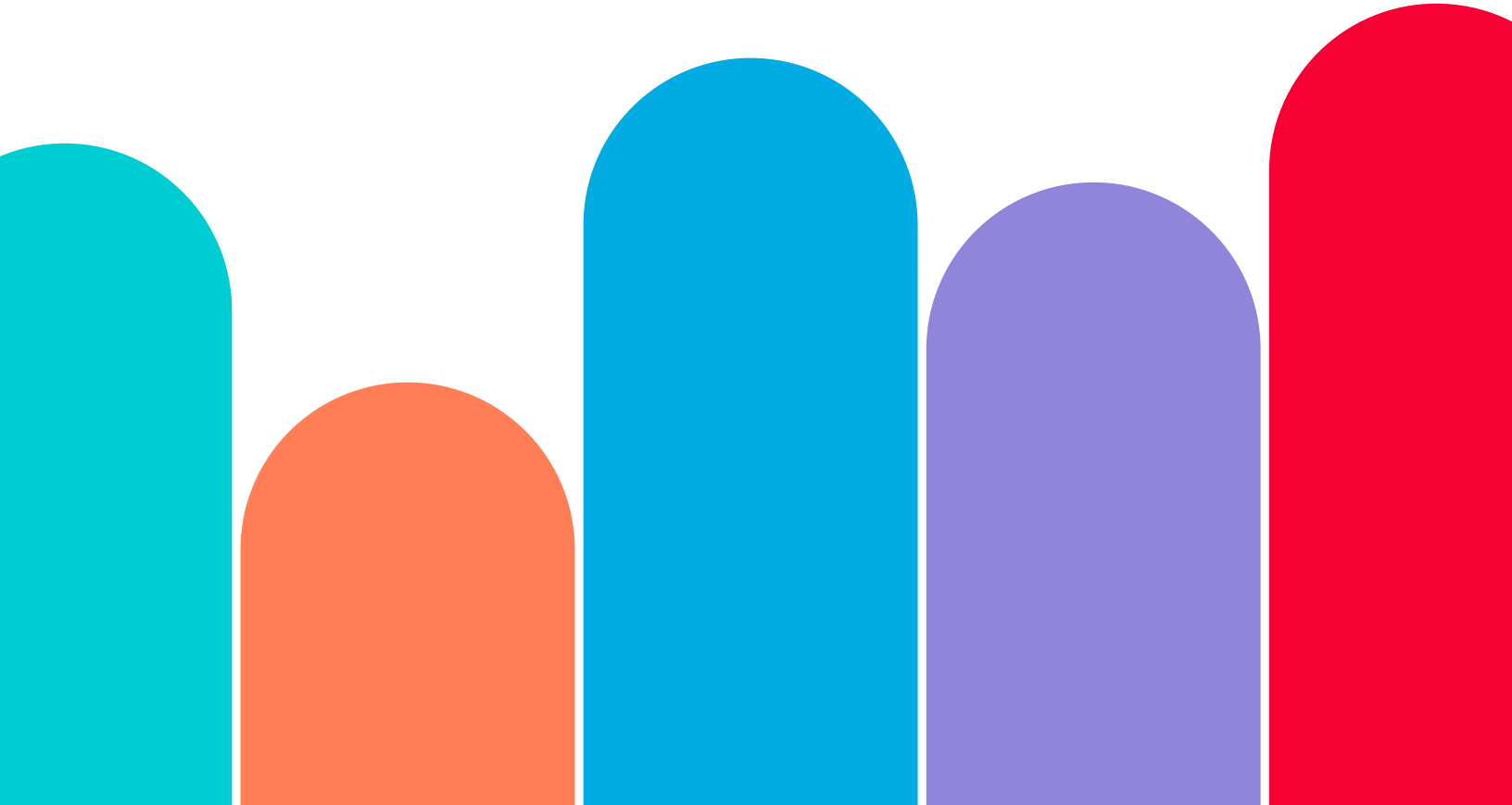
education reimagined

THE Transformative Potential OF LEARNER-CENTERED EDUCATION

A Research Review of Outcomes and Impact for Learners

Khara Schonfeld, Ph.D.

February 2026



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Foreword

There's nothing quite like spending time with young people in learner-centered environments. They ask big questions. They reflect deeply. They show up with curiosity and confidence, a strong sense of who they are, pride in their work, and clarity about their dreams.

When we witness these moments, it feels like something powerful is at play, like learning is alive. And yet, as we've watched learner-centered education expand and evolve over the last decade, we've continued to wonder: What is it about these environments that leads to such thriving?

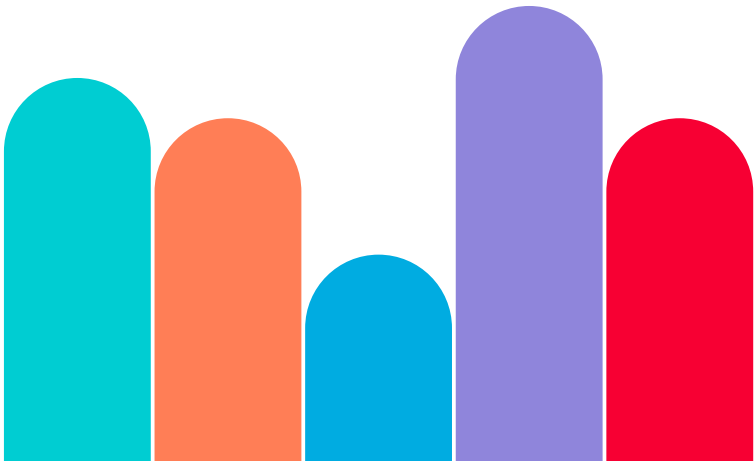
This question is ever more important to address amid growing calls from parents, policymakers, funders, and community leaders who are asking for what learner-centered education promises in their communities. We need to not only tell the story of learner-centered education—we also need to show its impact. We need evidence that grounds this work in research and points clearly to how and why it works.

That is why this report is so important.

In **The Transformative Potential of Learner-Centered Education**, our director of field research, Dr. Khara Schonfeld, has laid critical groundwork. From more than 500 academic studies, she selected 93 that offer meaningful insight into the potential outcomes and impacts of learner-centered education. The findings span cognitive, social-emotional, and behavioral domains and elevate potential long-lasting benefits for young people.

The result is a resource we hope will embolden efforts to reimagine education. We're proud to share this work, and we invite you to join us in carrying it forward.

Warmly,
Emily Liebtag, Ed.D.
Chief Innovation Officer
Education Reimagined



Introduction

"Does this actually work? And does it matter?" These are questions that education stakeholders tend to ask all the time.

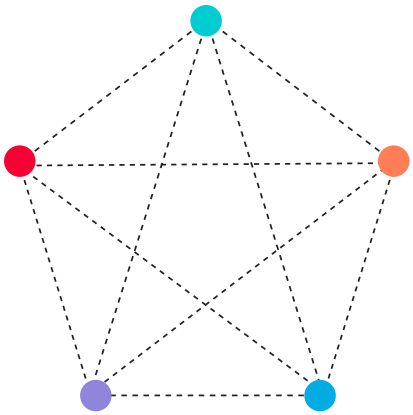
This is because we need to know whether our efforts are making a difference, and the study of outcomes and impact[1] offers the tangible evidence we need to get our answers.

[1] Outcomes and impact are closely related but refer to different levels of change. In this work, outcomes are framed as the more immediate, measurable results of a program or practice, such as improved academic performance, increased engagement, or stronger social-emotional skills. In contrast, impact refers to broader, long-term effects that those outcomes contribute to over time, like reduced opportunity gaps or lasting changes in school culture.

While outcomes show us what works in the short term, impact speaks to deeper significance and long-term value. In short, outcomes demonstrate effectiveness, and impact conveys meaning. Given the importance of each, this exploration was designed to study both the potential outcomes and long-term impacts of learner-centered education.

Education Reimagined defines "learner-centered education" as an approach to education that focuses on the holistic development of youth within and as part of supportive communities and through unique learning journeys. The approach is grounded in the following five key elements that, when present and equitably expressed, are designed to support young people for a life of learning as engaged members in society:

1) Learner Agency
2) Socially-Embedded
3) Personalized, Relevant, and Contextualized
4) Open-Walled
5) Competency-Based



LEARNER AGENCY

SOCIALLY-EMBEDDED

PERSONALIZED, RELEVANT, AND CONTEXTUALIZED

OPEN-WALLED

COMPETENCY-BASED

Learner-centered education emphasizes core principles that support youth to cultivate their sense of self, develop healthy relationships, navigate the dynamic landscapes of virtual and community-based learning, and gain exposure to diverse life skills and pathways. Collectively, these values aim to support lifelong well-being by equipping learners[2] with tools and experiences that can help them and their communities thrive.

Learner-centered education is rooted in long-standing educational theories[3] and has gained increasing attention as a promising way to support learners' growth and development. Despite this growing interest, it remains far from the norm in most public K–12 settings. Two key barriers appear to hinder its wider adoption: 1) limited research clearly documenting the approach's impact, and 2) limited investment in systems change and ecosystem development. Our review begins to address the first barrier—which can inform decisions about the second—by exploring this question: *What does research suggest about the potential outcomes and impact of learner-centered education for learners?*

The purpose of this work is to deepen the field's understanding of learner-centered education, advance a stronger narrative for its exploration, and lay a foundation for future studies and investment.

In this report, we outline the investigation's methodology, introduce the aligned research areas, present key findings, and conclude with a discussion of limitations and recommendations.

A CRITICAL MOMENT FOR STRATEGIC INVESTMENT

Interest in learner-centered education is growing, as is the need for additional support to further systems transformation and ecosystem development. As districts and networks explore the learner-centered approach, they need philanthropic investment to promote comprehensive implementation, develop appropriate assessment tools, and build the infrastructure necessary for widespread impact.

[2] Education Reimagined uses "learner" to refer to young people (ages 3 to 22) who engage in learner-centered environments. Unlike the word "student," which often implies a passive role in school, the term learner captures the active and dynamic nature of learning in learner-centered education and acknowledges that education is not limited to formal schooling. It also encompasses the evolving ways that young people grow, explore, and understand the world around them.

[3] Examples of these theories include Self-determination Theory (Ryan & Deci, 2000), Sociocultural Theory (Vygotsky, 1986/1999), and Constructivist Theory (Piaget, 1926).

Methodology

In alignment with Education Reimagined's 2024-2029 Research Agenda, the aim of this study was twofold: 1) to connect the key elements of learner-centered education to aligned bodies of research[4] that share similar principles, practices, or goals; and 2) to explore those bodies of research to identify potential outcomes and impacts of the learner-centered approach for learners. To accomplish these aims, we conducted a review of literature.

For each of the five key elements, multiple search terms and areas of possible alignment were identified. From these, 22 aligned research areas were selected, with three to five of these corresponding to each element. Then, we conducted exploratory reviews for each body of research, focusing on outcomes and long-term impact for learners. Key search terms were entered into numerous digital repositories, including online library catalogues, databases, and Google Scholar.

[4] In this work, "bodies of research" refers to a collection of studies, articles, and findings that have been conducted on a particular topic or area of inquiry over time. A body of research represents the accumulated knowledge and understanding researchers have developed through various investigations, often using different methods, theoretical frameworks, and perspectives. When we describe these bodies of research as "aligned" with learner-centered education, we do not mean that learner-centered education is directly informed by that content area. Rather, we use "aligned" to indicate that the topic shares similar principles, practices, or goals with one or more of the key elements of learner-centered education.

Across the aligned bodies of research, the range of available literature varied significantly—some had an abundance of studies to draw upon, while others were more limited. In total, more than 500 research articles and reports were reviewed. To select from these, priority was given to recent, peer-reviewed literature that provided clear evidence of outcomes and impact. Preference was also given to studies focusing on K–12 learners, meta-analyses, and large-scale studies conducted in the United States. Ultimately, we selected 93 studies for the review, with 4–10 studies representing each aligned area. More information about these aligned areas and all of the studies are available in the accompanying Literature Guide.

The selected literature reflects a wide range of methodological approaches, including 31 meta-analyses and systematic reviews, 8 experimental studies, 10 longitudinal research studies, 14 large-scale survey and cross-sectional studies, and 30 qualitative and theoretical investigations. A comprehensive list of these is available in Appendix A.

To identify potential outcomes and areas of impact, findings from these studies were analyzed using a thematic approach. This process enabled us to organize findings by each key element, map them across developmental domains, and explore the literature for insights into the drivers of impact.

Finally, it is important to note that this review presents a curated set of examples drawn from multiple exploratory literature reviews, rather than a comprehensive study of learner-centered education itself. The selected bodies of research offer a meaningful entry point for identifying shared values and strategies across the wider educational landscape. However, many additional areas of research also align with learner-centered principles but were beyond the scope of this project.

While not exhaustive or definitive, the methodological design offers a useful foundation for mapping the broader evidence base related to the approach and for guiding future investigations that examine its impact directly in learner-centered environments.

IMPORTANT NOTE: RESEARCH APPROACH AND LIMITATIONS

This review examines approaches that align with learner-centered education, but most of the research does not involve the direct study of learner-centered environments.

Additionally, some of the outcomes and measures included in this report reflect conventional educational priorities (e.g., standardized test scores and mainstream academic metrics) that may not fully capture the holistic outcomes central to the learner-centered paradigm.

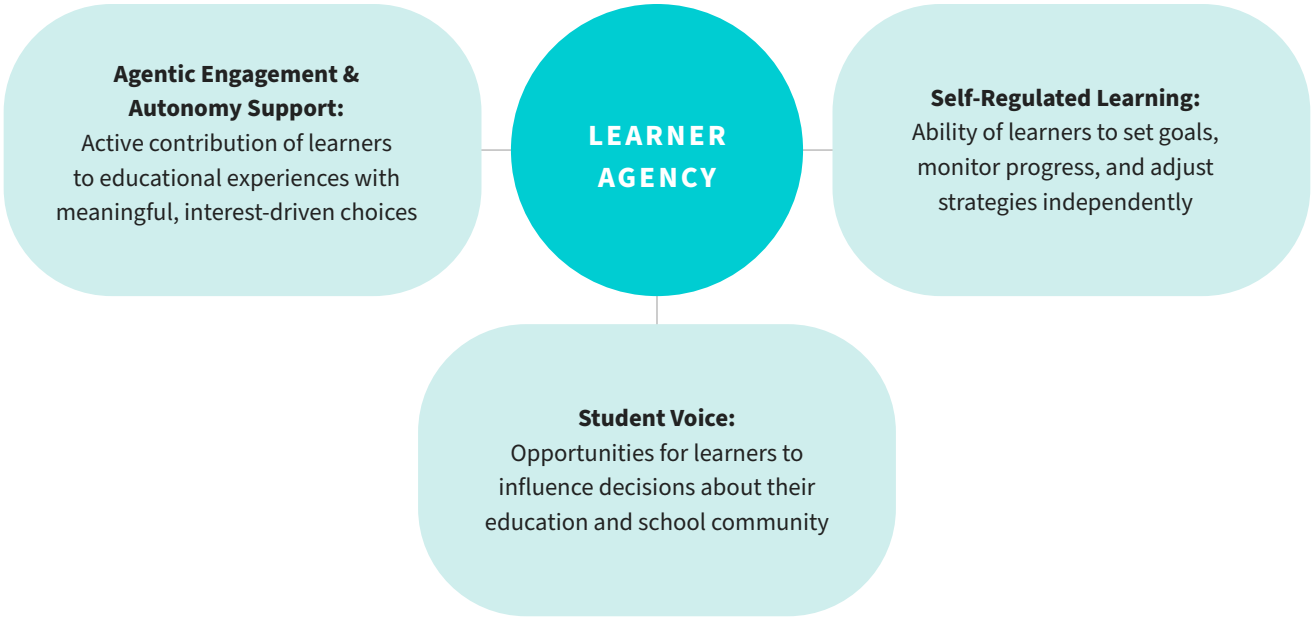
As such, findings from the review are suggestive of the approach's potential, as opposed to definitive proof of its impact. Future research directly studying learner-centered environments will be essential to validate the promising findings presented in this report.

Aligned Bodies of Research

This section introduces research areas aligned with the key elements of learner-centered education as defined by Education Reimagined in the Practitioner's Lexicon[5]. We present each aligned area with one key element, but many of them span across multiple elements due to their interconnected nature. In addition, all of the aligned areas represent distinct bodies of research, but some closely related areas were grouped together in the review, and ampersands are used to indicate these groupings (e.g., Community-Based Learning & Service Learning).

[5] The *Practitioner's Lexicon* is Education Reimagined's foundational document that offers distinctions for essential learner-centered terminology, including detailed descriptions of the five key elements.

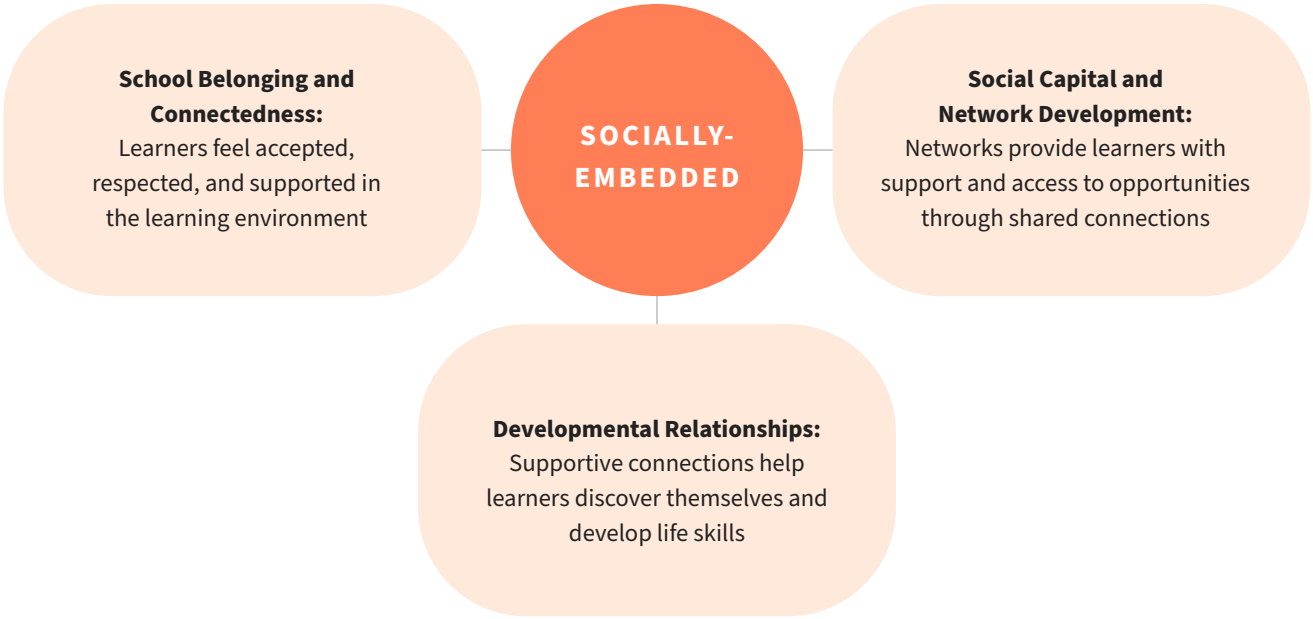
Learner Agency: Aligned Areas of Research



Learner Agency aligns with the following research areas related to how learners can actively shape and direct their learning experiences:

- ***Agentic engagement*** research explores how learners proactively contribute to their own learning goals and experiences to make learning more personally meaningful.
- ***Autonomy support*** research investigates the conditions that allow learners to act from genuine interest without external pressure.
- ***Self-regulated learning*** research focuses on how learners develop the capacity to set goals, monitor progress, and take ownership of their learning journey.
- ***Student voice*** research examines the ways youth can meaningfully influence decisions about their education and school environments.

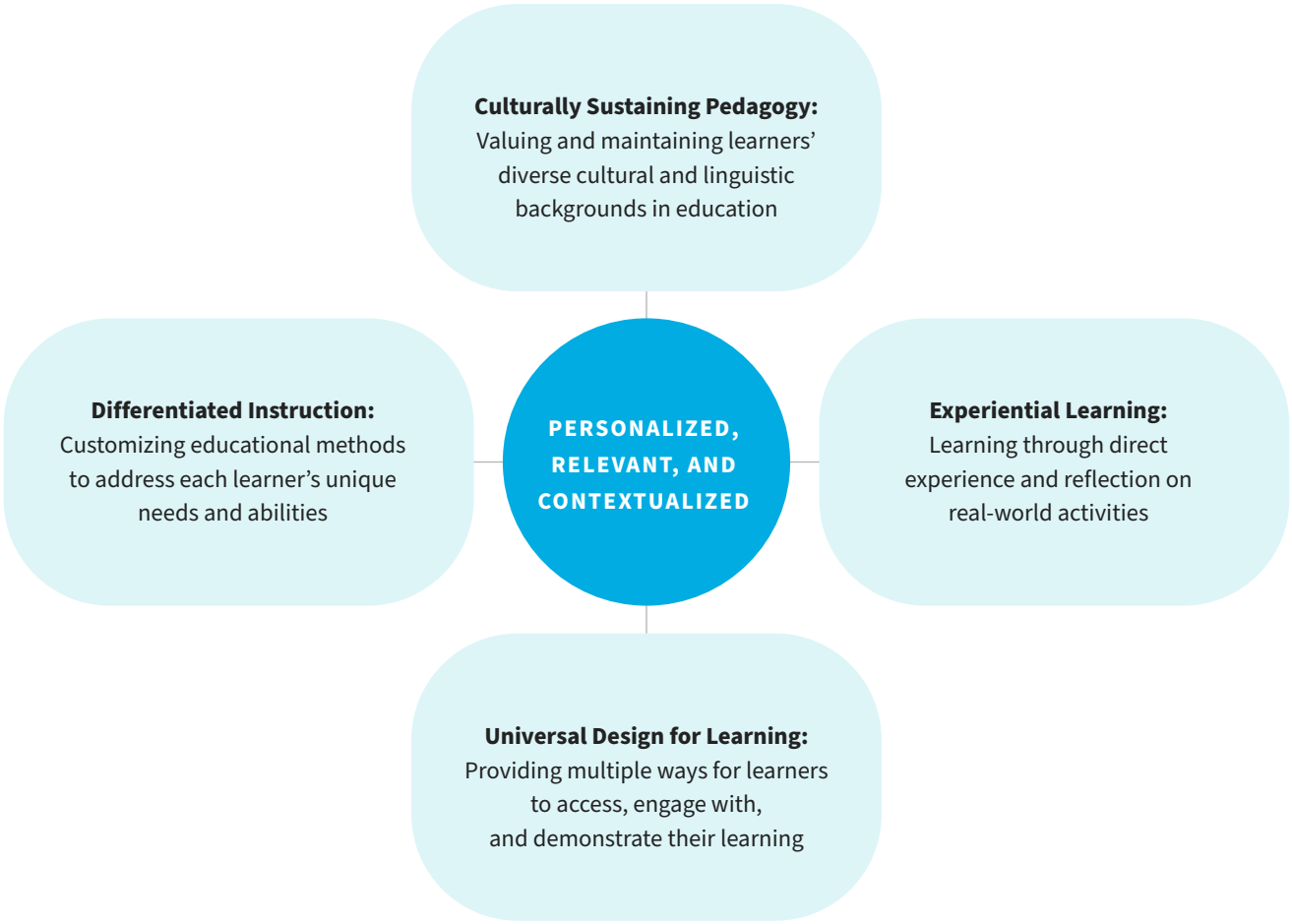
Socially-Embedded: Aligned Areas of Research



Socially-Embedded learning connects with these research areas, which show how learning can be fundamentally relational and community-centered:

- ***School belonging and connectedness*** research examines how feeling accepted, respected, and supported within learning environments affects young people's experiences.
- ***Social capital and network development*** research explores how relationships and group memberships provide learners with resources and opportunities for growth.
- ***Developmental relationships*** research investigates the close interpersonal connections that help youth explore their identity, develop capabilities, and learn how to contribute to their communities.

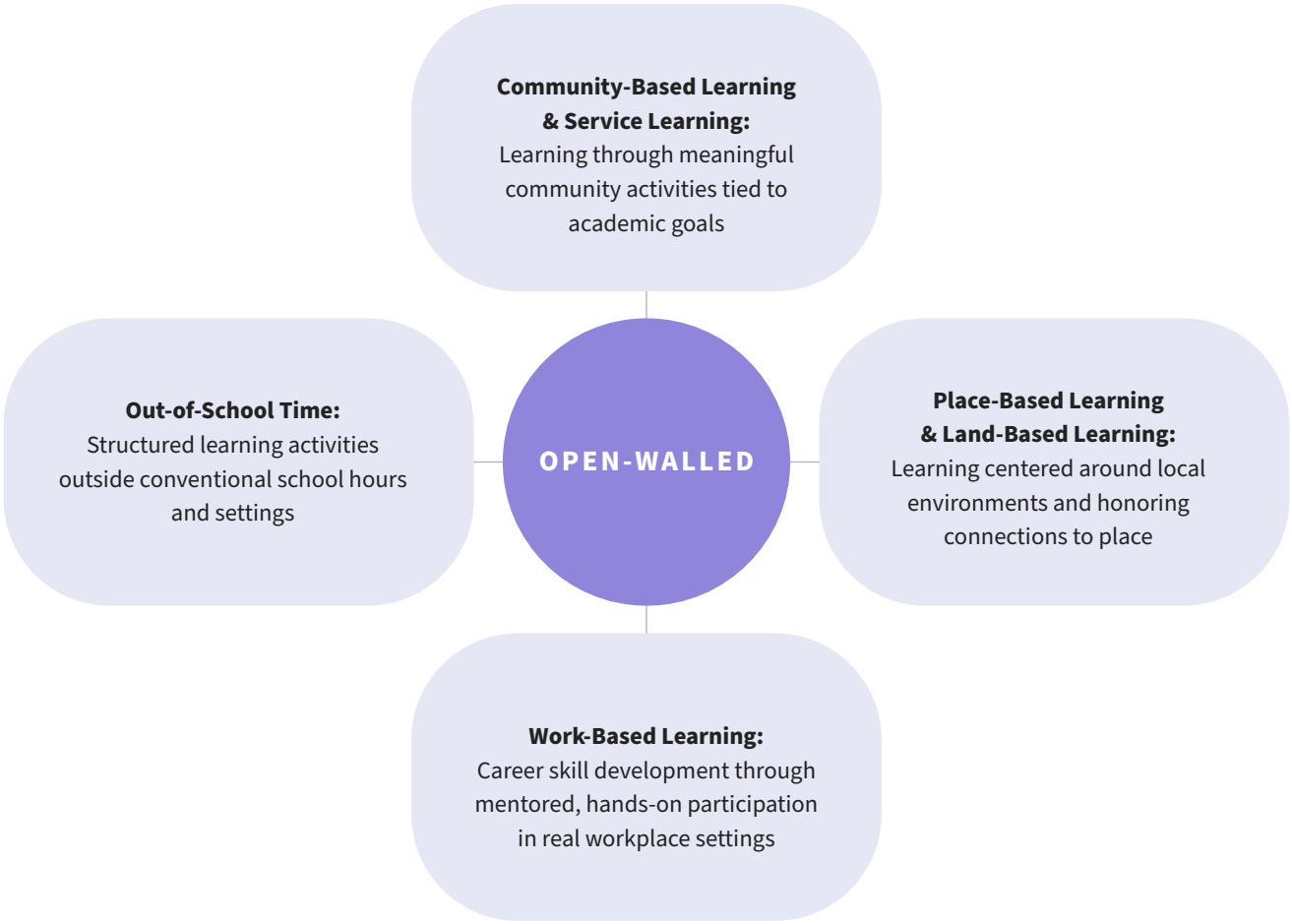
Personalized, Relevant, and Contextualized: Aligned Areas of Research



Personalized, Relevant, and Contextualized learning aligns with the selected research areas, all of which focus on learning that is tailored to honor a young person's unique identity, needs, and circumstances:

- ***Culturally Sustaining Pedagogy*** research explores how education can build upon and sustain learners' cultural and linguistic assets rather than replacing them.
- ***Differentiated instruction*** research investigates how teaching can be adapted to meet the diverse needs, strengths, and learning styles of every learner.
- ***Experiential learning*** research examines "learning by doing" approaches that connect education to real experiences and involve reflective practices.
- ***Universal Design for Learning*** research studies flexible frameworks that consider learner variability from the outset.

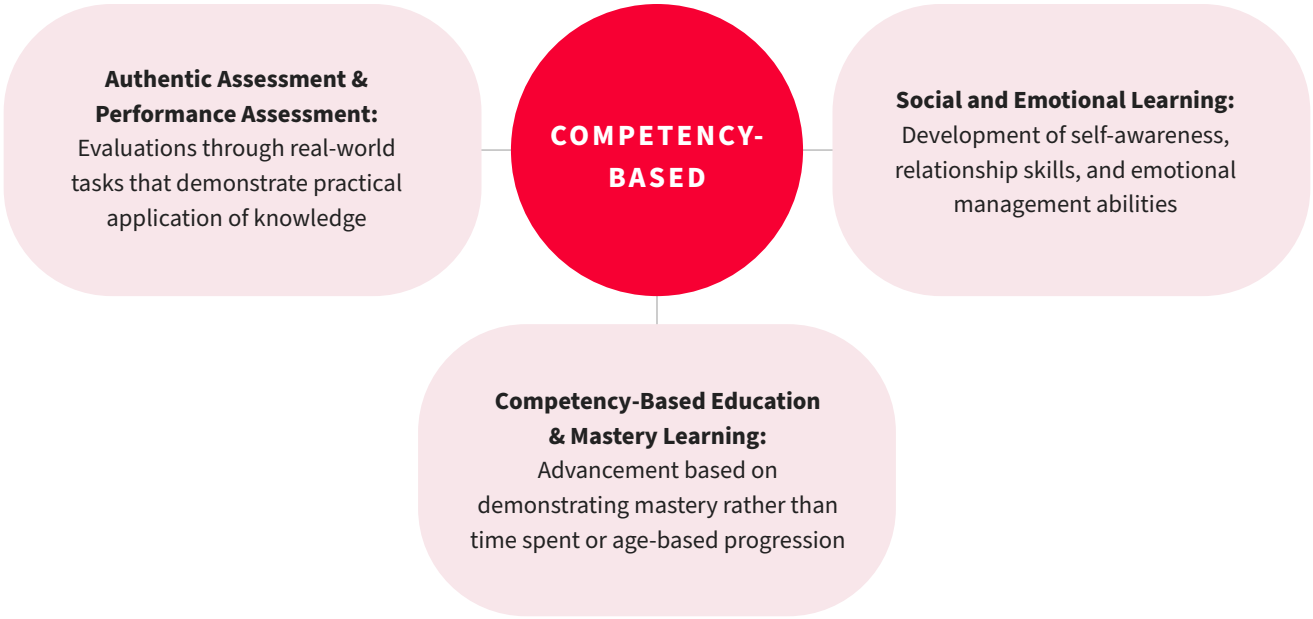
Open-Walled: Aligned Areas of Research



Open-Walled learning aligns with research areas that examine learning beyond conventional classroom boundaries and institutional barriers, which include the following:

- ***Community-based learning and service learning*** research explores how connecting academic instruction with surrounding communities creates meaningful learning experiences.
- ***Out-of-school time*** research investigates coordinated learning and development opportunities that happen outside conventional school settings and hours.
- ***Place-based learning and land-based learning*** research examines how using local environments and/or Indigenous relationships with land can ground learning in authentic contexts.
- ***Work-Based Learning*** research explores how structured workplace experiences develop career skills and authentic application of academic knowledge through employer partnerships.

Competency-Based: Aligned Areas of Research



Competency-Based learning prioritizes young people's ability to learn and apply what they learn in meaningful, authentic contexts. The following research areas exemplify this focus:

- ***Authentic assessment and performance assessment*** research examines how learners can show what they know through complex real-world tasks.
- ***Competency-Based Education*** and ***mastery learning*** research explore systems where learners progress based on demonstrated proficiency rather than seat time or age-based groupings.
- ***Social and Emotional Learning*** research investigates how learners develop the knowledge, attitudes, and skills needed to understand emotions, build relationships, and make responsible decisions.

MORE INFORMATION: ALL AREAS OF RESEARCH

For detailed research-based definitions for all of the above areas of research, see the accompanying Literature Guide.

Key Findings

In this section, key findings from the literature review are shared through three complementary analytical lenses.

First, we share aggregated findings from the featured studies for each of the five key elements.

Second, we synthesize evidence across all five elements to highlight outcomes related to three developmental domains, as well as longer-term impact.

Third, we identify four core processes that help explain how learner-centered education can lead to these outcomes and areas of impact.

Potential Outcomes and Impact per Key Element

To highlight recurring patterns across the literature, we developed thematic categories to organize outcomes from the aligned research areas across the key elements. These categories include the following:

SOCIAL-EMOTIONAL DEVELOPMENT & WELL-BEING

LEARNING & COMPETENCY DEVELOPMENT

ENGAGEMENT & MOTIVATION

RELATIONSHIPS & COMMUNITY CONNECTION

FUTURE READINESS & LIFE SKILLS

Organizing the findings by these categories helps clarify both the distinct contributions of each key element and the interconnected nature of their combined influence. This categorization process also reveals how many outcomes span across multiple elements, demonstrating the integrated nature of learner-centered education's impact.

To illustrate both these distinct contributions and interconnected effects of each element, we next present the three strongest outcome categories[6] for each key element. These categories were determined by the frequency and strength of evidence in the aligned literature, with specific examples from the reviewed research provided to illustrate these outcomes in greater depth.

[6] Since this investigation consists of numerous exploratory reviews of select research areas, it is important to note that these categories do not represent a complete range of outcomes associated with each element.

Potential Learner Agency Outcomes

When learners actively shape their educational experiences rather than passively receive instruction, a fundamental shift seems to occur in how they approach learning. Autonomy support, for example, leads to increased intrinsic motivation, classroom engagement, agency and initiative, academic achievement, positive emotions, vitality and well-being (Reeve & Cheon, 2021). In the same manner, student voice initiatives demonstrate that when learners feel schools are responsive to their feedback, they tend to have better grades, higher attendance, and lower rates of chronic absenteeism (Kahne et al., 2022). Student choice in learning activities also links generally to more positive engagement profiles, with meaningful choices producing stronger impact on engagement (Schmidt et al., 2018). Particularly in urban schools, feeling heard in class and being taken seriously by teachers promotes learner engagement (Wallace & Chhuon, 2014).

Research suggests that learning and competency development flourishes when learners develop self-regulation skills. Specifically, goal-setting, persistence, effort, and self-efficacy emerge as the strongest predictors of academic success (Sitzmann & Ely, 2011). These benefits also extend to learners with disabilities, as self-determination interventions prove effective across grade levels and disability types (Burke et al., 2020). For young people with autism, self-regulated learning reduces concerning behaviors while enhancing school-related function (Wan Yunus et al., 2021). These approaches also improve academic performance, on-task behavior, and appropriate verbalizations for youth with ADHD (Reddy et al., 2015).

The potential social-emotional benefits of learner agency appear to create lasting foundations for well-being and civic engagement. Learners with greater voice, choice, and influence report significantly higher well-being at school, including increased self-esteem, vitality, and life satisfaction (Anderson, 2018; Ferguson et al., 2011; Núñez & León, 2015). In addition, learners who demonstrate both self-regulated learning skills and growth mindsets show higher metacognitive knowledge, confidence, motivation, and study satisfaction (Hertel et al., 2024). Notably, student voice initiatives promote agency, belonging, competence, and civic efficacy while building capacity to engage in diverse discourse (Mitra & Serriere, 2012).

Learner Agency
Top Outcome Categories

SOCIAL-EMOTIONAL DEVELOPMENT & WELL-BEING

LEARNING & COMPETENCY DEVELOPMENT

ENGAGEMENT & MOTIVATION

For comprehensive outcomes across all thematic categories related to learner agency, see Table B1 in Appendix B.

Potential Socially-Embedded Outcomes

Rich relational environments can generate social-emotional benefits that extend well beyond the immediate school experience. This can be seen via the strong links that exist between school belonging and higher self-esteem, optimism, and reduced depression and anxiety that extend into young adulthood (Allen et al., 2018; Allen et al., 2024). Likewise, school connectedness in adolescence appears to reduce emotional distress, suicidal ideation, violence, risky sexual behavior, and substance use in adulthood (Steiner et al., 2019). In terms of school outcomes, belonging leads to better motivation, grades, attendance, and fewer disciplinary incidents, particularly for marginalized groups, with belonging interventions proving especially effective for racially minoritized learners in reducing failed classes, improving grades, and decreasing disciplinary citations (Korpershoek et al., 2020; Williams et al., 2020).

Social capital and meaningful connections can also help develop future readiness and life skills. For example, network-based social capital can connect youth with trusted role models who provide guidance and educational opportunities while helping learners envision positive futures (Dill & Ozer, 2019). The development of network structure and content also positively predict higher GPA, attendance, and four-year college enrollment plans (Ryan & Junker, 2019). The social capital that comes from developmental relationships further predicts improved work readiness and decision-making skills for opportunity youth (Boat et al., 2021). These approaches can support upward mobility for low-income learners while providing protective benefits for vulnerable youth, including those in foster care, justice systems, and immigration contexts (Kundu, 2017; Williams & Le Menestrel, 2013).

When it comes to comprehensive success and community connection, developmental relationships emerge as foundational catalysts. Learners who feel genuinely cared for and respected by their teachers show higher engagement, better social skills, increased motivation, and are less likely to drop out or act disruptively (Cornelius-White, 2007). These relationships foster trust, emotional support, and high expectations while building self-regulation, social competence, and classroom engagement, especially for at-risk students (Osher et al., 2020). Research shows that youth from high-stress families with strong developmental relationships are 7 to 33 times more likely to report positive outcomes, demonstrating how these connections can buffer against childhood adversity and family stress (Scales et al., 2023). Additionally, strong relationships provide access to opportunities, guidance, and resources essential for navigating transitions to adulthood (Boat et al., 2021).

Socially-Embedded
Top Outcome Categories

SOCIAL-EMOTIONAL
DEVELOPMENT & WELL-BEING

RELATIONSHIPS &
COMMUNITY CONNECTION

FUTURE READINESS
& LIFE SKILLS

For comprehensive outcomes across all thematic categories related to learner agency, see Table B2 in Appendix B.

Potential Personalized, Relevant, and Contextualized Outcomes

Education that honors learners' cultural backgrounds and unique circumstances can result in powerful identity-affirming effects. Culturally sustaining pedagogy helps learners construct hybrid and transcultural identities while fostering civic agency and community connection (Esteban-Guitart et al., 2019; McCarty & Lee, 2014). This can lead to heightened empowerment, leadership, stronger cultural identity, increased confidence, and greater belonging in learning environments (Aronson & Laughter, 2016; Lee & Walsh, 2017; Spencer, 2007). Particularly for immigrant youth, these approaches build cultural competence and provide tools for challenging social injustices (Lee & Walsh, 2017). In addition, culturally relevant approaches promote identity development and revitalization of language and traditions in Indigenous communities (McCarty & Lee, 2014).

When learning connects authentically to young people's interests and learning preferences, their engagement and motivation can flourish. Culturally relevant education, experiential learning, and Universal Design for Learning increase youth interest, ownership of learning, and intrinsic motivation (Aronson & Laughter, 2016; Capp, 2017; Kong, 2021; Ok et al., 2017). Culturally relevant approaches strengthen student voice and participation in school life, while also expanding critical reflection and engagement in academic discourse (Aronson & Laughter, 2016). Similarly, experiential learning encourages learners to move beyond memorization, helping them evaluate and apply knowledge thoughtfully while promoting logical thinking and problem solving (Kong, 2021). Universal Design for Learning approaches increase intrinsic motivation, reduce stress, boost confidence, and empower learner ownership while shifting perceptions of learning (Capp, 2017).

Tailoring instruction to meet diverse learner needs through learning and competency development can lead to significant benefits. For instance, research on differentiated instruction shows that learners in differentiated classrooms make more progress than those in conventional settings, with quality differentiated teaching linked to better outcomes regardless of socioeconomic status (Valiandes, 2015). Specifically, differentiated literacy instruction yields significantly higher scores, especially in letter-word recognition and writing (Puzio et al., 2020), and differentiated strategies for reading comprehension produce statistically significant improvements while enhancing participation and cooperation (Magableh & Abdullah, 2021; Mirawati et al., 2022). In accordance, learners working with educators who have high levels of Universal Design for Learning implementation perform better on standardized tests, revealing how the approach can positively impact achievement while providing flexibility that leverages learners' strengths and backgrounds (Craig et al., 2024; King-Sears et al., 2023). Beyond this, experiential learning helps learners apply knowledge to real-world situations while developing communication and critical-thinking skills (Bradberry & De Maio, 2018).

Personalized, Relevant, and Contextualized Top Outcome Categories

SOCIAL-EMOTIONAL DEVELOPMENT & WELL-BEING

LEARNING & COMPETENCY DEVELOPMENT

ENGAGEMENT & MOTIVATION

For comprehensive outcomes across all personalized, relevant, and contextualized thematic categories, see Table B3 in Appendix B.

Potential Open-Walled Outcomes

Breaking down barriers between classroom and community can lead to authentic learning experiences that enhance both academic and practical skill development. Service-learning can lead to significant academic and civic gains, with learners showing improvements in attitudes toward self and school, civic engagement, social skills, and academic performance (Celio et al., 2011). Learners in culturally relevant service programs also report stronger community and school connections with higher scores on contribution, responsibility, and action-taking (Yamauchi et al., 2006). In out-of-school time, higher-quality programs correlate to better reading and math skills, enhanced vocabulary, and greater social confidence in situations like speaking in groups or meeting new people (Vandell et al., 2020). Likewise, place-based programs foster academic improvements in science, memory, and vocabulary while building practical skills (Mann et al., 2022). Work-based learning engenders tangible career preparation, with high school programs helping youth of color and low-income students secure better jobs by age 30 (Ross et al., 2018).

As to community engagement, social-emotional development is fostered through meaningful connections and authentic contribution opportunities. For example, community-based learning builds empathy, social capital, and self-efficacy through mentorship and problem-solving experiences, and it promotes social sensitivity and justice awareness that prepares youth for active civic participation (Henness et al., 2013; Smith et al., 2019). Out-of-school time alumni report positive social-emotional development impact, with those from disadvantaged areas experiencing the greatest growth in self-management and future outlook (Helms et al., 2021). This is because programs that emphasize youth voice and humanizing practices foster emotional development, resilience, and identity formation (Baldridge et al., 2024). Moreover, place-based programs demonstrate lasting impact on nature connections and environmental stewardship (Keller, 2017).

Open-walled approaches can also offer powerful opportunities for relationship building and community connection that extend far beyond typical educational boundaries. Service-learning increases participation in civic activities and community-building efforts while strengthening connections between youth and adults (Celio et al., 2011; Henness et al., 2013). Nature-based learning fosters engagement, ownership, academic improvements, social skills, and enhanced self-concept through environmental connections (Mann et al., 2022). In addition, work-based learning builds self-regulation, social skills, and resilience through supportive relationships while providing hands-on workforce exposure (Lindstrom et al., 2020; Ross et al., 2020). This can be seen with asset mapping work experiences, which have led to broader community understanding and greater self-efficacy increases for Black youth (Frerichs et al., 2023). Particularly significant are Indigenous land-based approaches, which support emotional development, cultural identity, and environmental responsibility while promoting decolonization and community empowerment (Simpson, 2014). Land-based learning also helps learners develop strong connections to their homelands and cultural values, raising generations equipped with skills and knowledge needed to strengthen their communities and cultural sovereignty (Radu et al., 2014; Simpson, 2014).

Open-Walled
Top Outcome Categories

SOCIAL-EMOTIONAL DEVELOPMENT & WELL-BEING

LEARNING & COMPETENCY DEVELOPMENT

RELATIONSHIPS & COMMUNITY CONNECTION

For comprehensive outcomes across all open-walled thematic categories, see Table B4 in Appendix B.

Potential Competency-Based Outcomes

Prioritizing demonstrated mastery over time-based progression can give rise to comprehensive social-emotional benefits that support lifelong well-being. In particular, Social and Emotional Learning programs demonstrate remarkable outcomes, with learners showing significant improvements in social-emotional skills, attitudes, behavior, and academic performance that reflects an 11-percentile-point achievement gain (Durlak et al., 2011). These benefits prove remarkably enduring, as follow-up studies ranging from 6 months to 18 years show lasting positive effects, including a reduction in arrests and clinical disorders (Taylor et al., 2017). Longitudinal research further reveals significant links between kindergarten social competence and young adult outcomes in education, employment, crime, substance use, and mental health (Jones et al., 2015). Additionally, Social and Emotional Learning approaches enhance emotional regulation, social relationships, and learner-educator connections while providing stress buffering and long-term reduction in high-risk behaviors (Durlak et al., 2011; Hamedani & Darling-Hammond, 2015).

Learning and competency development also seems to be enhanced when learners demonstrate mastery through authentic and meaningful assessments. For instance, authentic and performance assessments enhance critical thinking, metacognitive engagement, and the application of knowledge (Bland & Gareis, 2018; Hallam et al., 2007; Hansen, 2024; Siarova et al., 2017). Research on competency-based education implementation reveals positive associations between learners' experiences with specific practices and their learning capacities, including clearer sense of learning targets, favorable changes in intrinsic motivation and self-efficacy, and perceived utility of mathematics (Haynes et al., 2016). Similarly, mastery learning programs demonstrate positive effects on examination performance, particularly for lower-performing students, with some interventions reducing math anxiety and improving academic achievement (Kulik et al., 1990; Scrivner, 2024). Performance assessments also help learners develop stronger self-awareness of their learning process and improved ability to build on existing knowledge when tackling new challenges (Bland & Gareis, 2018).

Placing emphasis on real-world application and building transferable skills can support future readiness and life skills development. Both competency-based education and performance assessments equip learners with critical 21st-century skills like problem solving, collaboration, and communication, enhancing their preparation for future careers (Darling-Hammond et al., 2013; Maier et al., 2020; Specht-Boardman, 2024). Furthermore, Social and Emotional Learning programs can result in higher graduation rates, improved college attendance, and reduced behavioral problems, all of which can contribute to long-term success (Greenberg, 2023; Taylor et al., 2017). In terms of skill development, performance assessments develop deeper learning competencies while enhancing communication and presentation skills, college and career readiness, and social-emotional skills like perseverance and creative problem solving (Maier et al., 2020). Peer- and self-assessments also prove especially effective in developing competencies such as initiative, entrepreneurship, and learning to learn, plus transversal skills including creativity, risk assessment, and decision-making (Siarova et al., 2017).

Competency-Based: Top Outcome Categories

SOCIAL-EMOTIONAL DEVELOPMENT & WELL-BEING

LEARNING & COMPETENCY DEVELOPMENT

FUTURE READINESS & LIFE SKILLS

For comprehensive outcomes across all competency-based thematic categories, see Table B5 in Appendix B.

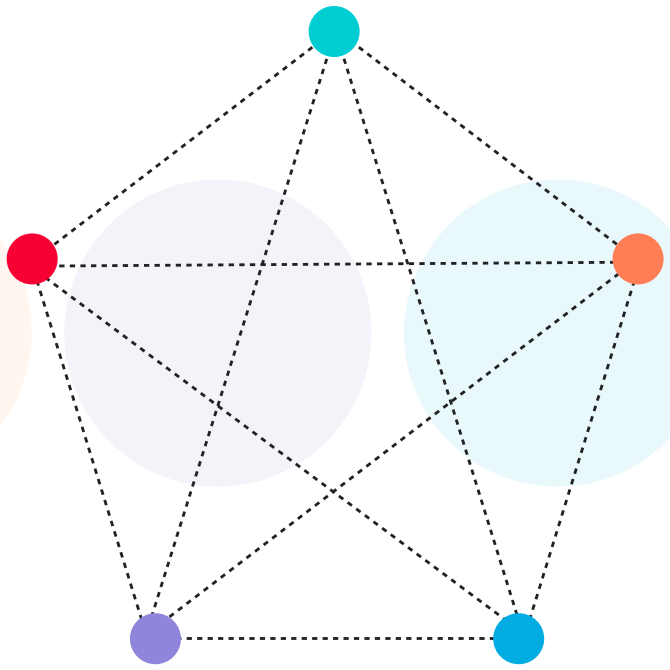
Synergistic Effects Across the Key Elements

Examining the thematic categories across all five elements reveals the interconnected nature of learner-centered education's potential impact. The approach's key elements appear to create positive developmental cascades, wherein growth in one area enables and accelerates growth in others. Examples include the following:

- Agency-building enhances learner engagement while also aiding learners to develop the self-regulation skills they need in personalized educational approaches.
- Cultural affirmation strengthens learners' identity and belonging, and this psychological safety enables authentic community engagement.
- Authentic, performance-based assessment practices develop both academic and social-emotional competencies simultaneously.

Notably, the "Social-Emotional Development & Well-Being" was a top outcome category for all five of the elements, which highlights its significance. The range of outcomes nested within this thematic category involves learners exercising agency, building relationships, engaging with relevant content, learning beyond classroom walls, and demonstrating competencies. This pattern suggests that social-emotional development and well-being may represent both a key area of impact for the learner-centered approach and a foundational condition for its effectiveness. That is, providing this relational foundation may be necessary to enable learners to take academic risks, engage in authentic assessment, and participate meaningfully in diverse learning experiences in learner-centered ways.

Building on this foundational role, the category of "Learning & Competency Development" spans four elements, while the "Engagement & Motivation" category surfaces for three elements. This broad convergence of potential outcomes among the key elements reinforces the notion that learner-centered education's transformative potential lies not in any single approach. Rather, the thoughtful, integrated implementation of all five key elements work together, with each element reinforcing and amplifying outcomes in multiple areas of young people's holistic development.



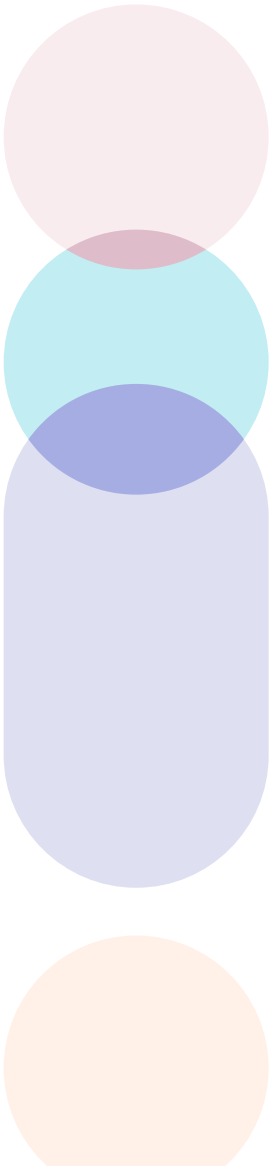
Complete outcome details for each element are provided in Tables B1–B5 in Appendix B.

Potential Developmental Outcomes and Long-Term Impact

In the next analysis, the wide-ranging outcomes documented across all five elements were plotted across three key domains of human development—cognitive, social-emotional, and behavioral. This allowed us to explore how learner-centered education can potentially support the full spectrum of children and adolescents' growth and learning needs. For the purpose of this work, these developmental domains are framed in these ways:

- **Cognitive** outcomes reflect the mental processes essential to learning, such as knowledge acquisition, critical thinking, problem solving, and academic achievement.
- **Social-emotional** outcomes involve learners' emotional well-being, self-awareness, interpersonal skills, and capacity to navigate relationships and regulate emotions.
- **Behavioral** outcomes refer to the observable actions and choices learners make in educational settings, including participation, attendance, motivation, and engagement.

Each of these domains supports the success of learners in educational settings and beyond. It is interesting to note that these developmental domains closely align with the thematic categories identified in the prior section. This alignment reinforces that the key elements operate together to foster comprehensive human growth. Building on this, a supplementary review of the literature was conducted to explore potential long-term impacts for learners, with those findings also presented in this section.



Cognitive Development: Building the Mind for Lifelong Learning

Among the developmental domains, cognitive outcomes may be the most familiar entry point for understanding an educational approach's impact, but the selected literature reveals these outcomes in new depth and complexity. Instead of focusing solely on standardized test performance or seat-time requirements, the studies in this review reveal how aligned approaches can contribute to the sophisticated thinking skills learners need for success in an increasingly complex world.

The cognitive benefits documented across the five key elements point to a fundamental shift from passive knowledge consumption to active knowledge construction. What this means is that, when learners exercise agency over their learning, they develop stronger metacognitive skills—the ability to think about their own thinking. This meta-awareness enables them to set meaningful goals, monitor their progress, and adjust their strategies when needed (Sitzmann & Ely, 2011; Hertel et al., 2024). Similarly, when education is personalized and contextualized to learners' interests and backgrounds, it activates deeper cognitive engagement and enhances memory formation by creating multiple pathways for understanding (Kong, 2021).

The research also reveals how the learner-centered approach may provide cognitive benefits for youth with diverse learning needs. For example, Universal Design for Learning principles consistently improve academic performance by removing barriers to access and allowing learners to engage through their strengths (King-Sears et al., 2023). Additionally, authentic assessment practices and mastery-based progression create multiple pathways for demonstrating understanding while building confidence in academic capabilities (Kulik et al., 1990; Maier et al., 2020; Siarova et al., 2017). Mastery learning specifically shows positive effects for lower-performing students and can reduce math anxiety (Kulik et al., 1990; Scrivner, 2024).

Together, these cognitive outcomes suggest that learner-centered education has the potential to cultivate not just academic skills, but the metacognitive awareness and critical thinking capacities essential for lifelong learning. Rather than preparing learners for tests, the learner-centered approach may be able to develop minds capable of navigating complexity and driving innovation.

The complete range of these documented cognitive benefits appears in Table 1.

TABLE 1
Potential Cognitive Outcomes

- Enhanced goal-setting, metacognition, and strategic learning skills
- Development of critical thinking, problem solving, and real-world application skills
- Growth in literacy, numeracy, communication, and technological fluency
- Cultivation of mastery mindset and long-term academic growth
- Improved measures of impact in academic performance and skill development (e.g., grades, standardized tests)
- Greater clarity of learning targets and satisfaction with learning
- Advanced memory and vocabulary development
- Reduced math anxiety and enriched mathematical understanding
- Deepened science reasoning and conceptual understanding

Note: These cognitive outcomes are drawn from studies that include meta-analyses on the impact of self-regulated learning (Sitzmann & Ely, 2011), differentiated instruction (Puzio et al., 2020), and Universal Design for Learning (King-Sears et al., 2023).

Social-Emotional Development: Nurturing the Whole Person

The social-emotional domain represents the heart of learner-centered education's transformative potential, encompassing outcomes that can extend far beyond the classroom and over time. This domain encompasses individual emotional regulation and self-awareness, as well as the interpersonal skills and cultural identity formation that enable youth to thrive in diverse communities.

Studies in this review reveal how approaches that align with learner-centered education create the relational safety and cultural affirmation necessary for healthy identity development. When learners see themselves reflected and valued in their educational experiences, their sense of belonging can grow stronger, and they can build resilience against stereotype threats and social marginalization (Esteban-Guitart et al., 2019; Allen et al., 2018). This is particularly important for racially and ethnically marginalized learners, who can develop deeper cultural pride and empowerment when their backgrounds are valued as assets rather than viewed as deficits (Aronson & Laughter, 2016).

The social-emotional benefits documented across the literature also highlight protective effects of the aligned approaches. For instance, strong developmental relationships and belonging can buffer young people against family stress, trauma, and adversity, which are benefits that can persist decades into adulthood (Scales et al., 2023; Steiner et al., 2019). This safeguarding function indicates that learner-centered education could serve as both an educational approach and a public health strategy in its ability to promote lifelong mental health and well-being.

Most significantly, findings related to social-emotional outcomes suggest that they may serve as a foundation for all educational endeavors in learner-centered environments. When learners feel safe, valued, and emotionally supported, they appear better positioned to take intellectual risks, engage in collaborative problem solving, and persist through academic challenges (Osher et al., 2020). This interdependence reveals why social-emotional development cannot be treated as separate from academic achievement. Rather, it may be integral to learner-centered education's effectiveness.

The full range of these social-emotional outcomes across the research appears in Table 2.

TABLE 2

Potential Social-Emotional Outcomes

- Improved self-esteem, self-concept, and emotional regulation
- Greater resilience, coping skills, and better stress management
- Heightened sense of belonging, purpose, and life satisfaction
- Deepened cultural identity, competence, pride, and personal empowerment
- Increased empathy, inclusion, and awareness of others
- Expanded self-efficacy, agency, and self-determination
- Enhanced relationships with peers, educators, and mentors
- Broadened social capital and access to opportunity
- Developed leadership, critical consciousness, and advocacy skills
- Amplified buffering effects against trauma, adversity, and family stress
- Advanced resilience to stereotype threats

Note: These social-emotional findings are supported by research that includes longitudinal studies on school belonging (Steiner et al., 2019), developmental relationships research (Scales et al., 2023), and culturally sustaining pedagogy studies (Esteban-Guitart et al., 2019).

Behavioral Development: Translating Learning into Action

Behavioral outcomes can offer tangible signs of learner-centered education's potential effectiveness by providing visible indicators of the cognitive and social-emotional development the approach aims to foster. For instance, outcomes that are related to young people's engagement, relationships, and decision-making may reflect deeper developmental shifts promoted by learner-centered environments.

The behavioral changes documented across the research reflect a fundamental shift from compliance-based to engagement-based learning. When learners have agency in their education, they experience cultural affirmation; engage in authentic learning experiences; and demonstrate increased motivation, initiative, and persistence (Howard et al., 2021; Schmidt et al., 2018). These changes may be particularly pronounced for learners who have previously been disengaged or unsuccessful in conventional settings (Wallace & Chhuon, 2014; Williams et al., 2020). This suggests that what may appear as behavioral challenges in other settings could actually reflect mismatches between learners' needs and their educational context rather than inherent deficits (Wallace & Chhuon, 2014).

Studies in this review indicate that aligned approaches enhance the development of prosocial behaviors and ethical decision-making. By engaging young people in community-based learning and collaborative projects that provide meaningful opportunities to contribute, critical-thinking and problem-solving capabilities are developed along with work ethics and leadership skills (Celio et al., 2011; Chan et al., 2021). These behavioral patterns may extend beyond a given learning environment, influencing how learners navigate relationships, make health and safety decisions, and contribute to their communities (Steiner et al., 2019; Taylor et al., 2017; Jones et al., 2015).

Ultimately, the behavioral outcomes documented in this work suggest that learner-centered education has the potential to help youth develop the capacity to make thoughtful choices about their own lives and learning. This agency could serve as the foundation for lifelong learning and democratic participation, enabling learners to continue growing and contributing long after their formal education ends.

Table 3 provides a comprehensive overview of all potential behavioral outcomes that emerged from the review.

TABLE 3
Potential Behavioral Outcomes

- Enhanced motivation and initiative in learning tasks
- Greater focus, persistence, and effort in academic tasks
- Expanded participation in civic, environmental, and school-based activities
- Healthier behavior patterns and improved decision-making
- Stronger work ethic, professionalism, and practical job skills
- Improved attendance and punctuality
- Reduced disciplinary incidents, high-risk behaviors, and dropout rates
- More frequent application of talents and personal interests
- Decreased substance use and high-risk behaviors
- Diminished fighting, bullying, and violent behaviors

Note: These behavioral outcome findings were informed by research that includes the study of student voice impacts (Conner et al., 2022; Kahne et al., 2022), work-based learning benefits (Ross et al., 2018; Frerichs et al., 2023), experiential learning effects (Chan et al., 2021), service learning outcomes (Celio et al., 2011), and social-emotional learning behavioral improvements (Durlak et al., 2011; Taylor et al., 2017).

Long-Term Impact: Building Foundations for Lifelong Success

Evidence to inform learner-centered education's transformative potential also comes from research that tracks the development of learners over time. For instance, a longitudinal study that tracked participants from kindergarten to middle age demonstrates how early social-emotional competencies predict career success, relationship quality, and civic engagement decades later (Jones et al., 2015). Other large-scale longitudinal studies show that school connectedness and belonging in adolescence are linked to lower rates of mental health challenges, substance misuse, and violence in adulthood (Steiner et al., 2019; Allen et al., 2024). In a longitudinal analysis of national survey data, findings reveal how early workplace experiences in adolescence predict better employment outcomes into adulthood, particularly for young people from historically marginalized communities (Ross et al., 2018).

These long-term areas of impact reflect how learner-centered education may be able to address fundamental human needs for agency, belonging, purpose, and contribution. When educational experiences honor these needs, this can set in motion positive reinforcing cycles that continue to benefit individuals and communities for years to come. This lasting impact could encompass multiple dimensions of lifelong success, as shown in Table 4, which details key research findings that support these long-term outcomes.

TABLE 4
Potential Long-Term Impact

- Stronger future orientation and goal achievement
- Better long-term mental health extending into adulthood
- Increased civic engagement and community participation
- Expanded career and life readiness, including job quality and stability
- Higher levels of college readiness, graduation, and lifelong learning
- Greater economic mobility, particularly for low-income learners
- Healthier physical and sexual health outcomes
- Lower rates of involvement in criminal justice system
- Elevated recognition and development of youth as capable leaders and change agents

Note: This long-term impact evidence reflects research that includes longitudinal studies tracking participants for decades: kindergarten social competence predicting life outcomes 13–19 years later (Jones et al., 2015), school connectedness reducing adult health risks (Steiner et al., 2019), work-based learning improving job quality by age 30 (Ross et al., 2018), and quality out-of-school programming showing benefits at age 15 (Vandell et al., 2020).

Potential Drivers of Impact

Through a final analysis of the selected 93 studies, four core processes emerged as potential drivers of the outcomes and areas of impact described in the previous sections. That is, these processes reveal how a learner-centered approach can lead to the noted benefits. In addition, the research indicates that implementing approaches aligned with learner-centered education may be particularly supportive for historically marginalized learners, which highlights its potential to fundamentally disrupt conventional educational paradigms that have perpetuated inequity.

1

Transforming Engagement Through Agency

Learners who actively contribute to shaping their learning experiences and overall learning journeys may develop stronger motivation and engagement rather than passive compliance (Reeve, 2013; Schmidt et al., 2018; Conner et al., 2022). Having agentic opportunities appears to activate intrinsic motivation, as learners who are given choices and feel understood by teachers tend to experience improved engagement, attendance, and academic outcomes (Ferguson et al., 2011; Kahne et al., 2022).

The research suggests these shifts in learner engagement may occur because agency appears to satisfy core psychological needs for autonomy and competence (Núñez & León, 2015; Reeve & Cheon, 2021). When learners see themselves as capable contributors rather than passive recipients, they may develop stronger self-regulatory behaviors and take greater responsibility for their learning journey (Reeve & Cheon, 2021). Moreover, agency-building approaches appear to be especially powerful for racially minoritized students, who research suggests may experience fewer failed classes, higher grades, and less disciplinary citations when they feel valued and supported in educational settings (Williams et al., 2020).

2

Transforming Identity Through Connection

Meaningful relationships and belonging can transform how learners see themselves. Educational environments that affirm young people's identities foster a sense of belonging and serve as protective buffers against family stress and adversity (Lee & Walsh, 2017; Scales et al., 2023). Seeing their identities reflected and valued in their educational experiences not only builds belonging and academic confidence in learners but also reduces the harmful effects of stereotype threat (Esteban-Guitart et al., 2019; Allen et al., 2024).

These identity-affirming effects are further strengthened through close connections with caring adults, who provide the relational safety essential for healthy identity exploration (Hamre & Pianta, 2006; Osher et al., 2020). Such connections reinforce belonging while boosting participation, self-esteem, and academic engagement (Cornelius-White, 2007). In particular, the combination of identity affirmation and supportive relationships can be especially impactful for minoritized youth. For example, it can lead to increases in motivation, engagement, and self-perception for immigrant children and English language learners (Aronson & Laughter, 2016; Dearing et al., 2016).

3

Transforming Learning Through Asset-Based Approaches

By building on learners' existing strengths and capabilities, asset-based educational approaches can strengthen cognitive outcomes. Providing flexible learning options and multiple pathways to demonstrate mastery reduces stress while enhancing motivation and confidence (Spencer, 2007; Capp, 2017), and Universal Design for Learning further supports academic success by removing barriers to access and allowing learners to engage through their strengths (King-Sears et al., 2023).

These approaches can foster positive, reinforcing cycles of competence and confidence that fuel deeper learning over time. Mastery-based progression exemplifies this by allowing learners to advance only after building on demonstrated skills, strengthening their sense of capability with each success (Kulik et al., 1990; Thai et al., 2022). A strengths-based foundation is especially impactful for learners with disabilities, or those who require differentiated support, because it shifts the focus from deficits to existing abilities, paving the way for continued academic growth (Kulik et al., 1990).

4

Transforming Purpose Through Authentic Learning

Authentic, real-world learning experiences can help youth connect their education to their sense of purpose and see themselves as capable change agents. When learning addresses problems that matter to youth and their communities, it can aid development of both cognitive and social-emotional competencies while fostering sustained motivation (Chan et al., 2021; U-senyang, 2024). This transformation occurs because authentic learning connects academic content to learners' lived experiences and future aspirations, making education personally meaningful rather than abstract (Kong, 2021).

Experiential and community-based learning approaches can amplify a sense of purpose by improving critical thinking, community engagement, and career readiness (Kong, 2021). These authentic learning experiences consistently produce positive effects across multiple domains (Celio et al., 2011). Learners who are in programs that connect them to their cultural communities through service demonstrate significantly higher scores on community contribution, responsibility, and action-taking, illustrating how authentic connections to community create pathways for meaningful engagement (Yamauchi et al., 2006).

How Learner-Centered Education Can Create Impact

The combination of these four processes can result in opportunities that fundamentally reshape learners' educational experiences. Gaining agency; experiencing cultural affirmation; accessing personalized learning pathways; and engaging in authentic, real-world learning can lead to cumulative effects that extend beyond isolated outcomes. Together, these core processes appear to cultivate the cognitive, social-emotional, and behavioral growth documented throughout this report.

In sum, the convergent evidence across 93 studies from 22 bodies of research indicates that learner-centered education has the power to fundamentally reshape educational experiences, creating environments where young people thrive academically, develop strong identities, and gain the tools to contribute meaningfully to their communities.

Discussion

This review demonstrates that learner-centered education holds significant transformative potential. However, the findings also highlight ongoing gaps in understanding, limitations, and opportunities for further inquiry. Translating this potential into widespread impact will require both continued research and strategic investment in the systems transformation and ecosystem development needed to spread the approach.

In this discussion, limitations that influence the interpretation of the key findings are discussed, then actionable recommendations are offered to those who are interested in advancing the implementation and study of learner-centered education.

Limitations

Interpreting the promising patterns that surfaced in this review requires careful attention to the investigation's boundaries and constraints. The following limitations do not diminish the insights offered, but they do underscore the need for caution about drawing causal conclusions and highlight opportunities for future, more targeted research.

Aligned vs. Direct Research
As shared in the introduction, the review examines aligned research rather than direct studies of learner-centered environments. This fundamental limitation means that the findings represent only suggestive evidence of learner-centered education's potential. The included research neither demonstrates causal relationships nor confirms that implementing the five key elements together would produce the documented benefits.

Selection and Coverage Limitations
The review includes only a select subset of research areas aligned with each element, meaning some relevant areas of study were excluded. Coverage across the selected research bodies was also uneven; some areas had extensive evidence, while others were more limited. Additionally, the review emphasized positive outcomes, resulting in a less balanced representation of studies that reported null and/or negative effects.

Generalizability Constraints
Several factors could limit the generalizability of the findings shared in this report. The diverse methodologies and educational contexts provide enriching evidence but do not allow us to draw strong conclusions (see the methodological breakdown in Appendix A). Furthermore, evidence from the educational contexts represented in the studies may not apply universally to other contexts.

Conventional Metrics Focus
Conventional metrics like grades and standardized test scores tend to be utilized regularly in research studies. While important given their ongoing weight in educational discourse, they can lead to an underrepresentation of the holistic outcomes that learner-centered education prioritizes. This limitation also reveals a critical gap: the field lacks research-validated tools for measuring the integrated social-emotional, identity, and community engagement outcomes central to the learner-centered approach.

Recommendations

Given both the promising findings and noted limitations, this review offers a collection of evidence that can be used to advance learner-centered education across multiple stakeholder groups. Ideas are shared below to guide and inspire practitioners, researchers, and philanthropic leaders who may be interested in leveraging the curated research and findings presented in this investigation.

For Practitioners: Evidence-Based Implementation and Advocacy

We encourage educators, school leaders, and other stakeholders to use this collection of research to support their learner-centered models and practices, particularly when there is a need to provide research-backed evidence to demonstrate the potential effectiveness of their work.

Advocacy and Decision-Making Support
To justify investments in learner-centered education, studies from this review could be shared with school boards, superintendents, or funders who may be particularly interested in the long-term impact findings. The literature could also be used to strengthen grant applications and charter or microschool proposals with evidence-based support.

Program Design and Professional Development
The developmental outcomes data across cognitive, social-emotional, and behavioral domains could be leveraged when designing programs or interventions that address the whole child. Additionally, the evidence might be used to guide professional development focused on approaches aligned with learner-centered education, like student voice initiatives and authentic assessment.

Community Engagement and Onboarding
The studies and report findings could serve as valuable onboarding tools when introducing learner-centered education to new staff, parents, or community members who may be unfamiliar with the approach. For these parties, seeing evidence grounded in research might help address common concerns about the effectiveness of this form of education.

NOTE

For all of these audience groups, but especially those pursuing research priorities, it may be beneficial to access the detailed study summaries provided in the accompanying Literature Guide. The guide provides methodological details, participant demographics, and specific findings from all of the studies included in this report.

For Researchers: Critical Investigations to Advance the Field

The exploratory nature of this literature review provides insight into how further research could deepen understanding of learner-centered education. The noted limitations highlight the need for continued, direct, and rigorous research on learner-centered environments to strengthen the evidence base. As such, we propose five research priorities[7] that could address critical evidence gaps affecting field growth. The funding of these could provide the documentation needed to support more widespread adoption and investment in the learner-centered approach.

Conceptualization and Operationalization of Learner-Centered Environments
Future research would benefit from developing clearer conceptual frameworks and operational definitions for learner-centered educational environments. This might include creating measurable indicators that distinguish authentic learner-centered environments from more conventional contexts, as well as frameworks to assess the quality of the approach's implementation.

Direct Study of Learner-Centered Environments
As noted throughout this report, there is limited research that involves the direct study of learner-centered environments. Conducting research within authentically learner-centered contexts would significantly deepen understanding of the approach's outcomes and long-term areas of impact.

Integrated Key Elements Research
Learner-centered education seems to be most powerful when its key elements work together. It would be helpful to conduct studies that examine how the elements interact and what emerges when they are implemented together. This research could also involve the development of measurement approaches to capture these synergistic effects and provide evidence for comprehensive implementation.

Holistic and Longitudinal Outcome Research
The development of more holistic outcome measures that reflect the full scope of learner-centered education would also be beneficial. Especially when applied in longitudinal studies, these measures could offer significant contributions related to long-term impact and provide a strong evidence base needed for broader adoption of the approach.

Equity and Broader Impact Studies
To better understand the equity potential of learner-centered education, it would be helpful to conduct studies that examine outcomes across different demographic groups and intersectional identities. Beyond impact for learners, outcomes for adults (e.g., educators, mentors, parents) involved in learner-centered environments and effects on local communities could also be investigated.

[7] These research priorities build on established frameworks for studying learning environments (Osher et al., 2020) and methodological approaches demonstrated in existing aligned research across the 22 bodies of literature examined in this review.

For Philanthropic Leaders: Research-Based Investment Considerations

This review highlights both promising outcomes and critical gaps in understanding the full impact of learner-centered education. Philanthropy plays a pivotal role in advancing this work in relation to research, practice, and system-level shifts that support more equitable, effective, and humanizing learning environments.

Investment in Integrated, Learner-Centered Models
Evidence suggests that learner-centered education may be most impactful when its key elements are implemented together. The philanthropic field has the unique opportunity to prioritize investments that support comprehensive, integrated models where all key elements work together to maximize impact for learners.

Support for Holistic, Longitudinal Research
Much of the existing research relies on short-term or conventional metrics, which have left gaps in our comprehensive understanding of longer-term outcomes. This creates an important opportunity for philanthropic funding to help close these critical gaps by supporting research that develops and tracks holistic, learner-centered outcomes over time. Investments in longitudinal studies—especially those capturing social-emotional, identity, and life readiness outcomes—could strengthen the evidence base and inform policy change.

Advancing Equity Through Targeted Support
Findings in this report indicate that learner-centered environments may be especially beneficial for historically marginalized learners. Philanthropic leaders can accelerate equity by directing resources toward models that prioritize inclusion, culturally affirming practices, and accessibility. Additionally, supporting research that examines impact across diverse demographic groups, intersectional identities, and entire learning ecosystems—including educators, families, and communities—can ensure that a learner-centered approach drives systemic, equitable change.

RESEARCH IMPLICATIONS FOR INVESTMENT

This review's findings reveal areas where strategic investment would advance understanding and implementation of learner-centered education.

These include

- direct studies of learner-centered environments,
- development of appropriate assessment tools, and
- research that tracks long-term impact over time.

Conclusion

Through this investigation, we amassed compelling evidence for learner-centered education's transformative potential. The convergent findings across 93 studies from 22 bodies of research demonstrate that honoring young people's agency, identity, and relationships through authentic learning opportunities can lead to benefits that include enhanced engagement, stronger academic outcomes, and improved social-emotional development.

The evidence is clear. We know how to create educational environments where every learner can thrive, but realizing this vision will require bold investment in the field of learner-centered education. We hope the promising findings documented here will inspire stakeholders to move from asking "Does this work?" to asking "How quickly can we make this the norm for learners?"

The time for transformation is now. Let's use this evidence to build the educational future all young people deserve.

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Appendix A

Studies by Methodology Type

Meta-Analyses & Systematic Reviews (31 studies)

1. Allen et al. (2018): Meta-analysis of 51 studies, 67,000+ participants examining school belonging
2. Alsbury et al. (2020): Literature review examining community-based learning research
3. Aronson & Laughter (2016): Synthesis of over 40 studies on culturally relevant education
4. Bland & Gareis (2018): Review of 12 years of performance assessment research
5. Burke et al. (2020): Meta-analysis of 108 evaluations promoting self-determination for students with disabilities
6. Capp (2017): Meta-analysis of 18 studies on Universal Design for Learning
7. Celio et al. (2011): Meta-analysis of 62 studies, 11,837 students in service-learning programs
8. Chan et al. (2021): Systematic review and meta-analysis of 20 studies on experiential learning programs
9. Cipriano et al. (2024): Meta-analysis of 90 studies, 20,626 K–12 learners in Social and Emotional Learning programs
10. Cornelius-White (2007): Meta-analysis of 119 studies, 355,325 students examining learner-centered relationships
11. Durlak et al. (2011): Meta-analysis of 213 studies, 270,000+ K–12 learners in Social and Emotional Learning programs
12. Duckworth et al. (2009): Literature review examining self-regulation and academic achievement
13. Greenberg (2023): Review of 12 meta-analyses on school-based Social and Emotional Learning programs
14. Hansen (2024): Synthesis of research on authentic assessments
15. Howard et al. (2021): Meta-analysis of 344 samples, 223,209 participants on student motivation
16. King-Sears et al. (2023): Meta-analysis of 20 studies on Universal Design for Learning achievement
17. Korpershoek et al. (2020): Meta-analysis of 82 studies on school belonging and student outcomes
18. Kulik et al. (1990): Meta-analysis of 108 controlled evaluations of mastery learning programs
19. Mann et al. (2022): Systematic review of 147 studies on nature-based outdoor learning (2000–2020)
20. Ok et al. (2017): Systematic review of Universal Design for Learning in pre-K to grade 12
21. Puzio et al. (2020): Review of 18 studies, 25 cohorts on differentiated literacy instruction
22. Ranken et al. (2024): Rapid evidence assessment of experiential learning in children aged 4–14
23. Reddy et al. (2015): Synthesis of outcome research on self-regulated interventions for children with ADHD
24. Rose et al. (2024): Meta-analysis of 90 studies on school connectedness and health risks
25. Sitzmann & Ely (2011): Meta-analysis of 369 studies on self-regulated learning
26. Smith et al. (2019): Literature review on service learning impact on student success
27. Taylor et al. (2017): Meta-analysis of 82 Social and Emotional Learning interventions, 97,406 students with follow-up effects
28. U-senyang (2024): Analysis of secondary data on experiential learning outcomes
29. Xia et al. (2024): Meta-analysis of informal science education studies from 1992–2022
30. Young et al. (2017): Meta-analysis of 15 studies on out-of-school STEM programs and student interest
31. Ziernwald et al. (2022): Systematic review of 49 studies on differentiated instruction (2000–2019)

Experimental Studies (8 studies)

1. Dearing et al. (2016): 667 first-generation immigrant children in high-poverty schools
2. Hallam et al. (2007): Head Start preschool classrooms using authentic assessment
3. Magableh & Abdullah (2021): 54 tenth graders in mixed-ability reading comprehension study
4. Scrivner (2024): 127 eighth-grade students in mastery-based learning for math anxiety
5. Thai et al. (2022): Nearly 1,000 prekindergarteners in personalized mastery-based learning
6. Valiandes (2015): 24 teachers and 479 fourth graders in differentiated instruction study
7. Wan Yunus et al. (2021): 40 children (aged 6–12) with autism spectrum disorders in self-regulated learning trial
8. Williams et al. (2020): 162 high school students in social belonging intervention

Longitudinal Studies (10 studies)

1. Allen et al. (2024): 1,568 adults tracked from adolescence to young adulthood
2. Boat et al. (2021): Low-income youth of color, ages 14–24, in work readiness programs
3. Bradberry & De Maio (2018): Former university students in experiential learning programs
4. Helms et al. (2021): 194 alumni, ages 15–30, from Dutch out-of-school time program
5. Jones et al. (2015): Students tracked 13–19 years from kindergarten to adulthood
6. Lee et al. (2018): 747 adolescents examining out-of-school activities and behavior
7. Ross et al. (2018): National longitudinal survey data on work-based learning and job quality
8. Scales et al. (2023): 633 adolescents and parents examining developmental relationships
9. Steiner et al. (2019): 14,800 participants from National Longitudinal Study of Adolescent Health
10. Vandell et al. (2020): 958 U.S. adolescents examining early childcare and out-of-school time

Large-Scale Surveys & Cross-Sectional Studies (14 studies)

1. Anderson (2018): New South Wales schools evaluating student participation and well-being
2. Conner et al. (2022): 67 urban high schools in Philadelphia examining student voice and engagement
3. Craig et al. (2024): Teachers and students, grades 3–8, in Universal Design for Learning implementation
4. Ferguson et al. (2011): 322 adolescents from Denmark, South Korea, and United States
5. Frerichs et al. (2023): Youth aged 14–22 in rural southeastern U.S. work experience programs
6. Haynes et al. (2016): Students, teachers, and administrators in three states implementing competency-based education
7. Hertel et al. (2024): University students examining self-regulated learning and intelligence mindsets
8. Kahne et al. (2022): Chicago Public Schools panel data on student voice and academic outcomes
9. Ryan & Junker (2019): 140 students, grades 9–12, measuring youth social capital
10. Schmidt et al. (2018): High school science classrooms examining student engagement and choice
11. Shakman et al. (2018): 10 rural Maine districts implementing proficiency-based education
12. Smith et al. (2014): Inner-city males aged 16–28 in workforce development program
13. Wallace & Chhuon (2014): 28 urban youth of color in Pittsburgh and Minneapolis schools
14. Yamauchi et al. (2006): 55 Hawaiian Studies Program students and 29 comparison peers

Qualitative & Theoretical Research (30 studies)

1. Baldridge et al. (2024): Interviews with out-of-school time leaders and youth
2. Cantor et al. (2019): Synthesis across disciplines on human development drivers
3. Card & Burke (2021): Outdoor Kindergarten case study with place-based learning approach
4. Darling-Hammond et al. (2013): Policy report on criteria for high-quality assessment
5. Darling-Hammond et al. (2021): Evidence-based playbook on science of learning and development
6. Dill & Ozer (2019): Ethnographic study of urban youth in East Oakland organization
7. Esteban-Guitart et al. (2019): Two empirical examples of culturally sustaining pedagogy
8. Evans & Boucher (2015): Theoretical review on motivational role of choice in learning
9. Hamedani & Darling-Hammond (2015): Three urban high schools with social-emotional learning focus
10. Hamre & Pianta (2006): Expert review on student-teacher relationships and academic success
11. Henness et al. (2013): Rural youth and adults in community development service-learning approach
12. Keller (2017): Qualitative case study of four learners in outdoor education program
13. Kong (2021): Conceptual analysis of experiential learning on motivation and engagement
14. Kundu (2017): In-depth interviews with low-income students achieving upward mobility
15. Lee & Walsh (2017): Collaborative research on culturally sustaining pedagogy for immigrant youth
16. Lindstrom et al. (2020): Framework development for work-based learning for students with disabilities
17. Maier et al. (2020): Multiple case study of three districts using performance assessments
18. McCarty & Lee (2014): Case studies of Native American Community Academy and Puente de Hózhǫ́
19. Mirawati et al. (2022): Expert opinions and research review on differentiated instruction
20. Mitra & Serriere (2012): Case study of fifth-grade girls in student voice initiative
21. Núñez & León (2015): Review of autonomy support research from self-determination theory
22. Osher et al. (2020): Knowledge synthesis on relationships and context in learning
23. Radu et al. (2014): Research collaboration with Cree Nation on land-based healing
24. Reeve & Cheon (2021): Review of 51 autonomy-supportive teaching interventions
25. Ross et al. (2020): Research synthesis on work-based learning for equity and opportunity
26. Siarova et al. (2017): Research review on 21st-century assessment practices
27. Simpson (2014): Nishnaabeg stories and analysis on land as pedagogy
28. Specht-Boardman (2024): Scoping review of competency-based education programs (2012–2022)
29. Spencer (2007): Theoretical exploration of phenomenology and ecological systems theory
30. Williams & Le Menestrel (2013): Program review on social capital and youth vulnerability

Appendix B

Potential Outcomes and Impact

Table B1: Learner Agency

Engagement & Motivation	Learning & Competency Development	Social-Emotional Development & Well-Being
Deep engagement in learning (Schmidt et al., 2018) Heightened focus and participation in learning (Schmidt et al., 2018; Reeve & Cheon, 2021) Stronger intrinsic motivation, initiative, and ownership (Howard et al., 2021; Reeve & Cheon, 2021) Greater agency, self-efficacy, and civic efficacy (Reeve & Cheon, 2021; Mitra & Serriere, 2012) Improved effort and persistence (Sitzmann & Ely, 2011) More equitable engagement in urban schools (Wallace & Chhuon, 2014) Greater self-determination for youth with disabilities (Burke et al., 2020)	Improved metacognition and strategic learning (Sitzmann & Ely, 2011; Hertel et al., 2024) More meaning found in pursuit of learning goals (Howard et al., 2021) Stronger course-specific skills and academic performance (Reeve & Cheon, 2021) Increased success in setting and achieving educational goals (Burke et al., 2020) Enhanced outcomes (i.e., academic, communications, and behavioral) for learners with disabilities, including ADHD and autism (Reddy et al., 2015; Wan Yunus et al., 2021) Better attendance and reduced chronic absenteeism (Kahne et al., 2022)	Improved self-esteem and confidence (Ferguson et al., 2011) Greater positive emotions, vitality, and creativity (Reeve & Cheon, 2021) Higher life satisfaction and well-being with less stress (Ferguson et al., 2011) Stronger, more positive self-concept (Reeve & Cheon, 2021) Enhanced sense of well-being at school (Anderson, 2018)

Table B2: Socially-Embedded

Social-Emotional Development & Well-Being	Future Readiness & Life Skills	Relationships & Community Connection
Improved happiness, self-esteem, and psychological well-being (Allen et al., 2018) Enhanced self-esteem, social skills, and relationships (Cornelius-White, 2007) Buffering effects against early adversity, family stress, trauma, and stereotype threats (Scales et al., 2023) Protective benefits for vulnerable youth experiencing foster care, justice system, poverty, and immigration (Williams & Le Menestrel, 2013) Improved mental and sexual health and reduced high-risk behaviors and long-term health threats (Steiner et al., 2019) Reduced stress, anxiety, and depression in childhood, adolescence, and into young adulthood (Allen et al., 2024; Steiner et al., 2019)	Enhanced work-readiness and decision-making skills (Boat et al., 2021) Greater long-term career success and stability (Ryan & Junker, 2019) Higher grades, GPA, and academic motivation (Williams et al., 2020) Improved attendance and learning engagement with fewer course failures (Williams et al., 2020) Fewer unexcused absences and tardies (Williams et al., 2020) Reduced dropout rates (Allen et al., 2018) Strengthened positive future vision of self (Boat et al., 2021) Upward mobility for low-income learners (Kundu, 2017) Increased likelihood of college enrollment (Ryan & Junker, 2019)	Stronger peer relationships, friendships, and social skills (Cornelius-White, 2007) Increased sense of safety, trust, belonging, and feeling socially valued (Allen et al., 2018) More supportive relationships with adults and mentors (Cornelius-White, 2007) Decreased bullying, fighting, and disciplinary incidents (Williams et al., 2020) Boosted motivation, confidence, and hope through connection (Osher et al., 2020) Expanded opportunities to build social capital (Dill & Ozer, 2019)

Table B3: Personal, Relevant, and Contextualized

Social-Emotional Development & Well-Being	Engagement & Motivation	Learning & Competency Development
Heightened sense of empowerment, leadership, and civic engagement (Lee & Walsh, 2017) Stronger sense of identity and cultural connection (Aronson & Laughter, 2016; Esteban-Guitart et al., 2019) Increased learner confidence, competence, and positive self-concept (Aronson & Laughter, 2016) Greater feelings of belonging and inclusion in learning environments (Lee & Walsh, 2017) Increased empathy and sense of well-being (Chan et al., 2021) Increased cultural pride and revitalization of language and traditions in Indigenous communities (McCarty & Lee, 2014) Development of hybrid and transcultural identities (Esteban-Guitart et al., 2019) Improved sense of being respected, heard, and valued by educators (Lee & Walsh, 2017)	Higher levels of intrinsic motivation and deeper engagement in learning (Aronson & Laughter, 2016) Greater student voice and participation in school life (Aronson & Laughter, 2016) Strengthened real-world application and skill development (Bradberry & De Maio, 2018) Improved ownership of learning and knowledge application (Kong, 2021) Increased effort and persistence in academic tasks (Mirawati et al., 2022) Expanded critical reflection and engagement in academic discourse (Aronson & Laughter, 2016)	Strengthened self-regulation skills, including goal-setting and persistence (Hertel et al., 2024) More frequent use of effective learning strategies, critical thinking, problem solving, and metacognitive skills (Kong, 2021) Improved academic performance and achievement across diverse learners (Valiandes, 2015; Magableh & Abdullah, 2021) Improved skills in literacy, communication, adaptability, and teamwork (Puzio et al., 2020) Increased engagement and positive academic and social outcomes for learners with disabilities and neurodivergent learners (King-Sears et al., 2023; Craig et al., 2024) Development of mastery mindsets and long-term academic growth (Hertel et al., 2024) Enhanced ability to evaluate and thoughtfully apply knowledge in real-world contexts (Kong, 2021)

Table B4 : Open-Walled

Learning & Competency Development	Social-Emotional Development & Well-Being	Relationships & Community Connection
More positive attitudes toward education, increased engagement, and ownership of learning (Celio et al., 2011) Increased interest in STEM fields (Young et al., 2017) Stronger academic motivation and improved performance in reading, math, and overall development (Vandell et al., 2020) Improved academic achievement for first-generation immigrant children, especially for English language learners (Dearing et al., 2016) Enhanced professionalism, responsibility, and practical work experience (Ross et al., 2018) Greater exposure to workforce realities and hands-on learning opportunities (Ross et al., 2020) Increased resilience, work orientation, and job readiness (Lee et al., 2018) Increased use of talents and stronger investment in personal interests into adulthood (Helms et al., 2021) Better job prospects and long-term job quality for youth of color and low-income backgrounds (Ross et al., 2018)	Increased self-esteem, positive self-identity, and emotional stability (Celio et al., 2011) Development of social, communication, and collaborative skills (Mann et al., 2022) Greater social confidence, especially in group settings and when meeting new people (Vandell et al., 2020) Increased adaptability, coping skills, and emotional resilience (Chan et al., 2021) More opportunities for connection, belonging, and positive peer relationships (Baldridge et al., 2024) Growth in self-management, self-awareness, and future outlook, especially for learners living in underresourced urban areas (Helms et al., 2021) Greater cultural awareness, empathy, and commitment to social justice (Chan et al., 2021) Healthier choices and reduced involvement in high-risk behaviors (Smith et al., 2014)	Increased participation in civic activities and community-building efforts (Celio et al., 2011) Stronger connection to nature, with increased commitment to sustainability (Mann et al., 2022) Increased recognition of youth as capable problem solvers and leaders (Henness et al., 2013) Stronger relationships between youth and adults, fostering mutual respect (Ross et al., 2020) Enhanced confidence and leadership skills, particularly in decision-making roles (Frerichs et al., 2023) Greater understanding of community resources and higher self-efficacy among Black youth (Frerichs et al., 2023) Strengthened cultural identity, leadership, and sense of place among Indigenous youth (Simpson, 2014) Empowerment of Indigenous youth to challenge colonial structures and lead community change (Simpson, 2014)

Table B5: Competency-Based

Social-Emotional Development & Well-Being	Learning & Competency Development	Future Readiness & Life Skills
Improved social-emotional skills, prosocial behavior, and learner attitudes (Durlak et al., 2011; Taylor et al., 2017) Strengthened initiative, perseverance, empowerment, and self-efficacy (Maier et al., 2020) Enhanced emotional regulation, social relationships, and learner-educator connections (Durlak et al., 2011) Support for stress buffering and long-term reduction in high-risk behaviors (e.g., substance use, crime) (Taylor et al., 2017; Jones et al., 2015) Development of a growth mindset, creativity, initiative, and resilience in the face of challenges (Maier et al., 2020)	Improved academic performance, engagement, and motivation (Durlak et al., 2011) Increased metacognition, critical thinking, and problem-solving skills (Hansen, 2024) Greater clarity of learning targets and more positive school experiences (Haynes et al., 2016) Enhanced language, literacy, and mathematical understanding (e.g., perceived utility, reduced anxiety) (Scrivner, 2024; Thai et al., 2022) Learning gains, especially in early education and among learners who struggle to perform in conventional settings (Thai et al., 2022)	Improved communication, collaboration, and technological fluency (Darling-Hammond et al., 2013; Maier et al., 2020) Stronger real-world learning application and workforce preparation (Maier et al., 2020) Development of entrepreneurial mindset, decision-making, and risk-assessment skills (Siarova et al., 2017) Higher graduation rates, college attendance, and long-term life and career outcomes (Taylor et al., 2017) Increased readiness for 21st-century careers and lifelong learning (Darling-Hammond et al., 2013)