

# UNDERSTANDING THE CONNECTION BETWEEN FAMILY- SCHOOL ENGAGEMENT AND EDUCATION SYSTEM TRANSFORMATION

A review of concepts and evidence

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BROOKINGS

September 2021

**T**his paper examines the connection between family-school engagement and education system transformation. We have broadly reviewed the literature related to family engagement in children’s education, including key terms and their various definitions, barriers to successful family-school engagement, effective strategies for overcoming these barriers, and how family-school engagement influences student outcomes. Most literature has focused on increasing student attendance, ensuring completion of school, or enhancing learning and development. Far fewer studies have focused on how family-school engagement can help or hinder system-wide reforms or transformations. Hence, we have also broadly reviewed the system transformation literature, including definitions of a system, the role of beliefs and values in changing systems, the major levers for changing systems, and the importance of changing systems of family-school alignment on the vision of what constitutes a quality education.

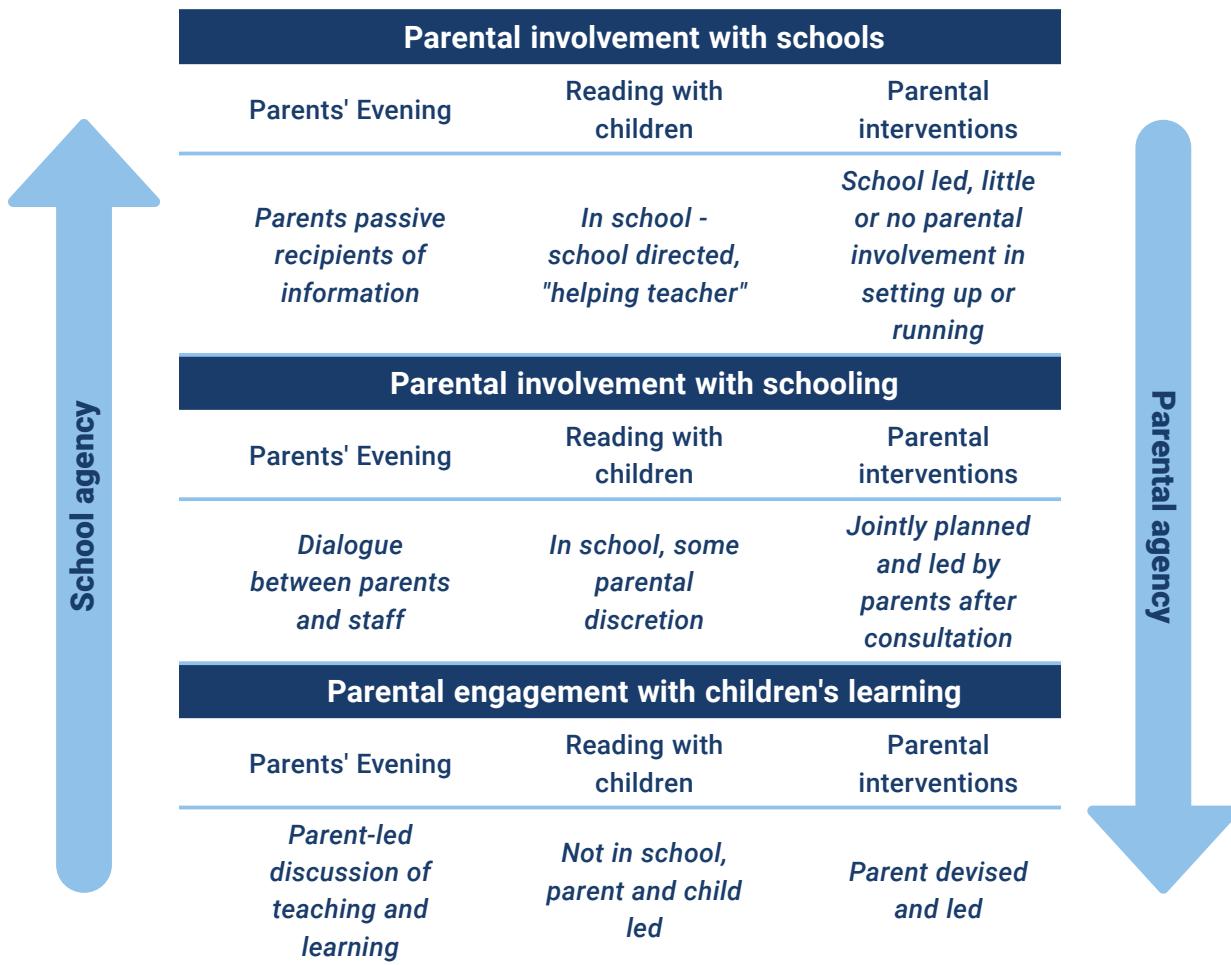
We have reviewed literature globally, but many sources are from North America due to the availability of multiple robust studies. While the insights of this review are likely to resonate around the globe, the insights must remain contextualized to particular geographic and cultural circumstances due to this limitation. We define “parent” to include any family member or guardian who serves as a primary caregiver to children. We use the term “teacher” instead of “educator” to distinguish between the education professional (whose vocation is to instruct and guide children in school) and parents (who are their child’s first educators, helping them develop and learn from birth on). We use “family-school engagement” as the default term if scholars or programs do not specifically employ other terms like parent involvement.

## How do you define family-school engagement?

The existing literature uses a wide range of terms in describing how schools and education personnel work with the parents of their students. No single definition applies consistently throughout the literature either. Generally, “parent involvement” refers to situations wherein parents contribute to and enrich

programs (e.g., activities or curricula) that have been planned and delivered by the education establishment (e.g., the child care center or school), whereas “parent engagement” refers to parents supporting their child’s learning at home. The greatest distinction between parent involvement versus parent engagement appears to lie in the role the parent fulfills and the parent’s agency in determining what and how their child is learning. Goodall and Montgomery (2014) posited a continuum that places parent involvement in schools on one end and parent engagement with children’s learning on the other; movement from the latter to the former concept thus represents a “shift in emphasis, away from the relationship between parents and schools, to a focus on the relationship between parents and their children’s learning” (Figure 1).

Figure 1. A continuum from parent involvement to engagement



More recent frameworks, such as the Dual-Capacity Building Framework for School-Family Partnerships, posit that both families and schools mutually benefit from an ongoing, school-wide co-creation approach to working together (Mapp & Bergman, 2021). Most importantly, whether a parent is involved in their child's education or engaged in their learning, parent participation in general can make a positive difference in a child's learning outcomes.

## Does family-school engagement support student outcomes?

Years of research indicate that family-school engagement can result in positive outcomes for student academic achievement and socio-emotional development (e.g., Brooks-Gunn & Markman, 2005; Fan & Chen, 2001; Ginsburg-Block et al., 2010; Henderson & Mapp, 2002; Patterson, 1974; Pomerantz et al., 2012). Family-school engagement can have positive impacts at the student, teacher, and school levels. A meta-analysis of 25 empirical studies examining the relationship between parent involvement and student academic achievement found that the factor "parental aspirations and expectations for children's education achievement" had the strongest impact on grade point average (Fan & Chen, 2001). A meta-analysis of 52 studies found that parent involvement leads to improved class grades for students and especially to improved scores on standardized tests (Jeynes, 2007). Indeed, greater parent involvement has been shown to enhance relationships between teachers and parents, which consequently leads to parental modeling and reinforcement at home of the knowledge taught in school (Hoover-Dempsey & Sandler, 1995). Studies have also shown that when parents are engaged with their children's education, parents are better able to set mutual goals and consequently partner with teachers to develop school- and classroom-level activities that parents can support at home (Christenson, 1995). In turn, parent involvement can improve relationships between parents and teachers by increasing teachers' understanding and empathy for their students' lives outside of school (Valdés, 1996). Moreover, when parents are involved in their child's education, teacher efficiency and teachers' perceptions of parent efficacy both tend to increase (Hoover-Dempsey et al., 1992).

Establishing trusting relationships between parents and teachers has many benefits. For example, when parents are engaged in their children's education, teachers gain great insight into their students' strengths and weaknesses, interests, and culture, and are thus better able to tailor their lessons to their students' experiences. Tailored lessons, in turn, help students to connect more deeply with classroom material. Parents can also help teachers identify the best ways to personalize learning for their children by providing insights into strategies that are effective at home or that have been effective in school in previous years; such knowledge-sharing can help build consistency between home and school and across grade levels to support learning. Teachers can help parents by sharing advice on how best to reinforce skills learned in school at home; this aspect of the parent-teacher relationship is especially important given that research has shown when parents are unsure of how to support their children's homework, parent involvement can be counterproductive to the child's academic success (Fan & Chen, 2001). Furthermore, parent-teacher partnerships can facilitate the use of effective and consistent methods for addressing behavior at home and school. Analysis of longitudinal data indicated the more family involvement activities implemented in a school, the fewer incidences of students being disciplined (Sheldon & Epstein, 2002). In addition to improving behavioral outcomes, family-school engagement may also result in parents and teachers communicating to determine higher expectations for students; expectations are of particular importance given that research has shown that parental expectations of a child's ability, compared to other forms of parent involvement such as helping with homework and parenting style, have the strongest effect on academic achievement (Jeynes, 2007).

## What are barriers to family-school engagement and strategies to overcome them?

Parental engagement with their child's learning does not always entail parent involvement in school. Research has shown that all parents, regardless of race or class backgrounds, have a strong desire to actively participate in their child's education (Valencia, 2002; Lawrence-Lightfoot, 2004). However, parents from racial and ethnic minorities and parents with a low socio-economic status frequently struggle to get involved at their child's school (Cooper, 2009; Kim, 2009; Turney & Kao, 2009). For example, parents from these demographics may need, but not receive, flexibility with meeting times, transportation assistance to attend meetings, and translation services to facilitate communication with teachers (Smith, 2000; Hughes et al., 1994; Vincent, 1996). A study of 13,558 households in rural India found that wealthier parents were consistently more likely to be involved in low-achieving children's learning, which may reflect family-school engagement practices that fail to serve the needs of poorer families (Cashman et al., 2021). Research has shown that without proper two-way communication, teachers may rely on inaccurate assumptions about the worldviews, experiences, and social capital of certain groups of parents (Horvat et al., 2003; Kao & Rutherford, 2007; Kim & Schneider, 2005; Rudney, 2005). In fact, one study found that the most common reason for which some parents were not involved in their child's school was "[lack of] power in decision-making processes and a more equal partnership with the school, one that [does] not center around fault-finding conversations" (Williams & Stallworth, 1984 as cited in Perez Carréon et al., 2005, p. 467).

Research on community-based approaches to family-school engagement has argued for equitable family-school collaboration consisting of reciprocal partnerships between parents and teachers in decisionmaking and program development. As opposed to the traditional outmoded models of engagement, which tend to be teacher-dominated and to cast parents as passive recipients,

parent-teacher co-creation is characterized by systemic, equity-focused goals driven by parents' strengths—instead of their deficits—and perceives parents as experts on their children (Ishimaru et al., 2014).

The impact of tailored family-school engagement programs is far-reaching. One longitudinal study of schools serving low-income elementary students in Chicago examined the long-term education attainment effects of involving parents in school-based educational enrichment and comprehensive family services from preschool to third grade (ages 3-9 years). Researchers found that, as a result of the early and sustained services, students attained higher postsecondary education levels later in their lives as compared with students whose parents did not receive the same type of intervention (Reynolds et al., 2018).

Posey-Maddox and Haley-Lock (2020) interviewed mothers from disadvantaged communities in the U.S. and found that parents use a variety of approaches to balance the responsibilities of daily life, such as employment and caregiving responsibilities, with their desire to be involved in their children's education. The most surprising finding was that many of the involvement strategies used by parents, particularly parents of low socio-economic status, were unknown and misaligned with the school staff's focus for engagement. Thus, their study concluded that the best approaches to parent involvement in education are those that provide opportunities tailored to families' unique circumstances and strengths (Posey-Maddox & Haley-Lock, 2020). Not all parents have the same needs or face the same barriers; accordingly, education researchers have warned against the use of one-size-fits-all interventions for family-school engagement (Crozier, 2001; Crozier & Davies, 2007).

In the U.S., the National Association for Family, School, and Community Engagement (NAFSCE) emphasizes that effective family-school engagement, what they term "high-impact family engagement," employs evidence-based approaches such as schools and teachers developing respectful personal relationships with families, sharing data, and modeling effective teaching practices so families can use the practices at home. The NAFSCE (n.d.) notes that many traditional activities that schools undertake, such as inviting families to attend school events or fundraisers, have little impact on student outcomes. The

National Association for the Education of Young Children (NAEYC) conducted a comprehensive review of successful family-school engagement in education programming that led to the identification of six principles to guide effective involvement of parents in their children's education:

- ✓ **Decisionmaking.** Invite families to actively participate in decisionmaking and goal setting via joint collaboration with teachers.
- ✓ **Communication.** Employ strategies that encourage timely and continuous two-way communication between parents and teachers.
- ✓ **Teaching practice.** Work closely with families with the goal of gaining deep and genuine understanding of students' lives, families, and communities to integrate parents' unique knowledge and skills into the curricula and teaching practices.
- ✓ **Home learning.** Provide practical ways to support parents' efforts to enhance their children's learning at home and in the community outside of school.
- ✓ **Design.** Invite families to actively participate in the decisionmaking process of the engagement program itself.
- ✓ **System change.** Institutionalize engagement practices and policies such that teachers have the support necessary to fully engage families. (NAEYC, n.d.)

The NAEYC guiding principles make it clear that a one-size-fits-all approach to involving parents does not exist. Rather, teachers must invest in establishing and sustaining authentic relationships with the families of their students in order to create suitable engagement programs tailored specifically to the families' desires and needs. Furthermore, the COVID-19 pandemic brought to light some often neglected factors that impede the cultivation of successful family-school partnerships. Mapp & Bergman (2021) asserts that three dynamics need to be

specifically addressed in order for families and schools to engage in sustainable and effective ways:

- 1. Schools must implement strength-based (as opposed to deficit-based) views of families:** Instead of perceiving families by what they don't have, schools should consider what families can contribute to strengthen the partnership such as families' expertise in their own children and communities.
- 2. Family-school engagement should be a co-creative process:** Families and schools need to work together to gain an understanding of each other's perspectives and define shared values and goals for their children's education.
- 3. Family-school engagement must be considered a core element of equitable and effective education:** Family-school engagement is essential to student success, so it should be treated as a principal and indispensable component of education.

## What role do trusting relationships play in family-school engagement?

One essential finding is that building trusting relationships between families and teachers is foundational for successful ongoing dialogue. Trust requires that all parties involved are willing to be vulnerable and take risks based on confidence that the other parties are "benevolent, honest, open, reliable, and competent" (Hoy & Tschannen-Moran, 1999; Tschannen-Moran, 2004). Given that trust is necessary for cooperative behavior, trust is increasingly being recognized as a requisite for organizational effectiveness and efficiency in the delivery of high-quality education (Bryk & Schneider, 2002; Tschannen-Moran, 2004). In fact, Bryk and Schneider (2002) conducted a study examining the impact of relational trust on student academic performance across 400 schools in the U.S. They defined relational trust as the presence of competence, personal regard, integrity, and

respect. They found that in schools with greater relational trust, students performed significantly better academically than did students in schools with lower levels of reported relational trust. In schools, trust between parents and educators can result from high-quality and consistent interactions between these stakeholders and can manifest as receptivity to mutual input and suggestions, which is imperative for constructive communication and co-creation; the CUE parent survey examined this aspect of trust specifically.

Teachers establishing trusting relationships with their students' families can encourage parent involvement, especially with families of low socio-economic status (Henderson & Mapp 2002; Mapp, 2003). In a study on parent involvement in an elementary school serving a majority Latino student population, researchers found that parent involvement was heavily influenced by how much time school staff invested in developing trusting relationships with parents; trust could be fostered via maintaining open lines of communication, offering assistance with overcoming obstacles to family involvement such as language and cultural barriers, ensuring availability of child care services, and providing assistance with academic content material for parents whose education level was below that of the teacher (Peña, 2000).

In their 2014 study, Tschannen-Moran surveyed 3,215 faculty, 2,959 parents, and 8,256 students from 64 elementary, middle, and high schools across urban and suburban districts in a mid-Atlantic state about trust. Trust was defined as "one party's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, honest, open, reliable, and competent" (Tschannen-Moran & Hoy, 2000). Tschannen-Moran (2014) assessed student achievement using state standardized assessments of reading and math. While many variables determine student outcomes, this study showed that trust between teachers, principals, parents, and students accounted for 78% of the variance in achievement. Two variables made strong independent contributions to explaining this variance: (1) teacher trust in students and parents and (2) student trust in their teacher. These findings offer powerful evidence for the importance of cultivating mutually trusting relationships between various stakeholders in schools, particularly between teachers, parents, and students.

## Why do some family-school engagement interventions fail?

Meaningful and sustainable family-school engagement in education can provide powerful support for student outcomes. However, when schools attempt to involve parents using programs that are not well planned or implemented, repercussions, such as impaired parent-teacher relationships, may arise. For instance, Wolf et al. (2019a) studied the involvement of parents of preschool children in Ghana via parental awareness meetings; the meetings were led by the school as part of a new teacher training program focused on play-based teaching and learning, but contrary to the researchers' prediction, the involvement diminished the otherwise positive impacts of the teacher training program on school readiness. Ghanaian parents believe the purpose of preschool is to prepare students for primary school through academic learning and socialization (Kabay et al., 2017). Therefore, it is possible the parents employed practices at home to counter the pedagogical changes in school that the parents learned of during the awareness meetings (see Box 1 for more information on this case). It is also possible that the failure of the intervention was because a passive family-school engagement approach was used where an active approach was needed. The topic of new teaching and learning techniques perhaps necessitated a much deeper exchange between parents and teachers. Such an exchange could have revealed parents' perspectives of what constitutes a quality education, and parents and teachers could have entered into a dialogue aimed at developing a shared vision, each group of stakeholders contributing their respective expertise (e.g., parents knowing their children and their aspirations for their children and education personnel knowing the learning sciences and the teaching profession). Research in the UK by the Education Endowment Foundation (n.d.) highlighted the importance of program design. Family-school engagement programs designed without family input and guidance are at risk of failing to meet parents' needs (e.g., requiring parent participation during work hours).

## BOX 1: LESSONS FROM GHANA ON THE IMPACTS OF FAMILY-SCHOOL MISALIGNMENT

In 2007, Ghana made a significant change to its education system. The lower-middle income country in West Africa, with a population of approximately 32.4 million people, added two years of universal preprimary education to its basic education system (Central Intelligence Agency, 2021). The reform was a response to low levels of school readiness among Ghanaian children. The preprimary education was successful in one regard: the net kindergarten enrollment rate for the country in 2017-8 rose to about 75%, one of the highest rates on the African continent (Ghana Ministry of Education, 2018). However, numerous reports by the Ghanaian government showed the quality of this preprimary education to be low (Ghana Ministry of Education, 2014).

The Quality Preschool for Ghana project, implemented from September of 2015 to June of 2016, attempted to address the preprimary education issues (Wolf et al., 2019b). It did so in two ways. First, the project implemented an eight-day teacher training program led by professional teacher trainers at the National Nursery Teacher Training Center in Accra. The training program aimed to help teachers generate activity-based classroom environments that would foster critical thinking skills and socio-emotional competencies, which would in turn increase school readiness among students. It was hoped the training program would also make teachers feel more motivated and satisfied with their work.

Second, the project selected certain communities in which to focus on increasing parent involvement in schools. This effort consisted of conducting three meetings, each organized by the local parent-teacher association, over the course of the school year. Parents came, watched a video about a given topic, and then participated in a conversation about that video facilitated by a government district coordinator. The meetings aimed to convince parents of the value of the activity-based approach and to urge parents to support the new pedagogical approach during family-school interactions.

Wolf et al. (2019a) conducted a study during the Quality Preschool for Ghana project's roll-out to evaluate the project's impact on teacher well-being, classroom quality, and children's level of school readiness. The study used three randomly assigned groups: a control group of schools that were not exposed to the project, a group of schools that received the teacher training but not the parent meetings, and a group that received both the teacher training and parent meetings. The results showed that the second group saw significant improvement in several classroom quality indicators; moderate improvement in teacher well-being (which reduced reports of burnout and lowered the probability of teacher turnover during the year); and small, but statistically significant, improvements in exams measuring early numeracy, early literacy, and social emotional skills. For the second group, the project was thus successful in raising the school readiness of the children. Some benefits even seem to have persisted over time. One year after the project's completion, the second group showed sustained improvements in early literacy, early numeracy, and socio-emotional skills. Two years after the project's completion, sustained benefits were found in these same areas as well as in executive function skills.

Regarding the third group, however, the results were surprising. The third group did see some minor improvements in measures of teacher burnout. However, instead of enhancing the success of the teacher training, the parent meetings had either very little impact or a negative one. Namely, the parent meetings had no impact on the level of emotional support and positive behavior management observed in the classroom, and they erased the gains made in every other indicator. In other words, the parent meetings had a cooling effect on teachers' use of activity-based pedagogy, and hence children did not enjoy the full benefits of the project's intervention. Worse still, the impacts of this cooling effect persisted. One year after the project's completion, the impacts were still present (Wolf et al., 2019a). Two years after the project's completion, the third group's students even performed worse on tests of numeracy than the control group's students.

So what happened? Why did the parent meetings have a cooling effect on teacher behavior and ultimately hurt student outcomes? In short, mere passive

involvement of parents is insufficient when implementing substantial school reforms. In this case, the parent meetings relied on one-way information transfer, offering little space for true dialogue.

Wolf (2020) conducted interviews with all the Quality Preschool for Ghana participants, 25 parents and 25 teachers, about their views on education and the parent meetings. The interviews highlighted key misalignments between the parents' vision of a quality education and the reforms teachers were trained to implement. Parents often invest heavily in their children's education and believe the best way for their children to advance in life is to ensure strong academic success (Agbenyega, 2017). This was the lens through which the interviewed parents viewed their child's participation in preschool (Wolf, 2020). It seems that the activity-based pedagogy caused concern among parents about lack of academic rigor. Indeed, in the interviews, several parents reported talking with teachers in order to push back on alternative pedagogy usage in favor of corporal punishment or more academically focused classrooms. This pushback could have been what led teachers to stop employing activity-based pedagogy in their classrooms.

This cautionary tale illustrates that family-school relationships and open dialogue about what constitutes good-quality education are key when attempting to transform teaching and learning approaches. In short, effective family-school engagement, despite its steep initial time investment, is critical in the context of educational change.

# Is family-school engagement important for education system transformation?

Globally, intergovernmental organizations such as the Organisation for Economic Co-operation and Development (OECD) and the World Bank frequently describe education systems as the various elements related to public school systems that are the purview world-over of governments. These elements include, for example, the governance structures, resources (e.g., financing, teachers), information (e.g., assessment), and cross cutting strategies (e.g., information and communication technologies) needed across the different levels of education from early childhood to workforce development (The World Bank, n.d.). However, what constitutes an education system, and any system for that matter, is at least partially dependent on the values, visions, and voices of those defining the system; the system will prioritize the same roles and activities that its designers prioritize (Midgley, 2006).

Coombs et al. (1974) have argued that education systems should be viewed holistically, taking into account the many ways in which children and youth learn and develop; a holistic view would include non-formal, community-based experiences and programs that may or may not be strategically connected to formal schooling. In line with this argument, we have chosen to define education systems with a wide lens. Per our past work with Robinson and Winthrop (2016), we view education systems as education “ecosystems.” Education systems involve a “broad constellation” of actors from the government, civil society, private sector, and community, all engaged in a particular context to support an intentional learning pathway for children and youth (Robinson & Winthrop, 2016). Importantly, ecosystems include non-formal and informal learning opportunities, including community center programming as well as videos and games on children’s devices. This expanded definition fits with the global shift toward an anywhere, anytime lifelong learning approach to education, in which family engagement can take on a wide array of forms. Our definition also draws on

Bronfenbrenner's (1992) seminal ecological model, which maps the differential impacts of diverse levels of action on a child's development; these overlapping spheres range from close components, such as families, schools, and immediate neighborhoods, to farther influences, such as broad societal culture.

Many actors and spaces can foster children's learning. However, in our current world of nation-states, it is ultimately the government in any given jurisdiction that bears the responsibility of ensuring its education ecosystem is serving all children, particularly children with limited resources or opportunities. While civil society and the private sector can help, they do not have the same duty to all children as governments.

## Why are beliefs, values, and perceptions at the heart of system transformation?

Systems, including education ecosystems, are complex sets of interrelated elements. Complexity, here, means that these elements are fluid, dynamic, and difficult to predict. The elements in any given system are diverse, ranging from the concrete—people or resources, for example—to the abstract—such as group priorities. Systems both arise from and intentionally produce specific patterns of belief and behavior (Anderson, 1999; Dyball & Kaufman, 2005; Meadows & Wright, 2008). These patterns of thought and action interact in multiple directions; beliefs drive behaviors, just as behaviors reinforce certain beliefs. These beliefs are multifaceted, ranging from personal norms to specific policy preferences (Sabatier, 2007).

The so-called “deep structures” of a system fundamentally constrain its behaviors; deep structures are implicit, recurring elements—such as values and beliefs—that exist just below the surface of activity, but drive our actions (Gersick, 1991; Heracleous & Barrett, 2001; Olson & Eoyang, 2001; Tushman & Romanelli, 1985). They contrast with the visible elements of a system, such as

rules or resources, which also play a role in system operations (Scholtes, 1998). Importantly, these deep structures or beliefs are quite resistant to change (Munro & Ditto 1997; Munro et al., 2002). This stickiness is behind countless stories of change resistance across the globe—and is part of what actors seeking to improve or transform education systems need to address.

Take, for example, the case of Portugal’s 2018 national education reforms. When the ministry attempted to shift schooling away from rote memorization toward flexible, hands-on learning, teachers resisted (Barton, 2021). The teachers believed that because existing university admissions tests rewarded memorization over critical thinking, changing instructional styles would set their students up for failure. Though the visible system element of examinations was an obstacle for reform, the root challenge was much deeper. Baked into the country’s test-based system was a values statement: schooling is for rote learning. Changing the examinations would not have been enough by itself; leaders needed to challenge this communally held belief about the purpose of schooling. Portuguese reforms managed to take root only by unsticking this belief system—this deep structure—through rounds of community-based, vision-setting dialogue (Barton, 2021).

Visible elements, while important, are not usually at the center of systems challenges or change; instead, deeper, normative elements, such as attitudes and values, are the focus of an effective change leader (e.g., Foster-Fishman & Behrens, 2007; O’Connor, 2007; Schein, 1990).

## Is there a practical framework for thinking about systems change?

There exist myriad frameworks for understanding systems change. These frameworks cut across fields and disciplines. Each presents a unique angle, such as a focus on collective creativity (Liedtka et al., 2017) or networked learning (Bryk et al., 2011). Among these frameworks, the “Leverage Points” framework by American systems theorist Donella Meadows stands out for demonstrating the

comparative power of different change approaches—a scale of ways to change a system (Meadows & Wright, 2008). Her framework builds on decades of research into complex human-environment systems, reflecting a wealth of empirical data on how people affect and are affected by their contexts—from the natural world to institutions. It is among the few frameworks that serve as both a utility-based classification system and a practical tool. Its insights have proven useful for scholars and practitioners alike.

Most importantly, the Leverage Points framework has been shown to work. Since its publication in 1999, a wealth of evidence has emerged to support the framework. It has been cited extensively in the sustainable development literature as a path to impact and efficiency (Abson et al., 2017; Hjorth & Bagheri, 2006). Health systems analysts have also helped to popularize the framework; a 2009 report by the World Health Organization proposed systems strengthening activities using Meadows' paradigm.

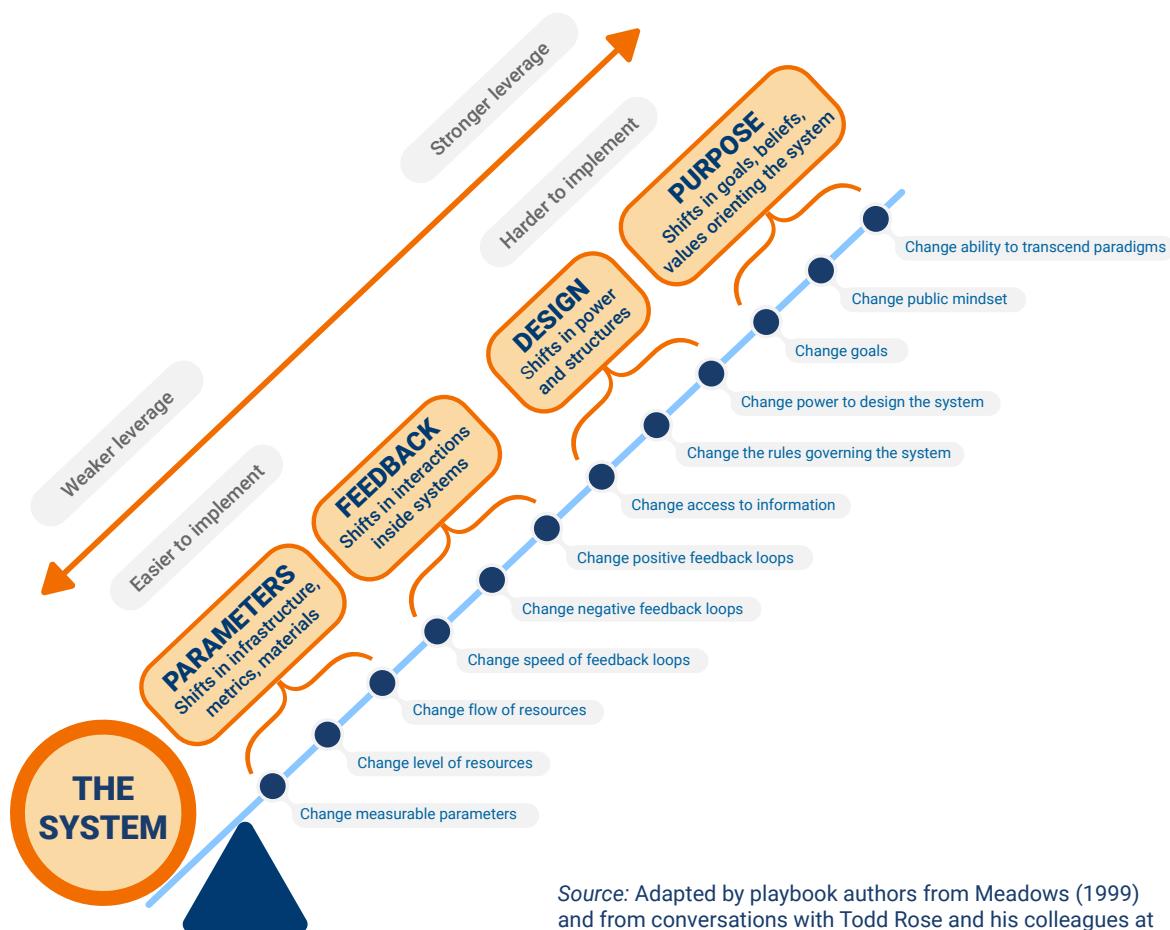
The Leverage Points framework identifies and arranges in a hierarchy 12 ways to intervene in a system (Meadows & Wright, 2008). The base of the hierarchy consists of interventions such as shifting parameters like reading benchmarks or air quality standards and remaking physical infrastructure. While crucial to system functioning, these interventions tend to be reactionary; their power lies only in their alignment with and support of the points at the top of the framework. Topping the hierarchy are interventions in system goals and paradigms—our shared beliefs and ideas. Put simply, the most powerful change involves shifting collective purposes and mindsets. In practice, this involves not only defining system purpose, but also showing why existing practices do not serve that purpose. This process forces system members to confront the misalignment between their perceptions and lived reality—between deeply held beliefs and today's outmoded systems logics.

The dynamics of system behavior underpin this hierarchy. Change is most likely to succeed when we leverage the interventions at the top of this framework, because they exert the strongest influence on behavior. As Meadows asserts, purpose is the fundamental shaper of system conduct. It is the nature of systems that all parts are, in some way, essential; however, tweaks in one area, such as

communication streams, do not define a system’s unique action patterns unless they directly shift its fundamental purpose (Meadows & Wright, 2008).

We find particularly useful as a visual for policy and practitioner audiences an adaptation of the Leverage Points framework that simplifies the terminology of feedback loops (Figure 2).

Figure 2. Leverage points for system transformation



Source: Adapted by playbook authors from Meadows (1999) and from conversations with Todd Rose and his colleagues at Populace (T. Rose, personal communication, June 19, 2019).

Healthcare systems provide a clear example of this dynamic. When the purpose is to simply treat illness, rather than prevent disease, systems spend a disproportionate amount of their resources on reactive, expensive procedures. This is, arguably, the state of many systems across the globe, including most of the OECD nations (Gmeinder et al., 2017). But shifting toward a model of preventative care is trickier than simply tinkering with the basic levers of change. We could start with lower-leverage actions, like building more community clinics or collecting data on wellbeing indicators such as nutritional habits. And these actions would certainly help with issues of capacity and tracking. More people would be able to access preventative care; politicians would pay greater attention to wellbeing; and the way doctors, patients, and politicians approach health would slowly change.

But if we shifted the explicit purpose of the system toward supporting wellbeing, instilling in citizens that medical guidance and support is to ensure they do not get sick in the first place, the entire game would change quickly. Patients would expect preventative options at their office visits, and doctors would approach medicine with holistic wellness in mind. Politicians would shift resources toward prevention, and indicators would surge in response to this community demand. This dynamic flow, from purpose to behavior, holds true in education as well. If we shift the values underpinning schooling, then teaching and learning practices are likely to fall in line.

## How is alignment of beliefs and perceptions key to sustainable education change?

Purpose is neither simple nor static. Meadows (1999) noted that feedback loops are the basic units of all systems. A feedback loop is a process of perception, communication, and action across a system. Actors automatically compare their perceptions of a system to a desired or ideal state; when discrepancies arise between perceptions and aspirations, the actors either correct or reinforce

behaviors. A simple metaphor for feedback loops is a thermostat. The device has a target temperature and a means of perceiving deviations from this ideal. Once a thermostat measures a deviation, it communicates the need for change to the furnace or air conditioner, which takes action to restore the system to its ideal state (Meadows & Wright, 2008). System transformation is a dynamic process, requiring attention not simply to abstract goals, but to the relationship between ideals and measures, between beliefs and perceptions. This focus on constant comparison is not unique to Meadows; scholars and lay observers alike have for decades noted that successful change requires aligning system goals with shared beliefs and values (e.g., King-Sears, 2001; Klein & Sorra, 1996; Foster-Fishman et al., 2007).

Other scholars of systems and complexity align with the insights Meadows offers. In his vision of a learning organization, Senge (1995) imagined a system poised for continuous, value-driven renewal and innovation. Such transformative change depends on several factors, core among them system coherence—and, specifically, coherent alignment around system purpose. However, this alignment can only be achieved through ongoing, co-creative interaction that values all members of a system (Tàbara & Chabay, 2013; Senge, 2006; Senge et al., 2004). Sustainably revising powerful education systems, then, requires a concerted and collaborative focus on aligning the visions and values of all stakeholders.

Educational scholars and practitioners have highlighted these same themes in sustainable systems change. Acclaimed reform expert Michael Fullan has argued across numerous works that successful education innovation depends on the beliefs and perceptions of those involved (Fullan, 1993, 2001, 2011a, 2011b, 2015; Fullan & Hargreaves, 1991; Fullan & Quinn, 2015). He showed that alignment between policy purpose and system goals drives reform success and, more recently, that enduring school and system change depends on coherence—a deep, shared understanding about educational purpose (Fullan, 2011b; Fullan & Quinn, 2015).

Additional empirical work has supported the power of values alignment. For example, Barton's (2021) cross-national exploration of successful education reforms demonstrated that values alignment is the most important driver of

whole-system change. Drawing on ministerial interviews and extensive document analysis, he found that reforms succeeded only when all actors—including parents, students, civil society, and educators—defined and aligned around a core set of beliefs. Simply put, misalignment was the greatest barrier to sustainable reform; resistance emerged when stakeholders perceived discrepancies between the reform’s purpose and their own goals.

In designing their now-classic framework for implementing educational change, Hall and Hord (2015) leaned into the notion that internal factors, such as beliefs and perceptions, dictate implementational success. Put simply, people journey through different stages of feeling and belief about a given change; when they perceive a change negatively—as a burdensome innovation, say, or as irrelevant to their educational goals—they are unlikely to engage with the change process. To facilitate change, then, one must account for the various personal understandings of individuals throughout a system.

Taken together, these studies point to alignment of beliefs and perceptions as a key driver of systems change. Alignment, here, is both inter- and intrapersonal; it represents the degree to which individuals’ beliefs match their perceptions of change purpose as well as to how these beliefs and perceptions compare to the belief-perception sets of others in the system. This alignment is the basic driver of organizational functioning; it enables collaboration and cooperation (Perkins, 2003; Sandow & Allen, 2005). Given that change fundamentally challenges existing norms and behaviors, the change process at its core demands a system-wide aligned shift in the beliefs and values that drive behavior (Bateson, 1972; Watzlawick et al., 1974; Sun & Scott, 2005).

## Why is family-school engagement essential for system change?

Given the central importance of aligning beliefs and values across actors in an education ecosystem for making change, family and community engagement is an indispensable element of successful system improvement or transformation.

Parents' beliefs about the most important purpose of school can impact students' beliefs, attitudes, and motivations toward school (Hong et al., 1999; Weiner, 1986). Families have the potential to be central drivers of education systems. Families' beliefs, perceptions, goals, and actions fundamentally impact system behavior. Family-school engagement, then, can ensure both the alignment needed for successful change and the core goal of an aligned system, that is, involvement of all stakeholders in clear feedback loops and a shared purpose.

With an eye toward family-school engagement, it is thus clear that alignment both enables and serves as a core goal of educational transformation. Schools must understand families' goals and perceptions in order to design, assess, implement, and sustain deep shifts in the teaching and learning process. If education systems attempt to operate within a belief structure that runs counter to parental and community values, the systems cannot hope to support meaningful family development; similarly, if families do not perceive schooling is working toward their values, they will not lend their vital support to the schooling mission. This mismatch between parental values and perceptions of schooling is the "alignment gap."

## What is the "alignment gap" and why does it need to be addressed?

An alignment gap exists when parents and schools do not share or perceive they do not share the same vision of what constitutes a quality education for their children and students. Alignment gaps are at the heart of many of today's educational challenges, preventing us from getting the most out of systems and from jointly working together to transform systems in ways suited for the 21st century. Alignment gaps erode family-school partnership and profoundly complicate efforts to improve and transform systems.

An alignment gap presents an additional challenge for system change. If parental perceptions and values remain different from schools' perceptions and values, any efforts will be reduced to tinkering with the surface of systems, with the

visible structures. The deep structures will remain entrenched, precluding any educational transformation.

Of course, even after this gap is bridged, systems are dynamic. Parent perspectives change throughout the course of education as children journey through early development and secondary education. Priorities shift; resources ebb and flow. Family-school engagement is key to identifying and closing any divides that emerge. Stakeholders must be prepared to see and work against alignment gaps: they must be “alignment ready.” Systems can pursue this readiness by providing foundational building blocks to family-school engagement ranging from basic resources and school information to detailed discussions on problems facing students. Discussions might include, for example, how students are learning (e.g., see learning outcomes transparency efforts in India from the Annual Status of Education Report and in the U.S. from Learning Heroes (2020)). Alignment-readiness activities may also include much work that does not directly involve families, for example, translating all school materials into the most common languages spoken by families. Among the most powerful of these alignment-readiness activities is teacher and school leader training that unpacks entrenched prejudices, educates on lived realities, cultivates asset-based mindsets, and helps teachers and school leaders to see the families of their students in a new, empathetic light. The dynamism of the alignment gap means that systems must constantly work to involve families. And the importance of alignment readiness means that we cannot think only in terms of direct family-school collaboration; rather, we must view family-school engagement as a diverse landscape of strategies that help systems both get alignment ready and bridge the alignment gap. There is no one “right” approach to engagement, nor one “correct” engagement goal. But it is important to carefully choose the right family-school engagement approach required for the type of problem that needs solving.

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The “Understanding the connection between family-school engagement and education system transformation: A review of concepts and evidence” is an appendix to the “Collaborating to transform and improve education systems: A playbook for family-school engagement,” which you can access here: [brookings.edu/familyengagement](https://www.brookings.edu/familyengagement).

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Brookings gratefully acknowledges the support provided by the BHP Foundation, Grable Foundation, and the LEGO Foundation.

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