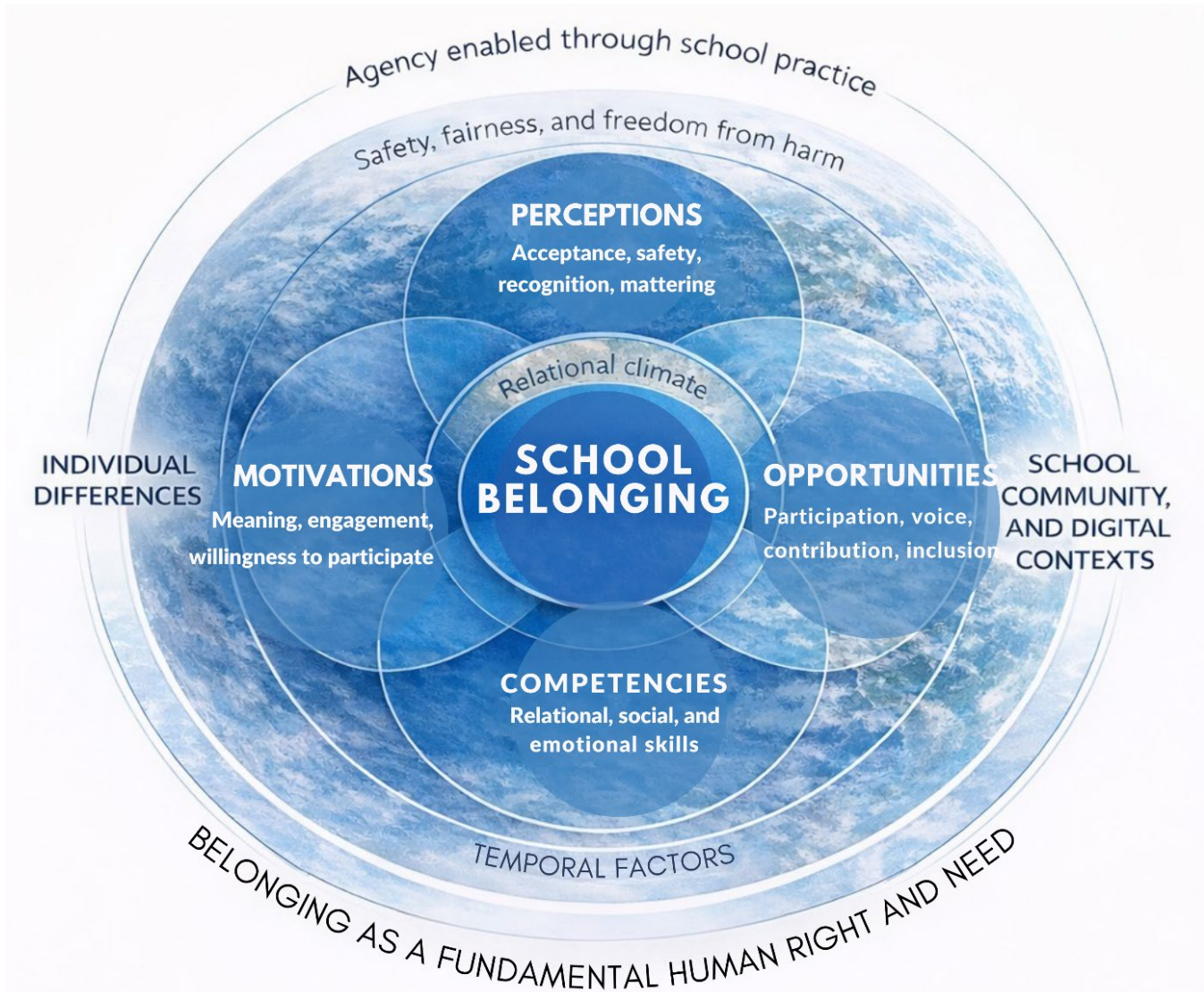
Together, the findings of this report culminate in a shared definition and integrative framework for understanding school belonging, offering IB schools and others a practical foundation for designing, implementing, and evaluating belonging-focused practice across diverse school and digital learning contexts. School belonging can therefore be defined as a student's experienced sense of legitimate membership within the school community. It is grounded in perceived relational value, safety, and recognition, and sustained through everyday opportunities to participate meaningfully in learning and social life, as shaped by the cultural, structural, and relational conditions of physical and digital school environments (Figure 1).



Photo by [Nathan Cima](#) on [Unsplash](#)

Figure 1.

The International Baccalaureate Framework of School Belonging



NEXT STEPS

- **Embed relationship-building and supportive climate practices:** Prioritise school-wide strategies that strengthen teacher-student and peer relationships. This includes mentoring programs, advisory periods, cooperative learning activities, and positive behaviour supports. These approaches have consistently been shown to improve students' sense of safety, engagement, and belonging.
- **Implement inclusive and culturally responsive pedagogy:** Train and support teachers to incorporate students' cultures, languages, and identities into teaching and curriculum. Practices such as culturally responsive teaching, anti-bias training, and restorative justice not only affirm diverse learners but also reduce exclusionary discipline and conflict, with robust evidence of benefits for student belonging and achievement.

- **Foster student agency and voice:** Create avenues for students to actively contribute to their school community and decision-making. Examples include student councils, youth advisory boards, collaborative class projects, and peer mentoring or tutoring roles. Growing evidence suggests that when students have a voice and see their ideas valued, their commitment to school increases – especially for those who might otherwise feel disengaged.
- **Provide targeted support for at-risk and marginalised students:** Alongside universal approaches, offer additional support where belonging is most fragile. This can involve affinity groups or clubs (e.g. cultural clubs, GSAs), counselling and mental health services focusing on connectedness, or transition programs for newcomers. Research shows these targeted interventions can yield significant improvements in belonging for vulnerable groups, though long-term evaluations are still needed.
- **Strengthen implementation through policy and professional development:** School leaders and policymakers should embed belonging into policies and accountability frameworks. This means dedicating resources (time, training, funding) to sustained programs rather than short-term initiatives. Invest in ongoing professional development for teachers and staff on inclusive practices and relationship-building skills. Evidence from case studies highlights that consistent leadership commitment and staff capacity-building are critical for translating belonging strategies into measurable outcomes.
- **Ensure digital inclusion and connection in online learning:** As education increasingly includes online components, schools should bridge digital divides and intentionally cultivate community in virtual spaces. This involves ensuring all students have access to devices and the internet, training teachers in online engagement techniques, and creating virtual forums or activities for peer interaction. Initial findings from recent remote-learning periods indicate that these steps help maintain a sense of belonging online, though further study is needed as digital education expands.
- **Measure belonging thoughtfully and act on the data:** Regularly monitor students' sense of belonging using brief, validated surveys or check-ins, but do so with clear plans for response. Treat belonging data as a starting point for conversation and improvement – for example, if surveys show low belonging in a particular group, convene discussions to understand why and co-create solutions. Always communicate with students and families about why their data is being collected and how it will be used to help, thereby building trust. This recommendation is based on ethical best practices rather than volume of evidence, recognising that how we use data can either enhance or undermine the very sense of community we seek to improve.

CONCLUSION

Cultivating a sense of school belonging is fundamental to educational success and equity. The evidence is clear that when students feel they belong, they are more likely to thrive academically, socially, and emotionally. Belonging should therefore be treated as a basic condition of schooling, not an optional extra. Schools do not leave access to water, food, safety, and toilets to chance; they design schedules, spaces, routines, and responsibilities to reliably meet these needs. Belonging requires the same design mindset. It strengthens when schools intentionally shape the everyday conditions that students repeatedly interpret as signals of legitimate membership.

This report shows that belonging is built through ordinary, cumulative experiences: predictable relational care from adults, respectful peer cultures, fair and protective responses to harm, and meaningful opportunities for students to contribute and be recognised. It also shows that belonging and flourishing are mutually reinforcing over time: stronger belonging supports wellbeing, and supported wellbeing increases students' capacity to participate, trust, and invest in relationships and learning. For practice, this implies a clear theory of change: schools strengthen belonging by deliberately improving the daily conditions that shape opportunities to participate, perceptions of safety and recognition, competencies for relationships and learning, and motivation to engage and seek connection. When these conditions shift consistently, students' lived experience of school shifts.

However, the intervention literature shows a practical gap: belonging is frequently assessed in published evaluations of school-based interventions but is less often directly or strategically targeted as an intended outcome. Building the next generation of belonging-first interventions and rigorously and ethically evaluating them will be essential to translating the evidence base into scalable practice. In summary, ensuring that all students feel that they are valued members of their school community is both an urgent responsibility and a promising opportunity. This can drive positive change in education systems worldwide, from daily classroom interactions to high-level policy and practice.



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The Science of Belonging



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INTRODUCTION

In psychology, *belonging* builds on the idea that humans have a basic need to form and maintain positive and meaningful relationships (Baumeister & Leary, 1995). This need has guided much of the work and understanding we have today concerning human motivation, learning, and development. In educational contexts, Goodenow's Psychological Sense of School Membership (PSSM) scale introduced the concept of belonging by defining it through students' perceptions, specifically their feelings of acceptance, respect, inclusion, and support at school (Goodenow, 1993). Subsequent work has linked these perceptions to students' motivations to learn, identified school belonging as a measurable construct, and provided clear evidence that school belonging is relevant and *necessary* for the educational experiences of all students (Allen et al., 2018; Allen, 2025).

Since early work on school belonging in the 1990s, meta-analyses have shown that school belonging is strongly associated with students' academic motivation, social-emotional competencies, and mental health, and have identified student, peer, teacher, family, and school influences that can be used to strengthen it (Allen, Kern et al., 2018; Korpershoek et al., 2019). Large-scale international studies, most notably those provided through data collection by the OECD Programme for International Student Assessment (PISA) since 2003, have revealed substantial differences between education systems and, in many cases, recent declines in adolescents' sense of belonging at school (e.g., OECD, 2019; OECD, 2023). Together, this evidence explains why school belonging has become a global priority for both research and policy. Reflecting this shift, the OECD identified belonging as a major trend in education in 2022 (OECD, 2022).

A SNAPSHOT OF THE LITERATURE

Numerous studies consistently show that school belonging is a reliable predictor of outcomes that matter to schools. For example, meta-analyses show that students who report stronger belonging tend to show higher academic motivation, engagement, and often achieve more (e.g., Allen, Kern et al., 2018; Korpershoek et al., 2020). Consistent with these findings, longitudinal work also indicates that higher belonging in high school is associated with greater academic motivation and a stronger appreciation for school (Neel & Fuligni, 2013). These findings position belonging as a meaningful psychological experience that shapes how students participate in learning over time.

Beyond learning, belonging also functions as a protective factor for mental health and healthy development. Systematic reviews and meta-analyses link stronger belonging with lower symptoms of depression and anxiety, and reduced involvement in a wide range of adolescent risk behaviours such as violence, sexual health risks and substance use (Allen, Greenwood et al., 2024; Raniti et al., 2022; Rose et al., 2024). International datasets support these patterns. PISA Analyses demonstrate that students who feel a stronger sense of belonging report higher life satisfaction, experience less bullying and demonstrate better academic performance, even after adjusting for background factors (Castelli & Marcionetti, 2024; Hark Söylemez & Söylemez, 2025; OECD, 2019). Further behavioural studies indicate that stronger school connectedness is also associated with fewer externalising and behavioural problems at school, including lower levels of misconduct, based on multilevel and longitudinal designs (AlMakadma & Ramisetty-Mikler, 2015; Arslan, 2022; Demanet & Van Houtte, 2012). These protective associations extend beyond schooling: adolescent belonging predicts more favourable mental health into young adulthood (Allen, Greenwood et al., 2024). Together, these findings show

broad and durable associations between belonging and developmental outcomes, suggesting that belonging is not only an experience students have but also one with meaningful developmental consequences.

Building on this, a second body of evidence identifies the school conditions that cultivate or undermine belonging. At the classroom level, the quality of teacher-student relationships is consistently linked to students' sense of acceptance and connection, especially when teachers are perceived as caring, respectful, and fair (Allen, Kern et al., 2018; Emslander et al., 2025; Roorda et al., 2011). Peer relationships contribute in similar ways: friendship support is associated with stronger belonging, while bullying, including cyberbullying, predicts lower belonging. Supportive teachers can moderate some of the negative effects of peer difficulties on belonging (Allen, Cordoba et al., 2022a; Arslan, 2021; Chen & Li, 2020; Hamm & Faircloth, 2005).

Significantly, these relationships do not develop in a vacuum, and they can be shaped and sustained by the wider school climate and organisational practices. Students report stronger belonging to their schools when they offer physical and emotional safety, promote respectful interactions across the community, and communicate that adults are invested in their learning and wellbeing (Reaves et al., 2018; Steffgen et al., 2013; Wang & Degol, 2016). Such climates are also associated with lower levels of bullying, aggression, and truancy (Reaves et al., 2018; Steffgen et al., 2013). Whole-school approaches that promote climate change, such as consistent expectations, staff capability in relationship-building and opportunities for participation and voice, show promise for strengthening these conditions and supporting belonging (Darling-Hammond et al., 2018; Thapa et al., 2013; Wang & Degol, 2016). Evidence from this line of work suggests that school belonging is shaped by both interpersonal experiences and the school structures that enable them.

Even when schools provide supportive climates and relationships, belonging is not experienced uniformly. It can vary with developmental transitions, institutional and cultural context, and students' social positioning. Belonging tends to decline at major transition points, particularly the shift from middle to high school (Benner et al., 2017). At a broader level, cross-national PISA analyses show substantial differences in average belonging between countries and across schools within countries (OECD, 2019). Variation also reflects how well school practices fit students' cultural and identity needs. In culturally and linguistically diverse settings, immigrant students' belonging is more strongly supported in schools that enact culturally responsive teaching (He & Fischer, 2020). LGBTQ+ students similarly report safer school experiences and stronger belonging when schools support Gender-Sexuality Alliances and adopt inclusive policies (Marraccini et al., 2022; van Vliet et al., 2025). Studies of students with disabilities or special educational needs often report lower belonging and higher exposure to bullying, highlighting persistent gaps in accessibility and inclusion (DeVries et al., 2018; Prince & Hadwin, 2013; Rose et al., 2011).

Digital environments add an additional layer to understanding the way belonging is experienced and can vary across students and school settings. Cyberbullying is associated with poorer wellbeing and weaker school functioning, and these issues are more prevalent in schools where students already feel less connected (Li et al., 2025; Wright, 2015; Zhu et al., 2021). Online harassment, constant connectivity and algorithm-driven comparison also shape how students interpret their place in their school communities. This expanding literature highlights the need to conceptualise belonging across offline and online settings.

Taken together, these findings show a pattern in which belonging is essential in education yet is also constructed through many layers of students' experiences, including relationships, classroom practices, school-wide norms, and broader social contexts. It is also widely known that it develops through ongoing experiences rather than one-off events. This understanding has implications for practice. Sustainable gains in belonging are more likely when schools adopt coordinated, system-wide approaches rather than rely on individual efforts or stand-alone programmes (Allen, Kern et al., 2016). The breadth of the evidence on school belonging demonstrates why a consolidated review is needed.

PURPOSE AND STRUCTURE

The purpose of this review is to bring together current evidence on school belonging to provide schools and policymakers with a clear, structured account of what school belonging means and why it matters in K–12 education. Belonging is a multi-layered construct, shaped by individual perceptions, teaching practices, peer relationships and wider school environments (Allen et al., 2021). It also varies across ages, cultures and learner groups and interacts with other constructs such as connectedness, engagement, and identity.

This review is structured so that each major section builds on the one before it, moving from conceptual foundations to practical applications across four sections:

Section 1 examines how school belonging is conceptualised. It brings together definitional work ranging from interpersonal understandings of acceptance and support to broader accounts that foreground safety, identity, mattering and the ecological conditions that shape whether students feel they fit within their school. This section also situates belonging within related constructs and outlines how experiences vary across ages, cultural groups, and distinct learner populations. It draws attention to definitional drift in the field and explains why conceptual clarity is needed for meaningful measurement and practice.

Section 2 reviews the factors that strengthen or undermine belonging in K–12 schools. It synthesises evidence across classrooms, peer groups, whole-school structures, families, and the wider social and digital environments in which young people learn. By examining these influences together, the section shows how belonging is built through everyday interactions and structural conditions rather than single events or isolated programmes. This systems view is essential for understanding why some groups experience lower belonging and how schools can respond.

Section 3 evaluates school-based and classroom-based interventions designed to support belonging. It examines programmes that target relationships, instructional practices, school climate, participation, and student voice. The section also considers the conditions required for implementation, the strength of evidence for different approaches, and the challenges schools face when seeking sustainable and equitable change. Practical examples are included where evidence permits, without over-extending claims beyond the data.

Section 4 focuses on measurement and ethics. It reviews existing tools used in research and practice, including their validity, reliability, and cultural fit. It also addresses ethical considerations related to collecting and using belonging data in school settings. The discussion highlights issues such as privacy, consent, data interpretation and the risk of using measures that do not align with clear conceptual definitions. Guidance is provided for schools seeking responsible ways to monitor belonging over time.

This review brings together current evidence to better understand school belonging and its importance in K–12 education. The report aims to provide schools and policymakers with clear insights into what belonging means, what helps or hinders it, and how it can be supported through practical strategies and fair measurement. Ultimately, the goal is to build a stronger evidence base that can guide both everyday school practices and future policy directions.

AIM

Although school belonging is strongly linked to wellbeing and flourishing, both as a supporting condition – where students who feel they belong tend to report better wellbeing – and as an outcome shaped by wellbeing, students experiencing distress or chronic stress may find it more difficult to connect with and maintain a sense of belonging (Arslan et al., 2020; Rincon et al., 2024). It is also linked with academic motivation (Allen, Kern et al., 2018), and long-term outcomes (Allen, Greenwood et al., 2024; 2025; Anderman, 2002; Boston & Warren, 2017), many students across The Organisation for Economic Co-operation and Development (OECD) countries report declining levels of belonging (OECD, 2017, 2019, 2021), yet schools lack clear guidance on how to respond. This review aims to clarify how belonging is distinct from related concepts such as wellbeing and flourishing, while examining how it varies across age, culture, and background. It will explore the factors that strengthen or limit belonging in both classrooms and digital environments, focusing on relationships, teaching practices, and school structures. The review will also assess school- and classroom-based interventions and strategies, considering their effectiveness, conditions for success, and challenges of equity and sustainability, with practical examples that schools can adapt. Finally, it will evaluate current tools for measuring belonging and address ethical concerns, such as privacy and consent, offering schools and researchers practical, responsible ways to monitor belonging. Together, these aims will provide a clearer understanding of belonging, consolidate the evidence base, and deliver actionable strategies to improve student experiences.

The review will achieve these aims by addressing the following research questions across four sections:

SECTION 1: How is school belonging conceptualised?

- How is belonging defined in psycho-educational research, and what are its related concepts?
- How is school belonging defined and clarified in relation to its major correlates and associations (for example, flourishing and wellbeing)?
- How does the experience of belonging vary across different ages, cultures, and diverse student populations, including “perceived belonging”?
- What theoretical model or conceptual framework would best support the understanding of the mechanisms of belonging in various educational settings?

SECTION 2: What are the drivers and barriers of belonging in K–12 education in schools and digital learning environment?

- Why is belonging important in schools and in a digital learning environment?
- How does school belonging relate to flourishing and wellbeing?
- What are the key drivers of student belonging in schools and in a digital learning environment?

- What are the barriers to a sense of belonging in schools and in a digital environment (including but not limited to bullying behaviours, both physically on-site and cyberbullying as well)?
- What is the strength of empirical evidence supporting these drivers?

SECTION 3: What school-based or classroom interventions, strategies, or approaches are available?

- What educational contexts, factors and practices effectively cultivate a sense of belonging for diverse learners and what implementation factors are the most important for success?
- What does empirical research reveal about the strengths and limitations of belonging-focused interventions in K–12 education?
- How well-supported by research is the claim that instructional design strategies can effectively foster students' sense of belonging?

SECTION 4: What measurement and ethical considerations exist?

- How is belonging measured in educational research?
- What evidence is there for the validity and reliability of these tools in measuring belonging in K–12 settings?
- What are the promising strategies schools can use to assess and monitor student belonging?
- What are the ethical considerations in studying and measuring belonging in schools?

SECTION 1

How is school belonging conceptualised?



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1.1 Conceptualising Belonging

This section addresses the overarching question:

How is school belonging conceptualised?

OVERVIEW

To foster a sense of belonging, schools need a shared understanding of what they aim to achieve when working on belonging, as supported by multiple researchers (e.g., Allen, Riley et al., 2025, preprint; Pope & Miles, 2022). This requires a clear definition of school belonging because it shapes how researchers measure it and how schools can maintain and build it. Without a clear definition, schools risk launching a collection of activities rather than a cohesive strategy that transforms the student experience (Allen, Riley et al., 2025, preprint; NSW Government, 2025). While meta-analytic evidence shows that belonging predicts academic adjustment, engagement, and wellbeing (Allen, Kern et al., 2018), a gap remains between research and the classroom. This gap exists because "belonging" often means different things to different people. One teacher may prioritise attendance, while another focuses on emotional safety (Kuttner, 2023). When definitions are fuzzy, belonging competes with literacy and numeracy for space rather than supporting them.

We often think of belonging as a complex, abstract idea. Yet even the youngest children can clearly articulate what it feels like to belong in their classroom (Hudson et al., 2025). For decades, the most frequently cited definition of school belonging is "the extent to which students feel personally accepted, respected, included, and supported" in the school's social environment (Goodenow, 1993). The definition serves as the basis for the widely used Psychological Sense of School Membership (PSSM) scale. This focus on interpersonal relationships changed the field. However, modern research suggests this acceptance-only view may be too narrow. Belonging is a dynamic experience shaped by a student's culture and the school's structures; it is also about identity, mattering, and active participation (Alink et al., 2023; Slaten et al., 2016), much more than social connections alone.

To build a shared understanding of school belonging, consistency in language is critical. It is difficult to build a shared map when the compass keeps changing directions. Terms such as belonging, connectedness, engagement, bonding, and attachment are frequently used as if they are interchangeable, yet they describe distinct psychological experiences (Allen, Kern et al., 2016). This creates a potential problem. If an intervention targets "engagement" but measures "loneliness," the results become impossible to trust (Davies et al., 2025).

This confusion extends to measurement. In research, the tool you choose reveals what you truly value. Unfortunately, the same survey (like the PSSM) is often used to label entirely different concepts, from "school engagement" to "school loneliness" (Crouch & Pearce, 2012; Twenge et al., 2021). When we use the same ruler to measure different things, the data loses its power to guide policy or help students.

To untangle these complexities, this section synthesises the evidence into four strands: how school belonging is conceptualised and defined in psycho-educational research (Section 1.1.1); how it relates to flourishing and wellbeing (Section 1.1.2); how the experience of belonging varies across ages, cultures and diverse student populations, including perceived belonging (Section 1.1.3); and which theoretical models and conceptual frameworks best

explain the mechanisms of belonging in educational settings (Section 1.1.4). Then, the analysis is followed by a brief discussion relevant to this section (Section 1.1.5).

1.1.1 DEFINITIONS OF SCHOOL BELONGING

A student stands at the school gate on a Monday morning. In that single moment of crossing the threshold, a silent, internal calculation occurs. Am I safe here? Do people see me? If I didn't show up, would anyone notice? This split-second experience is the pulse of school belonging. It is the difference between a student who engages with their heart and one who merely occupies a desk. For years, the research on belonging has been a fragmented puzzle. To bring order to this confusion, we analysed dozens of definitions and distilled them into seven distinct lenses. These lenses weren't chosen at random; we built them through a rigorous process of coding and constant comparison, separating "belonging" from its close concepts, such as "engagement" and "connectedness." Our goal is to find a shared language that works for researchers and teachers alike.

To achieve this, the section addresses the question:

How is belonging defined in psycho-educational research, and what are its related concepts?

We examine belonging through seven specific lenses to understand its full complexity. The lenses are:

The psychological need lens: The first lens draws from need based discourse and theory, such as Self-Determination Theory, which shows that satisfying the psychological need for relatedness (often discussed interchangeably with belonging; Capon-Sieber et al., 2022; Escandell & Chu, 2023) is central to motivation and wellbeing (Ryan & Deci, 2000). This makes need fulfilment, and the quality of social relationships, a core element of any definition of belonging.

The safety lens: The second lens focuses on safety. Work on school safety and monitoring, including OECD PISA reports, consistently links experiences of safety versus bullying with students' sense of belonging (OECD, 2023), and recent scholarship highlights the roles of both psychological and physical safety (Flett, 2022). In this perspective, belonging is seen as contingent on the absence of threat and the expectation of protection. Students feel confident in participating in school life without fear of harm, harassment, or humiliation.

The mattering and acceptance: This emphasis is analytically different from the third lens, which prioritises being valued, included, and recognised. Belonging is not just about being accepted, though that's important. It's also about feeling significant and socially valued, which is different from simple acceptance alone (Flett, 2022).

The ecological-contextual lens: The fourth lens adopts a socio-ecological view, seeing belonging as co-produced across classrooms, schools, families and wider systems rather than residing solely "within" the individual (Allen, Vella-Brodrick et al., 2016; Flett, 2022). From this perspective, belonging is a dynamic and can be strengthened or weakened in different contexts and over time, rather than a fixed, binary state. This lens is supported by evidence that belonging is shaped by interacting influences at multiple levels, from classroom practices to school policies and community contexts (Allen, Kern et al., 2025).

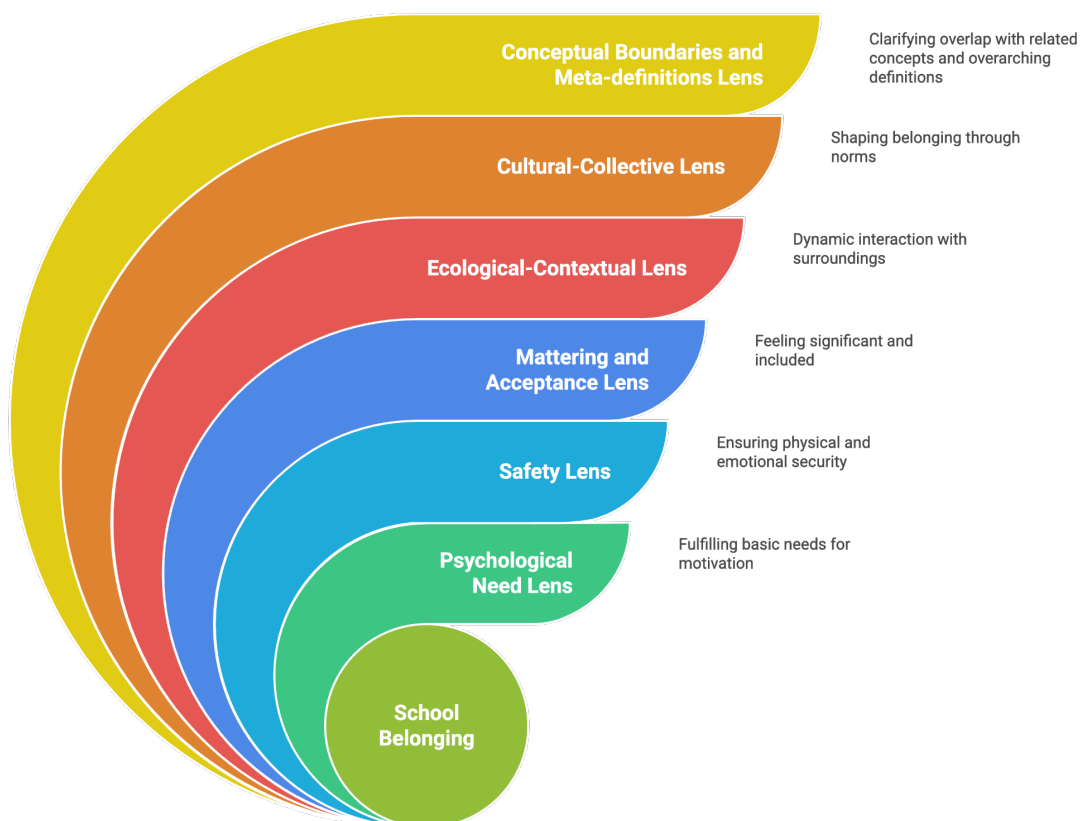
The cultural-collective lens: The fifth lens emphasises how culturally responsive practices, group norms and historical contexts shape who feels they “fit” at school and what counts as belonging (Graham et al., 2025; Ladson-Billings, 1995; Walton & Cohen, 2007). Recent work on *we-ness* strengthens this lens by showing how shared purpose, collective identity and cultural continuity influence motivation and community belonging (Gray et al., 2022).

The conceptual boundaries lens: The sixth lens addresses conceptual boundaries, addressing persistent overlap belonging, connectedness, attachment, and engagement (Allen, Kern et al., 2021). Clarifying where these constructs overlap or diverge improves measurement and supports more precise intervention design (Davies et al., 2025). For example, social connectedness is typically defined as feeling linked to others (Read et al., 2024), whereas school belonging can be experienced even when students work or play alone, as long as they feel safe, recognised and “at home” in school spaces (Hudson et al., 2025).

The meta-definitional lens: The final lens is a meta-definitional perspective that identifies elements that recur across many definitions of school belonging. This work often builds on Goodenow’s emphasis on students feeling accepted, respected, included, and supported, while also shifting attention beyond individual feelings to the wider school context that enables these experiences. In keeping with this broader focus, the report also incorporates Indigenous perspectives on the conditions for belonging, which foreground relational and place-based dimensions such as connection to community, Country/Place, and cultural continuity. Figure 2 provides an overview of the seven definitional lenses and their relationships across psychological, relational, cultural, and contextual dimensions.

Figure 2.

School belonging definitions and their main lenses



When we bring these seven threads together, the big picture emerges: belonging is not just a personal feeling; it is a collective condition. The climax of this research is the realisation that belonging is not a fixed, binary state. Instead, it is a living system. It connects the student's inner need for relatedness to the school's outer culture of safety and mattering. When these lenses align, we move toward a true culture of inclusion.

The remainder of this section unpacks each lens in turn to show exactly what “counts” as belonging in psycho-educational research and why it matters. To achieve this, the report provides examples of how psycho-educational researchers have defined school belonging through each of the seven lenses: (1) psychological need, (2) safety, (3) mattering and acceptance, (4) ecological-contextual, (5) cultural-collective, (6) conceptual boundaries, and (7) meta-definitional. For each lens, it summarises the key definitional emphases that recur in the reviewed literature and indicate how these emphases shape what is foregrounded (and what is backgrounded) in research and measurement. Individual definition extracts by lens can be found in Appendix B. By defining these boundaries, we provide schools with the tools to measure what is currently invisible.

(1) Psychological need

Many scholars and public communicators attest that belonging is a basic human need as fundamental as food or water. Just as the body needs calories to survive, the mind possesses a powerful drive to form enduring, positive bonds and to feel like an essential piece of a social puzzle (Baumeister & Leary, 1995; Hagerty et al., 1992). In the world of education, this universal drive becomes a specific question of survival: Am I accepted here? This lens defines belonging as the extent to which students feel accepted, respected, included, and supported by the people who hold the keys to their environment, particularly their teachers (Goodenow & Grady, 1993; Hamilton, 2024). Theory suggests that this need for belonging is the engine of human motivation; when it is met, learning happens naturally, but when it is ignored, students lose the spark to engage (Glasser, 2013).

Recent syntheses reinforce this perspective by identifying belonging as a universal need as well as a context-specific appraisal that can fluctuate across classrooms, peer groups, and moments in time (Allen, Fortune et al., 2021; Darke & Clark-Howard, 2023; Ryan & Deci, 2000). Contemporary formulations further emphasise the quality and maintainability of interpersonal bonds across settings, including relationships with colleagues, students, teachers, and school leadership (Falkenberg & Heringer, 2024). Ultimately, this lens defines school belonging as a relational and affective experience rooted in a basic need for connection, while recognising that its expression is shaped by the immediate social context of schooling. It reminds us that while the need for belonging is universal, its success depends entirely on the immediate social climate of the school. If we want students to learn, we must first satisfy their psychological needs to belong.

(2) Safety

In terms of safety, school belonging is partly defined by students' perceived security in the school environment, where they feel protected from harm, intimidation, and exclusion, and confident in safe interactions with peers and teachers. Throughout the research, safety is often mentioned as an explicit part of belonging alongside support, respect, and inclusion. Building on Goodenow and Grady's (1993) research, recent studies suggest that belonging is impossible without a “felt sense of security and safety” (Darke & Clark-Howard, 2023). It is the very opposite of feeling threatened. Whether it is the fear of physical bullying or the social

anxiety of being humiliated by a teacher, any threat to a student's safety instantly erodes their belonging (Allen, Gray et al., 2022). This isn't just a side effect of a good school; it is a defining condition. When students feel they truly belong, they naturally report feeling safer and happier (Meng et al., 2025). Overall, the safety lens views school as a fundamental secure space of social membership where students encounter both protection from threats and dependable interpersonal support within the school community.

(3) Mattering

If a student is absent for a week, does anyone notice? This lies at the heart of the mattering and acceptance perspective.

For decades, researchers have defined belonging in terms of acceptance. It involves being welcomed, recognised, and regarded as a legitimate member of the school (Goodenow & Grady, 1993; Borch et al., 2025). This differs from the safety perspective, which defines belonging in terms of freedom from threat and perceived protection. Importantly, acceptance is merely the baseline. Contemporary research indicates that genuine belonging also requires mattering – that is, the deep-rooted belief that you are significant to others (Flett, 2022; Allen, Greenwood et al., 2024).

This lens focuses on two powerful themes: identity affirmation and social value. Students feel they belong when their identity is not just tolerated, but respected. They feel a sense of pride and incorporate the school into their identity (Alink et al., 2023). Social value is about having a voice. When students believe that teachers and peers look up to them or care about their views, their sense of belonging soars (Allen, Greenwood et al., 2024). This isn't just about feeling good; it is a vital shield for mental health.

In a large longitudinal study (Allen, Greenwood et al., 2024), the aspect of belonging related to social status, feeling socially valued and respected at school, was the strongest predictor of lower anxiety and depression in later adolescence. When a student feels they are an important part of a collective identity, they derive a sense of self-worth that protects them from the sense of failure and rejection that can accompany not belonging (Kuttner, 2023). Ultimately, this lens defines belonging as a dual experience: being accepted for who you are and being valued for what you contribute. It shifts the focus from simple inclusion to significance. For a student to truly belong, they must feel that they are not just in the school, but of the school, that they are an essential part of the story the community tells about itself.

(4) Ecological-contextual

We have seen belonging as a psychological need, safety, and a sense of mattering and acceptance. However, exploring a shared understanding of school belonging not only looks at the student's internal feelings, but also notices that belonging lives in the space between the student and their world, as supported by multiple researchers (Alink et al., 2023; Allen, Gray et al., 2022). The biggest mistake we can make is treating belonging like a personality trait, something a student either has or doesn't have. We risk blaming a student for not "fitting in" while ignoring the fact that the school's ecosystem, including its rules, its families, and its culture, might be pushing them away.

The ecological-contextual lens changes the narrative. It defines school belonging as a multisystemic, multifactorial construct that operates through bio-psycho-socio-ecological influences spanning the emotional, cognitive, and behavioural domains, as supported by Jain

et al. (2026). Within this frame, belonging is a form of personal involvement in a social system such that students experience themselves as indispensable and integral to that system (Anant, 1967; Davies et al., 2025). Subsequent scholarship has explicitly expanded school belonging to involve multiple interacting systems (Baumeister, & Leary, 2022; Allen et al., 2016; Allen et al., 2021).

Empirical and applied studies have tested school belonging within such socio-ecological models, examining how individual, peer, family, school, and intercultural factors jointly predict belonging and wellbeing, and using this framework to structure multilevel strategies for fostering belonging (Allen, Vella-Brodrick et al., 2016; Allen, Fortune et al., 2021; Allen et al., 2022; Basarkod et al., 2024). Recent work further positions school belonging as essential for all students and frames it as a fundamental human right (Gray et al., 2018, Allen, Gray et al., 2022). Ultimately, this lens defines belonging as a dynamic interplay. It is the moment when a student and their surrounding environment click together. When the systems around a student, from the principal's office to the kitchen table at home, align to support them, the student doesn't just attend school. They become an integral, essential part of the school's very fabric.

(5) Cultural-collective

In the previous ecological-contextual lens, we have seen that belonging is a dynamic interplay between a student and their environment. However, we must also ask: Who built this environment, and who was it built for? Too often, we mistake "fitting in" for belonging. If a student feels they must hide their language, mask their heritage, or leave their true identity at the school gate just to be accepted, that is a tax rather than belonging. The challenge for many schools is moving past a culture that pressures students to change who they are to match the dominant group.

This cultural-collective lens defines school belonging as a social, cultural, and political process more than an individual feeling (Kuttner, 2023). It asks difficult questions: Whose history is on the walls? Whose cultural practices are seen as "normal"? This perspective defines belonging as the right to be different while still being an essential part of the community (Anant, 1967; Davies et al., 2025). It extends socioecological accounts by emphasising that belonging is produced through collective norms, roles, and practices that can either reproduce or contest exclusionary boundaries (Allen, Gray et al., 2022).

Recent scholarship further defines school belonging as a human and cultural right, emphasising schools' communal duty to foster conditions where all students, particularly those from marginalised communities, can participate as valued members on their own terms (Gray et al., 2018; Allen, Gray et al., 2022; Kuttner, 2023). Ultimately, this lens recognises belonging as a fundamental human and cultural right (Allen, 2025). It is not a reward for good behaviour or a gift given to those who blend in. Instead, belonging is a promise that a student's identity and history are not obstacles to their membership, but the very things that make their presence in the school community meaningful and secure.

(6) Conceptual boundaries

School belonging has often been described as a continuum ranging from non-belonging to high belonging (Logel, interviewed in Allen, 2025). Its boundaries are seen as flexible and dependent on context: "belongingness is multi-faceted and context-dependent," and "to belong to a group is not the same as feeling like you belong" (Allen, 2021). Earlier work has sometimes implied that loneliness and belonging lie on a single continuum, with loneliness

understood as the absence of belonging (Lim et al., 2021). More recent accounts challenge this view, especially those that define belonging as broader than social relationships, and instead propose a dual-continuum model in which loneliness and belonging are related but can coexist rather than being opposite ends of a single scale (Lim et al., 2021).

School belonging has been understood as a graded continuum, from non-belonging to high belonging (Logel, in Allen, 2025). Its boundaries are porous and context-sensitive: “belongingness is multi-faceted and context-dependent,” and “to belong to a group is not the same as feeling like you belong” (Lee, in Allen, 2025). Leary further notes that both researchers and participants often use “belonging” to denote adjacent constructs (e.g., acceptance, fitting in, mattering, inclusion, being valued), muddying definitional clarity (Leary, in Allen, 2025). Crucially, Leary emphasises the need to distinguish belonging from acceptance, since much school discourse indexes personal acceptance by peers rather than belonging to groups (Allen, 2025). In sum, these points frame school belonging as a continuum, inherently context-dependent, and conceptually distinct from, but easily conflated with, related social-affective experiences.

In parallel, researchers have described continua for rejection, ostracism, loneliness, and isolation, and belonging sits alongside these rather than collapsing into them. Work on the need to belong strengthens this distinction by showing that individuals vary in their baseline need, meaning that high need coupled with low measured belonging places some students at heightened risk. This has led to proposals for dual- or tri-continuum models that treat belonging as a distinct construct while recognising that need, presence, and absence may each follow distinct patterns.

(7) Meta-definition or common elements of belonging

Meta-definitional approaches do not treat school belonging as a fixed single definition. Instead, they compare how belonging is defined across studies and identify common features, or shared threads, that appear in multiple conceptualisations. Throughout this work, school belonging is often described as inherently complex, and the various approaches to its scholarship demonstrate that belonging can be understood as attributions and perceptions – such as those drawn from cues, events, experiences, and relationships – regarding one’s sense of fit or potential fit within a setting (Walton & Brady, 2017; Allen, 2021). This understanding is shaped by cultural, historical, and contextual conditions at the same time (Gray et al., 2018).

Meta-definitional approaches in the review also acknowledge Indigenous perspectives, where belonging extends beyond social connection to include an ontological relationship with place, where people, land, and identity are inseparable. For Australian Aboriginal and Torres Strait Islander peoples, as one example, Country provides a deep source of belonging, identity, and continuity (Harrison & McLean, 2017). Moreton-Robinson (2015) frames belonging as rooted in spiritual and sovereign relationships to land, rather than solely interpersonal ties. Meta-definitional approaches merge these accounts to consider shared features.



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Related concepts of school belonging

Having outlined how school belonging is defined across the eight lenses, the next step is to clarify how it relates to nearby constructs. This is important both for conceptual precision and for interpreting findings in a literature where terms are sometimes used interchangeably. Across the reviewed studies, several adjacent constructs overlap with, but are not identical to, school belonging. In this section, we focus on connectedness, engagement, identity, relatedness, and relationships. These terms were selected a priori based on the review process and are illustrative rather than exhaustive.

Connectedness is typically framed as a broader, multi-component construct. Peng and Patterson (2025) describe school connectedness as comprising school attachment/belonging, teacher attachment, and prosocial peer attachment. In this view, belonging is one facet within a wider network of attachments. Raniti et al. (2022) similarly characterise connectedness as multifactorial, including students' perceptions of relationship quality and support. Conceptually, connectedness emphasises the network of ties and perceptions that surround students, whereas belonging focuses more directly on whether students feel they are of and in the school community. Social connectedness, therefore, relates to social connections and other people, whereas belonging extends beyond people and relationships and is, therefore, a broader term.

Engagement is defined in terms of participation rather than membership. Davies et al. (2025) distinguish belonging from engagement, noting that engagement concerns active participation in school activities across behavioural, emotional, and cognitive dimensions (Fredricks et al., 2004). Duran and Lleras (2025) likewise define school engagement as the interaction between

students and their educational environment, with cognitive engagement referring to learning strategies and behavioural engagement to participation. Emotional engagement (e.g., enthusiasm, interest) can overlap with belonging, yet engagement is primarily about what students do, while belonging is about how they feel situated in the school. Nevertheless, the two constructs have been found to overlap. See Allen & Boyle (2022) for a full review.

Identity, particularly ethnic–racial identity, is a multidimensional construct that shares relational and evaluative elements with belonging. López et al. (2025) describe ethnic-racial identity as involving affective and cognitive processes, including personal views and perceptions of how others view one’s group. It therefore overlaps with belonging in its concern with group membership, social evaluation, and feeling “seen.” However, identity work can occur in contexts where belonging is fragile or contested, and students may have a strong ethnic-racial identity without feeling that this identity is accepted within the school.

Relatedness in self-determination theory provides a broader motivational backdrop. Deci and Ryan define relatedness as the need “to be close to, trusting of, caring for, and cared for by others” (Deci & Ryan, 2012, p. 418, cited in Davies et al., 2025). This positions school belonging as a context-specific realisation of a basic psychological need. Relatedness emphasises the general need to form caring bonds; belonging captures students’ appraisal of how far that need is met in this particular school.

Finally, **relationships** are often treated as key antecedents or vehicles of belonging rather than belonging itself. Falkenberg and Heringer (2024) highlight peer relationships characterised by mutual support, respect, trust, care, dialogue, and safety as contributors to belonging. They also identify caring, meaningful teacher-student relationships based on trust, acceptance, and interdependence as central factors. Here, relationship quality is distinct from belonging: positive relationships make belonging more likely, but they are not synonymous with the felt sense of being an integral member of the school community.

These constructs converge on themes of social connection, support, and value, yet they diverge in focus (behaviour versus feeling; general need versus school-specific appraisal; individual ties versus membership in a group). This convergence can create conceptual and measurement problems. For example, some tools label items as “belonging” while primarily tapping connectedness, engagement, or relationship quality. A growing body of work on “belonging uncertainty” further shows that students may simultaneously experience moments of doubt about whether they truly belong, even when they appear engaged or socially connected. Clarifying which construct is being measured, and employing more consistent language across studies, would help reduce conceptual slippage and strengthen comparisons in the school belonging literature.

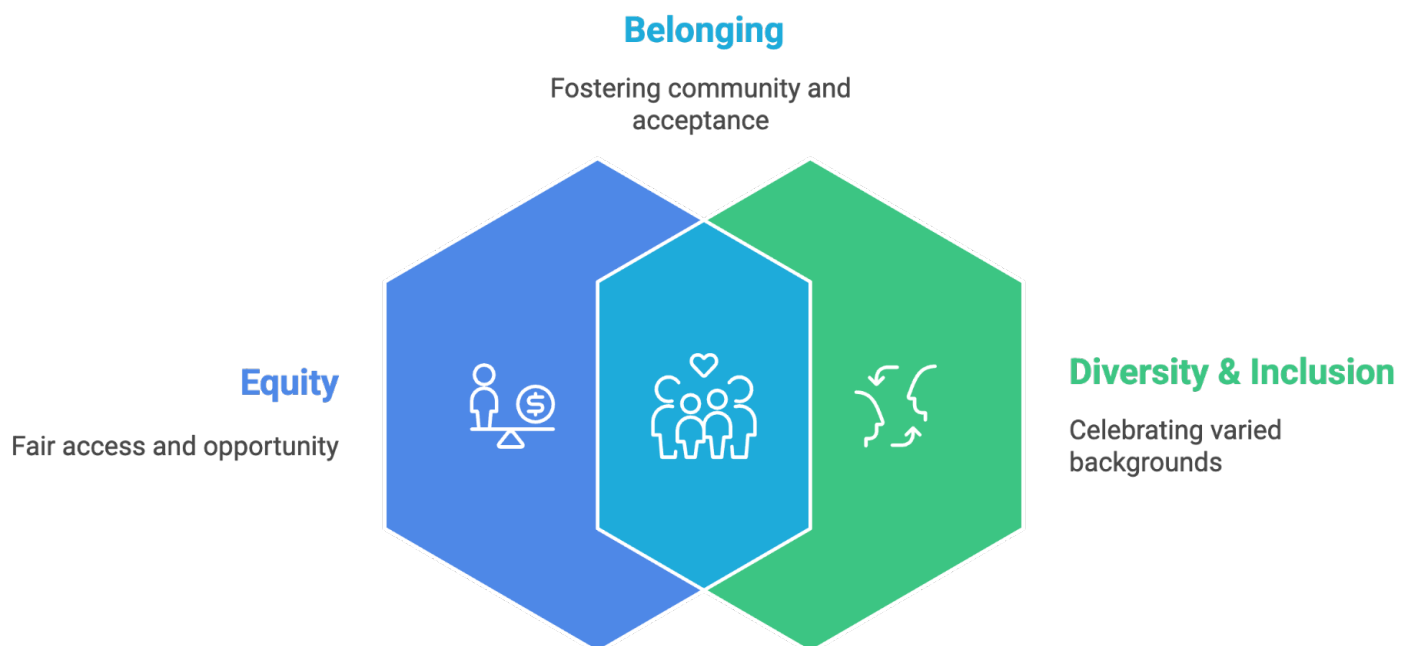
A special note on Diversity, Equity, and Inclusion

Although diversity, equity, and inclusion were not explicitly discussed in the reviewed papers, it is important to acknowledge their close relationship with school belonging. Belonging provides a way to understand how equity and inclusion are experienced by students in everyday school life (See Figure 3). Scholars have argued that belonging functions as the core construct through which inclusion, diversity, and equity become meaningful in educational settings (Allen et al., 2023). This position considers belonging as a necessary condition for genuine inclusion to occur. Surface-level inclusion may place diverse students in mainstream environments, yet

belonging is what enables their real inclusion with others in those settings. Allen and colleagues proposed a conceptual model positioning belonging at the intersection of inclusion, diversity, and equity, where it serves as the outcome of effectively implementing these practices and as the unifying element that ensures each concept is realised. Therefore, the real success of inclusive practices can be determined by the presence or absence of belonging among learners from marginalised groups. Taken together, belonging is the foundation for creating highly inclusive schools where equity and excellence become a norm for all students.

Figure 3

Belonging within a diversity, equity and inclusion perspective



1.1.2 BELONGING AS DEFINED BY CORRELATES AND ASSOCIATIONS

In the preceding section, we argued that school belonging is best understood through seven complementary lenses, spanning students' psychological needs, safety, mattering, and acceptance, as well as the ecological and cultural contexts that shape these experiences. We also clarified its conceptual boundaries with adjacent constructs, such as connectedness, engagement, identity, relatedness, and relationship quality.

A further way the field clarifies “what belonging is” is by what it relates to and predicts. Many scholars will therefore define school belonging by its correlates and associations, which can make understanding definitions murky.

This section asks:

How is school belonging defined and clarified in relation to its major correlates and associations (for example, flourishing and wellbeing)?

Although this approach is used in fewer studies, research on belonging can clarify its definition through its correlates and associations. In a review of 356 articles on school belonging, 14 defined belonging primarily through correlational patterns (see Appendix A for the search strategy, inclusion criteria, and approach).

Within this set, several studies position belonging as emerging from antecedent psychological characteristics. For example, Hernández et al. (2017) draw on Juvonen's work, noting that "Juvonen (2006) proposed that student self-worth precedes feelings of belonging in school." They further argue that "self-esteem, a global evaluation of one's worth (Harter, 2006; Ruiz et al., 2002), should help set the stage for developing positive school ties, social connections, and peer relationships" (Hernández et al., 2017). In this account, belonging is not defined as a stand-alone experience; instead, it is clarified through prior intrapersonal evaluations.

Other studies, by contrast, clarify belonging less through what precedes it and more through what it reliably accompanies, especially wellbeing and identity-related outcomes. Ibrahim and El Zaatari (2020) describe school belonging as "a psychological feeling of attachment that makes students want to go to school every day," while noting that it "is influenced by many factors, teacher-student relationships foremost (Uslu & Gizir, 2017). They further state that "school belonging is strongly correlated to other consequential dimensions of students' identities and behaviours: social and emotional well-being and self-esteem" (Farrelly, 2013). In this account, belonging is understood through its close ties to students' wellbeing and self-evaluations, rather than being defined as a sharply bounded construct in its own right.

A similar pattern emerges when belonging is defined by academic associations. Cupito et al. (2015) explicitly frame belonging in relation to achievement, stating that "previous research has shown that sense of belonging is positively related to grades, academic motivation, intrinsic value, students' expectation for success, and academic effort" (Goodenow & Grady, 1993; Hagborg, 1998; Roeser et al., 1996). They further note that "Goodenow and Grady (1993) found with a sample of Black, White and Latino 7th–9th graders that sense of belonging was more strongly associated with academic outcomes for Latino students." In this framing, belonging is made visible through its links to academic associations, with the strength of these links varying across student groups.

Alongside academic outcomes, several papers define belonging through relational and connectedness-based correlates. Wong et al. (2019), for example, describe school belonging in conjunction with supportive relationships, arguing that "adolescents who feel greater school connectedness, as represented by more supportive student-teacher relationships (STRs) and sense of school belonging (SSB), are more likely to project themselves into the future." Högberg et al. (2021) similarly situate belonging alongside related constructs, noting that "at the core of these terms is that they all aim to capture whether students feel accepted and included in the school environment, and as members of the school community" (OECD, 2017a). These formulations clarify belonging through shared relational indicators, particularly acceptance and inclusion, rather than through sharply distinct conceptual boundaries.

Another set of studies places belonging within broader developmental or motivational systems, using theory to explain why these associations might occur. Doumas and Midgett (2019),

drawing on self-determination theory, state that “the social context of the school is central to the fulfillment of the need for relatedness and positive school contexts support healthy development” (Deci & Ryan, 2012). Chang et al. (2020) likewise present belonging within socialisation processes, arguing that individuals “accept the socially valued goals in the process of getting along with important others so as to meet the need for social relationships and sense of belonging,” with these interpersonal and psychological processes influencing academic achievement (Wentzel, 1999). In these accounts, belonging is associated with outcomes and is positioned as part of a wider developmental pathway.

Health-focused studies extend this logic by describing belonging through its protective associations. Perales and Campbell (2020) report that “higher levels of school belonging have also been linked to positive health outcomes among youth,” proposing that this effect “may operate through emotional connections with school peers and staff, which can buffer health stressors and foster participation in developmental activities.” Chen et al. (2021) similarly describe school belonging “in terms of the relationship between peer victimisation and adolescent life satisfaction,” emphasising that “the relatedness, engagement, and social support associated with school belongingness have the potential to both improve mental health and wellbeing while mitigating the negative effects of peer victimisation.”

Finally, some studies provide an especially broad correlational account of belonging’s links across domains. Fisher et al. (2020), for instance, argue that “a better sense of belonging predicts fewer negative behaviours in school,” higher academic achievement, “better academic attitudes and intrinsic motivation,” improved self-efficacy, and “greater satisfaction with the school environment.” They also note that lower connectedness is associated with “psychological issues and poorer health and developmental outcomes such as substance abuse, violence, and suicidality,” as well as “depression and anxiety.”

These studies frequently clarify school belonging through what it predicts, what predicts it, or what it co-occurs with. This correlational tradition has been valuable for demonstrating why belonging matters and for mapping its links to learning, relationships, and health. At the same time, it shows a limitation: when belonging is defined mainly through its associations, definitional boundaries can blur, and the construct can drift away from its core experiential features (feeling accepted, valued, and included).

1.1.3 VARIATION ACROSS AGES, CULTURE AND DIVERSE POPULATIONS

This section addresses the question:

How does the experience of belonging vary across different ages, cultures, and diverse student populations, including “perceived belonging”?

Early years belonging for minoritised children

The report suggests that minoritised children are at greater risk of non-belonging, but that arts-based, inclusive practices can counter this risk by broadening the ways children can participate and build peer relationships. In early childhood settings, variation in belonging lies less in age (the focus is consistently early childhood) and more in whether pedagogy actively recognises, legitimises, and values difference. For example, Ajodhia and CohenMiller (2024) conceptualise belonging as part of “communities of learners” in early years classrooms, where children’s voices, identities and participation are acknowledged. Their integrative review focuses on minoritised children, including those from diverse cultural and linguistic

backgrounds and children with disabilities within classroom micro-communities, and frames belonging as being heard, seen, and treated as capable contributors.

Because young children may have limited opportunities to articulate belonging through formal measures, this report emphasises perceived belonging, inferred from the extent to which learning environments make space for identity expression and meaningful participation. Arts-informed pedagogy is a key mechanism for this as it offers multiple communication languages, such as art and drama, alongside or beyond dominant verbal and behavioural norms. These alternative modes can be especially important for children who experience linguistic, cultural, or ability-related mismatch with mainstream expectations, enabling them to participate more fully and build peer connections. In other words, the report supports that minoritised children's belonging in early childhood is most likely to be supported when everyday classroom life consistently communicates: you are welcome here, you are seen, and you are valued. This pattern mirrors findings from postsecondary research, where students from marginalised groups often benefit most when environments clearly signal that they are welcome, visible and valued (Fong et al., 2024).

Cross-cultural mobility and complex, deterritorialised belonging

For highly mobile young people who grow up across multiple cultural contexts, belonging is often described as deterritorialised (e.g., Donohue, 2022). Belonging is shaped by their mobility, hybridity, and the ever-changing social worlds they encounter, less anchored in a single nation, locality, or stable community. Donohue's (2022) review of Third Culture Kids (TCKs) shows that many TCKs locate belonging in a "third culture" formed through shared experiences of international movement rather than in one passport country or place of residence. Common themes include "belonging everywhere and nowhere", feeling "at home" with other cross-cultural individuals, and identifying as a TCK as a source of belonging in itself.

Perceived belonging in these studies is strongly tied to identity negotiation and cultural multiplicity. TCKs report feeling simultaneously connected to several cultures yet not fully accepted in any one national context, including their passport country. Their most secure sense of belonging often comes from relationships with other TCKs, where mobility and hybridity are normalised. Variation in belonging is therefore driven by mobility and cultural context rather than by schooling stage. Mechanisms include the frequency and quality of moves, expectations of temporary residence, the presence of cross-cultural peer networks and the extent to which school and community narratives allow for complex, multi-sited identities. These accounts underline that perceived belonging reflects young people's own interpretations of fit and recognition, not simply their formal membership in a school or nation, as argued by Fong et al. (2024).

Conceptual reviews emphasising marginalised groups and perceived belonging

Broader conceptual syntheses reinforce that variation in belonging is context-sensitive, especially for students positioned as minoritised. Allen, Kern et al. (2021) emphasise that marginalised groups, including Indigenous peoples, racialised minorities, sexually and gender diverse students and people with disabilities, are often more frequently exposed to exclusionary cues and therefore more vulnerable to low belonging and its associated consequences. At the same time, they note that group membership can sometimes be protective, for example, when it is accompanied by strong in-group connection, shared identity, or affirming community spaces. Evidence from postsecondary research further supports this. A systematic review of postsecondary settings found that the academic and wellbeing benefits of

belonging were often strongest for students from marginalised groups, suggesting that differences in belonging can vary where it is not so much about the group, but the context in which the group belongs (Fong et al., 2024). Importantly, school-sector data also show that marginalisation does not always map neatly onto lower belonging. In Australia's PISA 2015 results, Australian-born students reported a significantly lower sense of school belonging than first-generation and foreign-born students, with no significant difference between first-generation and foreign-born students; foreign-born students' mean belonging also did not differ significantly from the OECD average. Consistent with the idea that context and covariates matter, Parker et al. (2022) found that Indigenous status was a positive predictor of school belonging, even after controlling for other factors like SES, whereas immigrant status showed a small positive association in their Australian cohorts. They also warn against overly optimistic readings, noting that Indigenous students may appear less belonging in unadjusted comparisons, and broad demographic groups can conceal significant within-group diversity and intersectional variation. These findings don't mean all immigrant or Indigenous students in Australia feel more belonging; they highlight the review's main point that perceived belonging depends on how recognition, fit, and value are signalled in specific contexts, and patterns can vary widely across communities, cohorts, and schools.

A special note on Indigenous populations.

It is also worth signalling that for Indigenous communities, belonging to country is deeply entwined with identity, sovereignty, and dispossession of land, signalling that place-based belonging can look different depending on unique accounts of history and context. In colonised contexts, these meanings cannot be separated from histories of sovereignty, dispossession, forced displacement, and cultural disruption, which shape when and how belonging is recognised, contested, or denied. As a result, place-based belonging may look qualitatively different for Indigenous students and communities and may not be well captured by generic school belonging measures that assume belonging is primarily interpersonal or school-centred. This is an important point for the review because it highlights how belonging is inherently historical and political as well as psychological, and why interpretations of "perceived belonging" must remain sensitive to local Indigenous histories and the broader power relations that structure educational contexts.

Perceptions of belonging and age-related differences

The reviewed set did not produce many studies that directly compared age groups, but broader literature indicates meaningful developmental differences in how belonging is understood and narrated. Supplementary work (Allen, Berger et al., 2025) suggests that younger children described belonging through immediate experiences of feeling happy, safe, and included, and having friends who cared about them, whereas older children expressed belonging with more detail, showing early signs of linking belonging to identity and social roles. Older children were also found to have a greater developed sense of the importance of providing a sense of belonging to others. More generally, adolescence is widely treated as a sensitive period for belonging because social orientation shifts toward peers: the negative effects of social exclusion and loneliness are described as particularly high during adolescence, and adolescents are characterised as actively seeking peer approval and avoiding exclusion (Tomova et al., 2021). As adolescents move toward greater independence, the main source of social interaction is described as shifting from parents and family toward peers; fitting in with the peer group becomes a key developmental goal, linked to the transition into independent adulthood and the formation of a social self-identity (Tomova et al., 2021).

This explains why ‘perceived belonging’ can become more volatile during adolescence. Small cues carry larger identity and status implications because time spent with peers increases, and young people’s sense of social and personal worth is influenced by peers’ thoughts, making them more susceptible to peer influence (Tomova et al., 2021). Relatedly, evidence from adversity research illustrates how belonging-relevant experiences operate through perceptions rather than only objective conditions: children’s negative perceptions of peers (e.g., expecting others to “put you down” or being left out) are tied to poorer adjustment, and these perceptions can mediate links between adverse experiences (such as maltreatment) and internalising and behavioural outcomes (Ross et al., 2023).

Exclusion and the need to belong

Allen, Gray et al. (2022) develop Baumeister and Leary’s “need to belong” argument by treating belonging as a basic human motive, while also recognising that the strength of this need can differ across individuals and contexts. Cross-cultural work suggests that cultural norms may shape what “belonging” looks like in schools and which relationships count most. For example, collectivist cultural settings tend to emphasise interdependence and in-group goals, whereas individualistic settings tend to emphasise autonomy and personal goals, and these differences can change how students interpret belonging cues in the school environment (Cortina et al., 2017). Allen, Gray et al. (2022) also stress that belonging can have both positive and problematic forms. For instance, students who experience exclusion may seek belonging elsewhere and be more prone to join harmful groups. In adolescence, peer rejection can contribute to clustering with deviant peers, creating “alternative” groups where acceptance is available, but the norms may reinforce antisocial behaviour (Kornienko et al., 2020). At the extreme end, public health work on gang affiliation shows that delinquent peer friendships are a key risk factor, and explicitly frames preventing gang affiliation as a way to reduce later gang activity and harm (McDaniel, 2012). This is why school belonging matters for prevention: by reducing everyday exclusion and strengthening safe, prosocial bonds with peers and adults, schools can interrupt pathways from rejection to risky affiliations and related harms.

1.1.4 THEORETICAL MODELS AND FRAMEWORKS OF BELONGING

This section addresses the *question*:

What theoretical model or conceptual framework would best support the understanding of the mechanisms of belonging in various educational settings?

Various theoretical frameworks and models have been used to explain belonging because the construct sits at the intersection of basic human motivation, relationships and group processes, and institutional and cultural contexts, as discussed in previous sections. In practice, no single theory fully captures how belonging is built, signalled, withheld, and repaired in classrooms, schools, online spaces, and communities. Instead, belonging research has typically used complementary frameworks to explain different mechanisms, such as why belonging matters (needs-based accounts), how it’s formed (relational and participation accounts), how it’s monitored (social-evaluative accounts), and how it’s shaped by context, through ecological and cultural accounts (Baumeister & Leary, 1995; Deci & Ryan, 2000; Bronfenbrenner, 1979; McMillan & Chavis, 1986; Lave & Wenger, 1991; Leary, 2005).

Allen (2025) summarises several “traditional” theories that have shaped dominant psycho-educational approaches to belonging (Table 1), including Maslow’s needs hierarchy (Maslow, 1968; 1971), the belongingness hypothesis (Baumeister & Leary, 1995), SDT/relatedness

(Deci & Ryan, 1985, 2000), attachment (Bowlby, 1969), communities and participation traditions (Cohen, 1982, 1985; Lave & Wenger, 1991; McMillan & Chavis, 1986), ecological systems theory (Bronfenbrenner, 1979, 1986), and sociometer theory (Leary, 2005). What these theories share is a core claim: belonging is consequential because humans are oriented toward connection, and social environments continuously provide cues about acceptance, value, and membership. Where they differ is which mechanism they privilege. For example, SDT centres the need for relatedness as a driver of engagement and wellbeing; sociometer theory emphasises how perceived acceptance calibrates self-evaluations and behaviour; communities-of-practice explains belonging as emerging through legitimate participation; and ecological systems theory explains why belonging varies across classrooms and cultures because children are nested within interacting systems (family, peers, school policies, community, and wider cultural narratives).

Table 1

Selected Theoretical Frameworks Traditionally Referenced in Belonging Research

Theory	Main Elements
Maslow's Hierarchy of Needs (1968; 1971)	Belonging is a core human need necessary for self-actualization.
Baumeister & Leary's Belongingness Hypothesis (1995)	Belonging is a fundamental human need and people have an intrinsic drive to form and maintain interpersonal relationships.
Glasser's Choice Theory (1986)	Belonging is one of five basic psychological needs driving human behaviour.
Belongingness and Boundary Constructs in a Community (Cohen, 1982; 1985)	Communities contribute to belonging through shared boundaries, norms, and symbolic membership.
Self-Determination Theory (Deci & Ryan, 1985; 2000)	Relatedness (used interchangeably with belonging) is one of three basic psychological needs, alongside autonomy and competence.
Sense of Community Theory (McMillan & Chavis, 1986)	Belonging (described as membership) is one of four elements of community.
Communities of Practice (Lave & Wenger, 1991)	Belonging develops through participation.
Attachment Theory (Bowlby, 1969)	Secure attachments, especially in early life is foundational for healthy development.
Ecological Systems Theory (Bronfenbrenner, 1979a, 1979b, 1986a)	Belonging is shaped by various systems that influence human development.
Epstein's Framework of Parental Involvement (1992)	Belonging is enhanced through school-family-community partnerships.
Leary's Sociometer Theory (2005)	Individuals have an internal sociometer, which influences self-esteem, and ultimately social behaviour.

Note. The theories outlined in this table reflect a limited and narrow collection of traditionally cited psychological and sociological theories that have shaped dominant Westernised understandings of belonging. These approaches offer only a partial view of belonging, grounded largely in Euro-American perspectives (see Allen, 2025) and may exclude longer-standing understandings of belonging (e.g., philosophical, Indigenous), many of which emphasise place-based and non-relational ideals of belonging. The table also omits newer conceptual contributions that have shaped empirical and applied work, such as research on belonging uncertainty (Walton & Cohen, 2007; 2011). Finally, it does not include cultural narratives, poetry, or lived experience, increasingly recognised as important in cross-disciplinary scholarship.

Need-based motivational frameworks: Self-Determination Theory and basic psychological needs

Across the reviewed papers, need-based motivational frameworks provide a strong foundation for explaining how belonging operates across educational settings. These accounts share a common premise: belonging matters because it reflects the satisfaction of fundamental human needs. Classic formulations include Maslow's hierarchy of needs, which positions belongingness as a basic need that supports psychological security and growth, and Glasser's Choice Theory, which similarly places "belonging/love" among core needs that guide behaviour. Closely aligned is the Belongingness Hypothesis (Baumeister & Leary, 2017), which argues that humans have a pervasive need to form and maintain stable, positive relationships; when this need is unmet, wellbeing and functioning are undermined. These perspectives justify why belonging should be treated as more than a "nice to have": it is a motivational and developmental condition that shapes how students engage with school and with others.

Within this broader family, Self-Determination Theory (SDT) offers particularly clear mechanisms for educational contexts because it specifies both what needs matter (autonomy, competence, relatedness) and how environments can support or frustrate them. Conesa et al. (2022) synthesise research on autonomy, competence, and relatedness in elementary and middle school settings through Self-Determination Theory (SDT) and Basic Psychological Needs Theory. In this framework, belonging is anchored in relatedness satisfaction and is inseparable from autonomy and competence. Needs-supportive teaching, characterised by warmth, structure, autonomy support and high expectations, is the central mechanism to building school belonging. When teachers support students' needs, they foster autonomous motivation and engagement, which in turn are linked to wellbeing and achievement. When classroom practices thwart these needs, motivation and belonging suffer.

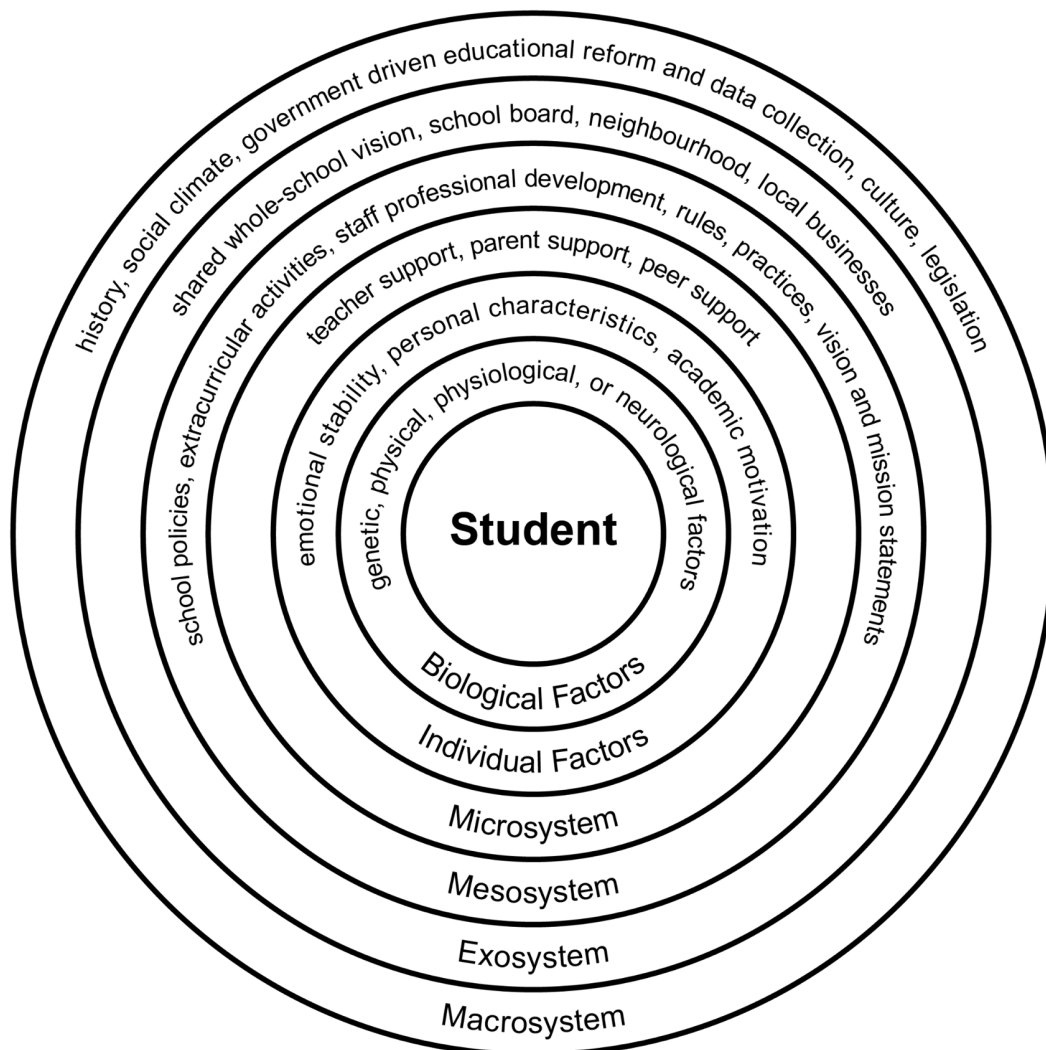
Meng et al. (2025) extend this needs-based view into adolescence using a meta-analytic cross-lagged panel design. They conceptualise school connectedness, including belonging, as arising from relationships with teachers and peers and from feeling that school is important. Their model integrates SDT with social development and developmental contextualism theories. The key contribution is a reciprocal mechanism: higher school belonging predicts fewer future depressive symptoms, and lower depressive symptoms predict higher future connectedness. In other words, fulfilling belonging needs protects mental health, while mental health difficulties erode perceptions of connection over time. This dynamic perspective shows that belonging is not simply a static input to outcomes, but part of an ongoing person-context loop, where students' mental health influences their sense of connection to school, and their level of connection then feeds back to influence future mental health.

Ecological and systems perspectives: neighbourhood, school and peer networks

Socioecological models explain belonging as a result of interconnected contexts, including individual experiences, classroom climate, wider community, and structural conditions (Figure 4). These contexts shape belonging, considering students' identities, location, learning environment, and opportunities and constraints. Duran and Lleras (2025) push beyond individual and dyadic processes to examine how structural context shapes belonging. Drawing on neighbourhood effects theories and Harding's cultural heterogeneity theory, they treat school belonging as the emotional strand of engagement, enjoyment of school, feelings of safety, and closeness to teachers and peers. In their multilevel model, neighbourhood disadvantage is not simply background noise. Instead, dangerous and economically disadvantaged neighbourhoods are theorised to erode school belonging through exposure to disorder and violence and through constraints on peer networks. Peer acceptance then acts as a central mechanism that can either reinforce or counter these structural pressures. For students in disadvantaged contexts, peer acceptance at school is a powerful protective factor that supports belonging and engagement. This work illustrates that mechanisms of belonging operate simultaneously at individual, relational, school and community levels.

Figure 4.

Example of a socioecological model (Allen et al., 2018, used with permission).

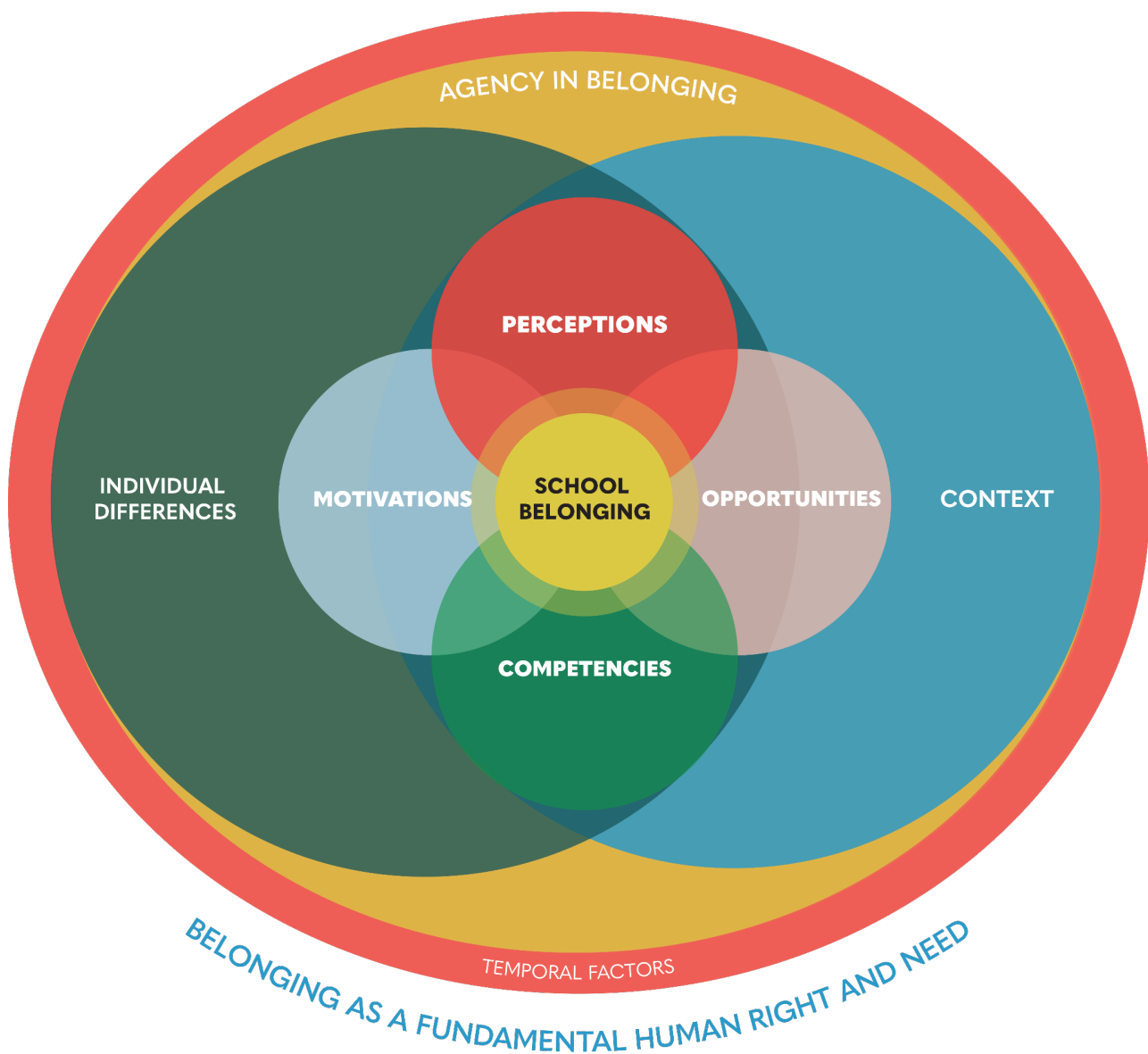


Meta-theoretical integrative frameworks for school belonging

Allen (2025) adds an explicitly meta-theoretical layer by applying and extending the Integrative Framework of School Belonging to school contexts (Figure 5). Using expert interviews and narrative synthesis, the paper evaluates how well existing theories, such as SDT, Bronfenbrenner’s ecological systems, the belongingness hypothesis, sociometer theory and others, fit contemporary educational settings. Experts highlight persistent definitional ambiguity, related problems with constructs (acceptance, fitting in, mattering), and a theory-practice gap in which frameworks are cited but underused in everyday school decision-making.

Figure 5.

Integrative Model of School Belonging (Allen, 2025, used with permission)



Artwork by Kathryn Kallady

Within the Integrative Framework, belonging is conceptualised as an ongoing, negotiated process shaped by students' perceptions (e.g., attributions, perceived relational value, beliefs about belonging), competencies (social, emotional, and cultural skills), motivations (including variation in the need to belong and avoidance of rejection), and opportunities (interpersonal, instructional, and institutional). These antecedents are embedded in contextual, temporal, and individual factors such as cultural and political settings, historically colonised contexts, school structures and composition, leadership, transitions, developmental stage, personality, attachment, and intersecting identities. The framework, therefore, connects micro-level psychological processes to meso- and macro-level conditions, and explicitly invites translational use in interventions, policies, and school leadership practice. It also distinguishes trait belonging (a more stable, core sense of being connected) from state belonging (short-term, situation-specific feelings), which helps explain why the same student may experience belonging differently across lessons, peers, and key school transitions.

Building on the distinction between state and trait belonging, sociometer theory offers a clear mechanism for why belonging can fluctuate across lessons, peer groups, and school transitions. Sociometer theory suggests that self-esteem acts as an internal gauge, monitoring perceived relational value and producing rapid affective shifts that motivate behavioural regulation to maintain inclusion. In school settings, where peer status and acceptance cues are significant and socially impactful, everyday interactions (e.g., being ignored, excluded, corrected publicly, or welcomed) should predict short-term changes in self-evaluations and emotions, which in turn influence participation, help-seeking, and relationship maintenance.

This core claim is supported by experimental and naturalistic evidence showing that self-evaluations respond to rejection/acceptance cues (including subtle signals of social value) in ways consistent with a relational “monitor” (Anthony et al., 2007; Weisbuch et al., 2009). Diary work in early adolescence similarly shows that daily affect and self-esteem vary meaningfully with peer-related functioning, aligning with the idea that social feedback in everyday contexts drives within-person fluctuations (Nelis & Bukowski, 2019). Framed this way, sociometer theory benefits as a testable mechanism that can be examined across settings and indicates actionable leverage points, the kinds of cues and practices that reliably communicate inclusion and relational value.

A closely related framework is belonging uncertainty, developed in the social-psychological belonging tradition. Walton and Cohen (2007) suggest that students, especially those from historically stereotyped or underrepresented groups, become more vigilant to cues of acceptance or rejection when they doubt the quality of their social bonds. This cue-sensitivity influences how students interpret everyday adversity, leading to mechanisms of belonging. Ambiguous negative events are more likely to be interpreted as evidence of non-belonging, triggering withdrawal, reduced help-seeking, and lower performance. These processes can become recursive if poorer outcomes further confirm non-belonging. This account suggests that students' perception of difficulty and social setbacks explains why brief social-belonging interventions, such as normalising belonging doubts and providing credible narratives of eventual fit, can have lasting effects on targeted groups (Walton & Cohen, 2011).



Photo by Vitaly Gariev on Unsplash

1.1.5 BRIEF DISCUSSION

The evidence reviewed in Sections 1.1.1-1.1.4 indicates that school belonging is best understood as a multi-component construct rather than a single feeling or trait. Across the psycho-educational literature, belonging is consistently grounded in students' perceptions of being accepted, respected, included, and supported in the school social environment, but this interpersonal focus is now extended through lenses that foreground safety, identity, mattering, ecological context, and culture. Belonging functions both as a core psychological need and as a situated appraisal of "fitting" within a particular school setting, shaped by everyday interactions, structures and histories. Clarifying these definitional contours is essential because they determine how belonging is measured, how it is distinguished from related constructs such as connectedness and engagement, and which levers schools view as open to change.

The synthesis of definitional work (Section 1.1.1) shows increasing convergence around several common elements. First, belonging is rooted in relatedness and safety: students feel they belong when they experience secure, trusting relationships and when school is a place where they feel physically and psychologically safe. Second, acceptance and mattering extend this relational base by signalling that students' identities are recognised and that their presence and contributions are valued, rather than merely tolerated. Third, ecological and cultural lenses emphasise that belonging is co-constructed across multiple systems – classrooms, whole-school climate, families, communities, and wider socio-political contexts – and that these systems distribute opportunities for belonging unequally.

Finally, work on conceptual boundaries highlights the need to distinguish belonging from adjacent constructs: connectedness describes broader networks of ties, engagement refers to participation, identity captures how students see themselves and their groups, while relationship quality is a key antecedent of belonging rather than a direct synonym. Together,

these strands support a meta-definition of school belonging as students' inferential, context-dependent sense of being safe, accepted, and significant members of their school community, embedded within wider social and cultural systems.

In relation to flourishing and wellbeing (Section 1.1.2), the reviewed studies converge on the view that school belonging is a central pathway rather than a peripheral correlate. Stronger belonging is consistently associated with fewer symptoms of depression and anxiety, better psychosocial adjustment, lower involvement in risk behaviours, higher life satisfaction and stronger academic engagement and achievement, with some evidence of effects extending into adulthood. Distinctions between trait and state belonging are important here: enduring, trait-like belonging appears more protective for mental health than short-lived feelings of inclusion, suggesting that schools need to cultivate stable cultures and relationships rather than rely on occasional “feel-good” activities.

At the same time, the way belonging is operationalised is often narrower than the breadth of outcomes it predicts. Many instruments foreground emotional and relational aspects (feeling included, respected, supported) while giving less attention to agency, cultural recognition, voice, or rights-based dimensions, even though these factors are central to flourishing for many students. This creates a tension between increasingly rich conceptualisations of belonging and relatively constrained measurement practices.

The analysis of variation across ages, cultures, and diverse populations (Section 1.1.3) further underscores that belonging is not evenly distributed and that “perceived belonging” is crucial. In early childhood, belonging is expressed through participation, recognition, and the validation of multiple “languages” of expression, with minoritised children particularly dependent on inclusive, arts-informed pedagogies to counter invisibility. For mobile and cross-cultural youth, such as Third Culture Kids, belonging is often deterritorialised and anchored in relationships with others who share similar hybrid experiences, rather than in a single national or school context.

Conceptual and empirical work on marginalised groups, Indigenous, racialised, LGBTQ+, disabled and neurodivergent students, highlights that exposure to exclusionary cues, stigma and structural disadvantage increases the effort required to interpret whether one genuinely belongs. In these contexts, perceived belonging hinges not only on interpersonal warmth but also on cultural safety, visibility, and the extent to which schools affirm students' identities and rights. The same formal environment can therefore be experienced as welcoming by some students and as threatening or marginalising by others.

SECTION 2

What are the drivers and barriers of belonging in K–12 education in schools and in a digital learning environment?



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2.1 Drivers and barriers of belonging

This section addresses the overarching question:

What are the drivers and barriers of belonging in K–12 education in schools and in a digital learning environment?

OVERVIEW

In Section 2, the report investigates the factors associated with the drivers and barriers of school belonging in K–12 education, drawing on evidence from school-based and digital learning environments. The purpose of this section is to clarify the most significant influences, their mechanisms of action, and the extent to which conclusions can be drawn with certainty from the extant evidence.

A key task in this section of the synthesis is to be precise about what the research shows. Many of the included studies use terms like 'driver', 'predictor', and 'correlate' interchangeably, even though they imply different levels of influence and actionability. In this review, drivers are factors that schools can realistically change and that are likely to shift students' sense of belonging when they do (for example, classroom routines or relationship practices). Predictors are factors that tend to precede belonging and help identify who is more or less likely to feel they belong, but they may not be easy for schools to change directly (e.g., some background characteristics). Correlates are variables that co-occur with belonging, but the evidence does not show which one comes first or whether another influence explains both. Making these distinctions explicit helps avoid overclaiming and supports clearer, more practical conclusions.

To address the section's guiding question, this section also treats belonging as something that changes over time and can create feedback loops. Across school and digital settings, belonging is not a fixed trait that students either have or do not have. Instead, early experiences of inclusion or exclusion shape their participation in class, interactions with peers and teachers, and online interactions. These responses then affect later opportunities for connection, which can either strengthen or further weaken belonging. For this reason, many factors discussed in this section may work in both directions: they can influence belonging, and they can also be shaped by belonging over time. Where the evidence allows, the synthesis highlights these dynamics and is cautious about making cause-and-effect claims when studies cannot rule out reverse influence.

With this in mind, the evidence is organised into four strands. Section 2.1.1 provides a high-level synthesis of key findings across the literature. Section 2.1.2 explains why belonging matters in both school and digital learning environments. Section 2.1.3 synthesises evidence on how school belonging relates to student wellbeing and flourishing across school and digital learning contexts. Section 2.1.4 examines proposed drivers of belonging across classrooms, peer groups, families, schools and digital environments. Section 2.1.5 analyses barriers and conditions associated with lower belonging, including structural, relational, and online risks. Sections 2.1.6 then assess the strength and limitations of the empirical evidence, followed by Section 2.1.7 with a brief discussion. Throughout, the focus remains on students' everyday experiences of feeling accepted, valued, safe and connected, drawing together findings across levels of influence where schools are most likely to have leverage in both in-person and digital contexts.

2.1.1 KEY FINDINGS

- Belonging in K–12 settings consistently relates to better mental health, stronger engagement and more positive learning outcomes in both in-person and digital environments.
- Drivers of belonging align with Allen's Integrative Framework: students' perceptions of being known, valued, and supported, the competencies of adults and students, underlying motivations to connect, and concrete opportunities to participate, all shaped by the wider context.
- The strongest empirical support is for relational and opportunity-based drivers (e.g., warm teacher and peer relationships, inclusive climates, structured chances to connect), including in online and hybrid learning spaces.
- Key barriers include structural and institutional racism, deficit views, hostile or unsafe climates, bullying and cyberbullying, cumulative disconnection and loneliness, and digital exclusion or fragmented support in remote learning.
- Evidence suggests possible negative feedback loops, where repeated experiences of non-belonging and exclusion erode trust and motivation, making later opportunities for connection less effective.

2.1.2 IMPORTANCE OF BELONGING IN SCHOOLS AND A DIGITAL LEARNING ENVIRONMENT

One of the questions addressed in this section:

Why is belonging important in schools and in a digital learning environment?

Across the included studies, belonging was a central resource for young people's mental health, academic functioning, and adaptation, both in physical schools and in digital or remote learning contexts. Although the designs and measures of the studies vary, the overall pattern is consistent: students who feel accepted, respected, and connected to their school communities tend to report better wellbeing, more adaptive engagement, and fewer risky or problematic behaviours.

Belonging, loneliness, and mental health

Several studies highlight belonging as a key buffer against loneliness and psychological distress. In a large longitudinal study of Finnish adolescents, Beattie et al. (2025) examined belonging across multiple groups, including friends, school, hobbies, home, and broader society, and identified distinct loneliness trajectories over seven waves. Profiles characterised by higher belonging across these groups displayed lower loneliness, better mental wellbeing, and lower school burnout. In contrast, students in a "stable high loneliness" trajectory reported the lowest levels of belonging and the poorest wellbeing. This provides strong evidence that sustained belonging across multiple social domains is broadly protective during adolescence.

Cross-sectional work further emphasises this pattern. Wagle et al. (2021) used a person-centred approach with upper primary students in California and found that high school belonging was associated with the lowest psychological distress and the highest psychological strengths within a complete mental health framework. Students with low belonging showed the opposite pattern: elevated distress and diminished strengths, with around one third of the

sample falling into this vulnerable constellation. Chen et al. (2025) extended this line of inquiry among Chinese students in grades 5–9, modelling school belonging as a mediator between school climate and negative emotions. A positive climate, characterised by teacher and peer support and opportunities for autonomy, predicted greater school belonging, which in turn was linked to fewer negative emotions. Negative climate was associated with social avoidance and distress. Belonging thus functioned as a key mechanism through which the school environment shaped emotional outcomes.

Belonging-related constructs also spill over into broader life satisfaction. Ulmanen et al. (2024) showed that peer-relatedness and study engagement fully mediated the association between study-related peer support and adolescents' life satisfaction in Finnish upper secondary schools. Peer support did not directly predict life satisfaction; instead, students who felt accepted and connected to peers were more engaged in their studies and, in turn, reported higher overall life satisfaction. Marsh (2023) focused on school connectedness among adolescents with emotional and behavioural disorders in the United States. Although the study did not model outcomes directly, it documented distinct connectedness profiles for students with and without such difficulties and framed school connectedness as a protective factor against dropout, risk behaviours, and mental health problems.

Taken together, these studies indicate that school belonging, connectedness, and relatedness are tightly linked to reduced loneliness, lower distress and negative emotions, and greater psychological strengths and life satisfaction. They also suggest that belonging often operates as a mediating mechanism between contextual factors (such as school climate or peer support) and mental health outcomes.

Belonging, engagement and learning

Belonging is also portrayed as important for students' engagement and academic performance. Wagle et al. (2021) showed that primary students with high belonging not only experienced better mental health but also demonstrated stronger psychological strengths, which are typically associated with adaptive engagement and learning. Qualitative perspectives reinforce this academic dimension. In a socio-ecological study in Türkiye, Akbaba Altun and Turan Bora (2024) analysed open-ended responses from high school students about what different stakeholders can do to foster school belonging. Students consistently linked belonging with higher academic achievement, motivation, self-esteem, and general health, as well as lower anxiety, depression, dropout, and behavioural problems. Although these associations were not tested statistically in this study, they reflect how young people themselves perceive belonging as a foundation for academic and motivational outcomes.

Maddens et al. (2023) provide more direct quantitative evidence in a digital context. In an online research skills course for Belgian upper secondary students, they compared a standard 4C/ID-based course with an otherwise identical version that explicitly supported autonomy, competence, and relatedness. Both groups improved on a knowledge test, but students in the need-supportive condition performed better on a complex research task and showed lower amotivation. While the authors use self-determination theory language rather than “belonging”, the relatedness support dimension is conceptually aligned with belonging to the learning environment. Their findings suggest that designing online courses that support students' needs for connection, alongside autonomy and competence, can translate into more adaptive motivation and stronger performance on demanding tasks.

Other studies offer converging qualitative evidence. In Qatari secondary schools, Allen and colleagues (2024) found that students viewed caring, supportive teachers, being treated “as people”, and engaging school environments as central to feeling they belonged. They associated this sense of belonging with better social-emotional adjustment and school functioning, including in periods of remote learning. Similarly, Marsh (2023) drew on prior research to argue that improving school connectedness is vital for academic and behavioural outcomes, particularly for students with emotional and behavioural disorders. Although these studies rely more on perception and prior literature than on new outcome modelling, they reinforce the view that belonging is intertwined with engagement and academic trajectories.

Belonging in digital and remote learning contexts

Several studies speak directly to the importance of belonging in digital or hybrid learning environments. Perkins et al. (2021) investigated middle and high school students during 13 weeks of fully remote schooling due to COVID-19. They found that school connectedness was negatively associated with anxiety and depressive symptoms, even after controlling for general social connectedness and demographic variables. This suggests that feeling connected specifically to school – as an institutional and learning community – can provide unique protection for mental health in digital-only contexts, beyond the benefits of peer relationships alone.

Meissel et al. (2025) examined 10-year-old children’s experiences during the COVID-19 lockdown in Aotearoa New Zealand. Most children reported feeling socially connected and enjoying time with family. Higher social connectedness and positive household dynamics were associated with greater school satisfaction and better wellbeing, despite disruptions to in-person schooling. These findings show that connectedness can act as a buffer in crisis conditions and that children’s sense of belonging extends across home and school spheres, including when schooling is mediated through distance learning.

Belonging also appears relevant to digital risk behaviours. Fang et al. (2025) studied Chinese secondary vocational students and modelled school belonging as a predictor of problematic online game use. Higher school belonging was associated with fewer emotional symptoms, which in turn predicted lower problematic gaming, with physical exercise moderating some of these relationships. This suggests that belonging does not only support positive wellbeing; it may also indirectly reduce maladaptive digital engagement by alleviating emotional distress.

Finally, Maddens et al. (2023) show that relatedness-supportive features in an online course can enhance motivation and complex performance, and Allen et al. (2024) report that students see belonging as important for adjustment both in-person and during remote learning. Together, these studies indicate that belonging remains crucial when learning is mediated by digital technologies. It supports mental health during remote schooling, strengthens engagement in online coursework, and may reduce vulnerability to problematic online behaviours.

2.1.3 BELONGING AND WELLBEING

We now turn to the relationship between school belonging and flourishing/wellbeing. In this review, belonging is not treated only as an outcome of schooling. Instead, the evidence supports a bidirectional relationship: stronger belonging tends to support wellbeing and flourishing, and students’ wellbeing and capacity to flourish also shape their ability to participate, connect, and sustain belonging over time. This framing matters because wellbeing

and flourishing are central aims of education, and belonging functions both as a pathway to these outcomes and as a condition that is itself strengthened or weakened by students' psychological, social, and contextual resources.

Converging evidence indicates that stronger school belonging is prospectively associated with fewer depressive and anxiety symptoms and broader adolescent health benefits, with higher life satisfaction and lower exposure to bullying in international datasets, and with greater motivation/engagement and higher academic success, together positioning belonging as a core pathway to student wellbeing (Moallem, 2013; OECD, 2019; Raniti et al., 2022). At the same time, wellbeing and flourishing are not merely downstream effects: when students experience distress, threat, or chronic stress, their willingness and capacity to engage with peers and teachers, take social risks, and invest in school life can weaken, processes that can, in turn, reduce belonging.

Belonging as a protective factor for wellbeing, mental health, and risks

In this section, we synthesise this literature to address the question:

How does school belonging relate to flourishing and wellbeing?

Conceptual and review papers emphasise that school belonging is linked to better psychological adjustment, while low belonging is associated with distress and risk behaviours (e.g., Allen et al., 2021; Howard, 2025). Carter-Plouffe (2024) argues that a strong sense of belonging in Indigenous and non-Indigenous classrooms supports positive wellbeing and mental health. By contrast, a lack of belonging is linked with depression and risky behaviours as analysed by Millings et al. (2012). Darke and Clark-Howard's (2023) review of diverse high school students similarly concludes that trait belongingness is more important for mental health than short-term feelings of inclusion.

During fully remote schooling in the USA, school connectedness, feeling accepted, respected, included, and supported, was uniquely associated with lower anxiety and depression, even after accounting for wider social connectedness (Perkins et al., 2021). This positions school connectedness as a protective factor for mental health in digital learning contexts. Similarly, in Turkish secondary schools, school belonging mediated the relation between strength-based parenting and academic motivation (Arslan et al., 2023). In Finland, peer support predicted life satisfaction indirectly through relatedness and engagement (Ulmanen et al., 2024). Across these studies, belonging-like constructs consistently appear as mechanisms linking relational and contextual drivers to both wellbeing and learning outcomes.

It may be possible that the strong associations with wellbeing emerge from belonging being a fundamental human need. Darke and Clark-Howard (2023), Borch et al. (2025), and Allen et al. (2021) all build on need-to-belong theories and classic motivational work (e.g., Maslow; Baumeister & Leary). They argue that belonging underpins most human action and has wide-ranging positive effects, including improved social relationships, academic outcomes, occupational success, and better physical and mental health. In this body of work, school belonging is not a soft extra, but one of the basic conditions for young people's wellbeing and development.

The distinction between trait and state belongingness is also central in this literature. Darke and Clark-Howard (2023) and Allen et al. (2021) emphasise that a stable, enduring sense of

belonging (trait) appears more crucial for mental health than transient feelings of inclusion (state). Trait belongingness is associated with more robust mental health and wellbeing, while fleeting experiences of feeling included may not be sufficient to protect against distress. This distinction has practical implications: it suggests that schools need to cultivate sustained cultures and relationships that support ongoing belonging, rather than occasional “feel-good” activities.

Other papers reinforce the idea that low belonging, loneliness, and structural risk combine to undermine wellbeing. Falkenberg and Heringer (2024) synthesise research showing that loneliness and lack of belonging are associated with problems in students’ health, wellbeing, and school success. Duran and Lleras (2025) add an ecological dimension, showing that living in dangerous and economically disadvantaged neighbourhoods is linked to poorer developmental outcomes, including lower school engagement, reduced life satisfaction, and worse physical and mental health. Within these contexts, school belonging can act as a buffer, but it is also more difficult to achieve.

The evidence base also extends beyond immediate mental health indicators to short- and long-term risk and resilience. Allen, Jamshidi et al. (2022) summarise studies where positive school belonging is associated with better psychosocial health, adult functioning, and psychological wellbeing, and with reduced school violence, truancy, substance use, mental illness and bullying. Research has further argued that school belonging is linked not only to motivation and wellbeing during schooling, but also to later employment, engagement in higher education, substance use behaviours, and adult mental health (Allen, Greenwood et al., 2025; 2024; Parker et al., 2022). Gokman Arslan, interviewed in Allen (2025), underscores that school belonging is related to a broad range of school-based outcomes and young people’s overall quality of life.

Relational and emotional mechanisms

Most papers foreground relational and emotional pathways between belonging and flourishing. Darke and Clark-Howard (2023) highlight nurturing teacher-student relationships, small relational groups, and affirming student voice as core mechanisms through which schools can buffer risk and promote wellbeing for vulnerable learners. Falkenberg and Heringer (2024) identify supportive teacher-student and peer relationships, inclusive curricula and pedagogy, and family and community engagement as key levers that operate across ecological levels to foster both belonging and mental health.

These relational mechanisms are also evident in studies focusing on neurodivergent students. Hamilton (2024) positions lack of belonging as a major driver of emotionally based school avoidance among autistic and neurodivergent young people. In this work, wellbeing depends on students feeling accepted, valued, and understood in ways that honour neurodiversity. Belonging is closely tied to agency and participation. Neurodiversity-affirming practices, predictable structures, and efforts to reduce the “double empathy” gap between staff and autistic students are presented as critical to creating psychological safety, reducing anxiety and supporting flourishing.

Quantitative evidence from related fields supports these relational pathways. Howard et al.’s (2021) meta-analysis, grounded in self-determination theory, does not measure belonging directly but focuses on need-supportive and need-thwarting behaviours in student populations. Across nearly 400,000 students, relatedness support and other need-supportive behaviours are positively associated with wellbeing and engagement, while controlling and rejecting

behaviours are related to poorer wellbeing and maladjustment. Although framed in terms of autonomy, competence and relatedness, this work reinforces the idea that environments which satisfy students' need to connect and feel they belong are those in which they are more likely to flourish. Equally, when wellbeing is undermined by need-thwarting environments, students' capacity to connect and belong is reduced.

Ecological, structural and equity perspectives

Several papers move beyond individual relationships to emphasise how school belonging and wellbeing are shaped across ecological systems. Poole (2025) uses socio-ecological systems theory to locate school belonging within interacting layers of influence, extending from individual perceptions to classroom climate, school structures and wider social contexts. In this view, family relationships are part of the ecology of belonging: positive parent–child relationships and healthy emotional connections with primary caregivers are linked to children's prosocial behaviour and mental health, which in turn support their capacity to engage and belong at school.

Structural conditions outside school also play a critical role. Duran and Lleras (2025) show that living in dangerous and economically disadvantaged neighbourhoods is associated with poorer developmental outcomes, including lower school engagement and achievement, reduced life satisfaction, and worse physical and mental health. Within these constrained contexts, peer relationships at school emerge as important protective assets. Supportive peer acceptance can enhance resilience and strengthen students' sense of belonging, partly offsetting the risks associated with neighbourhood disadvantage. This underscores that school belonging is not evenly distributed; it is constructed at the intersection of community risk, school climate and peer networks.

Equity and justice are prominent themes also for mental health and wellbeing. Lobenstein et al. (2022) argue that many youth mental-health curricula overlook access, equity and belonging, which may limit their impact on wellbeing for marginalised groups. Borch et al. (2024) review survey instruments used to study belonging among young people. They find that most school measures fail to capture agentic, intersectional, systemic, political or rights-based dimensions. Yet the outcomes associated with school belonging in these studies extend beyond emotional wellbeing to absenteeism, dropout, involvement in “adverse” activities and later economic independence. This review suggests that current measures reflect a relatively narrow emotional-relational view of flourishing, even though the consequences of belonging and non-belonging are much broader.

2.1.4 DRIVERS OF BELONGING

Another question addressed in this section:

What are the key drivers of student belonging in schools and in a digital learning environment?

Prior research indicates that a relatively small number of domains shape students' sense of school belonging. Across reviews and empirical studies, the most commonly proposed influences include the quality of relationships with teachers and peers; opportunities for participation, contribution, and recognition in learning; perceptions of safety and fairness; experiences of bullying and exclusion; and broader features of school climate such as expectations, consistency, and respect (Allen, Cordoba et al., 2022b; Allen et al., 2018;

Korpershoek et al., 2019; Thapa et al., 2013; Wang & Degol, 2016). Evidence from large-scale international datasets, most notably the Programme for International Student Assessment (PISA), shows that these factors tend to co-occur across education systems, even after accounting for student background characteristics (OECD, 2019; Castelli & Marcionetti, 2024; Palikara et al., 2025). At the same time, socio-ecological research demonstrates that their influence operates across multiple levels, including classrooms, peer groups, schools, families, and wider social contexts (Allen et al., 2016; Allen et al., 2022).

Building on this foundation, the purpose of this section is to examine drivers of school belonging, that is, the conditions and practices that schools can influence to strengthen belonging. Across ten studies, the strongest and most consistent drivers of belonging cluster around relational opportunities with peers and adults, family and community contexts, and intentional design of learning environments, including digital spaces. These drivers operate through students' perceptions of being accepted, valued, and seen, and are shaped by wider cultural and structural conditions.

Relational Opportunities as a Core Driver

Relational opportunities, especially peer and teacher support, emerge as the clearest drivers of constructs related to belonging. In upper secondary school, peer support in study-related situations predicted students' sense of relatedness to peers, which, in turn, supported engagement and life satisfaction (Ulmanen et al., 2024). Here, peer support functions as both an opportunity (having peers to turn to) and a perceived signal that one is accepted and respected. Teacher-student relationships play a similarly central role. In Qatari secondary schools, students rated teacher encouragement, support, and being treated "as people" as strategies that helped them feel they belonged, both in-person and during remote learning (Allen et al., 2024). These practices combine relational opportunities with powerful perception-level mechanisms: students interpret teacher care as evidence of their relational value and place in the school community. These studies support the Integrative Framework's claim that belonging is not simply about being present in a setting, but about receiving, noticing, and interpreting relational cues as inclusion and value.

Family and Home Contexts as Drivers of School Belonging

Several studies show that belonging in school is shaped by relationships and routines beyond the school gates. In the New Zealand longitudinal cohort, family functioning, positive household dynamics and social connectedness during lockdown were associated with higher school satisfaction and wellbeing among 10-year-olds, even when schooling was fully remote (Meissel et al., 2025). Family interactions provided both emotional security and everyday opportunities for connection, which children appeared to generalise to their school experience. A Turkish study of adolescents returning to school after COVID-19 closures found that strength-based parenting – parents noticing and encouraging their children's strengths – predicted school belonging and academic motivation, with belonging acting as a mediator (Arslan et al., 2023). Here, family practices shape young people's competencies (strength use) and motivations (confidence to enact these strengths), which in turn bolster how they perceive their status and fit at school. Parent-focused interventions can also act as school-adjacent drivers. In a US parenting program embedded in Title 1 elementary schools, design elements

such as safe, non-judgemental spaces, clear respectful ground rules, facilitator warmth and shared goals fostered high social connectedness among parents, which was linked to reductions in children's behaviour problems (Plesko et al., 2024). While the primary outcome was parent connectedness, qualitative accounts indicate that parents felt more connected to the school community, suggesting a broader ecology of belonging in which family-school ties support children's experiences. Collectively, these studies show that school belonging is influenced by multi-level relational ecologies, aligning with the framework's emphasis on contextual layers and cross-system influences.

Community, Culture and Design of Learning Experiences

Beyond dyadic relationships, some studies highlight community-level and culturally grounded drivers. In the Chilean STEAM project, students, teachers, neighbours, and elders co-designed digital and non-digital artefacts representing local cultural heritage (Videla et al., 2024). The process, rather than any single tool, appears to drive belonging: participants engaged in participatory, culturally situated design, using VR/AR, fabrication technologies and storytelling to affirm a shared sense of place and identity. This work speaks directly to the "opportunities" component of the framework: belonging is strengthened when students are given meaningful roles, can contribute their knowledge, and see their culture recognised and valued in learning activities. It also illustrates how community-cultural opportunities intersect with digital affordances, extending belonging beyond the classroom to neighbourhood and territory.

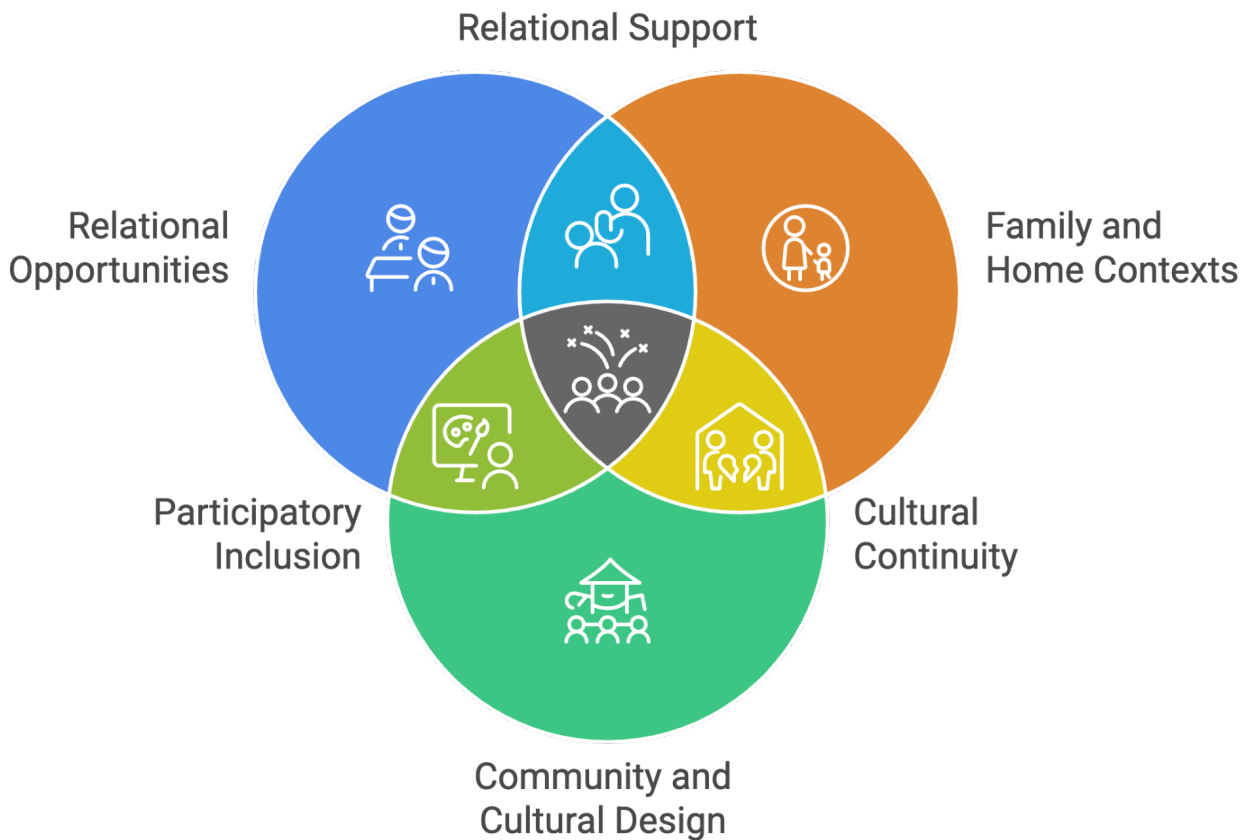
Allen (2025) points to specific structural and cultural levers that promote belonging. Interventions that develop students' emotional regulation and co-regulation with peers and teachers have been shown to improve psychological wellbeing and social connectedness, suggesting that skills-based programmes can enhance the conditions for belonging. At the cultural level, students who perceive their school as culturally congruent and active in intercultural education, learning to represent, respect and communicate across cultural differences, report stronger wellbeing and a greater sense of belonging, irrespective of background. Allen argues that some groups can be predicted to be especially vulnerable to cues of non-belonging and especially sensitive to cues of belonging, and that these students can flourish when environments actively welcome them. Drivers of belonging in education are summarised in Figure 6.



Photo by CDC on Unsplash

Figure 6

Belonging Drivers in Education



Mechanisms: Perceptions, Competencies and Motivations

Across the evidence base, four mechanism clusters align with the Integrative Framework:

- **Perceptions:** Students' sense of being accepted, noticed, and valued is central. Whether through peer support, teacher encouragement or recognition of cultural heritage, it is the interpretation of experiences as signals of inclusion that matters.
- **Competencies:** Several studies implicitly highlight social, emotional, and cultural competencies. Strength use (Arslan et al., 2023) can be read as a competence that enables students to contribute and feel efficacious in school settings. In digital and community projects, competencies in collaboration and communication underpin the capacity to make use of opportunities for connection.
- **Motivations:** Students' willingness to seek help, participate in activities or engage with peers influences whether opportunities translate into actual connections. Although motivation is less often measured directly, findings on strength use, engagement and participation suggest that motivational readiness shapes how strongly drivers can operate.
- **Opportunities:** Belonging is more likely to strengthen when students have regular, fair chances to participate and connect in everyday school life. These opportunities include relationship-rich classroom routines, peer collaboration, student voice roles, co-

curricular activities, and access to learning and wellbeing support. In digital and hybrid settings, opportunities also depend on access to platforms and online spaces that make interaction safe and sustained. When opportunities are built into routines rather than offered as one-off events, they create repeated moments for students to contribute, be recognised, and experience school as a place where they belong.

These mechanisms are not independent; they interact within cultural and institutional contexts, as emphasised by the framework.

Contextual and Modal Considerations: In-Person vs Digital

In addition, the reviewed studies show that drivers of belonging are shaped by both learning mode and broader context. During COVID-19 disruptions, relational drivers remained central, but the way they were enacted changed. In Qatar, teacher encouragement was viewed as supportive of belonging in both remote and in-person modes, whereas break-time activities and opportunities to make friends were more salient when students were physically at schools (Allen et al., 2024). Similarly, evidence from New Zealand and the USA suggest that when school moved online, family and home contexts became more visible as key sources of support (Meissel et al., 2025; Perkins et al., 2021). Importantly, studies of community-focused and parenting programs that moved to synchronous online formats (Videla et al., 2024; Plesko et al., 2024) demonstrate that digital environments can sustain or even expand opportunities for connection when intentionally designed.

These studies show that technology alone is not the key factor. What truly matters is how digital spaces are designed and managed, including whether they offer safe, inclusive, and participatory environments that facilitate meaningful interaction and recognition. This highlights a consistent set of drivers focused on relational opportunities, family and community connections, culturally significant participation, and the intentional creation of learning environments, including digital spaces. Nonetheless, identifying these drivers is only the initial step. For schools and systems, the practical challenge is translating these broad influences into concrete, prioritised actions that are intelligible and feasible in real settings. To address this implementation gap, a Live Delphi study was conducted independently of this review to test whether empirically identified drivers could be translated into clearly defined strategies and whether there is international consensus on which strategies are most important (Allen, Riley et al., 2025, preprint).

Findings from a consensus study

To translate broader drivers into actionable, prioritised practices, the report draws findings from a three-phase Live Delphi study designed to address the lack of international agreement on what schools should do to strengthen school belonging (Allen, Riley et al., 2025, preprint). The study combined (i) an empirical synthesis of strategies drawn from peer-reviewed studies in which belonging was measured as an outcome, (ii) ratings from children and young people alongside adult stakeholders, and (iii) structured expert consensus across six countries. In Phase 1, school belonging researchers identified evidence-linked strategies from the literature, yielding a large pool of candidate practices. In Phase 2, children and young people, alongside adult stakeholders, rated these strategies for importance, feasibility, cost, and likely impact. In

Phase 3, an international expert panel refined wording, resolved ambiguities, and prioritised strategies through a facilitated, in-person Delphi process.

Across iterative rounds, the Delphi study reached agreement with the predefined 80 per cent threshold for all strategies. Twenty-two strategies reached final consensus on wording and intent, with twenty achieving unanimous agreement. Minor differences related to terminology did not alter the agreed statements. Priority ratings showed strong convergence around strategies that address learning needs, social connection, cultural recognition, staff support, and clear ways to evaluate belonging. Differences between student and adult priorities reinforced the importance of including multiple stakeholder voices in strategy development.

The study found international consensus on school belonging strategies is achievable when evidence, lived experience, and professional judgement are brought together in a structured way. The result is a set of strategies ready for piloting, evaluation, and system-level use, which are summarised below:

- **Meet diverse learning needs:** Understand the diversity of children's learning needs and provide opportunities and supports to meet them; Provide comprehensive and developmentally appropriate feedback to students to make sense of their learning processes; Teach students how to set short-term goals, provide strategic feedback, and teach self-evaluation; Ensure a holistic and whole school approach to learning and wellbeing.
- **Strengthen relationships and connection:** Create opportunities for connection to expand social networks across ethnic and cultural groups; Build effective community partnerships based on trust; Strengthen meaningful relations with parents for engagement and collaboration; Adopt a whole-school practice of consistent and personalised student-teacher relationships; Develop structured opportunities for all stakeholders to feel socially valued at school.
- **Recognise culture and identity:** Embed recognition of the diverse cultures which make up the school community within school policy; Create an environment and opportunities to build students' confidence and self-worth; Create welcoming spaces to meet students' holistic needs.
- **Safety, fairness, and behaviour:** Create and maintain physical, psychological, and emotional safety across all school environments; Create appropriately positive and consistent approaches to managing behaviour; Show fairness by being transparent about how decisions are made when appropriate; Address attendance and absenteeism through relational approaches rather than punitive measures.
- **Agency, voice, and participation:** Embed opportunities for student-led non-academic opportunities; Create opportunities that nurture students' agency and voice within the school experience; Have a dynamic approach to identifying and reducing barriers to school belonging.
- **Leadership and staff conditions:** Create effective and practical ways to define and evaluate belonging; Strengthen staff visibility, support, and recognition; Ensure strategic leadership decisions are made through a compassionate lens.

The consensus strategies identified through the Live Delphi study reflect strong agreement on how schools can actively support belonging in practice. However, clear strategies do not guarantee that belonging will be realised. Across the reviewed literature, belonging is repeatedly shown to be vulnerable to a range of relational, structural, and contextual barriers

that can undermine even well-intentioned efforts. The following section, therefore, shifts from identifying what supports belonging to examining what constrains it.

2.1.5 BARRIERS TO BELONGING

Having identified the key drivers of school belonging and the strategies that translate these drivers into actionable practice, the next step is to examine what can undermine belonging. Understanding the barriers of school belonging is essential for two reasons. First, barriers help explain why belonging remains uneven across schools, student groups, and learning contexts, even when schools adopt well-intentioned approaches. Second, identifying barriers clarifies the conditions under which the strategies identified through the Delphi are most likely to succeed, and the points at which they may be weakened or reversed. As these barriers are discussed below, they should be interpreted considering prior research showing that both barriers and drivers can take different forms across diverse school contexts, including material, resource-based, or economic constraints such as limited access to technology, unreliable internet, and poorly maintained or unhygienic environments, as some examples (Allen, Osborne et al., 2025).

This section addresses the question:

What are the barriers to a sense of belonging in schools and in a digital environment (including but not limited to bullying behaviours, both physically on-site and cyberbullying as well)?

Across the included studies, barriers to belonging cluster in three areas: (i) structural and cultural exclusion in schools; (ii) chronic disconnection across social settings; (iii) digital exclusion and weakened relationships during remote learning. These map onto failures or distortions in perceptions, competencies, motivations, and opportunities, as described in the Integrative Framework of Belonging.

Structural and institutional barriers: racism, climate and “unbelonging”

Akuoko-Barfi et al. (2023) show how Black Caribbean youth in Ontario experience school as a system “not built” for them. Exclusion is produced by policy and practice, not individual failings. Students describe:

- Racist structures such as streaming, harsh discipline, and deficit-based assumptions.
- Curriculum and norms centred on whiteness, which render Black identities and histories marginal.
- Daily surveillance and misrecognition signal that they are unsafe and do not fully belong.

Within the framework, these findings reflect failures of opportunities (few safe, valued roles), distorted perceptions (being seen as risky or deficient), and powerful contextual forces (historical and ongoing anti-Black racism). Even when students comply with school expectations, they remain positioned at the margins.

Cumulative disconnection and internalised non-belonging

Beattie et al. (2025) examine how belonging to friends, school, hobbies, home, and wider society unfolds over time. They identify a group of adolescents with persistently high loneliness. These students report:

- Consistently low belonging across multiple groups.
- Worse mental health and higher school burnout than their peers.

The barrier here is not a single negative event. It is a pattern of limited or fragile membership across everyday contexts. From a framework perspective, these young people face a long-term shortage of credible, stable opportunities to join and remain in valued groups. Over time, this can shape perceptions that “I do not belong anywhere”, making later offers of connection harder to trust.

Digital exclusion and fragmented support in online schooling

The two studies on COVID-era remote schooling highlight how digital transitions can magnify existing inequities and create new barriers.

Page et al. (2021) focus on students with disability and additional learning needs in Australia. Staff report that, once learning moved online, many students lost:

- Accessible digital tools and platforms.
- One-to-one and specialist support.
- Informal contact where difficulties and distress are usually noticed.

These conditions reduced both opportunities for participation and the capacity of adults to use their competencies in inclusive practice. Students risked “slipping through the cracks”, and from their point of view may have felt unseen and unimportant.

Tosun et al. (2021) describes teachers’ experiences in Türkiye at the start of the pandemic. They highlight:

- Unequal access to devices and internet.
- Low digital skills among some teachers and families.
- Low or inconsistent student participation, especially for vulnerable groups.

Teachers sometimes could not reach entire groups of students. For those young people, there were almost no relational or instructional contacts with school. In framework terms, basic opportunities were absent, context (infrastructure and family resources) limited what schools could offer, and repeated failures to connect are likely to have shaped students’ perceptions of being outside the school community.

2.1.6 STRENGTH OF EVIDENCE

The preceding sections examined drivers and barriers that influence belonging in school and digital learning environments, helping to explain why belonging varies across schools, student groups, and learning contexts. Building on this, the following section synthesises what the reviewed studies collectively indicate about the mechanisms through which belonging is supported and undermined, organised using the Integrative Framework of School Belonging

(Allen, 2025). The framework brings together evidence on relationships, participation, and context by explaining how belonging develops through students' everyday opportunities, interpretations, skills, and expectations within school and digital environments. This section therefore addresses the question:

From the papers reviewed, what findings support the integrative framework on school belonging?

Guided by the Integrative Framework of Belonging (Allen, 2025), this section evaluates how the reviewed studies align with the framework's proposed mechanisms. Specifically, the framework conceptualises belonging as shaped by (a) opportunities for connection and participation, (b) perceptions of being accepted, valued, and supported, (c) competencies that enable students and adults to navigate relationships and learning contexts, and (d) motivations to seek, maintain, or avoid connection, each operating within contextual conditions (e.g., culture, structures, resources, and learning mode). Across the included studies, evidence most consistently supports the centrality of relational and participatory opportunities, alongside students' everyday perceptions of being known and supported, with additional support for the importance of staff and family capabilities and for the shaping role of context (including digital provision).

Opportunities and participation

Across the reviewed papers, the clearest support for the framework comes from findings emphasising the importance of structured opportunities to connect, participate, and be recognised, both in-person and online. Studies describing remote learning and hybrid arrangements highlight that when schools intentionally maintain contact, design inclusive activities, and create routes for peer connection, students are more able to remain socially and academically connected (Charteris & Page, 2021; Page et al., 2021; Allen, McCarthy et al., 2024). School-linked programmes that structure regular, facilitated interaction similarly illustrate how intentionally designed opportunities can strengthen connectedness within the wider school community (Plesko et al., 2024). Collectively, these findings support the framework's emphasis that belonging is enabled through access to interaction, contribution, recognition, and participation, not simply through pro.

Perceptions of being accepted, valued, and supported

A second consistent pattern aligns with the framework's focus on students' perceptions. Across settings, relational practices (e.g., encouragement, responsiveness, supportive contact) are repeatedly described as shaping whether students feel noticed, respected, and included, which signals the "felt" experience of belonging (Allen, McCarthy et al., 2024; Hossain & Bain, 2025). These studies support the framework's proposition that belonging operates through how students interpret daily interactions and school messages, particularly whether they experience school as a place where they are safe, valued, and socially included.

Competencies of adults and systems

Several papers support the framework's competencies component by showing the salience of adult capabilities (e.g., teacher confidence, inclusive knowledge, and relational skills) and the system's readiness to respond to diverse learning needs. For example, work on teacher self-efficacy provides robust evidence about factors associated with educators' competence beliefs (Kachchhap & Horo, 2021), while qualitative accounts from parents and stakeholders

underscore the importance of staff understanding and neuro-affirming practice for supporting connection and reducing isolation (Hossain & Bain, 2025). In combination, these studies align with the framework's emphasis that belonging is more likely to be supported when adults and systems have the skills, confidence, and practices needed to build inclusion in everyday interactions.

Motivation and engagement processes

Motivational processes appear most often in the reviewed papers as part of the belonging-engagement-wellbeing pattern: belonging is linked with engagement, persistence, and broader adjustment, and disruptions to connection are described as undermining participation (Page et al., 2021; Poole, 2025). Although motivational mechanisms are not always measured directly, the findings support the framework's proposition that belonging is intertwined with students' willingness to participate, invest effort, and remain connected, especially when learning conditions change and participation becomes harder to sustain.

Context and learning mode as shaping conditions

Finally, the studies provide clear support for the framework's emphasis on contextual conditions, including culture, structural resources, and learning mode. Evidence from the COVID-era of schooling shows that core drivers (especially relationships) remain central across modes, but their expression depends on what digital and home contexts make possible (Meissel et al., 2025; Perkins et al., 2021; Allen et al., 2024). Studies also highlight how infrastructure, coordination, and equitable access shape whether online connections can function as genuine sources of belonging (Baskaran et al., 2024; Page et al., 2021). These findings align closely with the framework's view that drivers are best understood as operating within broader structural and cultural conditions, rather than as universally "portable" inputs.

Across the reviewed papers, the strongest convergence with the Integrative Framework is seen in evidence emphasising opportunities for connection and participation and the perceptions those opportunities generate (being known, valued, safe, and included). The studies also support the role of adult and system competencies, highlight the close coupling of belonging with motivation/engagement, and consistently show that context, including digital conditions, shapes how these mechanisms operate. Taken together, the reviewed findings provide converging support for the framework's central claim: belonging is produced through multiple, interacting pathways and is most visible in students' lived experience of everyday relational, participatory, and contextual conditions.

2.1.7 BRIEF DISCUSSION

The studies in this review show that belonging is a core condition for students' mental health, engagement and learning across both in-person and digital environments. High levels of school belonging and related constructs such as connectedness and relatedness are consistently linked with lower loneliness, distress and burnout, alongside stronger psychological strengths, motivation, and academic functioning. In many models, belonging operates as a mediating mechanism through which school climate, peer support and family dynamics shape emotional and academic outcomes, rather than as a peripheral by-product.

The evidence also indicates that drivers of belonging are multi-layered and align closely with Allen's Integrative Framework of Belonging (2021). Relational opportunities with teachers and peers, such as caring interactions, encouragement, and cooperative activities, are the most

robustly supported antecedents. Students repeatedly identify being known, treated “as people”, and having structured chances to connect with classmates as central to feeling that they belong. Family and community contexts further shape belonging, with strength-based parenting, positive household dynamics and participatory community projects supporting students’ sense of value and membership. In both physical and digital spaces, it is not technology itself but how environments are intentionally designed to support relatedness, autonomy and competence that appears to drive belonging.

Barriers to belonging mirror these drivers, but in reverse. Structural and institutional racism, deficit views of students with disabilities or behavioural differences, and Eurocentric curricula position some groups as perpetually “out of place”. Digital exclusion, loss of specialist support, and limited access to devices or a stable internet connection further weaken opportunities for connection during remote learning. For some adolescents, disconnection extends across home, peer, and school contexts, creating a pattern of high loneliness and low belonging over time. Interpreted through the integrative framework, these conditions represent failures or distortions in perceptions (being seen as risky, invisible, or unimportant), competencies (limited capacity to notice and include), opportunities (few credible chances to participate) and context (inequitable policies and infrastructures).

Across the corpus, there are indications of negative feedback loops. Repeated experiences of surveillance, exclusion, or being overlooked can consolidate the belief that one does not belong anywhere, making later offers of connection harder to trust. Likewise, when students are rarely contacted during remote learning or cannot access online platforms, absence becomes normalised, and motivation to re-engage may decline. These cumulative patterns suggest that belonging is not simply switched on or off by a single event; it is built or eroded over time through recurring interactions and structural conditions.

Methodologically, the strength of evidence is promising but uneven. A small group of longitudinal and quasi-experimental studies provides moderate to strong evidence that belonging trajectories relate to wellbeing and engagement, and that relatedness-supportive or opportunity-based interventions can enhance motivation, participation, and aspects of connectedness. Most quantitative work is cross-sectional, using validated measures of belonging or connectedness to demonstrate reliable associations between feeling known, valued, and supported and outcomes such as achievement, mental health, and adaptive motivation. Qualitative and mixed-methods studies offer rich accounts of how racism, bullying, digital exclusion, and gaps in specialist support undermine belonging, especially for minoritised and vulnerable groups, but are often limited to single contexts and small samples.

Overall, the synthesis suggests that belonging in K–12 schooling and digital learning environments is both powerful and fragile. Relational climates, inclusive and participatory opportunities, and equitable digital infrastructures offer clear, evidence-informed levers for strengthening belonging. At the same time, structural inequities, hostile or unsafe climates, and cumulative disconnection create enduring barriers that cannot be addressed solely by classroom strategies. Consistent with this, belonging is best supported through collective, universal approaches that make the everyday environment more relationship-rich and fair for all students, supplemented by targeted supports where needed. Ecological approaches that adjust school structures, classroom climates and peer cultures, often within multi-tiered frameworks, show some of the strongest effects on school belonging in secondary schools (Davies et al., 2025). Guidance from the Centers for Disease Control and Prevention and other bodies highlights that staff–student support, positive peer groups, commitment to learning and

a safe, respectful environment are malleable school-level levers, not fixed traits of individual students (Allen, Kern et al., 2016; Centers for Disease Control and Prevention, 2009). These insights reinforce the idea that school belonging is a whole-school responsibility that depends on clear definitions, shared goals, and coordinated action across the school ecology. Future research will need to move from describing what seems to help to testing what reliably changes belonging over time, especially for students who are most at risk of belonging uncertainty, and across the hybrid school-home-online ecologies in which contemporary education now unfolds.



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SECTION 3

What interventions and strategies are available?



Photo by August de Richelieu

3.1 Interventions and implementation

This section addresses the question:

What school-based or classroom interventions, strategies, or approaches are available?

OVERVIEW

In the previous sections, the report identifies where belonging is conceptualised and the key drivers and barriers across school and digital contexts. This section turns to the practical question of what schools can do to strengthen belonging and what supports implementation at scale. Specifically, the report in this section addresses the question of what school-based and classroom interventions, strategies, and approaches are available to foster students' sense of school belonging. It synthesises findings from the reviewed studies and draws on broader literature to situate these within current policy and practice debates. A central finding across the literature is that, despite the prominence of belonging in educational discourse, there are relatively few well-defined, rigorously evaluated interventions designed explicitly to improve school belonging, particularly in K–12 settings. Much of the existing work consists of practice-based, relational, or context-specific approaches rather than manualised programs with clearly specified components, fidelity criteria, and outcome evaluations (Allen, Kern et al., 2016; Allen et al., 2022). Reflecting this evidence base, this section distinguishes between formal interventions, broadly defined strategies and practices, and design principles that recur across diverse contexts.

To address what school-based or classroom interventions, strategies, or approaches are available to schools, the synthesis is organised into five strands. Section 3.1.2 reviews the range of school-based and classroom interventions and approaches reported in the literature. Section 3.1.3 examines contextual and implementation factors that shape whether these approaches succeed or fail in practice. Section 3.1.4 analyses the strengths and limitations of belonging-focused interventions, and Section 3.1.5 assesses the extent to which instructional design strategies are supported by empirical evidence. Section 3.1.6 then outlines implications for policy, practice, and future research.

3.1.1 KEY FINDINGS

- Belonging-focused work spans early childhood, K–12 and non-formal settings, and centres on students whose belonging is most precarious (disabled, migrant and refugee, racially minoritised, LGBTQ+, and highly gifted learners).
- Effective approaches share three core features: relational safety and respect; identity-affirming, culturally sustaining practice; and meaningful opportunities for student agency, voice and strengths-based participation.
- Interventions and strategies operate across nested levels, classroom pedagogy, physical and digital spaces, school climate and leadership, and cross-sector partnerships, with multi-level designs more promising than isolated classroom activities.
- Practitioner-led, relational and reflective approaches (e.g., restorative circles, digital storytelling, arts-informed pedagogy, Gender-Sexuality Alliances (GSAs), identity projects, multilingual teaching, strengths-based programs) consistently show local gains in inclusion and belonging but are intensive and context-dependent.

- Implementation quality is as important as program content: shared and equity-focused leadership, supportive policy, sustained resourcing, ongoing professional learning, and youth co-design enable success, whereas high-stakes accountability, structural racism and ableism, and reliance on “hero teachers” undermine impact.
- Overall, there is coherent conceptual and moderate empirical support that intentionally designed instructional and leadership practices can foster students’ sense of belonging, especially for marginalised groups, but stronger causal and longitudinal evidence is still needed.

3.1.2 TYPOLOGY OF BELONGING-FOCUSED INTERVENTIONS

This section addresses the question:

What educational contexts, factors and practices effectively cultivate a sense of belonging for diverse learners?

Across the included studies in this review, school belonging for diverse learners emerges as both deeply contextual and fundamentally relational. The papers reviewed span mainstream and special education settings, and cover a wide range of student groups, including young people with disabilities, LGBTQ+ and racially minoritised students, immigrant, and refugee youth, and highly or profoundly gifted learners. These studies show that belonging is cultivated when everyday practices combine emotional safety, identity affirmation, meaningful participation, and supportive structures at classroom, school, and system levels.

Educational contexts and diverse groups

Several studies focus on students with disabilities’ school belonging experiences in mainstream schooling. In a US district that had implemented the Restorative Practices Program for around five years, Kervick et al. (2025) found that circle processes (structured group conversations designed to build understanding and repair relationships) were associated with many students feeling more respected, having greater voice, and being included. However, the results also show statistically significant variation across student groups, including differences in perceived respect from teachers and being listened to by peers for students within the education programs. By exploring perspectives of youth with disabilities, this study indicates how a universal approach to youth with disabilities may still reproduce ableist dynamics if it is not tailored to their needs. Albarran et al. (2025) extend this picture by shifting from students’ reports to practitioners’ perspectives. In this mixed-methods study of school-based occupational therapy practitioners, most respondents viewed belonging as within the scope of school-based occupational therapy and important for students with disabilities. Yet fewer of them reported considering belonging in evaluation, intervention, and outcome processes more than half the time.

The review also shows that belonging is a salient concern for students at the “top end” of achievement. Johnson et al. (2024) illustrates how families of highly and profoundly gifted children navigate school systems and specialised programs that often do not fit their children’s developmental profiles. Parents describe isolation, misalignment with school expectations, and a strong need for networks where both they and their children feel understood. Similarly, Watson et al. (2025) examine a strengths-based career exploration program for high-ability students in a rural US state. Collaborative modules designed to help students explore their strengths and future careers provide a context in which belonging predicts greater enjoyment

and engagement, especially for underrepresented gifted youth. These two studies found that belonging is important for high-achieving and gifted students, especially those who are underrepresented. When programmes fit their developmental needs and create meaningful, strengths-based peer and community connections, students can be strengthened.

Another cluster of studies focuses on racially and sexually minoritised students in secondary schools. Poteat et al. (2024) show that Gender-Sexuality Alliances offer LGBTQ+ youth a peer and adult community within otherwise hostile school environments. Weekly variation in perceived group support and leadership opportunities maps onto week-to-week changes in school belonging, underscoring the importance of these micro-contexts. Lloyd and colleagues (2024), working in predominantly Black high schools, identify that Black LGBTQ+ students are less likely than straight peers to feel their identities are valued, despite sharing racial backgrounds with the wider student body. Lower perceived safety and identity valuation correspond with lower belonging, indicating that generic “supportive” climates are insufficient if sexual identity is not explicitly affirmed. In a study of Arizona teachers nominated as strong examples of effective practice, Morris (2025) finds that Black students’ belonging is nurtured through culturally responsive classroom practices rather than colour-blind approaches that treat race and culture as irrelevant.

Other work widens the lens to immigrant, refugee, and ethnically minoritised youth. Froehlich et al. (2024) focus on social identity threat, that is, students’ concern that they may be judged through negative stereotypes about their ethnic group, or that mistakes could be taken as confirming those stereotypes. They show that higher identity threat is linked to lower belonging to school and class and to lower perceived teacher acceptance, which in turn reduces students’ motivation to approach classmates. Rodriguez and colleagues (2025) argue that for Latino immigrant youth, school belonging must be understood within racialised and immigration-shaped structures; their conceptual review highlights the importance of both school and out-of-school spaces that affirm cultural, racial, and linguistic identities. These points highlight school-level actions such as adopting culturally sustaining curricula, supporting bilingual practices and family communication, challenging deficit narratives about immigration status, and partnering with community groups that offer culturally affirming programs. Ward’s (2022) study of unaccompanied asylum-seeking children in England shows what this can look like in practice, emphasising that feeling “at home” in educational spaces depends on trauma-informed approaches (prioritising emotional safety, predictable routines, and supportive, non-stigmatising responses to distress) and linguistically sensitive approaches (reducing language barriers through accessible communication, interpretation where needed, and respect for home languages).

Finally, system- and school-level studies highlight how broader policy and organisational conditions shape belonging. Högberg and Lindgren (2023) link a Swedish reform agenda centred on early grading, national testing, and performativity to declining national levels of school belonging, particularly for marginalised pupils. In contrast, Jang and Lee’s (2024) analysis of US high schools indicates that shared leadership, where principals and teachers collaboratively shape school culture, correlates with higher belonging for all students, with especially strong benefits for American Indian and Alaska Native youth. One plausible interpretation is that shared leadership supports more consistent, relationally focused, and culturally responsive practices across the school, which may be particularly important for students whose belonging is more sensitive to whether schools recognise and respect their identities and communities. Allen and colleagues’ (2022) systematic review of interventions

reinforces this multi-level view, showing that programs which enhance relationships and climate across classrooms and whole schools are most likely to improve belonging.

Factors and practices that cultivate belonging

Having outlined the educational contexts in which belonging is studied, this section turns to the factors and practices that appear to cultivate belonging for diverse learners across those contexts. Although the studies span different settings and populations, the evidence converges on a small number of recurring levers that operate through students' everyday experiences of safety, recognition, and participation.

First, relational safety and respect are central. In Kervick et al. (2025), restorative circles (structured group discussions intended to replace punitive discipline with relationship-based accountability) are associated with many students feeling more listened to and included. Meanwhile, statistically significant variation across student groups suggests that respect and voice are not experienced uniformly, highlighting that “universal” approaches require deliberate accessibility and inclusive participation design. Albarran et al. (2025) similarly highlight how occupational therapists foster belonging by enabling meaningful participation in everyday activities, for example, by adapting tasks and facilitating peer interaction. In Ward's (2022) study, practitioners supporting asylum-seeking children emphasise building emotionally safe, predictable relationships that put the child first, and learning to communicate across language barriers so that students can participate rather than remain on the margins. These studies converge on the idea that belonging is not only about being present in the classroom; it is about being recognised, heard, and able to take part.

Second, identity-affirming and culturally sustaining practices consistently support belonging, especially for racially and sexually minoritised students. Lloyd et al. (2024) show that when schools explicitly affirm Black LGBTQ+ students' identities through policies, curriculum, and staff behaviours, belonging improves; when sexual identity is ignored or devalued, belonging suffers even in majority-Black schools. Morris's (2025) exemplar teachers embody this principle in day-to-day pedagogy: they actively educate themselves about students' experiences, practice empathy and vulnerability, encourage cultural humility and connection, and centre equity and wellbeing in classroom norms. Hölscher et al. (2023) provide a complementary view: the Identity Project helps adolescents explore and affirm their heritage identity, but its benefits for belonging are contingent on teachers who support autonomy and relatedness and on school climates open to cultural discussion. Rodriguez and colleagues (2025) argue that race-conscious, care-based approaches are essential, since belonging for Latino immigrant youth is shaped by racialisation, immigration status, and policy. Froehlich et al. add that reducing stereotype threat and supporting integrated identities, valuing both heritage and national identities, can buffer against belonging losses for ethnic minority students.

Third, opportunities for student agency, voice, and strengths-based participation appear as powerful levers. In Poteat et al.'s (2024) study, LGBTQ+ youth report higher belonging in weeks when they take on more leadership roles within GSAs, not only when they receive support. This suggests that belonging is cultivated when young people are co-creators of their communities, rather than passive recipients of care. Watson et al. (2024) similarly find that belonging in the TICE program is fostered through collaborative, strengths-focused activities that allow high-ability students from underrepresented groups to explore their talents and futures together. Allen, Jamshidi et al.'s (2022) systematic review supports this pattern at scale: interventions that target students' strengths and competencies, and that promote

behavioural, emotional, and cognitive engagement, are more likely to boost belonging. Johnson et al.'s (2024) work with parents of gifted children also points to agency, albeit at the family level; parents build informal networks and advocate for appropriate placements to create spaces where their children, and they themselves, experience understanding and connection.

Fourth, structural and organisational conditions either enable or constrain these practices. Jang and Lee's (2024) findings on shared leadership suggest that when principals distribute leadership, communicate a shared vision, and encourage innovation, and when teachers collaborate and share responsibility for all students, the resulting school culture supports belonging for diverse groups. In contextual features such as racial climate, resource allocation, and partnerships between schools and community-based organisations, not only on individual teacher goodwill. Allen, Jamshidi et al. (2022) demonstrate that the most effective belonging interventions are multi-year, embedded in routines, and operate across ecological levels, indicating that quick, isolated programs are unlikely to be sufficient.

3.1.3 EFFECTIVENESS OF INTERVENTIONS

This section addresses the question:

What does empirical research reveal about the strengths and limitations of belonging-focused interventions in K–12 education?

Across the included studies, empirical research portrays belonging-focused work in K–12 (and adjacent early-years) education as both promising and under-developed. Most contributions highlight rich, practice-based strategies that appear to support belonging for diverse learners, yet the evidence base is dominated by small qualitative studies and cross-sectional analyses rather than robust intervention trials. Together, these papers speak more clearly to *how* educators and systems might foster belonging than to *how effective* specific interventions are in changing outcomes over time.

Practitioner-led, relational and reflective approaches

A first group of studies illustrates the strengths of practitioner-led, relational, and culturally responsive approaches (Keary et al., 2023; Khoo et al., 2024). Digital storytelling in early childhood centres, for example, is used as a professional learning tool for teachers working with migrant and refugee children (Khoo et al., 2024). Teachers' digital stories about their own migration and belonging journeys prompt deep reflection on inclusion, bias, and relationships, and are experienced as powerful tools for building collegial trust and developing concrete belonging-supportive practices.

Similarly, Keary and colleagues (2023) show how early childhood educators' beliefs about culture, identity and rights shape the everyday relational practices that make refugee families feel recognised and included. In an inclusive toddler community, Recchia and McDevitt's (2023) longitudinal case study of "Miguel" illustrates how responsive relationships, environmental scaffolds and peer inclusion can gradually draw a child with autism into full membership of a learning community. These studies collectively demonstrate that intensive relational work, reflective practice and attention to identity and rights can create strong local cultures of belonging, especially for migrant, refugee, and disabled children.

Belonging for racially and ethnically minoritised and students with a disability

A second set of studies foregrounds the experiences of minoritised student groups within mainstream schools and highlights culturally responsive teaching and anti-racist practice as key mechanisms (Lepore-Stevens & Sosland, 2025; McGinley & Keane, 2022). McGinley and Keane show that Irish Traveller students in a highly diverse post-primary school still experience being “othered”, and that diversity alone is insufficient without intentional anti-racist, identity-affirming practices from teachers and peers. Reddig and colleagues (2022) centre the voices of Black adolescent males in special education, identifying specific teacher behaviours and classroom features, care, racial reckoning in the curriculum, and inclusive pedagogy, that help them feel safe, seen and valued.

Lepore-Stevens and Sosland (2025), through parents of students with albinism, point to the importance of disability-specific accommodations combined with social acceptance and warm relationships. These studies contribute detailed, practice-near accounts of what belonging looks and feels like for groups who are often marginalised by race, ethnicity, and disability. Their strength lies in thick description and youth or family voice, which generate design principles for culturally responsive, psychologically safe classrooms.

Structural, spatial and leadership levers for belonging

Another strand of the literature focuses on school structures, spaces, and leadership as levers for belonging. Page and colleagues (2024) examine innovative learning environments in mainstream schools in New Zealand and Australia, showing that flexible physical spaces, collaborative teaching, and peer interaction can create new possibilities for belonging for students with disabilities. Their analysis underscores that material design interacts closely with pedagogy and relationships; ILEs are not neutral but can either support or hinder inclusion depending on how they are enacted.

At the organisational level, Jang and Lee (2024) use nationally representative data from US high schools to show that shared leadership, where principals and teachers co-construct vision, culture and decision-making, is positively associated with students’ sense of school belonging, with particularly strong effects for American Indian and Alaska Native students. This large-scale quantitative evidence positions leadership and teacher collaboration, rather than only classroom strategies, as central to belonging work.

Contextual Factors as Targets for Future Interventions

Several papers provide important insights into contextual factors and potential intervention targets rather than evaluating specific programs. Allen, Fortune et al. (2021)’s multilevel analysis of Australian PISA data demonstrates that school belonging is shaped by social-ecological factors including teacher fairness, parental support, and disciplinary climate, and that these associations vary by generational status. Cunningham et al. (2024) show that students with disabilities are at greater risk of in-school suspension, and that higher belonging and engagement are associated with lower use of exclusionary discipline.

McInerney’s (2023) mixed-methods study of newcomer multilingual adolescents in a large US high school identifies peer and adult support, language supports and opportunities for

participation as predictors of belonging in a hostile socio-political climate. Zaman and colleagues (2025) use photovoice with Bangladeshi primary students to reveal how everyday practices and spaces make children feel “in” or “out”, demonstrating participatory methods as a promising basis for co-designing interventions with children. Finally, Rodriguez and co-authors (2025) extend the discussion beyond individual feelings, arguing from multiple empirical sources that race-conscious, structural approaches, addressing racial climate, immigration policy and school-community partnerships, are essential for Latino immigrant youths’ belonging.

Emerging strengths of belonging-focused work

Taken together, these studies point to several consistent strengths in existing belonging-focused work.

- First, they converge on the centrality of relationships: caring teacher–student and peer relationships, supported by reflective practice and cultural humility, appear in almost every study as key mechanism through which belonging is experienced.
- Second, they highlight identity-affirming practices as crucial, particularly for migrant, refugee, Indigenous, disabled and racially minoritised students. Digital storytelling, heritage identity curricula, culturally responsive teaching and race-conscious policy work all seek to recognise and value students’ and families’ identities rather than treating them as deficits.
- Third, a multi-level perspective emerges: interventions and approaches operate not only at the level of individual students or classrooms but also through physical environments, leadership practices, disciplinary systems, and cross-sector partnerships. This aligns with social-ecological models and provides a rich menu of potential levers for future intervention design.

These strengths suggest that the field has developed a sophisticated understanding of *where* change is needed and *what principles* should guide belonging-focused practice.

3.1.4 IMPLEMENTATION AND CONTEXTUAL FACTORS

This section addresses the question:

What implementation factors are the most important for success?

Across the included studies, implementation emerges as at least as important as program design for cultivating school belonging. Successful initiatives are not defined only by *what* they do, but by *how* they are resourced, led, adapted, and sustained within complex school systems. Four sets of implementation factors stand out: (i) Multi-level infrastructure and leadership; (ii) Staff beliefs, skills and professional learning; (iii) Youth agency and voice; (iv) Equity-focused structural conditions and partnerships.

First, effective belonging work is supported by strong organisational infrastructure and leadership. Kervick et al. (2025) show that restorative practice (RP) circles were possible only because the district had adopted a consistent RP framework and shifted policy away from exclusionary discipline. Similarly, Jang and Lee (2024) find that shared leadership in U.S. high schools, where principals and teachers jointly shape culture, share responsibility for all

students, and communicate a clear vision, is associated with higher belonging for diverse groups, particularly American Indian and Alaska Native students. Allen and colleagues' (2022) systematic review reinforces this pattern: interventions that improved belonging were typically multi-year, embedded in school routines, and operated across both classroom and whole-school levels. In contrast, Högberg and Lindgren's (2023) analysis of Swedish reforms illustrates how policy environments dominated by high-stakes accountability and early grading can erode the conditions needed for relational and inclusive practice. These studies suggest that leadership and policy must explicitly prioritise wellbeing and belonging, and allocate time and structures for collaborative work, if interventions are to take root.

Second, staff beliefs, skills and professional learning are central to implementation quality. Albarran et al. (2025) report that most school-based occupational therapists believe belonging is within their remit and recognise its academic and mental health benefits, yet fewer than a quarter routinely consider belonging in assessment or intervention, and only a minority feel confident doing so. These values-practice gap points to the need for specific tools, training and collaboration structures that make belonging work visible and routine. Morris' (2025) study of exemplar teachers supporting Black students highlights a parallel dynamic: culturally responsive practices, such as ongoing self-education, empathy, cultural humility, and restorative approaches, depend on teachers' willingness to critically reflect on their own positioning and to engage in sustained professional learning. Froehlich et al. (2024) argue that reducing social identity threat for ethnic minority adolescents requires teacher professional development on stereotype threat, identity-affirming feedback, and diversity-affirming classroom norms. Ward similarly emphasises that practitioners working with unaccompanied asylum-seeking children need systematic training in trauma-informed practice and ESOL-sensitive communication. Across these contexts, implementation is strengthened when professional learning is ongoing, explicit about power and identity, and linked to concrete practice changes rather than one-off workshops.

Third, youth agency and voice appear as crucial, but often under-utilised, implementation levers. Poteat et al. (2024) show that in Gender-Sexuality Alliances, LGBTQ+ young people report higher weekly school belonging not only when they feel supported, but also when they take on leadership roles. Belonging is cultivated when GSAs are truly youth-led, with advisors acting as responsive adults rather than directors. Hölscher et al. (2023) find that the Identity Project is more effective when teachers create autonomy-supportive classrooms where students have choices, can express their views, and engage in meaningful reflection on their heritage identities. Watson and colleagues' (2025) evaluation of the TICE career program similarly shows that collaborative, strengths-based modules that recognise high-ability students from underrepresented groups foster belonging and enjoyment. Rodriguez et al. (2025) argue more broadly that centring youth perspectives in the design of programs and policies is essential for Latino immigrant youth, for whom belonging is shaped by racialisation and immigration status. Taken together, these studies suggest that successful implementation requires structures that position diverse students as co-designers and leaders of belonging initiatives, rather than passive recipients.

Fourth, the most robust implementations attend to equity-focused structural conditions and cross-sector partnerships. Lloyd et al. (2024) demonstrates that in predominantly Black high schools, Black LGBTQ+ students' belonging is constrained when schools do not explicitly affirm sexual identity, even if race is nominally recognised; they argue that whole-school programming must centre identity valuation, not only generic notions of "safety". Rodriguez and colleagues (2025) extend this logic to Latino immigrant youth, arguing that schools must

address racial climate, discrimination, and immigration-related barriers through race-conscious, care-based policies and routines. They also highlight the importance of partnerships between schools and community-based organisations, which can provide consistent, affirming spaces across settings and support educators as “institutional agents” who broker resources and relationships. Ward’s (2022) study similarly points to cross-sector collaboration, between schools, social workers, charities, and local authorities, as a key facilitator when supporting asylum-seeking children. Johnson et al. (2024) underscores that, for highly and profoundly gifted students, implementation requires networks that connect schools with families and specialist services, alongside policies for early identification and flexible provision. Across these studies, belonging work is most effective when it is not confined to a single classroom or program but is supported by coherent, multi-agency ecosystems.

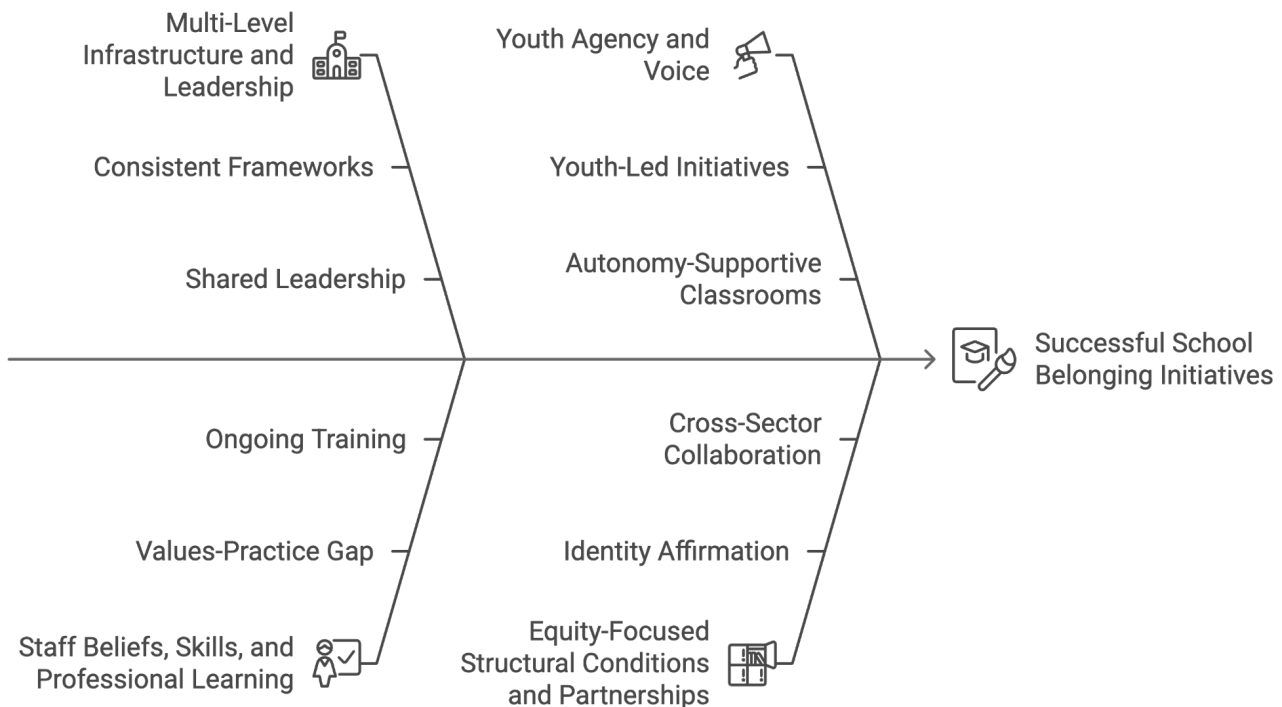
At the same time, the literature is clear about the implementation challenges that can undermine success. Structural ableism and discipline disproportionality can mean that restorative practices reproduce rather than redress exclusion for disabled youth, unless targeted adaptations and disability awareness are built in. Victimisation and marginalisation in the broader school climate can limit the impact of GSAs, even when within-club processes are strong. Systemic racism, tracking, and inequitable discipline can dilute the effects of culturally responsive teaching if leadership and policy do not address these drivers. High-stakes accountability regimes can crowd out the time and emotional bandwidth needed for relationships and identity work. For refugee and immigrant youth, hostile immigration policies and deficit media narratives can overshadow school-based efforts, making it harder to sustain trust and safety.

In summary, the most important implementation factors for successful belonging interventions are multi-level and interdependent. Effective initiatives are supported by leadership and policies that prioritise wellbeing and equity, by staff who are equipped and willing to engage in relational, culturally sustaining practice, and by structures that enable student agency and cross-sector collaboration. Conversely, efforts are likely to falter when they rely on isolated “hero” teachers, short-term projects, or classroom strategies that are not backed by supportive organisational and policy environments. For schools seeking to strengthen belonging for diverse learners, these findings highlight the need to plan for implementation from the outset, including attention to leadership, professional learning, youth voice, and structural conditions, rather than treating them as secondary considerations. A summary of implementation factors for school belonging are outlined in Figure 7.



Figure 7

Implementation factors for school belonging initiatives.



3.1.5 INSTRUCTIONAL DESIGN INSIGHTS

This section addresses the question:

How well-supported by research is the claim that instructional design strategies can effectively foster students' sense of belonging?

Across the coded papers, the evidence base for this sub-question is diverse but uneven. Thirteen studies examine how specific instructional designs, pedagogical strategies, or leadership approaches relate to students' sense of belonging. Most focus on minoritised or structurally disadvantaged groups (e.g., disabled students, migrant and refugee children, Black students, LGBTQ+ youth, children needing special support). Together they provide a coherent picture that deliberate design of learning environments can foster belonging, but the strength of empirical support is moderate rather than definitive.

Study designs and belonging measures

Only two studies in the present review drew from quantitative designs with validated belonging scales. Kervick et al. (2025) survey students in one U.S. district and show that greater engagement in restorative practice circles is associated with higher school belonging. The study benefits from a large sample and standardised measures, but its cross-sectional design means the findings are correlational rather than causal. Ialuna et al. (2024) provide the strongest quantitative evidence: their multi-school, multi-informant study links teachers' culturally responsive teaching self-efficacy to students' school belonging. This relationship is

mediated by teacher–student closeness and reduced conflict, with benefits for immigrant and refugee students. Again, the design is correlational, yet it offers a clear, theoretically coherent pathway from instructional approach to belonging.

The remaining studies rely on qualitative, integrative, or conceptual approaches. Several are in-depth case studies that infer belonging from children’s narratives, participation patterns, and observed interactions (Bateman & Mitchell, 2023; McGillicuddy & Machowska-Kosciak, 2021; Wagner et al., 2024; Reddig et al., 2024). Others use teacher interviews or focus groups to explore how practitioners design learning environments they believe foster belonging (Khoo et al., 2024; Peter, 2023; Morris, 2025). Ajodhia and CohenMiller (2024) synthesise 12 empirical studies on arts-informed pedagogy, while Li and Enemark (2023) combine policy analysis with oral-history interviews to examine mother-tongue instruction. Kokozos and Gonzalez (2024) offer a conceptual framework for critically inclusive leadership for LGBTQ+ belonging, drawing on prior empirical work but not collecting new data.

Across this body of work, belonging is more often conceptualised than directly measured. Many studies treat it as feeling accepted, recognised, and able to participate fully, especially for minoritised learners. However, only a small subset uses standardised belonging scales, and none implement experimental or quasi-experimental designs that would support strong causal claims.

Types of instructional design strategies

The studies collectively span a wide range of instructional designs.

Restorative practice circles represent one approach grounded in inclusive pedagogy. Kervick et al. (2025) show that students who report higher engagement in restorative circles also report higher school belonging. Importantly, students with disabilities still experience lower belonging than their peers, suggesting that RP circles may help, but do not fully close belonging gaps.

Culturally responsive and sustaining pedagogy appears in several studies. Ialuna et al. (2024) demonstrate that teachers who feel more confident in culturally responsive practices tend to have closer, less conflictual relationships with students, which in turn predict higher belonging. Morris (2025) identifies concrete classroom strategies used by exemplar teachers of Black students, such as affirming racial identity, combining high expectations with care, and providing culturally relevant curricula. Reddig et al. (2024) foreground the voices of Black males in special education, who describe feeling they belong when teachers validate their experiences of racism, know their sociocultural realities, and offer engaging, relevant learning. These qualitative accounts give rich insight into how culturally responsive teaching and relational care foster belonging, even though they do not quantify outcomes.

Language and curriculum design also function as belonging strategies. Li and Enemark (2023) show that mother-tongue instruction, while officially framed as addressing “difference”, often produced feelings of sameness, recognition, and community among migrant students in Danish schools. Wagner et al. (2024) contrast segregated language support classes with inclusive, multilingual whole-class teaching. They show that pull-out models can generate “unbelonging”, while inclusive grouping and multilingual practices, supported by teachers as “brokers of belonging”, promote participation and recognition for newcomer pupils.

Participation-oriented and relationship-focused design is central in after-school and early childhood settings. Peter (2023) finds that Swedish after-school staff deliberately plan group activities, avoid segregating children needing support, and use “inclusive individualisation” to foster participation and belonging. They describe how such practices help children feel part of the community, although belonging is not measured directly. In early childhood centres, Bateman and Mitchell (2023) show how drawing activities, combined with “slow pedagogies” and sensitive teacher talk, allow immigrant children to narrate and negotiate their belonging across home and host contexts. Khoo et al. (2024) use teacher digital storytelling about their own migration journeys to deepen teachers’ reflections and redesign pedagogy; they identify strategies such as storytelling, active listening, and inviting family input that are expected to support children’s belonging, though child outcomes remain theorised.

Other work extends beyond traditional school classrooms. Kim (2025) examines public pedagogy projects for undocumented migrant children in non-formal learning spaces. Carefully designed community-based and “city-as-classroom” experiences that recognise children’s histories and mobility are shown to strengthen both local and transnational senses of belonging. Ajodhia and CohenMiller’s (2024) integrative review concludes that arts-informed pedagogies – using puppets, poetry, stories, and collaborative arts – tend to support identity, voice, relationships, and communities of learning, all of which are interpreted as components of belonging. However, the underlying studies are mostly small-scale and qualitative.

Finally, Kokozos and Gonzalez (2024) propose a model of critically inclusive leadership to move from token “safe spaces” to more transformative belonging for LGBTQ+ youth. They argue that leadership dispositions shaping curriculum, pedagogy, and school culture - such as critical reflection, advocacy, and historical awareness - are essential for LGBTQ+ students’ belonging, especially for youth of colour. This work is conceptual but aligns with the empirical evidence that identity-affirming, critically aware teaching matters for belonging.

Strength and pattern of support

Taken together, the studies provide converging but methodologically modest support for the claim that instructional design strategies can foster belonging. The strongest empirical backing comes from the two quantitative studies that use validated measures of belonging and robust analyses. Both show meaningful associations between specific instructional features (restorative practices, culturally responsive teaching, and relationship quality) and students’ reported belonging. However, neither uses an experimental design, and both rely on self-report data.

Most of the remaining evidence is qualitative, case-based, or retrospective. These studies excel at uncovering mechanisms: they show how particular design features – such as multilingual groupings, opportunities for storytelling, arts-based expression, critical discussions of racism, or participatory after-school activities – shape experiences of inclusion, safety, recognition, and voice. They also highlight how pedagogies can generate “unbelonging” when they marginalise languages, identities, or participation. Yet they rarely measure change in belonging over time, and they offer a limited basis for generalising effect sizes or comparing approaches.

Overall, the evidence suggests moderate support for the claim. There is clear, consistent indication that thoughtfully designed instructional and leadership practices can enhance

students' sense of belonging, especially for marginalised groups. At the same time, the rigour and scope of the empirical base do not yet justify strong causal claims across settings and populations.

3.1.6 BRIEF DISCUSSION

The studies reviewed in Sections 3.1.2 – 3.1.5 indicate that school-based and classroom interventions can meaningfully support students' sense of belonging, but only when they are deliberately designed and carefully implemented within broader equity-focused systems. Across diverse settings and populations, a coherent set of principles and tensions emerges regarding what kinds of approaches are most promising, for whom, and under what conditions.

A first insight is that belonging-supportive work is fundamentally relational, identity-affirming, and participatory. Whether situated in early childhood centres, mainstream classrooms, specialist programs, or non-formal learning spaces, effective approaches share three core features. They prioritise emotionally and physically safe relationships in which students feel noticed, respected, and cared for; they affirm and sustain cultural, linguistic, gendered and ability-related identities rather than treating differences as deficits; and they create genuine opportunities for students to participate, exercise agency and contribute to their communities. These design principles are evident in restorative practice circles adapted for disabled youth, culturally responsive teaching in racially diverse schools, GSAs, and other affinity-based initiatives for LGBTQ+ students, trauma-informed and multilingual pedagogies for migrant and refugee children, and strengths-focused enrichment and career programs for highly able or under-represented students. Across contexts, students interpret belonging not only as being present, but as being recognised, able to influence their environment and to participate as full members of the learning community.

Second, the review underscores that contexts and structures shape whether these relational and participatory practices can take root. Interventions rarely operate in isolation from their organisational and policy environments. Shared, distributed leadership and supportive school climates are consistently associated with higher belonging, particularly for minoritised groups, whereas high-stakes accountability, exclusionary discipline and early grading can erode the conditions needed for relational, inclusive work. Studies of policy reforms, leadership arrangements and innovative learning environments illustrate how the same practice, such as restorative circles or flexible learning spaces, can either support or undermine belonging depending on how it is resourced, framed, and embedded. This suggests that belonging-focused interventions cannot be treated as add-on programs; they must be aligned with school-wide priorities, disciplinary policies, resource allocation and professional learning structures.

Third, the evidence points to belonging as an equity imperative rather than a universal, neutral goal. The strongest gains in belonging are reported for groups whose membership in school communities is often most precarious: disabled students, migrant and refugee children, racially minoritised and Indigenous youth, LGBTQ+ students, and highly or profoundly gifted learners whose needs are frequently misunderstood or marginalised. For these groups, belonging is shaped as much by structural forces, racism, ableism, heteronormativity, immigration regimes, tracking and exclusionary discipline as by individual relationships. The most promising approaches, therefore, go beyond generic "inclusion" to explicitly address race, culture,

language, disability, and sexuality. Race-conscious pedagogy, trauma-informed support, mother-tongue and multilingual instruction, identity-focused curricula and community-based public pedagogy all exemplify efforts to confront rather than sidestep structural inequities. At the same time, the review shows that well-intentioned practices can inadvertently reproduce “unbelonging” when they fail to attend to these dynamics, for example, when restorative practices are implemented without disability-specific adaptations, or when flexible learning environments are enacted in ways that exacerbate segregation or invisibility.

Fourth, the findings emphasise that implementation is as critical as design. The same intervention architecture can produce very different outcomes depending on how it is led, resourced and sustained. Successful initiatives tend to be multi-year, embedded in everyday routines, and supported by distributed leadership, collaborative staff cultures and ongoing professional learning that is explicit about power, identity, and structural barriers. They create formal and informal structures for youth leadership and co-design, so that students are not simply recipients but shapers of belonging work. They also leverage cross-sector partnerships with families, community organisations and social services to build coherent ecosystems of support. In contrast, efforts that rely on “hero teachers”, short-term projects, or one-off workshops struggle to shift belonging in durable ways, especially when operating against the grain of punitive, high-pressure policy settings.

From an evidence perspective, the review reveals a field that is conceptually rich and empirically promising, but methodologically modest. There is converging qualitative and correlational evidence that interventions centring relationships, identity affirmation and participation are associated with stronger belonging, particularly for students at the margins of school communities. Large-scale multilevel analyses and systematic reviews provide moderate-strength support for the role of school climate, leadership, and multi-level programs in enhancing belonging. A smaller set of quantitative studies link specific instructional designs, such as restorative circles or culturally responsive pedagogy, to belonging outcomes via theoretically coherent pathways. However, robust experimental or quasi-experimental evaluations remain rare. Most studies are small-scale, context-specific, and descriptive, relying on self-report measures of belonging or inferring it from related constructs and narratives. Implementation fidelity, scalability and long-term outcomes are seldom reported in detail.

These limitations do not undermine the value of existing work, but they do constrain the strength of the claims that can be made. Current evidence supports the claim that instructional and leadership practices can be designed to foster belonging, and it elucidates the mechanisms through which this is likely to occur. Yet the overall level of outcome evidence is best characterised as moderate: sufficient to justify policy and practice attention, but not yet sufficient to identify “best bets” with high confidence across settings. There is a clear need for mixed-methods, longitudinal and intersectionality informed studies that test multi-level interventions, use robust and culturally sensitive belonging measures, and systematically document how programs are implemented in real-world systems.

Finally, the synthesis points towards a reframing of belonging-focused interventions as long-term, system-level work rather than discrete projects. Belonging emerges here as a foundational condition for learning and wellbeing that must be treated as a core educational outcome and equity priority. This implies that future efforts should: (a) design interventions that integrate relational safety, identity affirmation and student agency across classroom, school

and community levels; (b) invest in leadership, infrastructure and professional learning that enable these designs to be enacted; (c) centre the voices and expertise of students and families, particularly those most marginalised; (d) explicitly tackle structural drivers of exclusion; and (e) strengthen the evidence base through rigorous, mixed-methods evaluation and careful, iterative scaling. In sum, the reviewed literature suggests that schools can cultivate robust, sustainable belonging for diverse learners when they see belonging not as a by-product of good teaching, but as a deliberate, co-constructed outcome that shapes how pedagogy, leadership, policy, and partnerships are imagined and enacted.



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SECTION 4

What measurement and ethical considerations exist?



Photo by Tima Miroshnichenko

4.1 Measurement and ethics

This section addresses the question:

What measurement and ethical considerations exist?

OVERVIEW

This section addresses how school belonging is measured in educational research and practice, and the ethical considerations that accompany its assessment and use. While belonging is now widely recognised as a foundational condition for learning, wellbeing and equity, its measurement raises distinctive conceptual, technical, and moral questions. Unlike many educational outcomes, belonging is relational, context-dependent and shaped by power, culture and language. As a result, how it is measured, interpreted, and acted upon matters as much as whether it is measured at all.

Ethical considerations are therefore central to the use of school belonging measurement in schools and asking students to report on their sense of belonging should never be considered as neutral. Given that belonging is increasingly framed as a basic psychological need and a condition of equitable participation in schooling, measurement can, and some say, *should* create an ethical obligation to respond when low belonging is identified.

This section will discuss the risks associated with the intent to measure school belonging that should always be considered to ensure that schools do not reinforce deficit narratives, or expose vulnerable students or groups to stigma. This section seeks to help schools use belonging data for support rather than surveillance and emphasises the importance of transparency, proportionality, cultural sensitivity and student participation in the design, interpretation, and use of belonging measures.

As such, the synthesis is organised into four strands. Section 1.4.2 reviews how belonging is currently measured in educational research. Section 1.4.3 examines the reliability and validity evidence supporting existing tools. Section 1.4.4 considers promising strategies for assessing and monitoring belonging in schools in ways that are practical and developmentally appropriate. Section 1.4.5 analyses ethical considerations in studying and measuring belonging, including obligations to act, risks of misinterpretation and the ethics of instrument design. Section 1.4.6 then translates these insights into discussion focused on responsible, equity-oriented use of belonging data.

4.1.1 KEY FINDINGS

- Belonging is measured through qualitative, quantitative and mixed-methods designs, each revealing different facets of students' experiences.
- Standardised self-report scales dominate large studies and generally show acceptable reliability and coherent factor structures.
- Evidence for validity is encouraging but uneven, with strong links to wellbeing and engagement but limited test–retest data and sparse content validity work.
- Cross-cultural and subgroup invariance is emerging but incomplete, raising fairness concerns when comparing groups or systems.

- Qualitative and participatory approaches foreground marginalised students' voices but lack standardised metrics for comparison.
- Co-designed and culturally grounded tools offer a productive middle ground, combining psychometric rigour with locally meaningful content.
- Ethical procedures (approval, consent, anonymity) are usually reported but with variable depth and limited reflection on obligations to act on low belonging.
- Measurement tools can embed cultural and normative assumptions, so "instrument ethics" and student participation in adaptation are essential.
- There are risks that belonging data reinforce deficit narratives or punitive accountability if interpreted without structural context.
- Promising school strategies use brief, validated measures at repeated time points, integrated with qualitative reflection and existing wellbeing or digital-skills surveys.

4.1.2 CURRENT APPROACHES TO MEASUREMENT

This section addresses the question:

How is belonging measured in educational research?

Across the included studies, belonging is measured using a mix of qualitative, quantitative, and mixed-methods approaches. Measures differ along four recurring dimensions: (a) the level of belonging being assessed (school, classroom, peer group, or digital learning context), (b) the informant (most often students, sometimes parents or staff), (c) the time frame (single snapshots versus repeated assessments), and (d) the degree of standardisation (narrative or participatory accounts versus validated multi-item scales). Mixed-methods designs are used less often but are especially valuable where researchers aim to capture culturally specific or neurodivergent experiences that generic scales may not represent well.

Qualitative approaches: belonging as lived and narrated

Several studies conceptualise belonging as a lived, relational experience and capture it through participants' narratives rather than through standardised instruments. Hossain and Bain (2025), for example, explore school belonging for children with ADHD in UAE private schools using interpretative phenomenological analysis and reflexive thematic analysis. Belonging is inferred from parents' accounts of inclusion and exclusion at school and how these experiences intersect with ADHD burnout. A rights-based study on "children's rights, belonging, and participation (Wood & Loveridge, 2025) similarly uses child-centred participatory methods (e.g., focus groups and visual or participatory tasks) to map where and with whom they feel they belong, across school and wider community contexts. Belonging is framed as a right and as membership in communities. It is articulated through narratives and visual artefacts rather than quantified scores. These qualitative studies conceptualise belonging as contextual, relational, and multi-layered. They prioritise participants' meanings and voices, particularly for groups whose experiences are often marginalised, such as children with ADHD. However, they do not produce standardised measures that can be easily compared across settings or samples.

Quantitative scales: standardised and adapted measures

In contrast, several studies use quantitative surveys to operationalise belonging as a measurable construct, typically through Likert-type self-report scales.

- In the EFL classroom study, belonging is measured as classroom belonging, defined as feeling accepted and valued in the language class (Allen, Osbourne et al., 2025). The authors use a Classroom Belonging Scale with nine items adapted from Allen and McKenzie (2013). Items target students' perceptions of inclusion, acceptance, and support in the EFL context. Responses are rated on a five-point Likert scale, and the scale demonstrates high internal consistency ($\alpha \approx .92$). Belonging is treated as a unidimensional score and used in correlational and regression analyses with enjoyment and willingness to communicate.
- Mammadova and Aypay (2023) examine Syrian refugee students' sense of school belonging in Türkiye using a Sense of School Belonging Scale with subscales for Belonging, Rejection, and Teacher–Student Relationship. Items are rated on a Likert scale, and the authors employ descriptive statistics, correlations, regression, and factor analysis. This implies attention to factor structure and reliability. Belonging is a central outcome, with mean levels reported, and is also a predictor of educational aspirations and an outcome predicted by demographic and educational factors.

These quantitative studies share several features: belonging is usually self-reported, framed around school or classroom contexts, and operationalised through short multi-item scales with acceptable internal consistency. They enable statistical modelling of how belonging relates to outcomes such as enjoyment, communication, life satisfaction, engagement, and aspirations. Some studies in the wider literature also use large-scale standardised instruments (e.g., the PISA School Belonging Scale); see Section 1.4.4 for how these measures are used for monitoring and benchmarking. However, they often rely on relatively generic items and may underrepresent culturally specific or neurodivergent experiences of belonging.

Mixed-methods and co-designed or culturally grounded measures

A third group of studies combines quantitative scales with qualitative or participatory components, often to align measurement more closely with particular populations.

- Atkinson (2024) investigates autistic secondary-school students' sense of school belonging and their ability to be their “true self” in mainstream UK schools. The study uses a brief Simple Sense of School Belonging Scale co-designed with autistic young people, alongside open-ended questions about belonging and camouflaging. The Likert-type scale is used as a continuous variable in a mediation model linking belonging, camouflaging, and anxiety, with internal consistency reported. Qualitative responses are analysed thematically to reveal what supports or undermines belonging. This approach balances the comparability of a quantitative measure with the co-produced, context-sensitive insights of autistic students.
- Peters et al. (2024) employ a community-based participatory research (CBPR) design to examine a Dakota cultural intervention's influence on Native students' belonging. They use both a culturally grounded peoplehood sense of belonging measure and the well-established Psychological Sense of School Membership (PSSM) scale

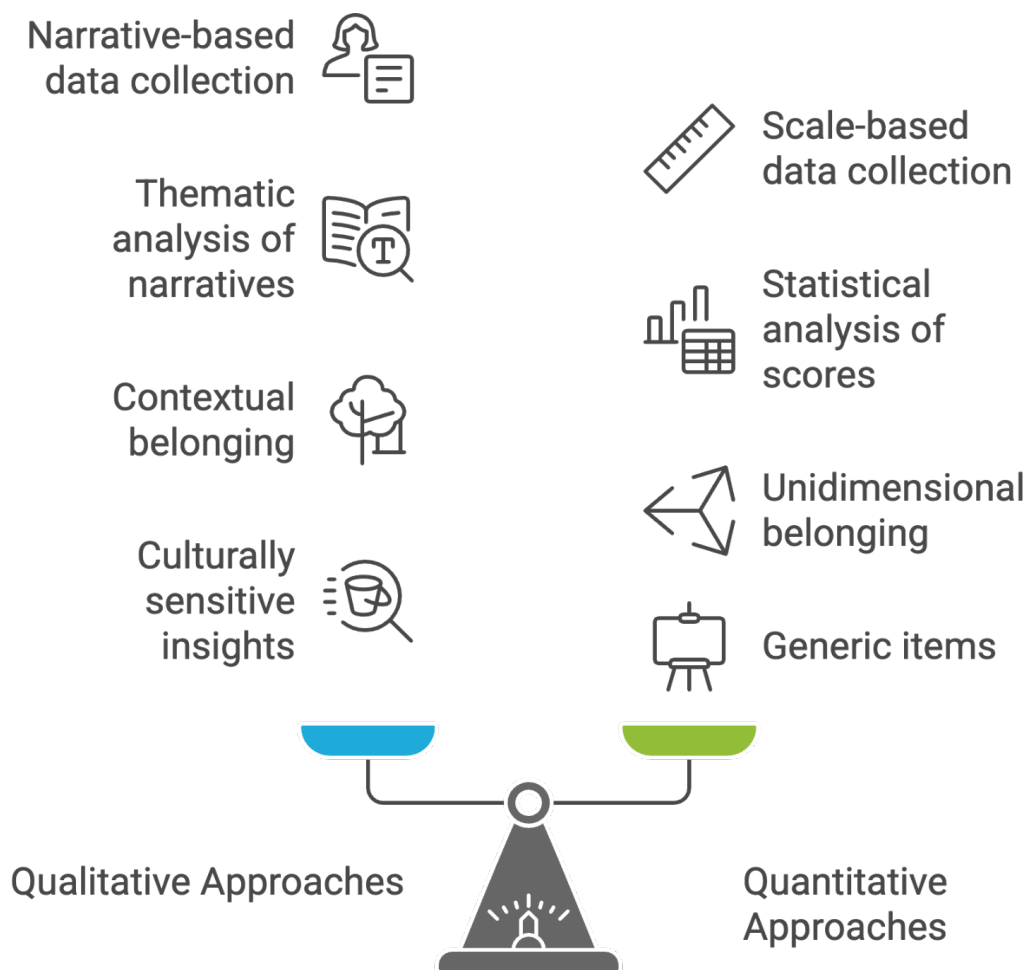
(Goodenow, 1993). The peoplehood measure captures belonging through kinship, land, language, and sacred history, reflecting Indigenous conceptions of relational belonging. PSSM, typically an 18-item, five-point Likert scale, measures acceptance, caring adult relationships, and perceptions of respect or rejection. Both scales show high internal consistency. Belonging is conceptualised as both an outcome of the intervention and a lens to interpret qualitative focus-group data on how curriculum practices affirm or undermine students' place within school.

Across these mixed-methods studies, belonging is treated as multi-dimensional and culturally embedded. Co-designed and culturally specific measures (e.g., peoplehood, simple school belonging) attempt to address limitations of generic scales by integrating the language, values, and priorities of the communities involved. Qualitative components then provide nuance on how students interpret survey items and experience belonging in practice.

A summary of the various measurement approaches are provided in Figure 8.

Figure 8

Balancing measurement approaches



4.1.3 PSYCHOMETRIC EVIDENCE

This section addresses the question:

What evidence is there for validity and reliability of these tools in measuring belonging in K–12 settings?

Across the included studies, belonging in K–12 settings is most often operationalised through multi-item self-report scales. A smaller number of tools measure a broader sense of belonging across school, family, peer, community, and digital contexts. Most studies report at least basic internal consistency, and many provide evidence for structural validity via factor analysis or item response theory. A smaller subset offers stronger evidence, including measurement invariance and links to meaningful outcomes such as mental health, aspirations, or bullying.

Internal consistency and score reliability

Nearly all quantitative tools report acceptable internal consistency. Classical indices such as Cronbach's alpha are standard, with values typically at or above .70. For example, the Sense of School Belonging scale used across Muslim-majority countries shows $\alpha \approx .80$ for the 18-item scale (Bouhlila & Hentati, 2024). The adapted School Belongingness Scale in Iranian adolescents also reports α values of .80 or higher for total scores and subscales (Arslan et al., 2022). Moroccan and refugee adaptations of the PSSM and related scales similarly show alphas in the mid-.70s to high-.70s range for their subscales (Mammadova & Aypay, 2023; Moubchiri et al., 2025).

A few large-scale structural models treat belonging as a latent factor without reporting alpha explicitly. In Finland, a six-item sense of belonging construct (covering school, classroom, peers, hobbies, online community, and society) is modelled as a latent variable in SEM, with strong factor loadings suggesting stable measurement (Abdulhamed et al., 2024). Similarly, in a Canadian community sample, belonging is treated as a latent factor formed by items on community belonging and loneliness; reliability is implied through acceptable factor loadings rather than reported coefficients (Brown et al., 2024).

Overall, internal consistency is generally adequate to strong across studies. Yet most rely on single indices (usually alpha), with little reporting of test–retest reliability. Only the Moroccan PSSM explicitly includes reproducibility over time, indicating that temporal stability remains an under-examined property for many belonging tools (Moubchiri et al., 2025).

Structural validity: factor structure and IRT analyses

Most studies also provide some evidence for structural validity. Many employ exploratory and confirmatory factor analyses to test the dimensionality of belonging scales. For instance, the Iranian School Belongingness Scale is supported as a three-factor measure (acceptance, respect, rejection) with acceptable fit indices (Arslan et al., 2022). Syrian refugee adaptations yield a three-factor model that distinguishes belonging, rejection, and teacher–student relationships, anchored in PSSM theory (Bozdog & Bilge, 2022). The Moroccan PSSM validation confirms a two-factor structure differentiating belonging and rejection, with good model fit (e.g., RMSEA around .06) (Moubchiri et al., 2025).

Several studies use more advanced measurement approaches. The Sense of School Belonging scale in Muslim societies is examined with graded response IRT, showing a strong

first factor and discriminating items (Bouhlila & Hentati, 2024). The instrument captures a unidimensional latent trait, with items such as pride in school and feeling respected contributing most information.

By contrast, Huang and colleagues (2023) explicitly interrogate the structure and functioning of the TIMSS Sense of School Belonging Scale across Hong Kong, Singapore, Australia, and the US. Using expert review and IRT, they identify language- and culture-related sources of construct-irrelevant variance and show that item parameters and information differ by country. Their analysis suggests that, while reliability is acceptable around moderate levels of the trait, the scale is not invariant across contexts and may be biased for some groups. This paper provides critical evidence that even widely used international indices can have compromised structural validity when moved across languages and cultures.

Taken together, these results indicate that most belonging tools show at least a plausible factor structure, often aligned with theory. However, the depth of structural validation varies. A small group of studies use IRT and critically examine item behaviour across groups, while others rely on single-country CFA. Only a few interrogate cross-cultural equivalence in a systematic way.

Evidence from relations with other constructs (convergent, discriminant, and criterion validity)

A substantial subset of studies go beyond internal structure to examine how belonging scores relate to other variables, providing convergent, discriminant, and criterion-related validity.

Moroccan validations offer some of the richest external evidence. The Moroccan PSSM study finds that belonging is linked to positive outcomes, such as school results, participation, and supportive disciplinary styles, whereas rejection scores correlate with risk behaviours, such as substance use and strained family relationships (Moubchiri et al., 2025).

Refugee-focused studies also highlight meaningful links. In Syrian samples, sense of school belonging is associated with educational aspirations and psychological functioning. Where social contact and belonging are measured together, stronger belonging and peer/teacher contact relate to better adjustment and lower distress. These patterns reinforce the centrality of belonging for refugee students navigating new education systems (Bozdog & Bilge, 2022).

Large-scale studies also provide robust criterion validity. The Slovenian analysis of the PISA school-belonging scale shows that lower belonging predicts both bullying perpetration and victimisation, with variations by immigrant background and gender (Kosir et al., 2025). PIRLS data from Saudi Arabia show that school belonging is negatively associated with exposure to bullying and positively with academic outcomes, even in a brief six-item scale (Sideridis & Alghamdi, 2024).

Latent belonging constructs that span multiple contexts also show plausible associations. In Finland, sense of belonging buffers the impact of discrimination on anxiety and depression, especially for immigrant-origin youth (Abdulhamed et al., 2024). In Canada, a latent belonging factor mediates the relationship between family, peer, and school contexts and mental health and wellbeing (Brown et al., 2024). Although these measures are broader than school belonging alone, they reinforce the idea that well-measured belonging sits within a network of expected correlations with social contexts and mental health.

By contrast, a few studies, particularly those emphasising psychometric modelling (for example, some IRT-focused analyses), give limited attention to external validity. They demonstrate sound internal structure but do not systematically link scores to outcomes, leaving part of the validity argument underdeveloped.

Cross-cultural and subgroup invariance

Several studies explicitly address whether belonging tools function equivalently across groups, which is crucial for comparative work.

The strongest evidence of invariance comes from the Finnish national survey (Abdulhamed et al., 2024). Multi-group CFA demonstrates configural, metric, scalar, and even strict invariance of the sense of belonging factor across native youth and several immigrant-origin groups, including those from MENAP regions and other countries. This suggests that group differences in belonging scores can be meaningfully interpreted rather than attributed to measurement bias.

Several refugee adaptation studies run factor analyses separately by language (e.g., Turkish and Arabic versions) and show similar structures and reliability in each, although formal multi-group invariance testing is less common (Mammadova & Aypay, 2023).

On the other hand, the TIMSS SSBS evaluation offers a more critical picture. IRT analyses highlight that items behave differently across countries and language versions, with some items showing differential item functioning. This indicates that, for international comparisons, scores may contain construct-irrelevant variance linked to translation nuances or cultural norms. The report recommends revising the scale to improve cross-cultural validity.

Overall, invariance and cross-cultural validity are unevenly addressed. Some tools exhibit strong within-country invariance or language-specific evidence, but far fewer have been rigorously tested across countries or cultural groups.

4.1.4 PROMISING STRATEGIES FOR SCHOOLS

This section addresses the question:

What are the promising strategies schools can use to assess and monitor student belonging?

Utilising standardised and brief quantitative scales

A primary strategy for schools involves embedding validated, multi-item belonging scales within existing annual or periodic school climate surveys. This approach relies on established instruments such as the *PISA School Belonging Scale* or *Panorama Education modules*, which allow educators to measure multi-dimensional facets of the school experience, including peer respect, adult connection, and the degree to which a student feels "at home" (Allen et al., 2021; Armstrong-Carter et al., 2023). To ensure the psychometric integrity of these assessments, effective scales utilise a balanced composition of positive affirmations (e.g., "I feel like I belong") and reverse-coded items (e.g., "I feel like an outsider"), which helps maintain internal consistency and reduces response bias (St-Amand et al., 2022). Furthermore, for more agile and frequent monitoring, schools can deploy pulse surveys (brief, five-item subscales) designed to be completed in under 20 minutes during regular class time.

These tools enable staff to track real-time fluctuations in the school social environment and identify immediate needs rather than waiting for annual results (Allen et al., 2023; St-Amand et al., 2022).

Incorporating qualitative student voice methods

While standardised quantitative scales provide a necessary benchmark for measuring the prevalence of student belonging, they represent only the first step in a comprehensive monitoring framework. Relying solely on numerical data presents a significant limitation; pure quantitative metrics can identify that a problem exists, but they often fail to explain the underlying causes or surface the "exclusionary routines" and subtle cultural barriers that standardised items might overlook (Brezicha & Miranda, 2022). To bridge this gap, many researchers implement qualitative strategies to collect students' voices. The strategies include adding open-ended survey prompts (e.g., "What helps you feel you belong?") and conducting ethnographic monitoring through interviews and classroom observations (Allen et al., 2023; Brezicha & Miranda, 2022). These actions allow educators to capture rich student narratives and identify specific, actionable drivers of belonging, such as the need for greater emotional support or more inclusive respect from peers and staff (Tate et al., 2024). By integrating these qualitative insights, schools can move beyond passive monitoring to co-design interventions with their students, ensuring that school-wide practices are culturally sustaining, relevant to the local context, and directly responsive to the lived experiences of the student body (Tate et al., 2024).

Equity-Focused Disaggregation of Data

Beyond listening to students generally, many scholars also look deeper into their data to ensure that some minor groups are not overlooked in the broad school average. A critical strategy is to break down survey results by specific student backgrounds, such as English Learners (EL), LGBTQ+ students, and those from immigrant families (White et al., 2023; Choi et al., 2025). In addition, several studies suggest that schools can add simple "risk screeners" to identify students with heavy out-of-school duties. For example, a study of 48,500 students in Rhode Island found that those who spend significant time caring for siblings or grandparents feel much less connected to school (Armstrong-Carter et al., 2023). To make this data accurate, surveys must be provided in a student's native language; otherwise, language barriers, rather than a lack of belonging, might skew the results (White et al., 2023). This detailed approach turns a generic school report into a precise map, allowing educators to provide targeted support to the specific students who need it most.

A note for schools that use multi-tiered system of support (MTSS)

These monitoring strategies align well with a Multi-Tiered System of Support (MTSS) approach to school belonging. MTSS provides a tiered framework for using data to guide universal, targeted, and intensive support rather than treating all students as having the same needs.

Tier 1: Universal screening and whole-school monitoring.

Short, validated belonging scales or brief indicators can be administered to all students once or twice a year. Results are used to inform appreciative inquiry processes and whole-school policy development, focusing on strengthening existing relational and cultural assets rather

than deficit framing. The survey-based and embedded-indicator approaches described above are particularly suited to this universal tier.

Tier 2: Targeted group monitoring and support.

Students who show consistently low or declining belonging on Tier 1 screening can be offered targeted group interventions. Monitoring at this tier may involve more frequent use of brief scales, session-by-session check-ins, or small-group reflections. Data are used to see whether targeted interventions are improving belonging trajectories for specific cohorts (e.g., Year 9 students, recent arrivals, LGBTQ+ students), and to adjust group content accordingly.

Tier 3: Intensive individual monitoring and support.

For students whose sense of belonging remains low despite Tier 2 support, MTSS points to individualised psychological intervention that explicitly targets school belonging barriers. Monitoring here may involve personalised measures, goal-focused checklists and regular clinical or counselling notes that track perceived acceptance, safety and participation over time. Approaches drawing on ACT and CBT principles can be adapted to focus on school contexts, with data used to guide and evaluate individual case planning.

Framing belonging assessment within MTSS makes clear that monitoring is not an end in itself. Universal, targeted and intensive data are explicitly linked to graduated responses, so that students who report low belonging are visible, supported and followed up over time rather than simply identified. This tiered approach also helps schools balance efficiency (through brief, universal tools) with depth (through targeted and individualised qualitative work) and provides a coherent structure for integrating the diverse strategies described in this section.

Accessing and selecting belonging measures

To assess and monitor students' belonging, schools are required to access not only psychometrically sound tools, but also clear guidance on selection, adaptation, and use. Several open-access repositories significantly contribute to this process. This stems from the fact they collate belonging measures and provide practical advice for schools and systems.

The Global Belonging repository brings together a range of belonging measures used across educational and community contexts. These include brief screening tools, multidimensional scales, and culturally grounded or population-specific instruments. Measures are accompanied by information on intended age groups, contexts of use and links to original validation studies. This structure supports informed selection and comparison, rather than ad hoc adoption of tools based on availability or familiarity.

The EdInstruments platform complements this resource by offering evidence-informed briefs on the use of school belonging assessments. Its guidance foregrounds considerations that are especially relevant for schools, including clarity of purpose, minimising student burden, avoiding deficit framing, and embedding belonging measures within broader wellbeing, engagement or digital-skills monitoring systems. Rather than promoting specific instruments, these briefs emphasise alignment between measurement choices and intended action.

Alternative approaches to measuring school belonging

In addition to self-report scales and standardised instruments, innovative methods exist that capture belonging through students' own expressions and lived experiences. These

approaches are particularly valuable for younger children and for contexts where traditional questionnaires may not fully reflect how students understand and experience belonging.

Draw, Write, Tell methods for early childhood

The “Draw, Write, Tell” method has been used to generate rich, developmentally appropriate data on how young children conceptualise belonging in educational settings. In a recent study with children aged 3 to 8, researchers asked participants to draw a picture in response to prompts about belonging, to write or dictate brief descriptions of their drawings, and to explain their drawings in follow-up conversations with researchers or caregivers (Hudson et al., 2025). This multimodal elicitation allowed children to communicate through visual and verbal means, generating insights into their sense of happiness, safety, friendship, inclusion, and caring environments as core aspects of belonging in their own words and representations.

Using drawing as an entry point into children’s subjective worlds leverages their natural communicative strengths and reduces reliance on abstract verbal scales. It creates space for children to express belonging through symbols and narratives that align with their developmental capacity, while the accompanying verbal explanations help clarify meaning and deepen interpretation. This method thereby provides both qualitative depth and developmental sensitivity that can inform belonging measurement and pedagogical reflection.

Co-created and context-responsive measurement

In middle childhood and adolescence, another innovative approach involves co-creating measurement tools with students and educators. Drawing on opportunities-based frameworks of belonging, researchers such as DeLeon Gray (2022) have developed measures that assess belonging through students’ experiences of opportunities to belong. For example, survey items can be co-designed with students and school community members to reflect culturally relevant cues and experiences that shape belonging in particular contexts. This co-creation process helps ensure that measurement tools are closely aligned with what students themselves identify as meaningful aspects of belonging.

Gray’s work illustrates how measurement development can be grounded in partnership with school communities, foregrounding culturally sensitive items and language that resonate with students’ diverse backgrounds. By centring opportunities to belong, such as relational supports, instructional inclusion, and institutional practices, this approach shifts belonging measurement toward the lived conditions that enable belonging to emerge. Instruments developed through this collaborative process demonstrate strong psychometric properties while capturing contextually grounded experiences of belonging among diverse student groups.

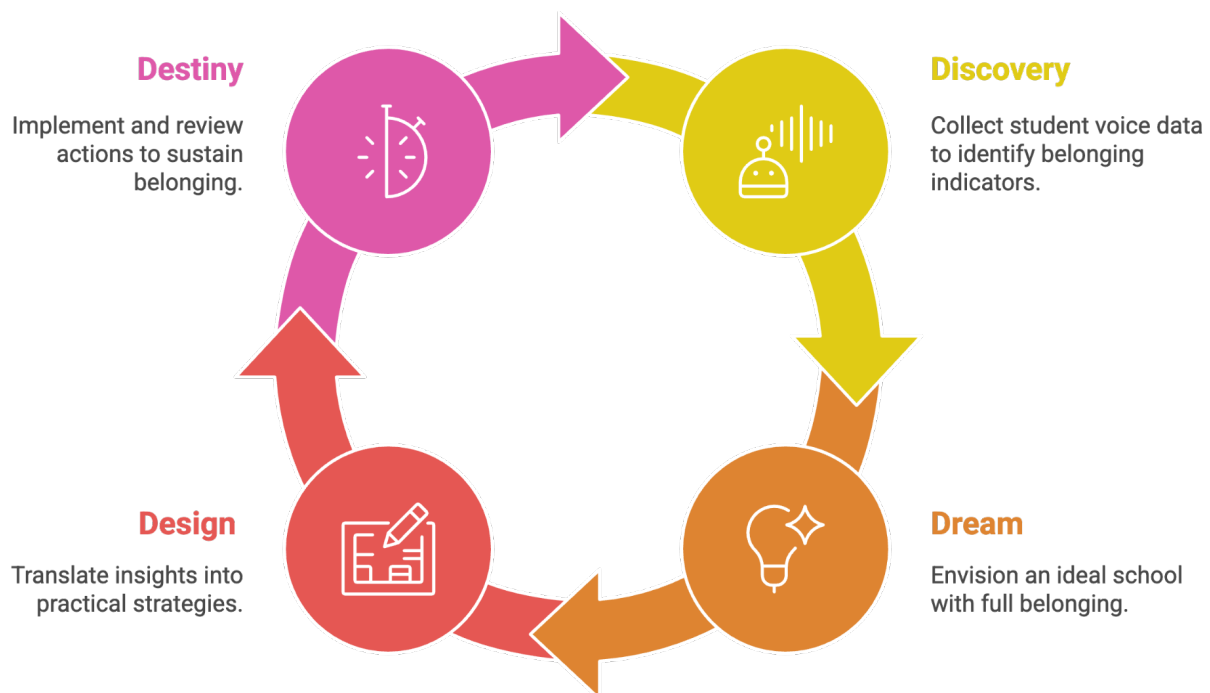
Appreciative Inquiry

Schools can use appreciative inquiry as both a measurement and improvement method for school belonging by systematically identifying what already supports students’ belonging, and then building action from those strengths (Greenwood & Kelly, 2020). As summarised in Figure 9, The process begins with Discovery, where schools collect structured student voice data that asks students to describe moments, relationships, routines, or spaces where they already feel they belong. These data function as belonging indicators, revealing concrete practices that are working well rather than abstract attitudes. In the Dream phase, students are invited to

describe what an ideal school would look like if belonging were fully realised, allowing schools to surface shared aspirations grounded in students' lived experience rather than adult assumptions. The Design phase translates these insights into practical strategies by asking students what teachers, peers, and the school could do more of to strengthen belonging, ensuring proposed actions are feasible within everyday classroom and school structures. Finally, Destiny focuses on implementation and review, where schools prioritise a small number of student-identified practices, assign responsibility, embed them into existing policies or routines, and return to students to check whether these actions are sustaining or strengthening belonging over time. In this way, appreciative inquiry allows schools to measure belonging by identifying what gives it life, while simultaneously generating a clear, student-informed plan of action that protects and extends effective practice rather than introducing disconnected initiatives.

Figure 9

The appreciative inquiry process



Complementing traditional scales

These alternative approaches complement traditional self-report instruments (such as Psychological Sense of School Membership) by providing deeper contextual and developmental insight. For younger children, creative and multimodal methods expand the ways belonging can be voiced and understood. For older students, co-created measures strengthen cultural relevance and student voice in what belonging means in their setting.

Together, these diverse measurement approaches reflect a commitment to capturing belonging as an experiential and context-responsive construct, enabling schools to interpret

data with an eye toward students' interpretations and priorities rather than researchers' assumptions alone.

4.1.5 ETHICAL CONSIDERATIONS IN PRACTICE

This section addresses the question:

What are the ethical considerations in studying and measuring belonging in schools?

Informed assent and accessibility for minors

Ethical research requires that students and families can make a clear, pressure-free choice to participate. To achieve this, researchers must remove barriers like language and power dynamics. For example, providing consent forms in multiple languages ensures that every family truly understands the study before signing (Ward-Seidel et al., 2025). It is also vital to distinguish between a parent's permission and the student's own consent. In competitive environments, students often feel pressured to please their teachers. To counter this, studies like the Physics Olympiad explicitly told students that saying "no" would not hurt their grades or their standing in the contest (Ladewig et al., 2023). This no disadvantage rule protects students, ensuring they only participate because they want to, not because they feel they must.

Managing psychological safety and identity threat

Once students feel free to choose whether to participate, the focus shifts to ensuring the research itself does not cause them harm. Measuring a student's sense of belonging often requires asking deep, personal questions about their identity and how they feel they fit in. The difficulty lies in the fact that these questions can be double-edged. Asking a student about negative stereotypes or whether they feel threatened by their social identity can accidentally trigger the very stress or anxiety the researcher is trying to study. If not handled carefully, the survey itself could make a student feel less safe or more isolated than before they started. To prevent this, researchers must build strong safety nets into their study design. For instance, studies like the one by Ladewig et al. (2023) emphasise the careful handling of sensitive questions. This means framing items in a way that avoids reinforcing harmful stereotypes and ensuring that students never feel forced to answer questions that make them uncomfortable. Researchers ensure that the process of measuring belonging does not damage it by prioritising psychological safety. This careful approach creates a protective environment where students can share their experiences honestly without being re-traumatized by the questions themselves.

Power dynamics and community-based approaches

Beyond keeping students safe from distress, researchers must also balance the power differences between the experts running the study and the students being observed. Belonging is not just a personal feeling; it is shaped by the power structures within a school (Cortina et al., 2017). Traditional research can sometimes feel like a "top-down" process where outsiders simply collect data from students without giving anything back. To fix this, researchers are moving toward Community-Based Participatory Research (CBPR). This approach treats students as partners rather than just subjects. For example, the "Explorers" internship program focused on rightful presence by involving participants in the design and interpretation of the research (Lalish et al., 2021). When students help shape the questions and share in the

results, the research becomes a shared journey that respects their voice and creates a more honest picture of what it truly means to belong.

Anonymity in qualitative and workplace contexts

When we treat students as partners and listen to their unique stories, we face a new ethical hurdle: keeping those personal details private. In small groups or close-knit schools, a student's story is often so specific that just changing their name isn't enough to hide who they are. If a teacher or peer reads the final report, they might recognize the person by the unique details of their life. Similarly, school staff may hesitate to speak honestly about their workplace if they fear their comments could be traced back to them by their supervisors. To protect everyone involved, researchers must go beyond basic name-changing. Pinkerton and Craddock (2024) suggest blurring specific life events or unique background clues, so individuals stay unidentifiable. For staff members, researchers must be extra clear about how data is stored and used, ensuring that feedback on school "connectedness" never leads to professional trouble (Pestaner et al., 2024). This deep level of privacy allows students and teachers to be vulnerable and honest, knowing that their identities and professional relationships are completely safe.

Researcher reflexivity and positionality

Researchers must be honest about how their own backgrounds and beliefs shape the way they see and measure belonging. No researcher is a blank slate; their personal identity can influence how they interpret a student's experience. To address this, many now include positionality statements that describe who they are and how they approach the study (Ward-Seidel et al., 2025). This practice encourages a strengths-based view, where researchers look for what is working well in a community rather than focusing only on problems. By acknowledging their own perspective, researchers ensure they don't accidentally judge different cultures through their own personal lens. This honesty builds trust and leads to a more accurate, respectful understanding of how diverse students truly feel.

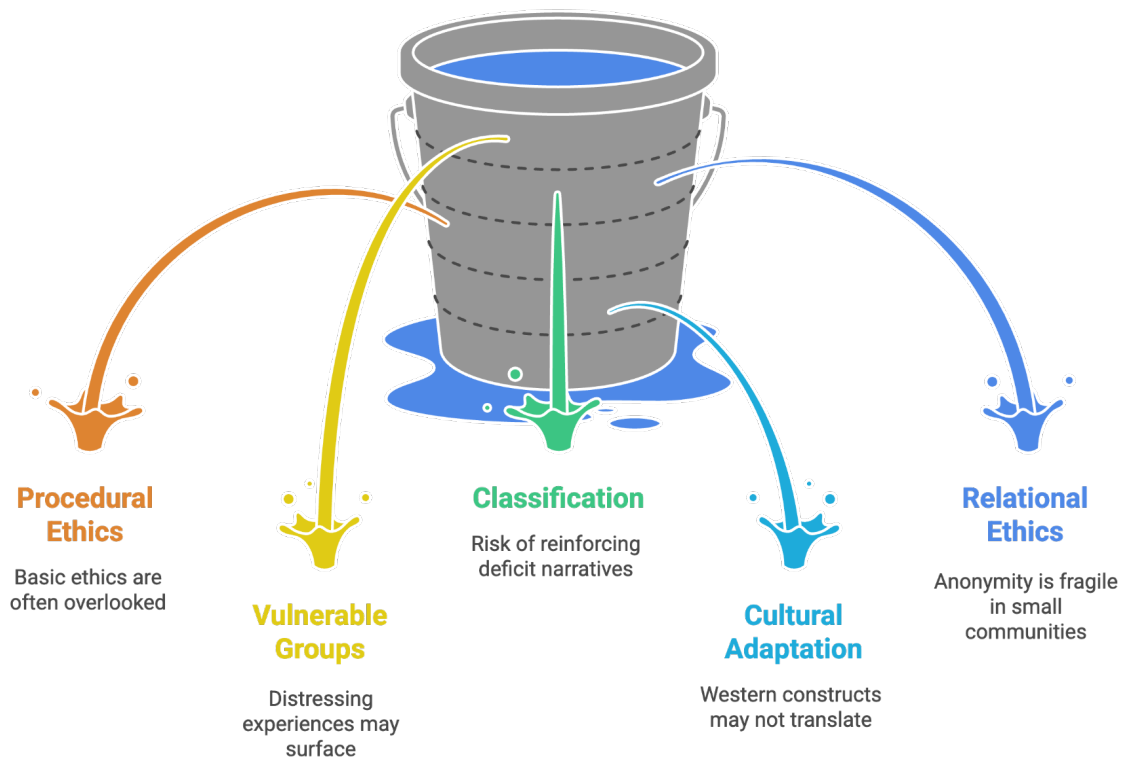
Measurement burden and data governance

While it is important for researchers to reflect on their own biases, they must also be mindful of the practical demands they place on students during the data collection process. Scientific accuracy often leads researchers to create very long, detailed surveys. However, asking students to answer dozens of questions, sometimes nearly 100 at a time, can lead to survey fatigue, where students become tired and stop giving honest answers (Aires et al., 2025). Furthermore, using data from old studies for new purposes can be ethically tricky if the students never originally agreed to have their information used that way. To respect students' time and privacy, researchers must keep surveys concise and focused. For example, they should avoid overwhelming participants with 91-item questionnaires that feel like a chore. Additionally, when using existing databases, researchers must ensure they have clear permission and proper oversight to reuse that data, keeping the participants' original intent in mind (Pestaner et al., 2024).

Ethical considerations for measuring belonging are summarised in Figure 10.

Figure 10

Ethical considerations for school belonging



4.1.6 BRIEF DISCUSSION

This review shows how school belonging is measured, validated, and used in practice is deeply entangled with ethical questions about whose experiences are visible, whose voices are centred and how data are acted upon. The evidence base is strongest for adolescent self-report scales used in mainstream school settings, and weaker for younger children, marginalised groups, and digital environments. Across Sections 4.1.2 – 4.1.5, a central tension emerges: tools that offer comparability and psychometric rigour often risk narrowing belonging to what is easily measured, while qualitatively rich and participatory approaches illuminate complex, situated experiences but are harder to standardise and monitor at scale.

Current approaches to measurement cluster into qualitative, quantitative and mixed-methods strategies. Qualitative and participatory studies foreground belonging as a lived, relational experience, particularly for children with ADHD, immigrant students and young people whose rights or identities are at stake. They capture nuanced accounts of inclusion, exclusion and “fitting in” across school and community contexts, but provide little formal evidence of reliability or validity and limited scope for comparison across sites. In contrast, quantitative scales, especially adaptations of the PSSM and related instruments, offer brief, internally consistent measures that can be linked to outcomes such as wellbeing, engagement, aspirations, and bullying. Yet these tools are often grounded in Western, majority-context assumptions about what “feeling accepted” looks like, and may not fully capture Indigenous, collectivist or

neurodivergent forms of belonging. Mixed-methods and co-designed instruments point towards a productive middle ground, showing that it is possible to retain psychometric structure while embedding community-specific meanings and using qualitative data to interpret scores.

From a psychometric standpoint, the evidence for reliability and validity is encouraging but uneven. Most scales report acceptable or strong internal consistency, and many demonstrate plausible factor structures aligned with theory. A subset of studies move beyond basic alpha coefficients to examine latent structures using CFA or IRT, provide external validity through associations with mental health, academic outcomes and social adjustment, and test measurement invariance across language, gender, or migration background. However, test-retest reliability is rarely examined, content validity is often assumed rather than demonstrated, and cross-cultural equivalence is systematically tested in only a small number of contexts. This creates a hierarchy of evidence: a few tools are well supported for specific populations, while many others rest on partial validity arguments that are adequate for exploratory research but less robust for high-stakes monitoring or cross-national comparison.

The ethical analysis sharpens these measurement issues by framing belonging as both a basic psychological need and, increasingly, as a human right in schooling. Asking students to report on their belonging is not a neutral act; it generates an obligation to respond when data reveal sustained exclusion or unmet relational needs. Across the reviewed studies, procedural safeguards such as ethics approval, consent and anonymity are common but unevenly described, especially in secondary analyses of large-scale datasets where ethical accountability is outsourced to international agencies. The more challenging questions concern how categories (e.g., “immigrant”, “English learner”, “LGBTQ+”) are constructed and interpreted, and whether belonging scores are used to illuminate structural barriers or to implicitly pathologise particular groups or schools.

The notion of “instrument ethics” highlights that technical validation alone is insufficient. When Western-origin scales are translated and applied in new cultural settings, there is a risk that majority norms are embedded in items and response options, and that locally salient forms of collective or place-based belonging are missed. Few studies involve children and young people directly in item development or cognitive interviewing, despite strong arguments for participatory measurement when working with caregiving youth, Indigenous students, multilingual learners, or LGBTQ+ students whose experiences of safety and recognition are fragile. Relational and contextual ethics in qualitative designs further remind us that belonging is not just a score but an embodied, emotional experience; here, the ethical task is to honour participants’ narratives, protect them from harm when sharing painful stories of exclusion, and avoid romanticising any single pedagogical approach as inherently “belonging-producing.”

Promising monitoring strategies illustrate how measurement and ethics can be brought together in practice. Repeated, low-burden surveys, brief identity-overlap indicators and ongoing qualitative reflection offer ways to track trajectories of belonging over time rather than relying on one-off snapshots. Embedding belonging items into existing wellbeing or digital-skills surveys and analysing them alongside indicators of digital access and family engagement, helps schools identify structural patterns rather than locating problems solely within individual students. At the same time, staff focus groups, student journals and community-based evaluations show how qualitative monitoring can surface how teachers talk about families, how programmes feel “like family” to young people, and where relational climates may be shifting. Across these designs, the most ethically robust approaches are those that: (a) treat belonging data as a starting point for dialogue and co-design of responses;

(b) triangulate student self-reports with adult and family perspectives; and (c) attend explicitly to avoiding deficit framings and unintended surveillance.

Against this backdrop, the overall level of evidence is best characterised as solid but partial. The field now has a suite of tools that can reliably measure key aspects of school belonging for many adolescent populations, and there are workable models for integrating belonging into school monitoring systems in ways that are both informative and manageable. However, gaps remain for early childhood and primary settings, for students at the intersection of multiple marginalised identities, and for rapidly evolving digital and hybrid learning environments. There is also a need for studies that bring psychometric innovation, cultural co-production, and ethical reflexivity together in a single programme of work, longitudinal designs that test score stability, invariance and predictive validity while simultaneously involving students in defining what belonging should mean in their schools.

In summary, this review suggests that advancing the measurement and ethics of school belonging requires holding three commitments in balance. First, conceptual clarity and psychometric rigour are essential if belonging is to be monitored and compared over time and across groups. Second, student voice and cultural grounding are necessary to ensure that what is measured aligns with how diverse children and young people understand belonging in their own terms. Third, ethical responsibility must extend beyond procedural compliance to include how data are interpreted, communicated, and used, with particular attention to avoiding harm and to supporting those whose low belonging signals unmet relational rights. Future work that weaves these commitments together will be better placed to produce tools and practices that are not only technically sound, but also just and responsive in the everyday realities of schools.



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DISCUSSION



Photo by Tima Miroshnichenko

DISCUSSION

While school belonging is widely recognised as essential for student success, it is often treated as an incidental by-product rather than a primary focus (Baumeister & Leary, 1995). In many educational settings, belonging is left to emerge on its own or is measured without a clear plan for how to respond to the data (Allen, Kern et al., 2018). This lack of strategy creates a significant gap between research evidence, institutional policies, and the daily lived experiences of students. The findings of this report argue for a fundamental shift: belonging must be repositioned within our education systems. It should not be viewed as a secondary concern alongside learning, wellbeing, or equity. Instead, belonging is the foundational condition that determines whether these other outcomes are even possible (Goodenow & Grady, 1993). When a student feels they belong, they are positioned to learn and thrive; without it, even the best-designed interventions may fail to reach their full potential (Walton & Cohen, 2011).

Meanwhile, belonging should not be framed only as a cause or “input” to wellbeing and flourishing. The relationship is reciprocal: stronger belonging can promote wellbeing and flourishing, and students’ wellbeing and flourishing also shape how belonging is accessed, interpreted, and sustained over time. In other words, flourishing is both an outcome of belonging and a resource that enables belonging through students’ capacity to participate, trust, regulate distress, and invest in relationships and learning. From this perspective, wellbeing and flourishing are not separate “add-ons”: they depend on the extent to which students experience school as a place where they are safe, valued, and able to participate as legitimate members.

This section synthesises the report’s findings into four distinct areas of focus. Following an overview of these areas, the discussion centers on three transformative outcomes intended to move the field forward:

- **A shared definition of school belonging** to resolve longstanding ambiguities in how the construct is described and applied (Slaten et al., 2016). A clearer definition supports better alignment between researchers, school leaders, and policy-makers.
- **A coherent integrative framework** that brings together evidence on the drivers, barriers, and interventions of belonging within a single model (Allen, Kern et al., 2021). The framework is designed to reflect the realities of contemporary schooling, including the growing influence of digital environments.
- **Measurement guidance with ethical emphasis** that moves beyond technical adequacy to address how belonging data should be selected, interpreted, and acted upon with care, particularly in relation to privacy, consent, and potential unintended harms.

These outcomes address a central challenge identified throughout this review: belonging is frequently valued but rarely put into consistent practice. The discussion therefore advances a vision of belonging as an explicit, shared, and ethically governed concern, one that can guide decision-making across classrooms, schools, and systems rather than remain an abstract aspiration. Crucially, the definition and framework presented later are intended to make the wellbeing-and-flourishing value of belonging operational: they clarify what belonging is, and what must change in everyday school life for students to reliably experience it.

SECTION 1: HOW IS SCHOOL BELONGING CONCEPTUALISED?

Section 1, asking the broad question of how school belonging is conceptualised, shows strong agreement on several core findings across a diverse and uneven literature. School belonging is widely recognized as a fundamental human need, essential for both psychological wellbeing and academic success (Baumeister & Leary, 1995). Research consistently shows that students experience belonging when they feel accepted, safe, valued, and recognised within their school community (Goodenow & Grady, 1993; Allen, Kern et al., 2021). While earlier definitions often focused narrowly on a student's social popularity or whether they were accepted by peers, modern evidence suggests a much broader scope. Recent work points to belonging as multi-faceted, shaped by identity, mattering, participation, and the social and structural conditions of schools.

A critical shift in the literature is the move away from viewing belonging as a trait that sits inside an individual student. Instead, it is seen as a relational product of the school's culture, policies, and environment (Slaten et al., 2016). Within this framework, safety emerges as a defining condition rather than a secondary outcome, with students linking belonging to freedom from threat and confidence to participate (Libbey, 2004). The synthesis also shows belonging as co-produced across systems, classrooms, peers, school policies, families, and wider cultural settings, rather than residing inside individual students. Cultural and collective accounts add weight to this view, showing how norms, histories, and recognition shape who feels they fit and who does not. The review identifies persistent confusion between belonging and related constructs like engagement, connectedness, and relationship quality, with measurement practices often blurring these boundaries. Evidence shows this weakens interpretation and translation. Work defining belonging through correlates such as wellbeing, achievement, and mental health demonstrates its importance but risks diluting conceptual clarity when core experience is left implicit. Variation across age, culture, and social positioning highlights perceived belonging as context-sensitive, historically shaped, and unevenly distributed. Together, these findings show school belonging as a dynamic, relational, and culturally situated experience that requires clear definition if schools and systems want to act on it with coherence.

SECTION 2: WHAT ARE THE DRIVERS AND BARRIERS OF BELONGING IN K–12 EDUCATION IN SCHOOLS AND IN A DIGITAL LEARNING ENVIRONMENT?

Section 2, asking the broad question of what drives and blocks belonging in K–12 schooling and digital learning environments, identifies several clear patterns across a mixed evidence base. Identifying what drives and blocks belonging in K–12 schooling is critical, as research consistently links school belonging to better mental health, stronger engagement, and more adaptive learning outcomes (Allen, Kern et al., 2018; Arslan et al., 2020). Across both in-person and online settings, the strongest and most reliable drivers are rooted in everyday relational and participatory conditions. Warm, respectful teacher–student relationships (McCormick & O'Connor, 2014; Wentzel, 1998), peer support, inclusive climates, and structured chances to connect emerge as the most robust influences, including during remote and hybrid learning (Uslu & Gizir, 2017). Evidence shows these drivers work through students' perceptions of being known, valued, and supported, rather than through formal participation alone.

In digital learning environments, the school ecology extends into the home. Evidence suggests that family involvement and household routines become vital predictors of belonging when

schooling moves online (Epstein, 2011; Uslu & Gizir, 2017). However, digital spaces also introduce unique challenges; while some students find virtual communities helpful, others perceive online peer connections as insufficient for building a deep sense of belonging (Lapointe & Reissetter, 2008).

Conversely, barriers to belonging typically cluster around experiences of exclusion. Racism, deficit views, unsafe climates, bullying and cyberbullying, cumulative loneliness, and digital exclusion repeatedly undermine belonging (Hymel & Swearer, 2015; Tynes et al., 2020). Several studies point to reinforcing cycles, where repeated experiences of non-belonging erode trust and motivation, reducing the effectiveness of later attempts to reconnect (Walton & Cohen, 2007). The review also shows limits in the current evidence. While opportunity- and relationship-based drivers are supported by moderate to strong findings, competencies, motivations, and digital mechanisms remain under-studied and often inferred rather than measured directly. Causal evidence remains uneven, with many studies relying on cross-sectional or descriptive designs. These findings show that belonging grows or fractures through ordinary conditions of school life, shaped by context and mode of learning, and that efforts to strengthen belonging need to focus on how students experience relationships, safety, and participation across physical and digital spaces.

A key implication for wellbeing and flourishing is that these drivers and barriers often operate through bidirectional cycles. When belonging is repeatedly undermined (e.g., through exclusion, bullying, or unreliable adult response), students' wellbeing and flourishing can deteriorate (e.g., heightened anxiety, loneliness, low mood), which in turn reduces participation, help-seeking, and willingness to risk connection, thereby further weakening belonging. Conversely, when wellbeing and flourishing are supported (e.g., through safety, predictable routines, timely support, and reduced threat), students are more able to engage, connect, and sustain positive relationships, which strengthens belonging over time. This is why the report treats belonging not only as an outcome of school conditions, but also as part of a reciprocal system linking relational experience and flourishing.

SECTION 3: WHAT SCHOOL-BASED OR CLASSROOM INTERVENTIONS, STRATEGIES OR APPROACHES ARE AVAILABLE?

Section 3, asking the broad question of what school-based or classroom interventions, strategies, and approaches are available to foster belonging, identifies a clear but uneven body of evidence. Across the literature, there are relatively few well-defined interventions designed explicitly to improve school belonging, particularly in K–12 settings. Most belonging-focused work takes the form of relational, practice-based, or context-specific approaches rather than tightly manualised programs. Despite this, consistent patterns emerge. Effective approaches centre on relational safety and respect, identity-affirming and culturally sustaining practice, and meaningful opportunities for student agency, voice, and contribution. Belonging is most likely to be supported when these elements operate together across classrooms, school climate, leadership, physical and digital spaces, and partnerships with families and communities. Practitioner-led strategies such as restorative practices, culturally responsive teaching, GSAs, arts-informed pedagogy, multilingual instruction, and strengths-based programs show local gains in belonging, particularly for students whose belonging is most precarious. Implementation quality emerges as decisive. Shared leadership, equity-focused policy, sustained resourcing, professional learning, and youth co-design enable success, while reliance on isolated teachers, short-term projects, or high-stakes accountability environments limits impact. The evidence base offers rich insight into mechanisms but remains

methodologically modest, dominated by qualitative studies and correlational designs, with few rigorous trials or long-term evaluations. Taken together, the findings show coherent conceptual support and moderate empirical evidence that intentionally designed instructional and leadership practices can foster belonging, alongside a clear need for stronger causal and longitudinal research to guide system-level action.

SECTION 4: WHAT MEASUREMENT AND ETHICAL CONSIDERATIONS EXIST?

Section 4, asking the broad question of what measurement and ethical considerations exist in relation to school belonging, highlights that how belonging is assessed and used is as consequential as whether it is measured at all. Across the literature, belonging is assessed through qualitative, quantitative, and mixed-methods approaches, each capturing different aspects of students' experiences. Standardised self-report scales dominate large studies and generally demonstrate acceptable reliability and coherent factor structures, with consistent links to wellbeing, engagement, and safety. At the same time, evidence for validity is uneven. Test–retest reliability, content validity, and cross-cultural invariance remain under-developed, raising concerns about fairness when tools are used to compare groups, schools, or systems. Qualitative and participatory approaches foreground lived experience and amplify marginalised voices, yet lack standardised metrics for monitoring change. Co-designed and culturally grounded measures emerge as a promising middle path, combining psychometric discipline with local meaning. Ethical issues cut across all approaches.

A practical implication of this evidence is the understanding that school's may benefit from using a brief, conceptually clear belonging measure that can be administered repeatedly and interpreted with defensible reference points. For this reason, schools could consider using a tool like the PISA Sense of Belonging measure (BELONG) (OECD, 2024) as a practical KPI style tool for monitoring belonging over time. It is brief (six items), widely used internationally, and designed for comparability across large and diverse samples. The measure captures core experiences of social inclusion and exclusion.

Used in a low-burden survey format, measuring belonging allows schools to track change over time and to benchmark patterns against broader reference distributions where available (e.g., country level and internationally) as the PISA report on student belonging in over 70 supporting OECD countries every 3 years (except for a 1-year delay from 2021 to 2022 due to the pandemic). To strengthen system-level understandings of student's sense of belonging, the International Baccalaureate could also explore formal avenues to access relevant benchmarking data for IB schools participating in PISA through the OECD, subject to appropriate permissions and governance. See the recommendations for further information.

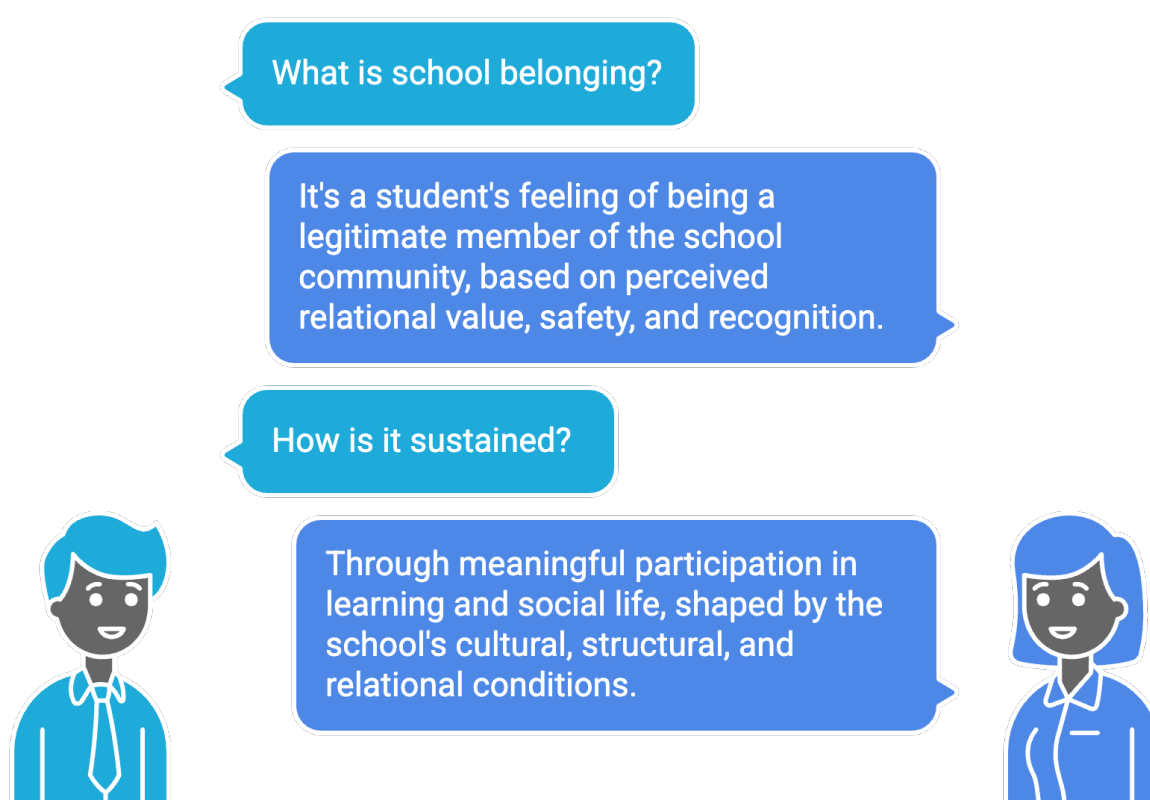
Ethical issues cut across all approaches. Measuring belonging is never neutral. Asking students to report low belonging can create an obligation to respond, and data can reinforce deficit narratives or punitive accountability if stripped of structural and cultural context. The evidence points to the need for transparency, proportionality, cultural sensitivity, and student participation in instrument design, interpretation, and action. Promising school practices use brief, validated measures at repeated time points, integrated with qualitative reflection and clear plans for support rather than surveillance. Taken together, the findings show that responsible measurement of belonging requires conceptual clarity, technical care, and explicit ethical commitment, ensuring that data are used to strengthen relationships, equity, and trust rather than to label, rank, or stigmatise students and schools.

An International Baccalaureate definition of school belonging

Drawing on the full body of evidence reviewed, school belonging can be defined as a student's experienced sense of legitimate membership within the school community (see Figure 11). It is grounded in perceived relational value, safety, and recognition, and sustained through everyday opportunities to participate meaningfully in learning and social life, as shaped by the cultural, structural, and relational conditions of physical and digital school environments.

Figure 11.

An international baccalaureate definition of school belonging



Within this definition, belonging is a condition that arises when students interpret their interactions with peers, teachers, institutional practices, and cultural norms as signals that they are welcomed, protected, and socially valued within the school. This interpretation is shaped by perceptions, immediate relational cues, and wider structural and cultural considerations, including how schools organise learning, respond to difference, and distribute voice, care, and responsibility.

The review shows that belonging is experienced as contingent rather than guaranteed. Students assess their belonging through patterns of interaction over time, drawing inferences from how consistently they are treated with respect, whether they can participate without fear of harm or humiliation, and whether their presence and contributions are taken seriously. These appraisals extend beyond interpersonal warmth to include perceptions of fairness, cultural recognition, and institutional reliability. In this sense, belonging reflects not only how relationships feel, but how the school functions as a social system.

Importantly, this definition recognises belonging as situated and uneven. Students do not experience belonging in the same way, even within the same school. Belonging varies across developmental stages, cultural histories, social positioning, and learning modes, including online and hybrid contexts. It can fluctuate across time and settings, intensify during periods of affirmation, and fracture following repeated cues of exclusion or disregard. For students whose identities or histories have been marginalised, belonging is particularly sensitive to how schools acknowledge difference, respond to harm, and create space for multiple ways of being and participating.

From an International Baccalaureate perspective, school belonging is therefore understood as a condition that enables learning, agency, and wellbeing, rather than an outcome to be pursued in isolation. It is produced when schools organise learning, relationships, and environments in ways that allow students to see themselves as valued members of a shared educational community, with the confidence to engage, contribute, and grow. This definition provides a common reference point for aligning pedagogy, leadership, policy, and ethical measurement, while remaining attentive to cultural context and student voice.

Further considerations

Individual schools that wish to create their own definition of school belonging should do so by involving all community members, including students, families, and staff. There are three important considerations when creating a school-based definition. In this review, culture, identity, and background were found to shape how belonging is experienced. For students from migrant, refugee, or linguistically diverse backgrounds, belonging was found to depend on whether their languages, histories, and cultural practices were visible and respected at school. For Indigenous students, belonging was linked to seeing their communities and knowledge systems recognised within the school. Across these groups, perceived belonging can differ from staff assumptions, making it essential to listen directly to students' own accounts and perspectives on what belonging means to them.

Second, for a global system such as the International Baccalaureate, school belonging raises important language and translation considerations. Words used for “belonging” in different languages may carry distinct shades of meaning, draw on different cultural metaphors, or overlap with concepts such as loyalty, harmony, or social duty. Terminology and definitions may therefore vary across contexts. At the same time, cross-cultural research suggests that the underlying need to form and maintain close, caring bonds is a basic human motivation rather than a culture-specific idea, and that social exclusion is distressing across many settings worldwide (for example, Baumeister & Leary, 1995; Ryan & Deci, 2000). This suggests that while the expression and language of belonging may differ, the core experience of feeling accepted, valued, and not left out is widely shared. Using appropriate terminology is therefore important for clarifying priorities and goals related to school belonging within specific school contexts.

Belonging work across K–12 cannot rely on good intentions alone. A school-wide effort needs a shared language about what it means for students to feel that they “belong”. Definitions are therefore important to guide schools to realistic change in how belonging is operationalised and measured.

THE INTERNATIONAL BACCALAUREATE FRAMEWORK OF SCHOOL BELONGING

This section synthesises the drivers of school belonging across the reviewed studies into a coherent conceptual framework adapted from Allen's (2025) integrative model. It organises evidence into four interrelated domains: opportunities, perceptions, competencies, and motivations. These domains describe how belonging is experienced by students and sustained within schools and across physical and digital learning environments.

Belonging emerges through students' ongoing experiences of participation, recognition, and sense of belonging within their school communities. Across the evidence base, belonging is shaped through interactions between students, peers, educators, families, institutions, and wider cultural settings. The framework reflects this socio-ecological, relational, and contextual character by positioning belonging as an outcome of everyday school life, shaped across time and settings. The four domains below describe what schools can shape, and how students interpret and respond to what schools provide. See Figure 12.

OPPORTUNITIES

Opportunities are the conditions that give students real chances to participate meaningfully in school life. Across the evidence, opportunities consistently appear as central drivers of belonging. These include access to supportive relationships with teachers and peers, opportunities to contribute to learning, involvement in school and community activities, and access to wellbeing and learning supports.

In digital learning environments, opportunities also depend on reliable access to platforms and the design of online spaces that allow participation to be sustained over time. When these opportunities are built into routines, not treated as one-off events, students are more likely to experience belonging as stable and reliable.

The findings show that opportunities operate at multiple levels. At the interpersonal level, belonging is stronger when students can rely on supportive teacher–student relationships, caring peer relationships, friendship support and positive peer norms. Belonging is weaker when opportunities for participation are disrupted by bullying, victimisation, exclusion, or hostile peer cultures. At the instructional level, opportunities are shaped by classroom practices that make participation predictable and safe. These include clear routines, cooperative learning, structured discussion, and repeated chances to contribute ideas. At the institutional level, opportunities are shaped by school climate, participation structures, transition processes, extracurricular access, and whole-school approaches. In digital contexts, these levels intersect. Online interaction, platform design, and staff responses shape whether students can participate and be recognised across both online and offline spaces.

PERCEPTIONS

Perceptions capture how students interpret what school life means for them. The evidence shows that belonging is closely linked to students' perceptions of acceptance, value, safety, and fairness. They form views about whether they are legitimate members of the school community. Perceptions help explain why the same school practice can produce different belonging experiences. Students do not only notice what is offered. They judge whether it is consistent, respectful, and credible. This is especially clear in relation to safety and fairness.

When students perceive bullying, exclusion, or inconsistent adult responses, belonging is reliably lower. When students perceive that adults notice concerns, respond in a timely way, and follow through, belonging is stronger. In digital settings, perceptions are shaped by visibility and responsiveness. They are also shaped by the quality of relational communication. How schools respond to online harm matters because it signals whether students will be protected and taken seriously.

COMPETENCIES

Competencies refer to the social, emotional, cultural, and relational skills that support students to engage with opportunities and participate in school life. Across the studies, competencies are developed through interactions with peers, educators, families, and communities. These competencies support students to communicate, collaborate, regulate emotions, and navigate learning environments. In digital learning settings, they also include self-regulation and the capacity to sustain constructive online interaction.

The evidence also shows that competencies are not only located within students. Adult competencies matter. Belonging is more attainable when staff have the skills to create accessible participation routines, recognise exclusion early, and respond in ways that reduce harm rather than intensify it. Cultural and linguistic competencies also shape belonging. Research on culturally responsive pedagogy and minoritised groups suggests that belonging is stronger when students' identities can be recognised without penalty, and when staff can navigate cultural cues in respectful ways. For neurodivergent students, the evidence points to the importance of adult understanding of neurodiversity and communication differences. When students' ways of thinking and communicating are treated as problems, belonging is undermined. When difference is understood and supported, belonging is more likely to strengthen.



Photo by Aaron Burden on Unsplash

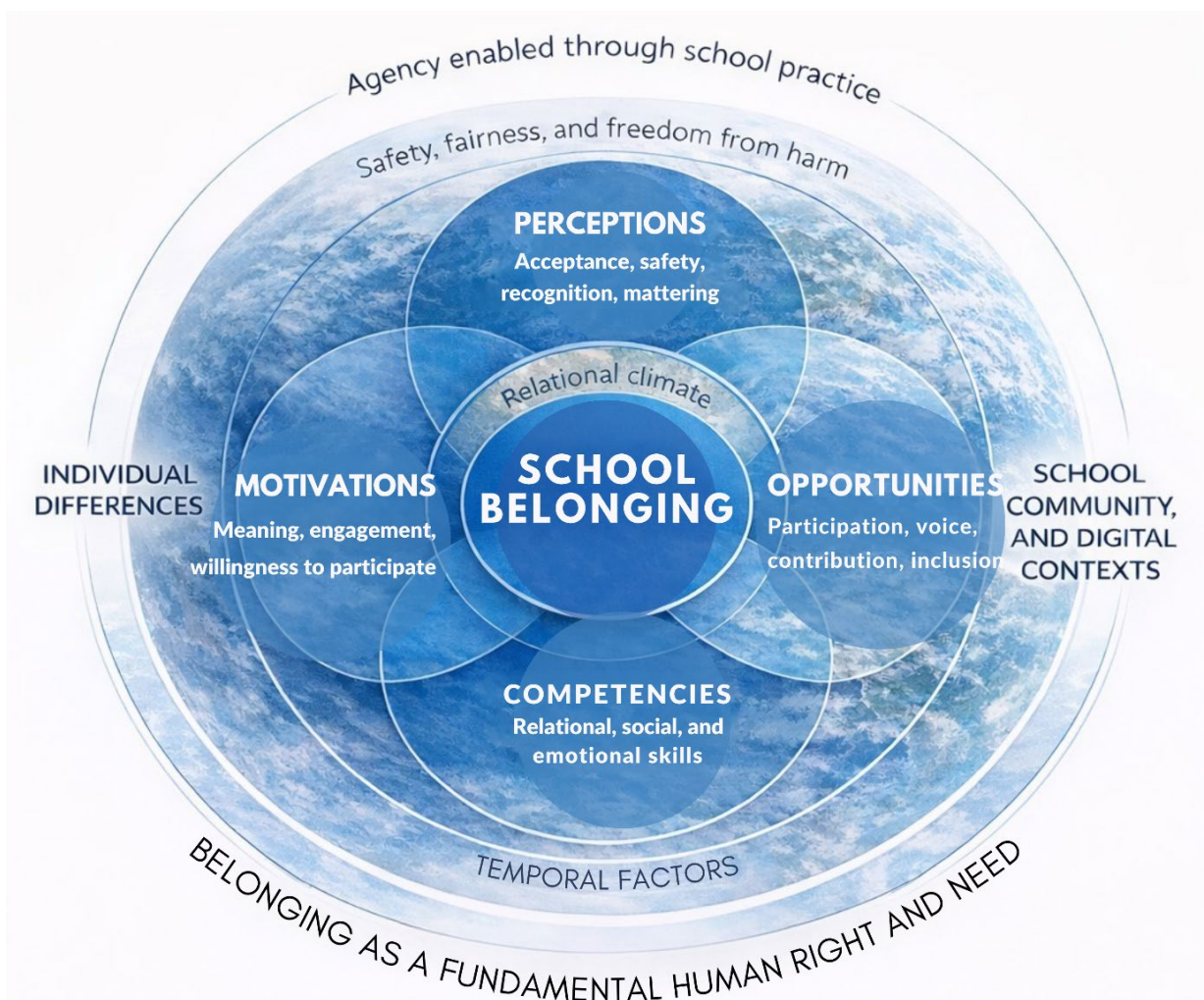
MOTIVATIONS

Motivations describe students' readiness to engage, seek connection, and invest in learning and relationships. The reviewed evidence shows that motivation influences how students take up opportunities and participate in school life. Motivation is shaped by students' expectations about what will happen when they participate. Those expectations develop through repeated experience.

Several strands of evidence highlight avoidance patterns. Some students withdraw from participation to avoid anticipated rejection, embarrassment, or failure. This pattern is especially likely after repeated experiences of bullying, discrimination, or academic struggle. The review also distinguishes between more enduring belonging and short-term fluctuations. More enduring belonging is more strongly associated with longer-term outcomes. This matters for motivation. When belonging is stable, students are more likely to persist, seek help, and stay engaged. When belonging becomes fragile, students may reduce effort and avoid participation, which can further weaken belonging over time. These processes operate in physical and digital settings, because students form expectations in both spaces about whether it is safe to invest effort and identity.

Figure 12

The International Baccalaureate Framework of School Belonging



Interactions across domains, and consideration of context and individual differences

The International Baccalaureate Framework of School Belonging visually demonstrates belonging as a dynamic process involving the interaction of opportunities, perceptions, competencies, and motivations. These domains do not operate independently. Opportunities provided by schools influence how students interpret their place within the community. Perceptions of acceptance, safety, and recognition shape motivation to engage. Competencies enable students to take up opportunities and participate with confidence. Together, these domains form a mutually reinforcing system through which belonging is built and sustained over time.

The framework is intentionally designed to be globally applicable and locally adaptable, reflecting the International Baccalaureate's presence across diverse cultural, linguistic, and institutional settings. Rather than prescribing a single model of belonging, the framework identifies core conditions that can be enacted across different national systems, school types, and learning communities. This allows schools to interpret and implement the framework in ways that are responsive to their local contexts while maintaining coherence with shared principles.

Belonging is understood as emerging through ongoing interaction between students and their environments. These interactions are shaped by cultural meaning systems, identity, organisational structures, relational histories, and developmental timing. The framework therefore positions belonging as neither a fixed trait nor a momentary feeling, but as a cumulative experience that develops through repeated encounters with school practices and relationships.

Context functions as a foundational condition within the framework. School leadership, curriculum design, pedagogical approaches, disciplinary practices, and access to support services shape both the opportunities available to students and the consistency with which they experience care and recognition. Broader social, cultural, political, and historical conditions also influence how schools operate as institutions and how belonging is enacted within them. In this sense, belonging is situated within systems rather than located solely within individuals.

The framework is explicitly designed to operate across learning modes. In digital and hybrid environments, the same domains remain active, though they are expressed through different mechanisms. Opportunities are shaped by platform design and access to technology. Perceptions are influenced by communication clarity, visibility, and responsiveness. Competencies support students' ability to navigate online interaction and learning demands. Motivation is sustained through relational continuity and meaningful engagement. Belonging in digital contexts is therefore supported through intentional design, consistent relational practice, and clear communication structures.

Individual differences are integral to the framework rather than external to it. Students' cultural backgrounds, languages, identities, family circumstances, and prior schooling experiences shape how they engage with opportunities and interpret their experiences. These differences interact with all four domains, influencing how belonging is perceived and enacted. The framework recognises that equitable belonging requires responsiveness to these differences rather than uniform provision.

Developmental timing and transition points play a critical role in shaping belonging. Periods such as starting school, moving between school levels, or shifting learning modes heighten students' sensitivity to relational cues and institutional practices. At different stages, students draw on different competencies and motivational resources when assessing their place within the school community. The framework therefore supports sustained attention to belonging across transitions, rather than isolated intervention at single points.

Cultural meaning systems shape how belonging is understood and expressed across contexts. Language, symbols, rituals, and everyday practices influence how students interpret membership, participation, and respect. While expressions of belonging vary across cultures, the experience of being accepted, valued, and recognised remains central. The framework accommodates this variation by identifying core conditions while allowing cultural interpretation and enactment.

Identity recognition operates across all domains of the framework. Belonging is strengthened when students see their identities, histories, and ways of being reflected in learning, relationships, and school practices. Recognition supports perceptions of legitimacy, strengthens motivation to engage, and enables students to use their competencies with confidence.

Finally, the framework emphasises the cumulative and ethical nature of belonging. Belonging develops through repeated experiences rather than isolated events. Patterns of recognition, care, and participation shape trust and expectations over time. Consistent, transparent, and respectful school practices support psychological safety and institutional reliability, enabling belonging to remain stable across contexts and learning environments.

Using the framework for strategies

The International Baccalaureate Framework of School Belonging provides a structured way to organise and apply strategies that strengthen belonging in schools and digital learning environments. The framework supports schools to align actions with the core domains of opportunities, perceptions, competencies, and motivations, ensuring that strategies address how belonging is experienced in everyday school life. The strategies presented within this report are derived from a Live Delphi study conducted by Allen, Riley et al. (2025), which brought together empirical evidence, student perspectives, and international expert judgement (i.e., from researchers, students, and educators) to identify shared, actionable approaches to fostering belonging. Positioned within this framework, the strategies offer schools a coherent foundation for planning, implementation, and reflection.

OPPORTUNITIES

Strategies in this domain shape the structural, relational, and environmental conditions through which students participate and connect.

- Understand the diversity of children's learning needs and provide opportunity and supports to meet them.
- Create opportunities for connection to expand social networks across ethnic and cultural groups.
- Create welcoming spaces to meet students' holistic needs.
- Embed opportunities for student-led non-academic opportunities.

- Create opportunities that nurture students' agency and voice within the school experience.
- Develop structured opportunities for all stakeholders to feel socially valued at school.
- Build effective community partnerships based on trust.
- Strengthen meaningful relations with parents for engagement and collaboration.
- Ensure a holistic and whole school approach to learning and wellbeing.

PERCEPTIONS

Strategies in this domain shape how students interpret their experiences as signals of acceptance, value, fairness, and safety.

- Embed recognition of the diverse cultures which make up the school community within school policy.
- Strengthen staff visibility, support, and recognition.
- Create appropriately positive and consistent approaches to managing behaviour.
- Ensure strategic leadership decisions are made through a compassionate lens.
- Create and maintain physical, psychological, and emotional safety across all school environments.
- Show fairness by being transparent about how decisions are made when appropriate.

COMPETENCIES

Strategies in this domain support the development of skills that enable students to engage, reflect, and participate with confidence.

- Provide comprehensive and developmentally appropriate feedback to students to make sense of their learning processes.
- Teach students how to set short-term goals, provide strategic feedback, and teach self-evaluation.
- Adopt a whole-school practice of consistent and personalised student–teacher relationships.
- Have a dynamic approach to identifying and reducing barriers to school belonging.

MOTIVATIONS

Strategies in this domain strengthen students' readiness to engage, persist, and invest in relationships and learning.

- Create an environment and opportunities to build students' confidence and self-worth.
- Address attendance and absenteeism through relational approaches rather than punitive measures.
- Create effective and practical ways to define and evaluate belonging.

From strategy to action

The strategies identified, in Allen, Riley et al. (2025) and the insights developed in this report including the application of a framework can only gain their true value through their enactment. When strategies are used consistently, valued by the community, embedded in everyday practice, and experienced as meaningful by students and staff, they shape belonging in

reliable ways. Trust grows through visible action. Trust, in turn, strengthens engagement across relationships and learning environments. In this sense, strategies function as commitments to practice rather than statements of intent. Thus, *the International Baccalaureate Framework of School Belonging* can support this movement from articulation to action and genuine change. By organising strategies and approaches across opportunities, perceptions, competencies, and motivations, the framework assists schools to translate shared priorities into coordinated decisions, routines, and practices, but a framework on its own is only the beginning and expected next steps are critical for ensuring that belonging research has real implications for change in schools.

Expected next steps

The evidence reviewed in this report shows that school belonging does not improve through isolated initiatives or short-term programmes. It strengthens when schools make deliberate, consistent changes to everyday practices that shape how students participate, how they are treated, what skills they develop, and what they come to expect from school. This aligns with decades of research showing that belonging reflects students' repeated interpretations of daily interactions (Goodenow, 1993; Walton & Cohen, 2011) and is closely tied to motivation and wellbeing through fundamental relational processes (Baumeister & Leary, 1995; Ryan & Deci, 2000). The next steps below provide a staged pathway for schools to move from evidence to action by combining Active Implementation Frameworks with a belonging-specific theory of change, so schools can act with clarity, coherence, and accountability, rather than adding disconnected activities.

Active Implementation Frameworks provide a staged structure for action. They help schools decide when to clarify intent, when to build capability, when to trial practices, and when to scale them. What they do not specify is the content of practice. What matters most is that schools implement a small, defined set of everyday practices that reliably shape students' experiences across four domains: opportunities, perceptions, competencies, and motivations. These domains reflect the strongest evidence base in the belonging literature: belonging is shaped by relationship quality and supportive climates (Roorda et al., 2011; Wang & Degol, 2016), meaningful participation and voice (Allen, Kern et al., 2018), and students' expectations about whether help-seeking and effort will be met with support (Walton & Cohen, 2011).

The next steps outlined here combine Active Implementation Frameworks (AIF) with a belonging-specific Theory of Change. Together, they provide schools with a staged, practical pathway from evidence to everyday practice.

BELONGING-SPECIFIC THEORY OF CHANGE

Belonging strengthens when students experience consistent changes across four domains of school life. All implementation decisions should be assessed against whether they reliably shift these four domains (Table 2)

Table 2

Consistent changes required to strengthen belonging

Domain	What should change in students' lived experience	Practical signals you can look/listen for	Key sources (peer-reviewed)
Opportunities	Students have regular, meaningful chances to participate, contribute, and connect in learning and school activities.	Students participate more consistently; more students contribute in class/online; more peer collaboration; fewer students "sit out" or withdraw.	Allen, Kern et al. (2018); Korpershoek et al. (2019)
Perceptions	Students repeatedly receive cues that signal care, fairness, recognition, and safety.	Students report feeling respected and noticed; reduced fear of humiliation; fewer bullying/exclusion reports; increased trust that adults will respond.	Goodenow (1993); Wang & Degol (2016)
Competencies	Students and staff build skills for learning, relationships, inclusive participation, and help-seeking.	Students know how to ask for help; improved classroom social norms; staff use inclusive participation routines; better conflict repair skills.	Ryan & Deci (2000); Darling-Hammond et al. (2018)
Motivations	Students come to expect that effort will be met with welcome, support, and progress.	Students persist after setbacks; more willingness to try challenging work; higher attendance/engagement during tough periods; stronger academic risk-taking.	Walton & Cohen (2011); Allen, Kern et al. (2018)

STAGE 1: EXPLORATION

Clarifying intent and readiness

The purpose of Exploration is to ensure shared understanding and strategic focus before action begins. Schools begin by agreeing on a student-recognisable definition of belonging and translating it into observable signs in daily school life, such as safe participation, fair treatment, and willingness to contribute in class and online. Clear definitions matter because conceptual overlap (e.g., belonging vs. engagement vs. connectedness) weakens measurement and makes practice harder to align (Allen, Kern et al., 2016; Fredricks et al., 2004). Schools should embed relationship-building practices and foster a supportive climate to strengthen students' day-to-day connections, because relational safety and everyday cues of care are the foundation that other strategies depend on (Allen, Kern et al., 2018; Roorda et al., 2011). A positive overall school climate that emphasises physical and emotional safety, respect, and teacher support is also identified here as a core lever, given its links to connectedness and lower bullying/disengagement (Wang & Degol, 2016; Thapa et al., 2013). This focus is especially important at transition points (e.g., primary-secondary) where belonging commonly declines (Benner et al., 2017).

Key tasks for schools

1. **Establish a shared definition of belonging:** Schools agree on a clear, student-recognisable definition of belonging that reflects everyday experience. This definition should be understandable to students and visible in daily school life.
2. **Define success in experiential terms:** Schools specify what stronger belonging would look like from a student perspective, using concrete indicators aligned with opportunities, perceptions, competencies, and motivations.
3. **Select a small number of high-leverage strategies:** Schools identify a limited set of evidence-aligned strategies that match local need and capacity, rather than attempting broad or diffuse action. For instance, whole-school initiatives such as mentoring programs, advisory periods, cooperative learning projects, and positive behavior supports can help build trust and a sense of acceptance among students (Allen, Kern et al., 2018; Roorda et al., 2011). Equally important is implementing inclusive and culturally responsive pedagogy that validates all students' backgrounds and identities, especially where belonging is uneven across groups (He & Fischer, 2020; Ialuna et al., 2024).
4. **Identify known barriers and risks:** Schools map patterns of exclusion, bullying, discrimination, transition vulnerability, and digital access issues within their community. For example, some learners, such as students from minority cultural backgrounds, LGBTQ+ youth, students with disabilities, or newcomers, may face additional barriers to feeling connected, and these should be mapped early (Marraccini et al., 2021; van Vliet et al., 2025). Given the expanding role of technology in education, schools also need to ensure digital inclusion and cultivate connection in online learning, including access barriers and online hostility risks (Zhu et al., 2021).
5. **Identify students with fragile belonging:** Using student-led and participatory methods, schools identify which students experience the greatest uncertainty about belonging and which signals matter most to them.

What should change at this stage

- **Opportunities** become intentional rather than incidental.
- **Perceptions** shift through explicit language about belonging priorities.
- **Competencies** begin with staff understanding of belonging mechanisms.
- **Motivations** are supported by clear commitment from leadership.

STAGE 2: INSTALLATION

Building the conditions for consistent practice

Installation focuses on creating the supports that allow practices to be enacted reliably. Schools establish an implementation team, building staff capability, and aligning school routines that already shape belonging every day. These routines include classroom participation norms, behaviour responses, feedback practices, transition processes, and expectations for online learning spaces. To strengthen the implementation of these practices, supportive policy and ongoing professional development are essential, because without leadership support, time, and training, relational and inclusive work is easily crowded out (Högberg & Lindgren, 2023; Albarran et al., 2025). Measurement is introduced at this stage, but only where it is clearly linked to action. See Figure 13, exemplar policy for school belonging.

Key tasks for schools

1. **Establish an implementation team:** Schools form a team with clear decision-making authority, including student representation, leadership, and staff from relevant roles.
2. **Build staff capability:** When teachers integrate students' cultures, languages, and lived experiences into the curriculum, through culturally responsive teaching, anti-bias education, and restorative practices, students feel more respected and understood, and this should be a core focus of training at Installation (He & Fischer, 2020; Jaluna et al., 2024). In addition, many educators recognise the importance of belonging but feel unsure how to consistently foster it in practice; targeted professional development and coaching can close this gap by building staff skills and confidence (Albarran et al., 2025).
3. **Align organisational systems:** Timetables, behaviour approaches, transition processes, feedback practices, and digital learning expectations are reviewed for alignment with belonging goals.
4. **Put measurement in place for action:** Schools adopt brief, repeat measures linked to decision-making, complemented by participatory approaches suitable for younger students. Regularly monitoring belonging through brief, validated surveys or check-ins can provide valuable insights, but this must be done with a clear plan for responding to the results (Davies et al., 2025).
5. **Remove practical barriers:** Administrative, scheduling, or policy barriers that limit enactment are identified and addressed.

What should change at this stage

- **Opportunities** are embedded in routines, not left to individual discretion.
- **Perceptions** strengthen as practices become more consistent.
- **Competencies** increase through coaching and shared tools.
- **Motivations** lift as staff confidence and clarity improve.

STAGE 3: INITIAL IMPLEMENTATION

Trying practices in defined settings

Initial Implementation is where schools trial practices in defined settings and refine them based on student experience. Rather than attempting whole-school change immediately, schools start in specific contexts, such as a year level, a learning area, or a cluster of classrooms. The focus here is not on perfection, but on learning. Schools use short improvement cycles to test whether practices are being enacted as intended and whether students experience them as meaningful. Fidelity is tracked in simple terms, focusing on what was done, with whom, how often, and what students noticed. At this stage, schools pay particular attention to trust signals. These include whether students report that adults notice concerns, respond in a timely way, and follow through. Adjustments are made based on student experience rather than compliance indicators.

Key tasks for schools

1. **Start in defined contexts:** Schools begin with specific settings such as Year 7 transition, a learning area, or a cluster of classrooms.
2. **Use short improvement cycles:** Schools apply plan-do-study-act cycles to refine practice quickly and responsibly.
3. **Monitor fidelity in simple terms:** Schools track what was done, with whom, how often, and what students noticed.
4. **Monitor trust signals:** Schools attend closely to whether students report that adults notice concerns, respond, and follow through.
5. **Adjust based on student experience:** Refinements are guided by student feedback rather than compliance metrics. This can take the form of student councils, youth advisory boards, collaborative class projects, or peer mentoring and tutoring roles, and schools should track whether students experience these as real influence (Darke & Clark-Howard, 2023; Poteat et al., 2024)
6. **Strengthen digital inclusion and connection during trials:** This involves bridging digital divides by guaranteeing all students have access to devices and reliable internet, as well as equipping teachers with strategies to engage students and build community in virtual classrooms (Allen et al., 2024). Deliberate efforts such as virtual homerooms, online clubs or discussion forums, and interactive class activities can help students feel seen and supported even when they are physically remote (Allen et al., 2024). Conversely, a lack of digital access or unchecked online hostility is linked to poorer wellbeing and weaker school connection, so online norms and responses should be part of the trial design (Li et al., 2025; Zhu et al., 2021).

What should change at this stage

- **Opportunities** become more frequent and visible.
- **Perceptions** shift through repeated, credible cues.
- **Competencies** develop through practice and feedback.
- **Motivations** strengthen as students see effort recognised.

STAGE 4: FULL IMPLEMENTATION AND SUSTAINMENT

Embedding belonging in how the school operates

Full implementation occurs when evidence shows that students consistently experience the intended changes. At this point, practices are scaled and embedded into how the school operates. Belonging expectations become part of induction processes, leadership routines, and school review cycles. Student partnership is maintained so that decisions remain grounded in lived experience rather than drifting into procedural compliance. Schools also monitor patterns of impact across groups, recognising that average improvement can conceal ongoing exclusion for some students. Where uneven patterns emerge, additional supports are introduced. Belonging is treated as a condition that must be protected over time, not a goal that can be ticked off.

Key tasks for schools

1. **Scale only after evidence of student experience:** Expansion occurs when data show that students experience the intended changes, not simply when activities are completed.
2. **Embed belonging in core routines:** School leaders and policymakers should embed belonging as a priority in policies, strategic plans, and accountability frameworks so that relationship-building and inclusion efforts are backed by adequate time, funding, and resources rather than being one-off initiatives (Högberg & Lindgren, 2023).
3. **Maintain student partnership:** Students continue to shape decisions so implementation remains grounded in lived experience.
4. **Monitor uneven impact:** Schools analyse patterns across groups to identify where belonging remains fragile and adjust supports accordingly.
5. **Sustain improvement cycles:** Collecting data on student belonging is not a neutral exercise; it creates an obligation to follow up and support students, especially where data show persistent gaps (Davies et al., 2025). It is crucial to communicate to students and families why belonging data is being collected and how it will be used to help, so measurement strengthens trust rather than undermines it (Davies et al., 2025). Schools should use tools and definitions that truly capture belonging, since using a mismatched or unclear measure can yield misleading conclusions (Davies et al., 2025). By treating belonging data as a starting point for dialogue and improvement, not as an endpoint, schools keep belonging work connected to lived experience and practical change.

What should change at this stage

- **Opportunities** are stable and accessible across the school.
- **Perceptions** reflect trust and fairness as normalised conditions.
- **Competencies** are distributed across staff and students.
- **Motivations** are sustained through predictable support and progress.

Figure 13*School belonging policy exemplar*

THE INTERNATIONAL BACCALAUREATE POLICY OF SCHOOL BELONGING

Purpose

This policy sets out how the school will support students' sense of belonging, based on evidence synthesised in *The Science of Belonging* review. The review shows that students' experiences of belonging are consistently associated with academic motivation, engagement, wellbeing, and longer-term developmental outcomes, and that belonging has declined across many education systems (Allen, Kern et al., 2018; Korpershoek et al., 2019). The policy therefore focuses on shaping the everyday conditions through which belonging is experienced at school, rather than on short-term initiatives.

Definition

School belonging refers to students' experiences of feeling accepted, respected, included, and supported within the school environment (Goodenow, 1993). Evidence reviewed shows that belonging is shaped through students' ongoing interpretations of school life, including whether they experience opportunities to participate, cues of safety and fairness, support to engage in learning and relationships, and confidence that effort is met with care and follow-through (Baumeister & Leary, 1995; Ryan & Deci, 2000; Walton & Cohen, 2011). Belonging is context-dependent and can vary across settings, time, and student groups (Allen, Kern et al., 2018; Korpershoek et al., 2019).

Scope

This policy applies to the whole school community, including classrooms, peer settings, co-curricular activities, and digital learning environments. The review demonstrates that belonging is produced through interactions across classrooms, peer groups, school-wide practices, and organisational conditions rather than through isolated initiatives or individual characteristics alone (Wang & Degol, 2016). Responsibility for belonging therefore rests with school structures and everyday practice.

Policy commitments

The school commits to strengthening belonging by improving four connected domains of everyday school life.

(1) OPPORTUNITIES FOR PARTICIPATION AND INCLUSION

The school will ensure that students experience regular and meaningful opportunities to participate in learning and school life. Participation will be predictable and built into daily practice rather than optional, uneven, or symbolic (Allen, Kern et al., 2018). The school will examine how classroom routines, transitions, co-curricular activities, and digital learning arrangements enable or restrict participation for different student groups and will adjust practice so opportunities are accessible and fair (Korpershoek et al., 2019).

(2) PERCEPTIONS OF SAFETY, FAIRNESS, AND RECOGNITION

The school will attend to the cues students receive about whether they are safe, treated fairly, and recognised as legitimate members of the school community. The school will prevent and respond to bullying, exclusion, and inconsistent adult responses that communicate care, respect, and follow-through. Research shows that bullying and unsafe climates are reliably associated with lower belonging, while perceptions of physical and psychological safety are linked to stronger belonging (Thapa et al., 2013; Wang & Degol, 2016; Steffgen et al., 2013). Expectations for safety and respectful interaction apply in both physical and digital settings (Zhu et al., 2021).

(3) COMPETENCIES FOR LEARNING AND RELATIONSHIPS

The school will support the development of skills that enable students to engage confidently in learning and relationships. This includes strengthening teacher–student relationships, supportive peer interactions, and providing practical help for learning demands and help-

seeking (Roorda et al., 2011; Ryan & Deci, 2000). Support will be proactive during key transition periods, when belonging and engagement often become more fragile (Benner et al., 2017).

(4) MOTIVATIONS SHAPED BY EXPERIENCE AND FOLLOW-THROUGH

The school recognises that students' motivation to engage is shaped by what they come to expect from school over time. The school will ensure that students see effort met with encouragement, guidance, and credible follow-up. Evidence reviewed shows that belonging is stronger when students perceive that effort is worthwhile and that engagement is met with support rather than indifference or punitive responses (Ryan & Deci, 2000; Walton & Cohen, 2011). Where students repeatedly experience a lack of follow-through, inconsistent expectations, or low recognition, motivation and belonging are more likely to weaken. Feedback, responses to difficulty, and pathways to support will be designed to build students' confidence that participation and persistence are worthwhile (Allen, Kern et al., 2018).

School leadership is responsible for embedding these commitments into school priorities, policies, and review processes, and that staff have the conditions required to enact practices associated with belonging. Leadership and organisational conditions are central influences on school climate and relational quality (Thapa et al., 2013; Wang & Degol, 2016). Staff are responsible for enacting classroom and school practices that shape opportunities, perceptions, competencies, and motivation in daily school life (Roorda et al., 2011; Allen, Kern et al., 2018). The review consistently identifies classroom practices and teacher–student relationships as central influences on students' sense of belonging. Students' perspectives are essential for understanding belonging, because belonging is defined by students' own interpretations of school life. The school will maintain developmentally appropriate ways for students to report on belonging and inform decisions (Goodenow, 1993; Walton & Cohen, 2011). Families and caregivers support belonging through engagement with the school, particularly during transitions. Evidence reviewed suggests that continuity between school and family contexts can support students' sense of connection and security (Benner et al., 2017).

Monitoring and review

The school will monitor belonging using approaches that align with the review's guidance on measurement and ethics. Monitoring will be used to identify patterns over time and across student groups, and to guide improvement rather than surveillance. Because belonging measures can be sensitive and may differ across groups, the school will use conceptually clear measures, interpret results carefully, and ensure there is a planned response when data indicate concern (Allen, Kern et al., 2018; Korpershoek et al., 2019).

Policy basis

This policy is grounded in evidence synthesised in *The Science of Belonging* review. It reflects what the reviewed research shows about how belonging is experienced, what supports it, and where risks to belonging are most evident in K–12 education (Allen, Kern et al., 2018; Wang & Degol, 2016; Korpershoek et al., 2019).

ONGOING IMPROVEMENT CYCLES

Protecting belonging over time

Belonging is sensitive to staff turnover, policy change, cohort transitions, and digital shifts. Schools use continuous improvement cycles to detect early signs of erosion and respond before harm occurs. Schools should use continuous improvement cycles to detect early signs of erosion and respond before harm occurs. Success should be judged by whether students continue to experience consistent opportunities to participate, trustworthy cues of care and fairness, growing competence to engage and seek help, and confidence that effort will be met with support and progress.

A note on teacher belonging

A singular focus on students' experiences of belonging necessary, but it is not sufficient. The policy commitments above emphasise everyday opportunities, cues of safety and fairness, skill-building supports, and reliable follow-through, yet these conditions are created and sustained by adults working in the same organisational environment. For this reason, belonging should be treated as a whole-community condition: when staff feel like they belong, are valued, and supported, schools are better able to deliver the consistent relational practice that students experience as belonging.

Recent evidence indicates that teachers' sense of belonging is shaped by the quality of collegial relationships, supportive leadership, value alignment, and recognition of professional contribution (Wator et al., 2025; Melzak et al., 2025). Where these conditions are present, teachers report stronger wellbeing, motivation, and commitment to remain in the profession; where they are absent, through isolation, low recognition, unsupportive leadership, and chronic time pressure, teachers' belonging and capacity for relational work are undermined (Wator et al., 2025; Melzak et al., 2025).

Importantly, staff belonging is not separate from student belonging. Research suggests that when teachers experience stronger belonging, students are also more likely to report belonging, consistent with an ecological view that shared school climate, relational norms, and organisational stability shape daily experiences for both groups (Allen et al., 2025). Emerging multilevel evidence likewise shows positive cross-level links between teachers' school-specific wellbeing and students' school-specific wellbeing, including indicators closely related to connectedness (Zhang et al., 2025). Practically, this means that efforts to strengthen student belonging should include deliberate attention to staff belonging, through leadership practices that build trust, protect time for collaboration, recognise contribution, and create working conditions that make consistent care and follow-through possible (Wang & Degol, 2016; Allen, 2025).

Levels of evidence in this review

Research across four strands reviewed in this review demonstrates that the evidence base for school belonging is broad and generally consistent, though its depth varies considerably across different methodologies, settings, populations, and outcomes. At the strongest level, meta-analyses and large-scale surveys provide high-quality evidence that a sense of belonging is reliably associated with vital student outcomes, ranging from academic motivation and achievement to social-emotional functioning and mental health (Allen et al., 2018; Korpershoek et al., 2019). International datasets further validate these findings, documenting that while belonging has declined globally among adolescents, it remains a powerful predictor of life satisfaction and academic performance even when accounting for socio-economic backgrounds (OECD, 2019, 2023; Castelli & Marcionetti, 2024). This evidence is further strengthened by longitudinal studies, which clarify the direction of these effects; specifically, increases in belonging predict later academic motivation and valuing of school, and adolescent belonging forecasts mental health into young adulthood (Allen, Greenwood et al., 2024; Neel & Fuligni, 2013). These studies provide the most persuasive evidence that belonging is not only correlated with important outcomes but is also likely to contribute to them over time.

A large middle tier of research identifies the drivers and barriers linked with belonging, most often through cross-sectional surveys. This body of work consistently shows evidence that

supportive teacher-student relationships and positive peer interactions are the primary drivers of school belonging (Allen et al., 2018; Roorda et al., 2011). Conversely, experiences of bullying and cyberbullying serve as significant barriers; however, evidence suggests that strong teacher support can act as a protective buffer, mitigating the negative impact of peer victimization (Allen et al., 2018; Roorda et al., 2011; Emslander et al., 2025; Allen, Cordoba et al., 2022a; Arslan, 2021; Chen & Li, 2020; Hamm & Faircloth, 2005). Reviews also link stronger belonging with lower depression and anxiety and lower involvement in risk behaviours (Allen, Greenwood et al., 2024, 2025; Raniti et al., 2022; Rose et al., 2024), consistent with multi-level and longitudinal behavioural studies (AlMakadma & Ramisetty-Mikler, 2015; Arslan, 2022; Demanet & Van Houtte, 2012). While this literature is vast and thematic patterns are stable, the reliance on self-reported, correlational data restricts our ability to draw definitive causal conclusions (Maddens et al., 2023; Daley et al., 2025). Consequently, there remains a critical need to understand how these drivers interact and accumulate over time, particularly within the increasingly complex context of digital and hybrid learning environments.

While the drivers of belonging are well-documented, the evidence regarding the efficacy of school-based interventions remains promising but less robust. Research into school climate and whole-school approaches suggest that belonging is stronger when students feel safe, experience caring and respectful relationships, and perceive adults as committed to their learning (Reaves et al., 2018; Steffgen et al., 2013; Wang & Degol, 2016). Reviews and intervention work indicate that consistent behaviour expectations, staff training in supportive relationships, and programs that promote participation and student voice can strengthen these school-wide conditions (Darling-Hammond et al., 2018; Thapa et al., 2013; Wang & Degol, 2016). Ecological, multi-tier approaches that adjust school structures, classroom climates, and peer cultures show some of the strongest reported effects on belonging in secondary schools (Centers for Disease Control and Prevention, 2009; Allen, Kern et al., 2016; Davies et al., 2025). In parallel, a small cluster of longitudinal and quasi-experimental studies, some in online and hybrid contexts, tracks belonging trajectories over multiple timepoints or tests targeted interventions, providing moderate to strong evidence that well-designed, opportunity- and relationship-focused approaches can improve participation, motivation, and aspects of connectedness (Beattie et al., 2025; Meissel et al., 2025; Maddens et al., 2023; Plesko et al., 2024). However, across the intervention literature, rigorous experimental or quasi-experimental designs with long-term follow-up and detailed process evaluation remain relatively rare, which limits confidence about sustained impacts and scalability.

A further limitation is that the evidence is uneven across student groups and contexts, including those most affected by exclusion. Much quantitative work concentrates on adolescents in higher-income systems, with fewer longitudinal or intervention studies in early childhood, later adolescence, vocational pathways, and many non-Western settings. Where equity-focused research is available, it consistently shows that belonging is patterned by structural and cultural conditions: belonging is often lower (and bullying higher) among students with disabilities or special educational needs (DeVries et al., 2018; Prince & Hadwin, 2013), and identity-affirming supports such as Gender–Sexuality Alliances are linked with greater safety and belonging for LGBTQ+ students (Marraccini et al., 2021; van Vliet et al., 2025). Work on culturally responsive teaching similarly links such practices with stronger belonging for immigrant students in diverse classrooms (He & Fischer, 2020). Emerging research also indicates that cyberbullying and online harassment relate to weaker wellbeing and school functioning, especially where students feel less supported and connected (Zhu et al., 2021; Li et al., 2025). Yet these strands are not matched by a comparable volume of

rigorous, longitudinal, or intervention research in high-risk groups and digital/hybrid contexts, leaving important questions about “what works for whom” insufficiently tested.

Measurement and conceptual issues also shape how the evidence should be interpreted. Several widely used belonging measures show multidimensional structures, response-style artefacts (including clustering of negatively worded items), and only partial cross-cultural equivalence, which complicates comparisons across groups and countries (Cheung, 2000; Abubakar et al., 2016; St-Amand et al., 2020; Wagle et al., 2018). Some items also blend belonging with adjacent constructs such as teacher support or safety, and intervention reviews note inconsistent definitions and measurement across programs targeting overlapping constructs such as belonging, connectedness, and engagement (Allen, Kern et al., 2016; Davies et al., 2025). At the same time, psychometric evidence is encouraging in several large, multi-site studies that use rigorous modelling to test dimensionality, item functioning, and (in some cases) invariance (Bouhlila & Hentati, 2024; Huang et al., 2023; Moubchiri et al., 2025; Abdulhamed et al., 2024; Brown et al., 2024). A broader set of translation and adaptation studies reports acceptable reliability and expected links with outcomes such as bullying, engagement, and mental health (Arslan et al., 2022; Bozdog & Bilge, 2022; Mammadova & Aypay, 2023; Sideridis & Alghamdi, 2024; Kosir et al., 2025). Key gaps remain: test–retest reliability, sensitivity to change, and systematic invariance testing are still uncommon, evidence is thinner in primary-aged samples, and tools are under-tested in digital or hybrid settings.

Finally, the evidence on the ethical use and consequences of belonging measurement is relatively under-developed. Qualitative and mixed-methods studies provide important guidance on risks such as re-identification, stigma, and deficit framing for structurally vulnerable groups, and emphasise care in how belonging data are collected and used (Armstrong-Carter et al., 2023; White et al., 2023; Brezicha & Miranda, 2024; Reale-Smith & Suárez, 2024). However, there are few studies that follow how schools act on belonging data over time, whether monitoring practices reduce inequities, or whether unintended harms occur. Large secondary analyses often rely on existing ethical protocols and focus on statistical associations rather than the lived consequences of measurement in school practice (Allen et al., 2021; Choi et al., 2025; Palikara et al., 2025).

In sum, the evidence supports a strong conclusion with a clear caution. Belonging is consistently associated with important outcomes, and longitudinal evidence increases confidence that it can shape students’ trajectories (Allen et al., 2018; Korpershoek et al., 2019; Allen, Greenwood et al., 2024; Gillen-O’Neel & Fuligni, 2013). The evidence is less mature on the most effective, scalable ways to improve belonging, particularly for marginalised groups and in digital/hybrid contexts, and on how to measure belonging comparably and use data ethically in practice (Allen, Kern et al., 2016; Davies et al., 2025; Allen et al., 2021). The most pressing need is therefore not simply more research, but more theory-led, inclusive, and policy-relevant studies that test specific mechanisms over time, use culturally sensitive measures that work across groups, report implementation and sustainability in detail, and evaluate both intended outcomes and unintended harms when belonging data are used to guide school improvement (Allen et al., 2021; Allen, 2025; Allen, McCarthy et al., 2024; Rodriguez et al., 2025; McGinley & Keane, 2022; Lloyd et al., 2024).

General Recommendations

The consolidated evidence base is strong enough to justify immediate action, while also clarifying where recommendations should be implemented with evaluation and equity safeguards. Taken together, the findings indicate that school belonging is closely linked with academic engagement and wellbeing, that relational and participation opportunities are the most consistently supported levers, and that the evidence is less certain on which scalable interventions sustain effects over time, especially for marginalised groups and in digital/hybrid contexts. The recommendations below, therefore, align with the levels of evidence: act now on well-supported drivers; strengthen systems to implement and learn; and invest in measurement and ethics so that improvement efforts are reliable and do no harm.

The following general recommendations set broad field-shaping directions for systems and schools. Readers who want a practical sequence for implementation can use the action pathway and immediate next steps outlined above.

1. Embed belonging as a core educational goal and equity priority at the system level

At a system level, belonging should be treated as a core educational goal and equity priority. Education authorities and school leaders should embed belonging indicators in school improvement plans, wellbeing frameworks, and digital learning strategies alongside academic and behavioural targets (Daley et al., 2025; Beattie et al., 2025; Meissel et al., 2025). To reduce inconsistency across policy and practice, systems should also adopt a clear, shared definition and framework, such as the definition and framework in this report, that distinguishes belonging from related constructs while remaining usable in schools. This can be supported by system guidance and a common conceptual core, alongside local co-construction with students, staff, and families, so that the definition reflects community language and expectations. Where relevant, international systems should explicitly acknowledge cultural and linguistic variation in how belonging is expressed, while maintaining a shared focus on students feeling accepted, valued, safe, and connected.

2. Prioritise relational practices and structured opportunities for participation in everyday school life

Because the most consistent evidence concerns relational and opportunity-based drivers, schools should prioritise everyday practices that make students feel known, supported, and included, and build structured opportunities for participation and contribution. This includes relationship-rich routines (e.g., regular check-ins and predictable teacher presence), purposeful participation structures, and norms that promote respectful peer interaction in both classroom and school-wide settings (Maddens et al., 2023; Plesko et al., 2024; Daley et al., 2025). Where digital or hybrid learning is used, design should explicitly support connection rather than focusing only on content delivery. Practices such as small-group collaboration, regular check-ins, clear participation norms, and sustained teacher presence are especially important for maintaining connectedness online (Meissel et al., 2025; Plesko et al., 2024). Schools should also track participation and wellbeing indicators in remote and hybrid contexts, given longitudinal evidence that belonging and wellbeing can move together over time (Beattie et al., 2025; Meissel et al., 2025).

3. Centre equity in belonging policy rather than treating it as supplementary

Equity-focused recommendations should be treated as central rather than supplementary. It is well known that belonging is not evenly distributed, and context matters greatly. The review demonstrates that exclusion can persist even when schools adopt positive strategies if structural barriers are left unaddressed. Policies and improvement plans should therefore prioritise transition-sensitive supports (such as structured orientation, mentoring, and relationship-building at key transitions), monitor belonging data in ways that can identify disparities, and respond with targeted supports where inequities are detected. Digital contexts also require explicit attention: cyberbullying and hostile online interactions are associated with poorer wellbeing and weaker school functioning, particularly when students feel less supported and connected (Li et al., 2025; Zhu et al., 2021). Schools and systems should implement whole-school approaches to reduce cyberbullying and online harassment and ensure that students have safe ways to connect and participate, online and offline. Where restrictions on smartphones or social media are introduced, they should be paired with strengthened offline opportunities for connection (e.g., clubs, structured break-time activities, peer support), so that risk reduction does not inadvertently remove a key source of connection for students who rely on it (Reaves et al., 2018; Wang & Degol, 2016; Allen et al., 2018).

4. Design multi-level interventions and scale with learning rather than rapid roll-out

Intervention and implementation evidence support adopting multi-level approaches, but also calls for “scale with learning” rather than rapid roll-out. There is an urgent need to design interventions that combine (a) relational safety and respect, (b) identity-affirming and culturally sustaining practice, and (c) genuine opportunities for student agency and voice, embedded into daily routines rather than delivered as one-off projects. Because many promising approaches depend on committed staff and local conditions, system leaders should invest in the organisational infrastructure that makes implementation feasible: distributed and equity-focused leadership, multi-year planning, time for collaborative work, and sustained professional learning linked to practice. Implementation should be supported by clear logic models and simple evaluation plans, with attention to fidelity, resourcing, and sustainability, so that schools can adapt approaches while still learning what is driving change. In particular, systems should prioritise mixed-methods evaluation designs that combine validated belonging measures with qualitative evidence on how and why change occurs, and that include comparison conditions where feasible.

5. Strengthen measurement through technical quality, participatory adaptation, and repeated low-stakes collection

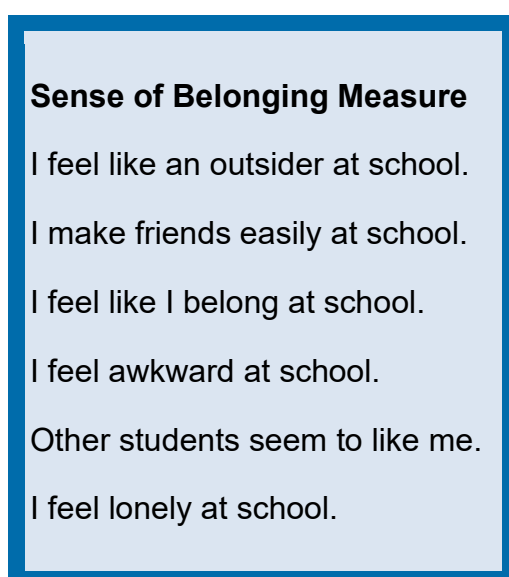
Recommendations for measurement and monitoring should strengthen both technical quality and ethical use. Schools and researchers should continue to use and refine quantitative belonging scales with established psychometric support, while also investing in participatory adaptation processes so that items reflect local cultures and capture the experiences of neurodivergent and marginalised students (Moubchiri et al., 2025; Sideridis & Alghamdi, 2024; Atkinson, 2024; Peters et al., 2024). Measurement studies should more routinely report evidence that supports responsible use over time and across groups, including test–retest reliability, sensitivity to change, and subgroup and cross-cultural invariance before scores are used for comparisons (Huang et al., 2023; Mammadova & Aypay, 2023). In practice, belonging data should be collected in repeated, low-stakes, context-sensitive ways (e.g., brief programme-embedded surveys administered multiple times across the year), complemented by qualitative methods that capture nuance and allow students to explain what helps or harms belonging.

6. Adopt a system-level key performance indicator

In addition, the report recommends adopting the OECD PISA 2024 sense of belonging measure (BELONG – Sense of belonging [WLE]) as a system-level KPI, reported alongside wellbeing and flourishing indicators. In PISA 2022, BELONG is derived from six student questionnaire statements (ST034) (see Figure 14) with four response options (“Strongly agree”, “Agree”, “Disagree”, “Strongly disagree”), and is scaled to support international comparisons. Schools can administer the same six statements used in PISA cycles, covering both positive belonging cues and negative exclusion cues: “I feel like an outsider at school” (reverse-coded), “I make friends easily at school”, “I feel like I belong at school”, “I feel awkward at school” (reverse-coded), “Other students seem to like me”, and “I feel lonely at school” (reverse-coded). Negatively worded items should be reverse-scored so that higher scores indicate stronger belonging. For school reporting, results should be summarised as (a) mean and distribution by year level, (b) subgroup gaps where appropriate and ethically governed, and (c) trend over time. Where feasible, item-level percentages (e.g., % who agree/strongly agree) should also be reported to support transparent interpretation.

Figure 14.

School belonging measure (OECD, 2023)



This PISA-aligned KPI strengthens system monitoring for three reasons. First, it is benchmarkable by design, enabling interpretation against reference points beyond the school and supporting more defensible conclusions than school-only baselines. Second, it has a stable pedigree across multiple PISA cycles and is linked to prior PISA belonging measures, supporting system-level comparability over time. Third, it aligns with the report’s bidirectional framing of belonging and wellbeing. The items capture felt membership and social fit (belonging cues and exclusion cues), which plausibly operate as both a protective condition for wellbeing and a construct shaped by wellbeing through participation, trust, and peer connection. To avoid narrowing belonging to what is easiest to quantify, schools should pair this brief measure with qualitative tools (e.g., open-ended prompts or structured listening

activities) so students can explain what is strengthening or weakening belonging in their context, and so actions can be co-designed rather than imposed.

7. Treat ethical safeguards as integral to monitoring and intervention

Finally, ethical safeguards should be treated as integral to any monitoring or intervention effort. When low belonging is identified, schools and researchers have a responsibility to respond carefully and constructively, rather than using data to label or stigmatise students or groups. This requires transparent communication about why data are collected, careful attention to anonymity and re-identification risk (especially for small groups), and explicit strategies to avoid deficit framing (Armstrong-Carter et al., 2023; Wood & Loveridge, 2025). Future research should also document how belonging findings are shared and acted upon in schools and evaluate the intended and unintended consequences of monitoring practices over time. Longitudinal, mixed-methods evaluations of school-level responses to belonging data would provide the next level of evidence on how measurement can support more inclusive, caring, and rights-respecting educational environments.

CONCLUSION

This report set out to consolidate and interpret the evidence on school belonging in K–12 education, at a time when many education systems are reporting declines in students' sense of connection to school (OECD, 2019; 2023). Across disciplines, methods, and national contexts, the reviewed research converges on a clear finding: school belonging is a foundational condition for learning, wellbeing, and healthy development. It is consistently associated with academic motivation, engagement, mental health, and longer-term outcomes, and it operates as a protective factor during periods of transition and challenge (Allen, Kern et al., 2018; Korpershoek et al., 2019). At the same time, the evidence shows that belonging is unevenly distributed, shaped by school practices, relationships, organisational conditions, and wider social and digital contexts.

A central contribution of this review is greater conceptual clarity in a field that often uses overlapping language. In educational research, school belonging is commonly defined through students' perceptions of feeling accepted, respected, included, and supported (Goodenow, 1993). Building on this foundation, the report advances a definition that treats school belonging as a context-dependent, relational, and ecological experience rather than a fixed trait or a by-product of individual disposition. Belonging is shaped by students' interpretations of whether they are safe, accepted, recognised, able to participate, and able to expect fair and supportive responses from adults and peers. Clarifying these mechanisms is essential because how belonging is defined determines how it is measured, how it is targeted, and how schools evaluate progress (Baumeister & Leary, 1995; Walton & Cohen, 2011).

The evidence reviewed also makes clear that belonging rarely improves through isolated initiatives or short-term programs. It develops through repeated experiences embedded in everyday school life, including classroom practices, peer interactions, staff relationships, leadership decisions, and school-wide norms. These levers are interconnected. This supports the need for coordinated approaches across classrooms and school systems, rather than piecemeal work (Wang & Degol, 2016). Teacher–student relationships are especially important, with evidence showing that relationship quality is linked to students' engagement and achievement over time (Roorda et al., 2011).

Importantly, the review reports that students' experiences of belonging vary across age, culture, identity, ability, and context. Patterns of lower belonging are evident at key transition points and among groups exposed to exclusionary cues, bullying, or misalignment between school practices and identity needs (OECD, 2019, 2022, 2023). Transition periods can be particularly sensitive, with evidence of increased risk for disengagement and weaker school belonging during shifts such as the move to secondary school (Benner et al., 2017). Digital learning conditions can widen gaps when access is uneven, or harm is not addressed, but they can also support school belonging when interaction is intentionally structured and protected (Zhu et al., 2021).

Going forward, schools should know that they are stakeholders, knowledge holders, and builders of belonging for their students, and that schools and their staff, including leaders, hold substantial power, as individuals and as a collective, to shape belonging experiences across the lifespan. As reflected in one study where a child described belonging as “a little heart within a big heart”, students' belonging is held within the love, care, actions, dedication, and responsibility of the adults and institutions that surround them (Allen, Berger et al., 2025).

Books and resources on belonging by the author of this report

CHILDREN'S PICTURE STORY BOOKS ABOUT BELONGING

- Wagner, M., & Allen, K. A. (2025). Mia belongs here. Routledge. ISBN 9781032465760 (<https://www.routledge.com/Mia-Belongs-Here-A-Story-About-Family-Home-and-a-Sense-of-Belonging/Wagner-Allen/p/book/9781032465760>)
- Allen, K. A., & Wagner, M. (2025). School is where we belong. Routledge. ISBN 9781032465777 <https://www.routledge.com/School-is-Where-We-All-Belong-A-Story-About-Building-a-Sense-of-Belonging-Outside-of-Home/Allen-Wagner-Kallady/p/book/9781032465777>
- Allen, K. A. (2023). The lonely little cactus: A story about friendship, coping and belonging. Routledge (book targeting parents and young children). ISBN: 9781032073682 <https://www.routledge.com/The-Lonely-Little-Cactus-A-Story-About-Friendship-Coping-and-Belonging/Allen/p/book/9781032073682>

TEACHER AND PARENT RESOURCES FOR BUILDING BELONGING

- Allen, K. A., Flear, M., & McKinley, L. (2023). Conceptual playworlds for wellbeing: A resource book for the lonely little cactus. Routledge (book targeting educators). ISBN: 9781032073651
- Allen, K. A., Flear, M., & McKinley, L. (2025). Conceptual playworlds for belonging: A practical resource for Abdul belongs at school. Routledge. ISBN <https://www.routledge.com/Conceptual-PlayWorlds-for-Wellbeing-A-Resource-Book-for-the-Lonely-Little-Cactus/Allen-Flear-McKinley/p/book/9781032073651> 9781032465791 <https://www.routledge.com/Conceptual-PlayWorlds-for-Belonging-A-Practical-Resource-for-Mia-Belongs-Here-and-School-is-Where-We-All-Belong/Allen-Flear-McKinley/p/book/9781032465791>
- Allen, K. A., & Kern, P. (2020). Boosting school belonging: Practical strategies to help adolescents feel like they belong at school (1st ed.). Routledge. ISBN: 9781138305083

A BOOK CHAPTER WITH A BELONGING ACTIVITY MAP FOR CHILDREN

- Allen, K. A., Kern, M. L., Basarkood, G., Melzak, E., Jain, R., & Boyle, C. (2025). Mapping belonging: A sociocultural and socioecological approach within educational contexts. In G. A. D. Liem, J. A. Fredricks, & Z. Y. Wong (Eds.), Sociocultural perspectives on student engagement: Theory, research, and practice. Information Age. ISBN 1837085552, 9781837085552
- Maps can be found here: https://figshare.com/articles/figure/Belonging_Maps_Adult_Teen_Child_/25913170

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APPENDIX



Photo by Max Fischer

Appendix A

Search strategy, inclusion criteria, and approach

Overview and Review Design

This review adopts a multi-part narrative evidence synthesis to address four interrelated research domains concerning school belonging in K–12 education:

1. Conceptualising belonging
2. Drivers and barriers (schools and digital)
3. Interventions and implementation
4. Measurement and ethics

Each research domain was addressed using targeted, question-specific searches, combining structured database searching, review-level evidence prioritisation, purposive inclusion of seminal works, and narrative thematic synthesis.

PART 1: CONCEPTUALISING BELONGING

Search Strategy

Search 1. Conceptualisation

"School Belonging" (*see note below)

Review filter terms (abstract/title)

"systematic review" OR "meta-analysis" OR "meta analytic" OR "review of reviews" OR "narrative review" OR "scoping review" OR "evidence synthesis" OR "integrative review" OR "literature review" OR "Delphi study" OR "consensus study"

Search 2. Wellbeing and Flourishing

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Educational Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR "teacher*"

+ search string specific to the question

flourish* OR wellbeing OR "well-being" OR "psychological well*being" OR "eudaimonic" OR "hedonic" OR "life satisfaction" OR "quality of life" OR "mental health" OR resilience OR thriving OR "positive functioning"

Review filter terms (abstract/title)

"systematic review" OR "meta-analysis" OR "meta analytic" OR "review of reviews" OR "narrative review" OR "scoping review" OR "evidence synthesis" OR "integrative review" OR "literature review" OR "Delphi study" OR "consensus study"

Search 3. Individual Differences**Core terms**

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Educational Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

+

age* OR child* OR adolescent* OR youth OR "early childhood" OR "primary school" OR "secondary school"

+ search string specific to the question

Different cultures and diverse student populations

cultur* OR cross-cultur* OR intercultur* OR Indigenous OR migrant* OR refugee* OR "language learner*" OR "first-generation" OR "low SES" OR "socioeconomic" OR disability OR neurodivers* OR "LGBT*" OR "gender minorit*" OR "sexual minorit*" OR "ethnic diversity" OR "ethnic minority" OR minority OR minorities OR "marginalized group*" OR "underrepresented group*" OR gifted OR giftedness OR "gifted student*" OR "high-ability" OR "high potential" OR "twice-exceptional" OR "2e"

Review filter terms (abstract/title)

"systematic review" OR "meta-analysis" OR "meta analytic" OR "review of reviews" OR "narrative review" OR "scoping review" OR "evidence synthesis" OR "integrative review" OR "literature review" OR "Delphi study" OR "consensus study"

Search 4. Theories**Core terms**

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Educational Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

+ search string specific to the question

Theoretical model or conceptual framework

"Self-Determination Theory" OR "Self-efficacy Theory" OR SDT OR relatedness; "Social Identity" OR "SIT" OR "social identity approach" OR identification; "Ecological systems" OR

“socio-ecological” OR Bronfenbrenner; “Communities of Practice” OR “community of practice”; “Attachment theor*”; “Social capital” OR “Bourdieu”; “Sociocultural” OR Vygotsk*; mechanism* OR pathway* OR mediator* OR process*

Review filter terms (abstract/title)

"systematic review" OR "meta-analysis" OR "meta analytic" OR "review of reviews" OR "narrative review" OR "scoping review" OR "evidence synthesis" OR "integrative review" OR "literature review" OR "Delphi study" OR "consensus study"

This search will be supplemented by a recent narrative review that discusses school belonging theory:

Allen, K.-A. (2025). School Belonging: Evidence, Experts, and Everyday Gaps. Educational Psychology Review.

Inclusion Criteria

Studies will be considered for inclusion if they meet the following criteria:

Language and Publication Type. This review prioritises peer-reviewed, English-language articles.

Topic scope. Eligible studies must address the review question(s) and focus on school belonging or closely related constructs (e.g., student belonging, sense of belonging, psychological membership, school connectedness).

Context. Explicitly discuss the conceptualisation or definition of school belonging, belongingness, or closely related constructs (e.g., school connectedness, school attachment, social connectedness, relatedness, psychological membership, mattering). Conducted in educational settings (schools, classrooms, early childhood centres, or equivalent learning environments). Exclude studies focused solely on higher education (university/college), workplace, or non-educational community belonging unless directly linked to K–12 schooling.

Relation to Wellbeing/Flourishing. Studies that examine the relationship between school belonging and wellbeing constructs (e.g., flourishing, resilience, mental health, eudaimonia, hedonia, thriving, quality of life).

Disciplinary scope. Research situated in education, psychology, educational psychology, or closely related interdisciplinary fields will be considered, with particular attention to psycho-educational work that (a) provides definitions/analyses of belonging, (b) links belonging to flourishing/wellbeing, (c) examines variation across ages/cultures/diverse learners (including perceived belonging), or (d) articulates theoretical models/mechanisms relevant to schooling.

Theoretical and Mechanistic Insights. Research that employs or develops theoretical frameworks (e.g., Self-Determination Theory, Social Identity Theory, ecological systems, attachment, social capital, sociocultural perspectives) to explain mechanisms, processes, or pathways of belonging in education.

Study types. High-level syntheses (systematic reviews, meta-analyses, and Delphi-style syntheses) and conceptually rich primary studies are prioritised, especially those eliciting student/child voices or offering clear theoretical explanation. Empirical studies (quantitative, qualitative, or mixed methods), theoretical papers, and narrative/review articles that advance understanding of conceptualisations of belonging. Intervention studies may be included if they

provide explicit theoretical or conceptual definitions of belonging. Exclude commentaries or opinion pieces lacking conceptual clarity.

Grey literature. When peer-reviewed evidence is limited, grey literature with transparent methodology (e.g., OECD/UNESCO/UNICEF reports) may be used to contextualise concepts or provide prevalence data. Non-methodological opinion pieces and materials lacking analytic transparency are excluded.

Population and setting. The primary focus of the review is students in K–12 settings. Studies from early childhood or higher education may be retained only when (i) they are widely cited by K–12 literature, (ii) provide conceptually transferable definitions/mechanisms. Studies may also include teachers, parents, or peers if their perspectives inform conceptualisations of student school belonging. Diverse student populations (e.g., cross-cultural, Indigenous, migrant, refugee, language learners, low SES, disability, neurodiverse, gender/sexual minority students) will be included to capture variation in experiences of belonging.

The Approach

To address the primary research question concerned with how school belonging is conceptualised, this review aims to adopt a rapid review if there is sufficient time.

Search Strategy. We will run a targeted Google Scholar search. We will restrict the title field to the exact phrase “school belonging”. The date range will be 1 January 2016 to 11 August 2025. Only peer-reviewed journal articles in English that define school belonging within educational school contexts will be included. Dissertations, books, book chapters, conference papers, policy briefs, preprints, and duplicate records will be excluded. From each included article we will extract: the verbatim definition of school belonging.

Student perspectives of definitions are important. We will draw from core papers that have captured student perspectives of definitions as well. For two examples:

Allen, K. A., Berger, E., McLean, L., Leif, E., Warton, W., Tuck, D., ... Fler, M. (2025). Belonging in their words: Exploring early childhood perspectives using the draw, write, tell method. *Australian Journal of Psychology*, 77(1).
<https://doi.org/10.1080/00049530.2025.2463949>

Allen, K. A., Mullholand, N., Berger, E., Warton, W., & Reupert, A. (2025). Defining School Belonging: A Cross-Cultural Investigation of Student-Led Conceptualisations. *European Journal of Education*, 60(4), e70290. <https://doi.org/10.1111/ejed.70290>

For the remaining questions grey literature will only be searched where relevant peer-reviewed evidence is unavailable or insufficient [e.g., PISA reports], UNESCO, UNICEF, or other reports with transparent methodologies) to supplement the evidence base. The report will be transparent in identifying data sources. For instance, PISA data will be used to discuss cross-cultural prevalence statistics.

For the remaining questions we will use the databases outlined above (e.g., ERIC, PsycINFO, Scopus, Web of Science) to ensure coverage of relevant literature. In addition, citation searching (both backward and forward) will be conducted to capture seminal works referenced in included studies as well as more recent publications citing them, thereby reducing the risk of omitting relevant evidence.

Data Synthesis. Extracted data will be organised thematically across four domains: (i) Definitions and conceptualisations of belonging and related constructs; (ii) Relationships between belonging, wellbeing, and flourishing; (iii) Variation in belonging across age, cultural, and diverse learner groups; (ix) Theoretical models and mechanisms explaining school

belonging. This thematic narrative approach allows integration of diverse study types (empirical, theoretical, and review-based) and provides a structured response to the review questions for this narrative review.

For the research question 1, data from the 16 included studies were analysed thematically using NVivo (version 15) to explore how belonging is conceptualised in psycho-educational research. The software facilitated systematic management, coding, and synthesis of textual data from full-text PDF files (REFF ADD).

Step 1: Data preparation and import.

All 16 peer-reviewed articles were imported into NVivo as individual sources. Each article was assigned metadata (e.g., year, author, and source ID such as Part1_RQ#) to support traceability and cross-referencing during analysis.

Step 2: Codebook development.

An initial node (code) structure was developed deductively based on the research question (“How is belonging defined in psycho-educational research and what are its related concepts?”) and the inclusion criteria. A parent node, Definition of Belonging, was created with seven child nodes representing emergent conceptual dimensions identified during familiarisation:

1. Psychological Need or Relatedness
2. Identity and Mattering
3. Conceptual Boundaries or Continuum
4. Meta-Definition or Common Elements
5. Emotional Safety or Acceptance
6. Ecological or Contextual Belonging
7. Cultural or Collective Belonging

Another parent node titled “Related Concepts of Belonging” was created to capture constructs conceptually linked to belonging, such as connectedness, attachment, engagement, mattering, identity, inclusion, acceptance, safety, relationships, and community. Each of the sixteen included studies was imported into NVivo and searched using targeted keywords (e.g., “connectedness”, “engagement”, “mattering”, “identity”, “safety”). It has five child nodes:

1. Connectedness
2. Engagement
3. Identity
4. Relatedness
5. Relationship

Step 3: Coding process.

Each article was read closely, and relevant text excerpts defining or discussing belonging were coded to the appropriate node(s). When multiple conceptual aspects appeared in the same passage, cross-coding was applied (e.g., excerpts referencing “belonging as a psychological need within ecological systems” were coded under both Psychological Need and Ecological Belonging). Coding was iterative and reflexive; the node definitions were refined to ensure conceptual consistency across sources.

Step 4: Query and pattern analysis.

Following coding, NVivo queries were run to examine patterns across the dataset:

- A Coding Summary by Node report was generated to identify the frequency and distribution of references across studies.
- A Word Frequency Query was run on text coded at the parent node to visualise dominant terms (e.g., accepted, connected, supported) using a word cloud.
- A Matrix Coding Query was conducted, with rows representing the seven nodes and columns representing the 16 studies, allowing comparison of which conceptual dimensions appeared in each source. This matrix provided the empirical basis for identifying overlaps, trends, and conceptual emphases across the literature.

Step 5: Thematic synthesis.

The coded data within each node were reviewed to identify definitional focus, key ideas, and representative authors. This synthesis produced a set of thematic narratives—for example, belonging as a psychological need, belonging as a socio-ecological process, and belonging as cultural inclusion. These themes were summarised in tables and supported by representative quotations and citations.

PART 2: DRIVERS AND BARRIERS (SCHOOLS AND DIGITAL)

Search Strategy

Search 1. Learning as an outcome

Core terms

belong* OR “sense of belonging” OR belongingness OR “school belonging” OR “academic belonging” OR “student belonging” OR “psychological membership” OR “school connectedness” OR “school identification” OR “school attachment” OR “social connectedness” OR mattering OR relatedness

Educational Limiter

educat* OR school* OR classroom* OR “primary school” OR “secondary school” OR “high school” OR “middle school” OR “K–12” OR “early childhood” OR preschool* OR student* OR pupil* OR teacher*

+

age* OR child* OR adolescent* OR youth OR “early childhood” OR “primary school” OR “secondary school”

Digital learning environment

"digital learning environment" OR "online learning environment" OR "digital learning" OR "online learning" OR e-learning OR "distance education" OR "remote learning" OR "virtual classroom*" OR "virtual school*" OR "online tutor*" OR "intelligent tutoring system*" OR ITS OR "game-based learning" OR "serious game*" OR "simulation-based learning" OR "learning management system*" OR LMS OR "virtual learning environment*" OR VLE

+ search string specific to the question

Student Outcomes and Wellbeing

"academic achievement" OR "academic performance" OR "learning outcomes" OR "student engagement" OR motivation OR persistence OR retention OR "dropout" OR wellbeing OR "well-being" OR "mental health" OR "psychological wellbeing" OR "quality of life" OR flourishing OR resilience OR "life satisfaction" OR "emotional outcomes" OR "positive functioning"

Search 2. Determinants, school belonging as an outcome

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Educational Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

+

age* OR child* OR adolescent* OR youth OR "early childhood" OR "primary school" OR "secondary school"

Digital learning environment

"digital learning environment" OR "online learning environment" OR "digital learning" OR "online learning" OR e-learning OR "distance education" OR "remote learning" OR "virtual classroom*" OR "virtual school*" OR "online tutor*" OR "intelligent tutoring system*" OR ITS OR "game-based learning" OR "serious game*" OR "simulation-based learning" OR "learning management system*" OR LMS OR "virtual learning environment*" OR VLE

+ search string specific to the question

Drivers

driver* OR determinant* OR antecedent* OR predictor* OR correlate* OR "associated with" OR influence* OR factor* OR variable* OR contributor* OR "key factor*" OR "supporting factor*" OR "facilitator*" OR enabler* OR "promoting factor*" OR "protective factor*" OR "motivational climate" OR "learning climate" OR "classroom climate" OR "school climate" OR "teacher-student relationship*" OR "peer relationship*" OR "peer support" OR "teacher support" OR friendship* OR "student engagement" OR "autonomy-support*" OR "competence-support*" OR relatedness OR "instructional practice*" OR "pedagogical practice*" OR "restorative practice*" OR inclusion OR "inclusive practice*" OR "inclusive education" OR identity OR respect OR fairness OR "family engagement" OR "parental involvement" OR collaboration OR "sense of community" OR safety OR "student voice" OR "student participation" OR engagement OR "extracurricular" OR transition* OR orientation OR "cultural safety" OR pedagogy

Search 3. Barriers of school belonging

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Educational Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

Digital learning environment

"digital learning environment" OR "online learning environment" OR "digital learning" OR "online learning" OR e-learning OR "distance education" OR "remote learning" OR "virtual classroom*" OR "virtual school*" OR "online tutor*" OR "intelligent tutoring system*" OR ITS OR "game-based learning" OR "serious game*" OR "simulation-based learning" OR "learning management system*" OR LMS OR "virtual learning environment*" OR VLE

+ search string specific to the question

Barrier block

barrier* OR risk* OR obstacle* OR hinder* OR impeded* OR "negative predictor*" OR "lower belonging" OR "reduced belonging" OR "deterrent*" OR "limitation*"

Barrier content

bully* OR "peer conflict" OR "teacher-student conflict" OR "classroom disruption" OR victim* OR harassment OR exclusion OR "lack of inclusion" OR "non-inclusive practices" OR "digital exclusion" OR ostraci* OR rejection OR loneliness OR "belonging uncertainty" OR "stereotype threat" OR discrimination OR racism OR sexism OR homophobia OR transphobia OR ableism OR "microaggression*" OR violence OR "disciplinary exclusion" OR suspension* OR expulsion* OR truancy OR absentee* OR "school refusal" OR "unsafe school climate" OR "toxic school climate" OR tracking OR streaming OR "high-stakes testing" OR "competitive climate" OR "school mobility" OR poverty OR "low SES" OR language OR "new arrival*" OR refugee* OR migrant* OR disability OR neurodivers* OR "digital divide" OR "device access" OR "cyberbullying" OR "online harassment" OR trolling OR "technology access barrier*" OR "limited internet access" OR "negative online experience" OR "online victimisation" OR "systematic barrier*" OR "systemic barrier*" OR "structural barrier*" OR "institutional barrier*"

Search 4. Strength of empirical evidence supporting these drivers**Core terms**

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Educational Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K-12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

Digital learning environment

"digital learning environment" OR "online learning environment" OR "digital learning" OR "online learning" OR e-learning OR "distance education" OR "remote learning" OR "virtual classroom*" OR "virtual school*" OR "online tutor*" OR "intelligent tutoring system*" OR ITS OR "game-based learning" OR "serious game*" OR "simulation-based learning" OR "learning management system*" OR LMS OR "virtual learning environment*" OR VLE

+ search string specific to the question

Drivers/Barriers

driver* OR predictor* OR antecedent* OR determinant* OR factor* OR correlate* OR variable* OR contributor* OR influence* OR cause* OR "barrier*" OR obstacle* OR hindrance* OR challenge* OR "facilitator*" OR enabler* OR support*

Empirical Evidence

"empirical evidence" OR "empirical study" OR "empirical research" OR "quantitative study" OR "qualitative study" OR "mixed methods" OR "case study" OR "longitudinal study" OR "cross-sectional study" OR "experimental study" OR "quasi-experimental study" OR "randomized controlled trial" OR RCT OR "control group" OR "intervention study" OR "program evaluation" OR "systematic review" OR "scoping review" OR "narrative review" OR "meta-analysis" OR "review of reviews" OR "integrative review" OR "evidence synthesis" OR "evidence-based" OR "research evidence" OR "strength of evidence" OR "effect size" OR "causal inference" OR "methodological quality" OR "evidence hierarchy"

This search will be supplemented by a recent meta-analysis that examines the correlations between school affiliation and students' motivational, social-emotional, behavioural, and academic outcomes in secondary education:

Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & de Boer, H. (2020). The relationships between school belonging and students' motivational, social-emotional, behavioural, and academic outcomes in secondary education: a meta-analytic review. *Research Papers in Education*, 35(6), 641–680.

<https://doi.org/10.1080/02671522.2019.1615116>

Inclusion Criteria

Studies will be considered eligible for inclusion if they met the following criteria:

Language and Publication Type. This review prioritises, peer-reviewed, English-language articles published in English.

Topic scope. Evidence is purposively selected for conceptual/empirical relevance to drivers and barriers of K–12 students belonging in school and digital learning contexts. Eligible studies must address one or more of the following RQ2 aims: (i) The importance of belonging for learning outcomes and/or wellbeing in K–12, (ii) Drivers/determinants of student belonging (predictors, facilitators, mechanisms), (iii) Barriers/impediments to student belonging (individual, interpersonal, structural) in on-site and/or digital environments (e.g., cyberbullying, access), and (ix) The strength of empirical evidence supporting specific drivers (meta-analytic or synthesis evidence).

Context. Eligible studies will be situated in formal educational settings (early childhood, primary, secondary, or equivalent K–12 environments). Studies focused solely on higher education, workplace belonging, or community contexts were excluded unless findings directly informed K–12 schooling.

Focus on Drivers and Barriers. Studies needed to investigate determinants, facilitators, or barriers of belonging. Drivers included factors such as teacher–student relationships, peer support, school climate, instructional practices, family engagement, and digital participation. Barriers included, but were not limited to, bullying, exclusion, discrimination, unsafe climates, socio-economic disadvantage, and the digital divide.

Related to Outcomes. Studies that examined the importance of belonging for academic achievement, engagement, motivation, wellbeing, or broader social–emotional development were included, given the centrality of outcomes to the research questions.

Study types. The narrative review will prioritise meta-analyses, systematic or umbrella reviews, and other high-quality evidence syntheses that quantify associations or effects.

Eligible primary studies will include quantitative designs (e.g., cross-sectional, longitudinal, quasi-experimental, RCTs, regression, SEM, path analysis, mediation–moderation, multilevel), qualitative designs (e.g., interviews, focus groups, child-voice studies), and mixed-methods approaches that provide clear evidence of drivers or barriers. Studies conducted in digital learning environments (DLE), for example, those explicitly examining belonging in online, remote, virtual, blended, or hybrid K–12 contexts, are also within scope.

Grey literature. When peer-reviewed evidence is limited, grey literature with transparent methodology (e.g., OECD/UNESCO/UNICEF reports) may be used to contextualise concepts. Non-methodological opinion pieces and materials lacking analytic transparency are excluded.

Population and setting. The primary focus is on K–12 students in school or school-affiliated digital, online, virtual, or blended learning environments (including LMS platforms, synchronous/asynchronous classes, videoconferencing, and forums). Studies will also be included if they have informative information involving teacher or parent reports on student belonging. Research from higher education may be retained only if (i) it is widely cited in the K–12 literature, (ii) it provides conceptually transferable definitions or mechanisms, or (iii) it is directly connected to the anchor through citation tracing. Studies that focus solely on staff or teacher belonging without a clear link to student belonging, or that examine non-school community or workplace belonging, are out of scope.

The Approach

This review will adopt a narrative synthesis approach to address the research question: **What are the drivers and barriers of belonging in K–12 education, both in schools and in digital learning environments?**

Search Strategy. We will answer the questions in this section using three targeted searches, applied to K–12 schooling. Search 1 maps why school belonging is important in schools and in digital learning environments. School belonging is treated as the focal construct (predictor/exposure). Eligible studies include (a) conceptual and theoretical papers that propose mechanisms linking belonging to students' educational experience, and (b) empirical studies (quantitative, qualitative, or mixed-methods) that examine how belonging relates to student outcomes in school and/or digital learning contexts (e.g., online, blended, remote, or technology-mediated learning). Outcomes are not restricted to academic achievement; learning-related outcomes (e.g., engagement, attendance, retention, completion, persistence) and wellbeing indicators are included where belonging is examined as an explanatory factor. Evidence is synthesised narratively to identify recurring rationales, mechanisms, and outcome patterns across physical and digital learning environments.

Search 1 also provides a targeted evidence base on associations between school belonging and flourishing/wellbeing. School belonging remains the focal construct (predictor/exposure), and outcomes include flourishing frameworks and broader wellbeing indicators (e.g., flourishing scales, psychological wellbeing, life satisfaction, positive affect, mental health indicators, school wellbeing). Studies conducted in school settings and digital learning environments are eligible. Findings are synthesised narratively, with attention to outcome definitions, measurement approaches, and contextual moderators (including digital learning conditions where reported).

Search 2 focuses on determinants. It looks at what predicts or enhances school belonging, including classroom practice, peer relations, teacher–student relationships, school climate, family engagement, identity and culture, and instructional design in online settings. The results will be framed according to Allen (2025) Integrative Framework of School Belonging (Figure 1).

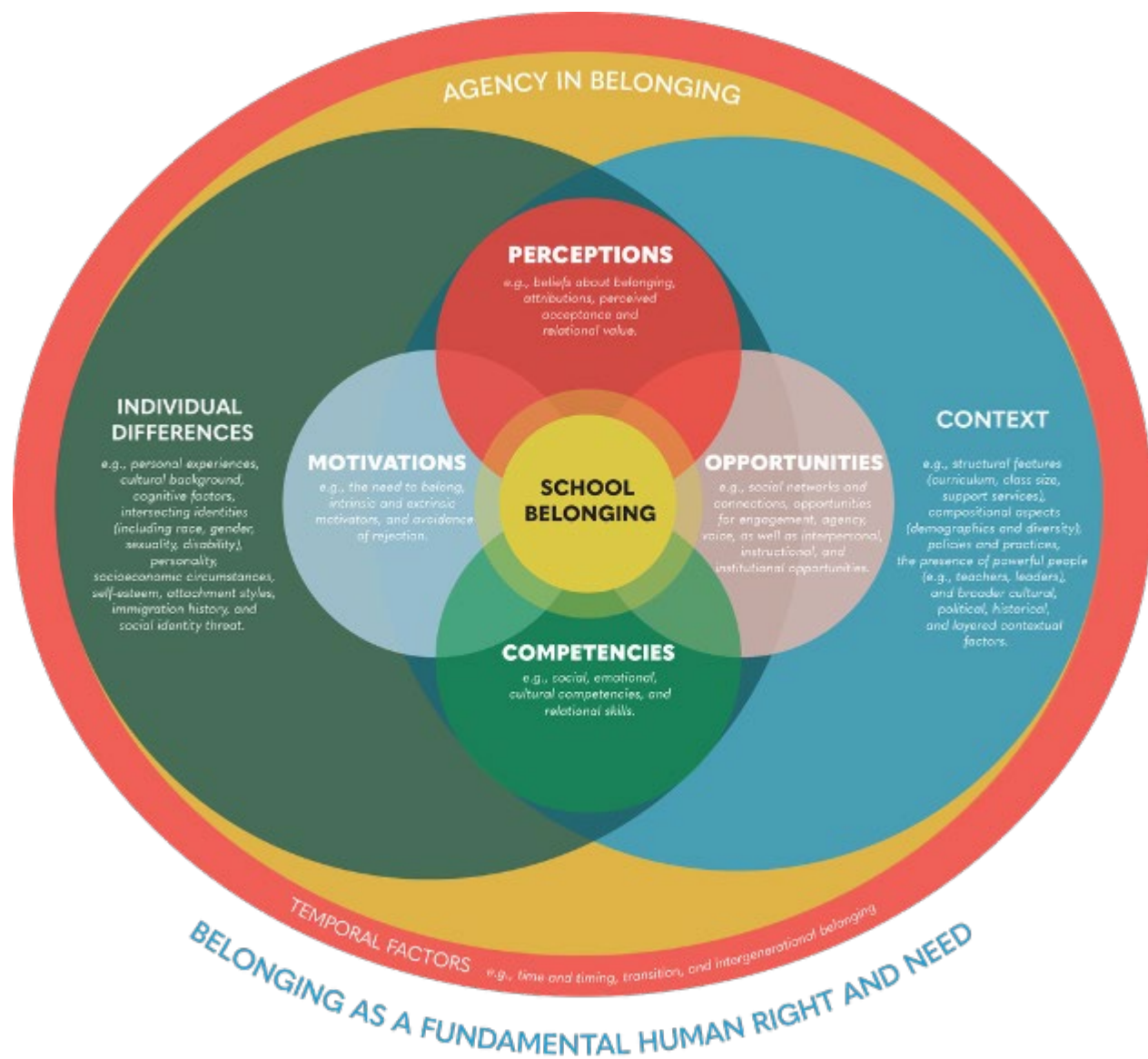


Figure 1. Integrative Framework of school belonging

Allen, K.-A. (2025). School Belonging: Evidence, Experts, and Everyday Gaps. *Educational Psychology Review*. <https://doi.org/10.1007/s10648-025-10055-x>

Search 3 addresses barriers and individual, interpersonal, and structural impediments to belonging, including exclusion, discrimination, bullying on site, cyberbullying, digital access issues, and policy or organisational constraints. In addition to database searches, two core sources will be purposively included to provide quantitative evidence of associations between school belonging and student outcomes:

1. Perspectives on Current and Future Directions in School Belonging Research. (2025). *Educational Psychology Review*, Special Issue. Springer website <https://link.springer.com/collections/dbaeefhihh>
2. Faircloth, B. S., Gonzalez, L. M., & Ramos, K. (Eds.). (2023). *Resisting barriers to belonging: Conceptual critique and critical applications*. Lexington Books.

Search 4

The fourth question concerns the strength of empirical evidence for specific drivers. That assessment is not suited to a narrative review. Instead, we will prioritise recent meta-analyses and high-quality evidence syntheses that quantify impact, and we will use those estimates to anchor our response. Where necessary, we will note gaps and recommend a full systematic review or meta-analysis.

To respond specifically to the question: “What is the strength of empirical evidence supporting these drivers?”, we will prioritise meta-analysis in this area such as:

Allen, K. A., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2018). What schools need to know about fostering school belonging: A meta-analysis. *Educational Psychology Review*, 30(1), 1-34. <https://doi.org/10.1007/s10648-016-9389-8>

Davies, C. A., Cordier, R., Graham, P., Littlefair, D., Speyer, R., & Melo, D. (2025). Interventions to Improve Connectedness, Belonging, and Engagement in Secondary Schools: A Systematic Review and Meta-Analysis. *Education Sciences*, 15(5), Article 582. <https://doi.org/10.3390/educsci15050582>

Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & de Boer, H. (2020). The relationships between school belonging and students’ motivational, social-emotional, behavioural, and academic outcomes in secondary education: a meta-analytic review. *Research Papers in Education*, 35(6), 641–680. <https://doi.org/10.1080/02671522.2019.1615116>

Data Synthesis. For each included study, information will be extracted on the conceptualisation of belonging, educational setting, methodological approach, and evidence regarding drivers or barriers. Findings will be synthesised narratively, grouping studies under themes such as: (a) the significance of belonging for outcomes, (b) drivers of belonging (e.g., relationships, school climate, pedagogical practices, digital participation), and (c) barriers to belonging (e.g., bullying, exclusion, socio-economic disadvantage, digital divide). The strength of evidence supporting each driver and barrier will also be assessed, with particular attention given to robust empirical designs such as longitudinal or large-scale survey studies.

**A note on digital learning environments*

To strengthen coverage of technology-mediated factors, we will run a stand-alone supplementary search focused on digital learning environments and school belonging. This search targets K–12 studies published in peer-reviewed journals in English from 2021 to 2025 that examine belonging in online, remote, virtual, blended, or hybrid classrooms. We will use combinations of terms for belonging with digital-learning descriptors (for example, online, virtual, remote, blended, LMS, synchronous, asynchronous, videoconference, discussion forum, cyberbullying, game-based learning, online tutors, virtual classrooms, etc.).

PART 3: INTERVENTIONS AND IMPLEMENTATION

Search Strategy

Search 1. School belonging intervention and strategies

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Education Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

+

age* OR child* OR adolescent* OR youth OR "early childhood" OR "primary school" OR "secondary school"

+

"inclusive education" OR "diverse learners" OR "culturally and linguistically diverse" OR CALD OR "ethnic minority" OR "Indigenous students" OR LGBTQ* OR "students with disabilities" OR migrant* OR refugee* OR gifted OR giftedness OR "gifted student*" OR "high-ability" OR "high potential" OR "twice-exceptional" OR "2e"

+ search string specific to the question

Intervention/Strategy Terms

intervention* OR strateg* OR approach* OR program* OR initiative* OR "school-based intervention*" OR "classroom intervention*" OR "pedagogical practice*" OR "instructional design" OR "teaching method*" OR "learning design" OR "curriculum design" OR "inclusive practice*" OR "social-emotional learning" OR SEL OR "restorative practice*" OR "whole school approach" OR "peer mentoring" OR "extracurricular program*" OR "transition program*" OR "orientation program"

Effectiveness/Outcome

effect* OR impact OR outcome* OR evaluation OR assessment OR "program evaluation" OR "evidence-based" OR "best practice"

Search 2. Implementation Factors & Contextual practices**Core terms**

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Education Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

+

age* OR child* OR adolescent* OR youth OR "early childhood" OR "primary school" OR "secondary school"

+

"inclusive education" OR "diverse learners" OR "culturally and linguistically diverse" OR CALD OR "ethnic minority" OR "Indigenous students" OR LGBTQ* OR "students with disabilities" OR migrant* OR refugee* OR gifted OR giftedness OR "gifted student*" OR "high-ability" OR "high potential" OR "twice-exceptional" OR "2e"

+ search string specific to the question

The Strengths and Limitations of Belonging-focused Implementation

"implementation factor*" OR "fidelity of implementation" OR scalability OR sustainability OR feasibility OR facilitator* OR barrier* OR limitation* OR challenge* OR "best practice*" OR

"lesson learned" OR "case study" OR "program delivery" OR "instructional practice*" OR pedagogy OR "classroom climate" OR "school climate" OR "teaching practice*" OR "learning environment" OR "teacher support" OR "peer support" OR "inclusive practice*" OR "restorative practice*" OR "student voice" OR "participatory learning"

Empirical Evidence

"empirical evidence" OR "empirical study" OR "empirical research" OR "quantitative study" OR "qualitative study" OR "mixed methods" OR "case study" OR "longitudinal study" OR "cross-sectional study" OR "experimental study" OR "quasi-experimental study" OR "randomized controlled trial" OR RCT OR "control group" OR "intervention study" OR "program evaluation" OR "systematic review" OR "scoping review" OR "narrative review" OR "meta-analysis" OR "review of reviews" OR "integrative review" OR "evidence synthesis" OR "evidence-based" OR "research evidence" OR "strength of evidence" OR "effect size" OR "causal inference" OR "methodological quality" OR "evidence hierarchy"

Search 3. Instructional Design Strategies

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Education Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

+

age* OR child* OR adolescent* OR youth OR "early childhood" OR "primary school" OR "secondary school"

+

"inclusive education" OR "diverse learners" OR "culturally and linguistically diverse" OR CALD OR "ethnic minority" OR "Indigenous students" OR LGBTQ* OR "students with disabilities" OR migrant* OR refugee* OR gifted OR giftedness OR "gifted student*" OR "high-ability" OR "high potential" OR "twice-exceptional" OR "2e"

+ search string specific to the question

Instructional Design Strategy

"instructional design" OR "instructional strategy*" OR "teaching strategy*" OR "instructional practice*" OR "pedagogical practice*" OR pedagogy OR "learning design" OR "course design" OR "curriculum design" OR "educational intervention*" OR "teaching approach*" OR "student-centered learning" OR "active learning" OR "collaborative learning" OR "peer learning" OR "cooperative learning" OR "problem-based learning" OR PBL OR "project-based learning" OR "design-based learning" OR "restorative practice*" OR "inclusive pedagogy" OR "instructional innovation*"

Inclusion Criteria

Studies will be considered eligible for inclusion if they met the following criteria:

Language and Publication Type. English-language, peer-reviewed studies are prioritised.

Topic scope. Eligible studies will address one or more of the following: (i)

Interventions/strategies/approaches intended to increase student belonging (or closely related constructs: school connectedness, psychological membership, mattering, relatedness) in school/classroom contexts, (ii) Implementation factors affecting success (e.g., fidelity, dosage, acceptability, feasibility, scalability/sustainability, cost, equity impacts), (iii) Effectiveness/impact of belonging-focused approaches on belonging and, where relevant, secondary outcomes (engagement, attendance, behaviour, achievement, wellbeing), and (ix) Instructional design (including curriculum/ pedagogy/ learning design; school-affiliated digital/hybrid elements where used within classroom practice).

Context. Studies must be situated within K–12 educational settings, including early childhood, primary, and secondary schooling. Interventions delivered in formal school or classroom environments, as well as school-linked programs (e.g., peer mentoring, transition programs, restorative practices, or social-emotional learning initiatives), were included. Studies focused exclusively on higher education, workplace, or community belonging outside of the K–12 context were excluded.

Relation to implementation and effectiveness. To be included, studies must investigate either (a) the effectiveness, outcomes, or impacts of belonging-focused interventions; or (b) the implementation processes and contextual factors (e.g., facilitators, barriers, scalability, sustainability, fidelity of delivery, or classroom climate) influencing the success of such interventions.

Evidence relevance. Studies had to provide explicit evaluation, assessment, or discussion of belonging-related outcomes or implementation factors. Opinion pieces, commentaries, or purely theoretical papers were excluded unless they directly informed understanding of intervention strategies or contextual practices.

Study types. The narrative review will prioritise studies making effectiveness claims, including cluster or individual RCTs, quasi-experimental designs, longitudinal evaluations, stepped-wedge trials, natural experiments, multilevel models, SEM, path analyses, mediation analyses, and pre–post designs with comparison groups. Studies providing implementation insights will also be eligible, such as qualitative and mixed-methods process or implementation evaluations, case studies with transparent methods, and realist evaluations. Narrative, systematic reviews, and meta-analyses will be included when they synthesise school-based belonging interventions or their implementation.

Grey literature. When peer-reviewed evidence is limited, grey literature with transparent methodology (e.g., OECD/UNESCO/UNICEF reports) may be used to contextualise concepts. Non-methodological opinion pieces and materials lacking analytic transparency are excluded.

Population and setting. The primary focus is on K–12 students in school or classroom settings (including targeted programs such as transition/orientation, SEL, restorative practice, peer mentoring, extracurricular delivered by schools). Diversity learners (e.g., Culturally and Linguistically Diverse (CALD)/ethnic minority, Indigenous, LGBTQ+, students with disabilities/neurodiversity, migrants/refugees, low-Socio-Economic Status (SES)) are explicitly in scope. Studies exclude research with purely higher-education settings, community-only, or clinical interventions not delivered by schools.

The Approach

To address Research Question 3, a narrative review approach will be employed to synthesise evidence on school-based and classroom-level interventions, strategies, and approaches that cultivate a sense of belonging for diverse learners.

Search Strategy. We will address this research question through a two-stage narrative literature search, focusing on school-based or classroom interventions, strategies, or approaches that cultivate a sense of belonging for diverse learners. The searches are designed to capture both empirical and review literature on (a) belonging-focused interventions and strategies, and (b) implementation factors and contextual practices that influence their success. Search 1 will target studies that evaluate school-based or classroom-level interventions, strategies, or programs designed to improve students' sense of belonging. The search will combine core belonging terms with educational context limiters, inclusive education terms, intervention/strategy keywords, and outcome/effectiveness terms. This approach aims to identify studies that implement a belonging-focused intervention and also evaluate its effectiveness or impact. Search 2 focuses on literature exploring the contextual conditions, classroom practices, and implementation factors that influence the success of belonging-focused initiatives, even when they are not part of a formal intervention program to allow for the inclusion of studies examining best practices, school climate, inclusive pedagogy, and other implementation-related factors.

Data Synthesis. Given the narrative review methodology, findings will be synthesised narratively. The synthesis will focus on three guiding dimensions: (i) the range of interventions and strategies available to promote belonging in K–12 settings, (ii) the effectiveness and limitations of these approaches as reported in the empirical literature, (iii) the contextual and implementation factors that shaped the success or challenges of belonging-focused interventions. This narrative synthesis will enable the integration of evidence from diverse study designs.

The following systematic review on school belonging interventions will supplement this search:

Allen, K. A., Jamshidi, N., Berger, E., Reupert, A., Wurf, G., & May, F. (2022). Impact of school-based interventions for building school belonging in adolescence: A systematic review. *Educational Psychology Review*, 34(1), 229-257.
<https://doi.org/10.1007/s10648-021-09621-w>

PART 4 : MEASUREMENT AND ETHICS

Search Strategy

To address Research Question 4, a two-tiered search strategy will be employed to capture both measurement and ethical considerations of school belonging in K–12 contexts.

Search 1. Repository Review

The primary sources will be the EdInstruments database and the Global Belonging Collaborative Repository, which curate existing belonging measures and provide psychometric and implementation information. These repositories will serve as the foundation for identifying widely used and emerging instruments.

Search 2. Targeted Database Searches

To supplement the repository review, structured keyword searches will be conducted in education, psychology, and interdisciplinary databases (e.g., ERIC, PsycINFO, Scopus, Web of Science, ProQuest Education, APA PsycArticle). Two parallel searches will be undertaken:

- Measurement & Psychometrics Search. Boolean combinations will draw on four groups of terms:
- Core belonging terms (e.g., "school belonging," "sense of belonging," belongingness, school connectedness, school identification, mattering, relatedness).
- Educational limiters (e.g., school*, classroom*, "primary school," "secondary school," "K–12," pupil*, student*).
- Measurement terms (e.g., measure*, instrument*, scale*, questionnaire*, survey, inventory, "self-report," "observational measure," "assessment tool").
- Validity and reliability terms (e.g., valid*, reliab*, "internal consistency," "construct validity," CFA, IRT, test–retest).

The combined Boolean string will capture studies reporting on the development, validation, adaptation, or use of belonging instruments in school contexts.

- Ethical Considerations Search. Boolean combinations will use:
- Core belonging terms (as above).
- Educational limiters (as above).
- Ethical terms (e.g., ethic*, "informed consent," parental consent, assent, confidentiality, anonymity, safeguarding, "data privacy," "student privacy," "child protection," "research ethics," "ethical approval").

This search will focus on literature that explicitly discusses the ethical challenges and practices related to measuring belonging in K–12 education.

Research question: *How is belonging measured in educational research?*

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Education limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

Measurement terms

measure* OR instrument* OR scale* OR questionnaire* OR survey OR inventory OR "self-report" OR "self report" OR "observational measure" OR "assessment tool" OR "rating scale" OR "measurement tool" OR "measurement model" OR "test development" OR "tool development" OR "construct development" OR "item development" OR "item analysis" OR "validation study" OR "psychometric property*" OR "factor structure" OR "construct validity" OR "convergent validity" OR "discriminant validity" OR reliability OR validity OR CFA OR EFA OR IRT OR "measurement invariance" OR "cross-cultural validation" OR adaptation OR translation OR "qualitative measure*" OR "qualitative approach*" OR interview* OR "focus

group*" OR "case study" OR "content analysis" OR "thematic analysis" OR observation* OR narrative* OR "mixed method*" OR "multi-method*" OR triangulation OR "conceptual framework" OR "measurement framework" OR model

Research question: What evidence is there for validity and reliability of these tools in measuring belonging in K–12 settings?

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Education limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

Psychometric & evidence terms

validity OR reliability OR "internal consistency" OR "test-retest" OR "test retest" OR "interrater reliability" OR "split-half" OR "split half" OR "item analysis" OR "item-total correlation" OR "item response theory" OR IRT OR "factor analysis" OR "exploratory factor analysis" OR EFA OR "confirmatory factor analysis" OR CFA OR "factor structure" OR "measurement invariance" OR "cross-cultural validation" OR "construct validity" OR "criterion validity" OR "content validity" OR "convergent validity" OR "discriminant validity" OR "psychometric property*" OR "psychometric evaluation" OR "validation study" OR "instrument validation" OR "tool validation" OR "scale validation" OR "evidence of validity" OR "evidence of reliability" OR "measurement error" OR "measurement precision" OR "methodological quality" OR "statistical evidence"

Research question: *What are the promising strategies schools can use to assess and monitor student belonging?*

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Education Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

Assessment and Monitoring Strategies

assess* OR evaluat* OR monitor* OR measur* OR "progress tracking" OR "student tracking" OR "school survey*" OR "student survey*" OR "pulse survey*" OR "check-in" OR "student check-in" OR "school climate survey" OR "wellbeing survey" OR "belonging survey" OR "self-assessment" OR "student voice" OR feedback OR "student feedback" OR "teacher observation*" OR "student observation*" OR "continuous assessment" OR "formative assessment" OR "data dashboard*" OR "monitoring framework" OR "assessment framework" OR "school improvement plan" OR "wellbeing framework" OR "school-based assessment" OR

"school-based monitoring" OR "school practice*" OR "school strategy*" OR "school initiative*" OR "promising practice*" OR "best practice*" OR intervention* OR "school intervention"

Research question: *What are the ethical considerations in studying and measuring belonging in schools?*

Core terms

belong* OR "sense of belonging" OR belongingness OR "school belonging" OR "academic belonging" OR "student belonging" OR "psychological membership" OR "school connectedness" OR "school identification" OR "school attachment" OR "social connectedness" OR mattering OR relatedness

Education Limiter

educat* OR school* OR classroom* OR "primary school" OR "secondary school" OR "high school" OR "middle school" OR "K–12" OR "early childhood" OR preschool* OR student* OR pupil* OR teacher*

Ethical terms

ethic* OR "informed consent" OR "parental consent" OR "assent" OR "confidentiality" OR "anonymity" AND "safeguarding" AND "data privacy" AND "student privacy" AND "child protection" AND "research ethics" AND "ethical approval"

Step 3. Expert Consultation

Leading scholars in school belonging research will be contacted to verify the completeness of the compiled instrument list and identify emerging or unpublished measures not yet available in repositories or peer-reviewed literature.

Screening and Inclusion.

Results will be screened against the predefined inclusion criteria, with priority given to peer-reviewed articles but supplemented by high-quality grey literature where peer-reviewed sources are limited (e.g., OECD, UNESCO, UNICEF reports).

Data Extraction and Synthesis.

Eligible studies will undergo structured data extraction covering instrument details, psychometric properties, and ethical protocols. Evidence will then be narratively synthesised to highlight how belonging is measured, the robustness of these measures, and the ethical safeguards associated with their use.

Inclusion Criteria

Studies will be considered eligible for inclusion if they met the following criteria:

Language and publication type. For the purpose of this review, peer-reviewed articles published in English will be prioritised.

Topic scope. Eligible studies must explicitly examine the measurement of school belonging or related constructs (e.g., belongingness, school connectedness, school attachment, social connectedness, relatedness, psychological membership, mattering). Studies may focus on the

development, validation, adaptation, or application of measurement instruments, or discuss ethical concerns in researching belonging.

Context. Studies must be situated in educational contexts involving K–12 learners (including early childhood, primary, and secondary school settings). Higher education, workplace, or community-based studies will be excluded unless they include direct implications for K–12 schooling.

Disciplinary scope. Research must be situated within education, psychology, or educational psychology, with clear implications for K–12 educational practice and research ethics.

Measurement focus. Included studies should present or evaluate tools, instruments, or approaches used to assess belonging (e.g., questionnaires, scales, surveys, inventories, self-report measures, teacher/peer reports, or observational tools). To be eligible, studies must report on aspects of reliability (e.g., internal consistency, test–retest reliability) and/or validity (e.g., construct validity, criterion validity, convergent validity, factor analysis, item response theory).

Ethical considerations. Studies that address ethical issues in the measurement or assessment of belonging in schools will be included. Relevant considerations include informed consent, parental consent/assent, safeguarding, confidentiality, anonymity, student privacy, data protection, duty of care, and processes of ethical approval.

Relation to practice. Studies that propose or evaluate strategies schools can use to assess and monitor student belonging, and that explicitly highlight the ethical implications of these practices, will be prioritised.

Study types. The narrative review will prioritise systematic reviews, meta-analyses, and Delphi-style syntheses as a starting point for each research question. Narrative reviews and single empirical studies will also be included where they address underexplored subpopulations, cultural contexts, or contextual factors not yet captured in larger syntheses. Both quantitative, qualitative, and mixed-method studies will be eligible.

Grey literature. Grey literature may be included where peer-reviewed evidence is limited, provided that a transparent methodology is reported; this may include reports from international organisations (e.g., OECD, UNESCO, UNICEF), large-scale assessment reports (e.g., PISA), or educational instrument repositories (e.g., EdInstruments School Belonging library).

Population and setting. Studies involving students from early childhood, primary, or secondary education will be considered, including those focused on diverse student populations such as culturally and linguistically diverse learners, ethnic minorities, Indigenous students, LGBTQ+ students, students with disabilities, migrants, and refugees.

The Approach

To address Research Question 4, this review will adopt a pragmatic narrative approach that draws on existing repositories and expert input rather than conducting a full systematic screening process. The aim is to compile an up-to-date list of instruments used to measure school belonging in K–12 contexts and to examine the associated psychometric and ethical considerations.

Step 1: Repository review. The primary sources for identifying belonging measures include the *EdInstruments* database (<https://edinstruments.org/briefs/considerations-use-school->

[belonging-assessments](https://edstruments.org/instruments/belonging), or <https://edstruments.org/instruments/belonging>) and the *Global Belonging Collaborative Repository* (<https://www.globalbelonging.org/repository>). These platforms provide curated, publicly accessible collections of validated instruments and resources related to educational measurement and school belonging, offering a reliable foundation for identifying widely used and emerging tools.

Step 2: Targeted keyword search strategy. To ensure the coverage of more recent or less widely disseminated instruments, a focused keyword search will be conducted using belonging, measurement, and psychometric terms in combination with education limiters (see search terms above).

Step 3: Expert consultation. Prominent researchers in the field of school belonging will be contacted to confirm the completeness of the compiled list and to identify additional scales that may not yet be published or widely available.

Data Synthesis. The compiled evidence will be narratively synthesised with attention to three dimensions: (a) how belonging has been measured in K–12 research; (b) the extent to which instruments report psychometric properties such as validity and reliability; and (c) the ethical considerations of using these measures with children and adolescents (e.g., informed consent, confidentiality, safeguarding). The main text of the review highlights key categories of instruments, examples of promising strategies for schools to monitor belonging, and the ethical challenges that accompany measurement in educational settings.

Appendix B

School belonging definition extracts by lens

Table 1 Psychological need definitions of school belonging

Allen, Gray et al., 2022	“Belonging – conceptualized broadly as a fundamental human needs – a complex construct due to its multifaceted components, predictors, and outcomes (Allen et al., 2021a; Baumeister & Leary, 1995)” (p. 1134).
	“...belonging in educational settings in the literature references a student’s feelings of being accepted, respected, and valued—an understanding that first emerged from the work of Goodenow and Grady (1993)” (p. 1135).
Alink et al., 2023	“In her study, school belonging is indicated by students feeling proud of being part of the school, feeling included and including school as part of their self-definition (Voelkl, 1997)” (p. 3)
Darke and Clark-Howard, 2023	“The construct of belonging is well-researched, with studies unequivocally identifying it as a fundamental human need, ahead of self-esteem and self-actualisation (Allen, 2021; Baumeister & Leary, 1995; Goodenow, 1993)” (p. 55).
	“Allen et al. (2021) refer to belonging as a core psychological need (a trait) and/or a situation-specific sense of belonging (a state)” (p. 55).
	“Goodenow and Grady’s (1993) definition of belonging was assumed, “that is the extent to which [students] feel personally accepted, respected, included and supported by others – especially teachers and other adults in the school environment” (pp. 60-61)” (p. 55).
Falkenberg and Heringer, 2024	“Belonging, in turn, is a sense of satisfaction of “a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships” (Baumeister & Leary, 1995, p. 497)” (p. 5).
	“Belonging is the sense of having and being able to maintain interpersonal relationships of significant qualities” (p. 5).
Hamilton, 2024	“School belonging is defined by Goodenow and Grady [74] (pp. 60-61) as “the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment” and is a predictor of academic attainment and wellbeing for children and young people” (p. 6).

Table 2 Safety definitions of school belonging

Allen, Jamshidi et al., 2022	“A students’ sense of belonging to their school is described as feeling safe, supported, accepted, and respected by peers and teachers (Goodenow & Grady, 1993)” (p. 230).
Darke and Clark-Howard, 2023	“A sense of belonging is linked to a felt sense of security and safety, an antidote to feeling threatened (Allen et al., 2022; Phillips et al., 2020)” (p. 52).

	“Goodenow and Grady’s (1993) definition of belonging was assumed, “that is the extent to which [students] feel personally accepted, respected, included and supported by others – especially teachers and other adults in the school environment” (pp. 60-61)” (p. 55).
Hamilton, 2024	“School belonging is defined by Goodenow and Grady [74] (pp. 60-61) as “the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment” and is a predictor of academic attainment and wellbeing for children and young people” (p. 6).
Law et al., 2024	“Belonging refers to school bonding, attachment, engagement, connectedness, and community and has most consistently been defined as the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment (Allen et al., 2016)” (p. 2).
López et al., 2025	“Across multiple conceptualizations, the operationalization of belonging reflects feelings of acceptance, respect, and being connected to others (Allen et al., 2018; Baumeister & Leary, 1995; Gray et al., 2018; Papageorge et al., 2020; Valenzuela, 1999)” (p. 15).
Duran and Lleras, 2025	“Following Wang and Eccles (2012), our main outcome, school belonging, was conceptualized as the emotional dimension of school engagement encompassing students’ relationships in school as well as their feelings about school” (p. 1912).
Meng et al., 2025	“... school belonging: feeling part of the school, feeling safe in school, feeling happy at school; ...” (p. 2575).
Allen, Gray et al., 2022	“... belonging in educational settings in the literature references a student’s feelings of being accepted, respected, and valued—an understanding that first emerged from the work of Goodenow and Grady (1993)” (p. 1135).
Allen, 2021	“Similarly, school belonging has also been described by students not just in social terms, but as encompassing a sense of safety and autonomy (Allen et al., 2025a)” (p. 2).
	“Arslan posits that “school belonging is the feeling and belief of being an integral and accepted member of the school community and while it involves students perceiving that they are respected, supported, and connected to their peers, teachers, and the broader school environment it does not mean that all students experience belonging in the same way” (p. 14)
Alink et al., 2023	“In this study, sense of belonging is about “feelings of being accepted and valued by their peers, and by others at their school” (Willms, 2003, p. 8)” (p. 2)
Dias-Broens et al., 2024	“Hausmann et al. (2007), for example, defined students’ sense of belonging in HE as “the psychological sense that one is a valued member of the college community” (p. 804)” (p. 2)

Table 3. Mattering and acceptance definitions of school belonging

Allen, Gray et al., 2022	“... belonging in educational settings in the literature references a student’s feelings of being accepted, respected, and valued – an understanding that first emerged from the work of Goodenow and Grady (1993)” (p. 1135).
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Alink et al., 2023	“In this study, sense of belonging is about “feelings of being accepted and valued by their peers, and by others at their school” (Willms, 2003, p. 8)” (p. 2)
	“In her study, school belonging is indicated by students feeling proud of being part of the school, feeling included and including school as part of their self-definition (Voelkl, 1997)” (p. 3)
Allen, Jamshidi et al., 2022	“A students’ sense of belonging to their school is described as feeling safe, supported, accepted, and respected by peers and teachers (Goodenow & Grady, 1993)” (p. 230).
Darke and Clark-Howard, 2023	“Goodenow and Grady’s (1993) definition of belonging was assumed, “that is the extent to which [students] feel personally accepted, respected, included and supported by others – especially teachers and other adults in the school environment” (pp. 60-61)” (p. 55).
Hamilton, 2024	“School belonging is defined by Goodenow and Grady (1993) (pp. 60-61) as “the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment” and is a predictor of academic attainment and wellbeing for children and young people” (p. 6).
Law et al., 2024	“Belonging refers to school bonding, attachment, engagement, connectedness, and community and has most consistently been defined as the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment (Allen et al., 2016)” (p. 2).
López et al., 2025	“Across multiple conceptualizations, the operationalization of belonging reflects feelings of acceptance, respect, and being connected to others (Allen et al., 2018; Baumeister & Leary, 1995; Gray et al., 2018; Papageorge et al., 2020; Valenzuela, 1999)” (p. 15).

Table 4. Ecological-contextual definitions of school belonging

Allen, Jamshidi et al., 2022	“They found that school staff thought that school belonging operates through bio-psycho-socio-ecological influences, a finding that reinforces the argument that school belonging is a multisystemic and multifactorial construct involving the emotional, cognitive, and behavioural domains described previously” (p. 231)
Allen, Gray et al., 2022	“Subsequent work has considered the socioecological interactions with school belonging to expand the definition to involve multiple systems (Allen et al., 2016; Allen et al., 2021e), and recent pioneering work has emphasized the importance of school belonging for all students, positioning it as a fundamental human right (Gray et al., 2018)” (p. 1135).
Allen, 2021	“Some researchers, as noted in the work of Walton and Brady (2017), extend the definition (proposed by Goodenow & Grady, 1993) by arguing that belonging is not based on the number of friends one has, “it is a more general inference, drawn from cues, events, experiences, and relationships, about the quality of fit or potential fit between oneself and a setting” (p. 272)” (p. 2).
	“Arslan posits that “school belonging is the feeling and belief of being an integral and accepted member of the school community and while it involves students perceiving that they are respected, supported, and connected to their peers,

	teachers, and the broader school environment it does not mean that all students experience belonging in the same way" (p. 14)
Alink et al., 2023	"In her study, school belonging is indicated by students feeling proud of being part of the school, feeling included and including school as part of their self-definition (Voelkl, 1997)" (p. 3)
Darke and Clark-Howard, 2023	"A sense of belonging is linked to a felt sense of security and safety, an antidote to feeling threatened (Allen et al., 2022; Phillips et al., 2020)" (p. 52).
Davies et al., 2025	"Belongingness has been defined as "...personal involvement (in a social system) to the extent that the person feels (them)self to be an indispensable and integral part of the system" (Anant, 1967, p. 391)" (p. 2).
Dias-Broens et al., 2024	"Sense of belonging is a fundamental human need (Baumeister & Leary, 1995) and is often referred to as "the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment" (Hagerty et al., 1992, p. 173)" (p. 2)

Table 5. Cultural-collective definitions of school belonging

Allen, Gray et al., 2022	"Subsequent work has considered the socioecological interactions with school belonging to expand the definition to involve multiple systems (Allen et al., 2016; Allen et al., 2021e), and recent pioneering work has emphasized the importance of school belonging for all students, positioning it as a fundamental human right (Gray et al., 2018)" (p. 1135).
Davies et al., 2025	"Belongingness has been defined as "...personal involvement (in a social system) to the extent that the person feels (them)self to be an indispensable and integral part of the system" (Anant, 1967, p. 391)" (p. 2)
Dias-Broens et al., 2024	"Hausmann et al. (2007), for example, defined students' sense of belonging in HE as "the psychological sense that one is a valued member of the college community" (p. 804)" (p. 2)

Table 6. Conceptual boundaries definitions of school belonging

Alink et al., 2023	"Finally, researchers need to make clear what they mean by the object where the belonging refers to: the peers, the teachers, or the school community" (p. 9)
Allen, 2021	"Logel introduces another important dimension to consider: "Standard definitions of belonging tend to see it as a continuum from non-belonging to high belonging. ..." (p. 2).
	"Lee states that "Belongingness is multi-faceted and context-dependent. To belong to a group is not the same as feeling like you belong. ..." (p. 13).
	"Leary reflects further on the problems with definitions and terminology: "For starters, what do we (as researchers) or ordinary people (as participants) mean

	when we/they talk about “belonging?” My view is that we (and they) are sometimes talking about belonging, but are often talking about other related things, such as being accepted, fitting in, mattering, being included, being valued, and so on. ...” (p. 11)
	“Leary affirms, “The big one is the failure to distinguish belonging from acceptance: much of what I’ve seen about school belonging is about personal acceptance by one’s peers and not about ‘belonging’ to groups. ...” (p. 11)
Allen, Mullholand et al., 2025	“School belonging often overlaps with school engagement and the two terms are used interchangeably, even though they are distinct concepts within the literature” (p. 2)

Table 7. Meta-definition or common elements of belonging

Allen, Kern et al., 2021	“Some researchers, as noted in the work of Walton and Brady (2017), extend the definition (proposed by Goodenow & Grady, 1993) by arguing that belonging is not based on the number of friends one has, “it is a more general inference, drawn from cues, events, experiences, and relationships, about the quality of fit or potential fit between oneself and a setting” (p. 272)” (p. 2).
Allen, 2025	“Belonging was described as context-dependent and shaped by cultural dimensions, layered and historically situated contexts, and the presence of effective leadership” (p. 1) In this piece, Allen’s work build on a prior meta framework that establishes belonging, or “A need to belong (as a way) to connect deeply with other people and secure places, to align with one’s cultural and subcultural identities, and to feel like one is a part of the systems around them” (Allen, Kern., et al., 2021). In this 2021 article, it is also mentioned: “Indeed, for Indigenous people, “others” and “place” are synonymous and are inextricably entwined, where country provides a deep sense of belonging and identity as Aboriginal people (Harrison & McLean, Citation2017)”. Similarly, Allen (2025) also describes : “Moreton-Robinson (2015) frames aspects of belonging as unmistakably ontological and rooted in a spiritual and sovereign connection to land, rather than being strictly social or interpersonal.”

Table 8 Related concepts of school belonging

Connectedness	Peng and Patterson, 2025	“Based on the review, the operationalization of SC is further clarified: SC as a multi-component construct with three key elements (i.e., school attachment/belonging, teacher attachment, and prosocial peer attachment)” (p. 760).
	Raniti et al., 2022	“School connectedness is a multifactorial construct that includes students’ thoughts (e.g., perceptions of the quality of relationships with teachers and peers and levels of support; ...” (p. 2).
Engagement	Davies et al., 2025	“In contrast, engagement refers to a student’s active participation and involvement in school-related activities, encompassing behavioural, emotional, and cognitive dimensions (Fredricks et al., 2004)” (p. 3).

	Duran and Lleras, 2025	“School engagement refers to the interaction between students and their educational environment and can be conceptualized by three interrelated dimensions: cognitive, behavioral, and emotional (Korpershoek et al., 2020; Wang & Eccles, 2012)” (p. 1908).
		“Broadly defined, cognitive engagement involves the strategies that students use in their learning processes, while behavioral engagement pertains to their participation in school ...” (p. 1908).
Identify	López et al., 2025	“From a psychological perspective, ethnic-racial identity is a multidimensional construct that shares relational elements with other forms of belonging (Lee et al., 2023)” (p. 11).
		“Ethnic-racial identity is considered a multidimensional construct informed by affective and cognitive processes that include personal views as well as perceptions of how others view groups (Rivas-Drake et al., 2009; Sellers et al., 1997)” (p. 30).
Relatedness	Davies et al., 2025	“Deci and Ryan (Deci & Ryan, 2012, p. 418) defined relatedness as “The need to be close to, trusting of, caring for, and cared for by others.” This perspective links connectedness to intrinsic motivation, which supports improved academic and socio-emotional outcomes (Ramella et al., 2023)” (p. 2).
Relationship	Falkenberg and Heringer, 2024	“First, peer relationships characterized by mutual support, respect, trust, care, dialogue, healthy conflict, and safety contributed to students’ sense of belonging (Arbeau et al., 2010; Government of New Brunswick, 2016b; MASS, 2020; Oberle et al., 2011)” (p. 11).
		“Second, teacher-student relationships that were caring, meaningful, and based on trust, acceptance, and interdependence were one of the central factors contributing to students’ sense of belonging in school (Bouchard & Berg, 2017; CASSA, 2017a, 2020a; Government of Alberta, 2021b; Government of New Brunswick, 2016b; Government of Saskatchewan, 2019, 2021; MASS, 2012, 2020; Vaillancourt et al., 2021)” (p. 11).



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