Sharing the Responsibility for Children Experiencing Poverty: Wellbeing, Empowerment, Complexification, and Ecosystem Leadership

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Abstract: Poverty is a clustered and corrosive disadvantage that affects students throughout their lives. The education system has been positioned as an opportunity to break the cycle of poverty. Yet, the education system continues to fail to achieve its potential. We conceptually explore how educational leaders could perceive their responsibility in assisting children experiencing poverty and in leveraging the education ecosystem to fulfill the promise of full capability functioning through self-agency and empowerment. We call for an education leadership shift from an outcomes-based paradigm to a student-focused paradigm that embraces the complexity of poverty, develops students' opportunities for self-agency and empowerment, and ultimately leads to a higher quality of life. We propose an interdisciplinary model of leadership.

Keywords: *Ecosystems leadership, quality of life, empowerment, complexification, education, poverty.*

Introduction

We must consider public education in the light of its full development and its present place in American life throughout the Nation…. Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education in our democratic society. . .. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the *opportunity of an education*. – Justice Earl Warren, *Brown v. Board of Education*

Children living in poverty are more likely to experience environmental challenges that affect their wellbeing. It affects their physical health. They more frequently experience low birthweight (Harper et al., 2011; McCormick et al. 2011), poor nutrition (Glewwe et al., 2001; Godfrey & Barker, 2000), higher levels of stress (Evans & Kantrowitz, 2002; Sapolsky, 2004), more frequent lead exposure (Brody et al., 1994), and higher rates of asthma and obesity (Schreier & Chen, 2013; Spencer et al., 2013). It also impacts their brain/cognitive development and socioemotional development (Luby et al., 2013; Schoon et al., 2012). The environment these children live in is more likely to be affected by familial and neighborhood violence (Evans & Kantrowitz, 2002; Harper et al., 2003).

Moreover, the impact of childhood poverty can have long-term detrimental effects on adulthood. Children raised in poverty are more susceptible to vascular disease, autoimmune disorders, and premature mortality as adults (Miller et al., 2011). Children born with low birth weight as adults have higher rates of coronary heart disease, high blood pressure, high cholesterol, and abnormal glucose-insulin metabolism (Godfrey & Barker, 2000). Poverty also increases the stress children experience resulting in insufficient glucocorticoid (an anti-inflammatory hormone) signaling in adulthood, causing increased inflammation and disease throughout the body (Danese et al., 2007). Lead exposure, asthma, and obesity also present long-term consequences for children (Duncan et al., 2010; Halfon & Newacheck, 1993; Needleman et al., 1990). Poverty is harmful to children, and it affects multiple factors relevant to their quality of life (Sen, 1990, 1999, 2009).

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The assault of poverty upon children and their wellbeing illustrates poverty is both a clustered and corrosive disadvantage (Wolff & de-Shalit, 2007). Clustered disadvantage describes the conditions in which one disadvantage is likely to be found in circumstances with another disadvantage - children often experience multiple physical and psychological challenges growing up in poverty. Extending the idea of clustered disadvantage, corrosive disadvantage is a disadvantage that leads to additional disadvantages - children who were raised in poverty often continue to feel its consequences into adulthood.

These types of disadvantages, clustered and corrosive, like poverty and many other social challenges, confront and confound education leaders. These disadvantages are complex (Boulton et al., 2015; Crutchfield, 2018). They epitomize social, political, health, and economic determinants. These determinants perpetuate social injustices at both the micro- (individual) and macro- (structural and systems) levels (Sensoy & DiAngelo, 2017). Poverty is also experienced at both the micro and macro levels. At the micro-level, poverty corrodes individuals' belief in their self-agency and empowerment. At the macro-level, leaders and systems are siloed and fragmented, unable to fulfill their promise as support systems for collective wellbeing (Montgomery, 2019). Leadership sustains the very status quo it aspires to disrupt. In part, attempts to disrupt the status quo fail because of the complexity of social challenges, the fractured supportive systems, and the inability of leadership to see its fuller scope and reach. Education leadership is no exception. Educating has been reduced to student results on academic tests, viewing students by the outcome of their performance with little notice to their ability to exercise their agency freely and acquire full functioning within school or society (Kabeer, 1999; Sen, 1990, 1999, 2009).

We suggest a paradigm shift for educators and ways to go about transforming their leadership. To make this transformation in which children's wellbeing, agency, and empowerment offer students the opportunity to do and to be what they choose (Kabeer, 1999; Sen, 1999, 2009), education leaders may need to revise their perceptions of problems that students face (Joosse & Teisman, 2021; Montgomery, 2019), the education system value and its membership (Stroh, 2015), and social responsibility beyond the school district (Scharmer, 2018). Now, though, to fulfill education's promise and human potential, leaders may need to accept the complexity – see the whole student, engage with a larger system to address the disadvantages and determinants that students face, and extend their networks beyond the parameters of their system to be inclusive of a larger ecosystem. Education may have a responsibility beyond student academic outcomes toward one rooted in the promise of education to mobile the masses.

The United States Failed 'War on Poverty'

The education system has focused on a simple 'reading, writing, and arithmetic' purpose of education – embedded in the industrial ages of the nineteenth and twentieth century. We revisit an example of how U.S. education leadership has stopped short of empowering children experiencing poverty, and offer theoretical- and research-based considerations for moving forward.

The United States offers a historical case that demonstrates how policies created to disrupt the cycle of poverty eventually failed to create sufficient change in schools for children. In 1964, the United States' President Lyndon B. Johnson (The State of the Union, 1964) declared war on poverty. At that time, 23% of U.S. children lived in poverty. The education system has been used in various ways explicitly to address poverty since Johnson's declaration. Head Start is an early childhood program that serves children living in poverty and provides wrap-around services (e.g., parenting supports, nutritional programs, special education services) to the children and their families. The National School Lunch Program was designed to provide nutritious meals to low-income children. The federal Department of Education was created and administers Title I funds used specifically for programs that support poor children.

More recently, standards-based education reform has led the march towards accountability, high-stakes testing, and rigorous content and performance standards for the United States' education system. Beginning in 1990 with President George H. W. Bush's *America 2000* legislation, continuing with President Bill Clinton's *Goals 2000* and the 1994 reauthorization of the *Elementary and Secondary Education Act (ESEA)- Improving America's Schools Act,* and peaking with President George W. Bush's 2002 *No Child Left Behind (NCLB)*, accountability standards are the framework that community and political leaders use to measure the successes and failures of schools, teachers, and students.

In addition to U.S. federal policy initiatives, many states have faced lawsuits in their courts extending from the inadequacy and inequality of their school systems. As of 2021, forty-five states had faced some form of an adequacy lawsuit. In 24 of those states, the plaintiffs won (National Access Networks, 2011). In many of these cases, the decision was based on language found in the state's constitution (West & Peterson, 2007). The most common phrase in these education clauses is "thorough and efficient," which in 1979, the West Virginia Supreme Court of Appeals defined as an education that "develops, as best the state of education expertise allows, the minds, bodies and social morality of its charges to prepare them for useful and happy occupations, recreation and citizenship, and does so economically" (Pauley v. Kelly, 1979).

Courts have also found on behalf of plaintiffs based on equal protection rights. In 1981, a federal court of appeals ruled that "African American children who had been educated in segregated, constitutionally inadequate schools could not be made to suffer adverse consequences for the inferior education that had been foisted on them" (O'Day & Smith, 1993, p. 287). This ruling was in response to Florida's use of a high-stakes test to obtain a diploma. The court's ruling clearly

shows that students cannot be held solely responsible for the outcomes of their test scores if insufficient resources have gone into their education. Synthesizing these two rulings, a strong legal case can be made that states and school districts are responsible for providing resources sufficient to empower students.

Standards-based reforms, beginning in the late 1980s, were an effort to provide the resources necessary for students to achieve. Content-based standards described what teachers were responsible for teaching; performance-based standards described what children were to know and do; and opportunity-to-learn standards described the resources states and school districts were responsible for providing in order for teachers and students to be able to successfully teach and learn.

In 1993, opportunity-to-learn (OTL) standards were introduced to Congress concurrently with content- and performance-based standards. However, OTL standards met strong opposition and were eventually abandoned to draw a centrist consensus to pass President Clinton's *Goals 2000* legislation (Nitta, 2008). Opponents of OTL standards argued that such standards would result in a higher level of bureaucracy, a shift away from student accomplishments, and mindless checklists and accounting (Porter, 1994). These opponents were also critical of increased federal influence over schools and assumed that OTL standards would result in greater obligations by the state to schools without additional funds from the federal government to pay for them (Goodling, 1994). Ultimately, political necessity triumphed and OTL standards faded from the legislative debate.

More recent efforts by states, U.S. Congress, and nonprofits have worked to guarantee the necessary inputs for high-quality education are made available to all students, regardless of race, gender, socioeconomic status, or geographic location. The supporters of these efforts recognized that for the United States to meet President Obama's goal that the country be a leader in post-secondary education by 2020, policy leaders must improve the educational access and outcomes for those most historically underserved by the educational system.

Following the failure to reauthorize NCLB in 2007, President Obama's administration granted waivers to forty-two states over academic years 2011-2014 with the stipulation that states must implement certain education practices, including the adoption of the Common Core State Standards Initiative. The Common Core was an initiative sponsored by the National Governors Association and the Council of Chief State School Officers to establish consistent academic standards in mathematics and reading across the nation to ensure college and career readiness for high school graduates. A study by the Fordham Institute found that the Common Core Standards were clearly superior to curriculum standards in both math and reading in thirty-three of the fifty states (Carmichael et al., 2010).

In 2015, the Obama Administration succeeded in passing its ESEA reauthorization, *Every Student Succeeds Act* (ESSA). ESSA narrowed the role of the federal government by shifting accountability measures to the states. Now, rather than having the federal Department of Education (DOE) define accountability measures and adequate yearly progress, states defined their own long- and short-term goals for accountability within certain predefined parameters established by the U.S. Department of Education.

In the years since Johnson first declared the war on poverty, education has continued to hold the promise of being the "most important function of state and local governments. . . [and without it, no] child may reasonably be expected to succeed in life if he is denied the opportunity of an education" (*Brown v. Board of Education*, 1954). Yet, disrupting the cycle of poverty and launching children into quality, empowered lives has not been realized.

Quality of Life and Empowerment

Recently, quality of life has become more of a matter of interest from scholars across many fields. Access to a livable wage, health care, and education and the capability of individuals to choose who they aspire to become and what they hope to do introduce the role of resources and agency within these discussions. Quality of life and the opportunity to exercise these choices is what Sen (1990, 1999, 2009) identifies as wellbeing in the capability approach. He argues that to understand wellbeing, leaders must focus on what people can be and can do – despite their social environments. He notes that some individuals must work extra hard to overcome environmental barriers to their functioning. Sen argues that individuals' struggle for wellbeing should be measured and understood, not by assessing the outcome but what it took for a particular individual to realize their capability.

Wellbeing, quality of life, and choice are best quantified not by a broad sweep but by the intersections of the individual's resources, environment, freedom of choice, and their choice in becoming and doing. Kabeer (1999) extends Sen's argument by arguing that individuals cannot make choices independent of the environment they find themselves – they must be empowered to circumvent oppressive social structures and systems that influence the reality of the choices available to them. Kabeer (1999) defines empowerment as resources, agency, and achievement. Resources include access to material, human, and social goods. Agency is "the ability to define one's goals and act upon them" and "encompasses the meaning, motivation, and purpose which individuals bring to their activity" (Kabeer, 1999, p. 438). Achievement is the realization of wellbeing, flourishing, and quality of life. Together, Sen's conceptualization of wellbeing and Kabeer's components of empowerment create an environment rich for fertile functioning.

The U.S. education system's emphasis on test scores - student outcomes - has not created the environment necessary for empowerment and fertile functioning (Lee & Su, 2022; Spring, 2021). Much like Sen's argument that national GDP does not illustrate the wellbeing of a country's people, a student's test score is one small facet of their life and does not capture the effort required to achieve wellbeing. For education to create the environment necessary for fertile functioning and empowerment, education leaders must shift the focus from test scores to the whole student.

For the whole student to be well, they must have the resources, agency, and achievement; in other words, they must be empowered to exercise their choice to be whom and to do what they want with their life. Test scores do not reflect the opportunity to choose a good life. Test scores reflect students' ability to take a test about material assigned to them. Educational leaders seeking to empower students provide the resources necessary to operationalize learning into agency and transform that agency into achievement.

This requires a shift in education leaders' thinking from an outcomes-based paradigm to a student-focused paradigm in which the student's lived experience of social and institutional systems is considered. Focusing on students' accounts for their physical and emotional health as well as academic performance. Focusing on students provides opportunities for voice and influence within the education system. Focusing on students includes family and community networks of support. Focusing on the whole student is a complex and networked process that looks beyond the traditional education hierarchy and bureaucracy and embraces complexification and ecosystem leadership.

Complexification

For decades, education has functioned on the assumption that good leadership simplifies social challenges into "controllable processes that yield high-quality results" (Joosse & Teisman, 2021). Stable and coherent organizations with clear divisions of tasks offer linear stages of goals and activities, allocated resources, and completion dates often simplify challenges so they can be pushed down through the system, controlled, and planned toward solution and product (Ashby, 1991; Hertogh & Westerveld, 2010; Rittel & Webber, 1973; Snowden & Boone, 2007). Such organizations have "linear processes, formal decisions, and strictly bounded problems and solutions" (Joosse & Teisman, 2021, p. 845). These bureaucratic operations and structures also take a toll on relationships. Social institutions are no strangers to undervalued people. Leadership should be responsible for "constructing nurturing, just, and reinforcing societies" (Houmanfar & Mattaini, 2016, p. 43). To do so, leadership must "give rise to oppressive cultural practices" and "systemic oppression that intersects other social struggles" (Esquierdo-Leal, & Houmanfar, 2021, p. 502).

Education also assumes such organizational structures and operations. They have imposed policy and change initiatives to control and solve complex problems (Boulton et al., 2015). The assumption and imposition have been critiqued for several decades. Education has fallen short of its promise and has left many students behind. The system's traditional hierarchy and machine-like bureaucracy have often been blamed for stunting its own and students' transformations. Part of its failure may be from oversimplifying the whole student who has been accounted for as objective measurements of test scores. By ignoring the identities and experiences of students, they undervalue and inadequately capture their diverse identities.

Further, education leaders should rethink confining processes and embrace decision-making paths that account for complexity (Joosse & Teisman, 2021). This path does not involve policy as a driver for action, but as a transformative mindset and process of decision-making by a diverse and mobilized network. These actors rethink assumptions and value what is unknown (Grant, 2021). Complexification raises personal and collective awareness, effort, and impact. The diversity and open-mindedness of these actors invite a fuller appreciation of the problem and possible actions to resolve them. Complexification is driven by inclusive and interpersonal, dialogic and action-oriented processes rooted in openness, empathy, and responsibility toward the common good; it is a combination of mindset and practice of ecosystem leadership (Joosse & Teisman, 2021). Practical foundations for complexification include a moral commitment to serving the public good; listening and learning from and with diversity; innovative and collective leadership capable of co-creating, experimenting, and adapting; and being open for feedback and review (Joosse & Teisman, 2021).

Ecosystem Leadership

Systems thinking is a way of making sense of the world by considering wholes and relationships (Ramage & Shipp, 2009). It focuses on how the individual interacts with the other system parts. Ecological systems theory specifically examines individuals' relationships within communities and the wider society (Bronfenbrenner, 1977).

Scharmer (2016, 2018) introduces Theory U, a framework for leadership and systems change. Theory U emphasizes the quality of relationships within ourselves, with others, and in relation to the system. It is a model for developing collective capacity in which everyone is a steward for the larger ecosystem. Scharmer (2016) describes Theory U as "a constellation of diverse players that collectively form a vehicle for seeing current possibilities and sensing emerging opportunities" (p. 303).

Theory U uses the illustration of an iceberg to suggest that below the visible level of social challenges, there are underlying structures, paradigms of thought, and sources responsible for creating them (Scharmer, 2018). Furthermore,

if we ignore the challenges, they will keep systems locked into re-enacting the same patterns again and again (Scharmer, 2018). Ecosystem leadership is a way to unlock the reproductive patterns of the education system.

Ecosystem leadership offers a model for education leaders that recognizes the complexity of poverty and creates an environment in which students can access the necessary resources to exercise their agency, achieve wellbeing, and thrive. Ecosystem leadership applies to any system, the economy, education, governance, etc., and the leadership within these systems (Klatzky, 2019, p. 2). Ecosystem leadership is a shift from the concerns of the 'ego' to that of the ecosystem, when leaders move from the "intentions of the small ego-self" and the "concern for money-making or the wellbeing of just a few of its inhabitants" (Scharmer & Kaufer, 2013, p. 2) to being "driven by the concerns and intentions of our emerging or essential self – that is by a concern that is informed by the wellbeing of the whole" (Scharmer & Kaufer, 2013, p. 2). Ecosystem leaders claim responsibility for the collective. With recognition of the complexity of the issues children living in poverty face, education leaders' responsibilities expand beyond the scope of "reading, writing, and arithmetic."

Ecosystem leadership concerns itself with the wellbeing of the whole student: cognitive and academic development, physical health, mental health, and social-emotional development and health. Because ecosystem leadership cultivates wellbeing in all aspects of students' lives, it must work with all the systems and sectors that support student wellbeing. Much like the sun feeds the algae that feed the insects that feed the frogs in a pond, the healthcare system, housing supports, food and nutrition distribution, community development, and criminal justice system affect the student that walks into the classroom. Ecosystem leadership engages with these different systems to ensure that students can learn when they walk into the classroom.

We distinguish between a network and an ecosystem. We recognize that education leaders may have a wide network of partners supporting their work. We distinguish between this network of partners and an ecosystem based on how the *systems* are integrated. A network may have systems working together, fields working with fields, an individual working with a field or another individual within the field, advocates working with several systems in coordination or not. Despite these relationships, the work is disparate. There is no social responsibility for supporting the systems and the people in them. Figure 1 illustrates a systems network.
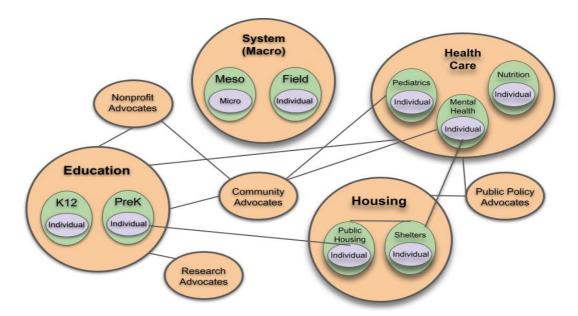

Figure 1. System Network

Ecosystem leadership distinguishes itself from networks by integrating systems and by viewing them as interdependent, for one system to be successful all systems must be successful, all must be members of the megacommunity. Figure 1.2 illustrates an ecosystem megacommunity with three possible systems, recognizing many more systems within the ecosystem. Notice that the image looks like a diagram of a cell and consider how all the parts of a cell are necessary for its functioning. The same holds true for our social systems.
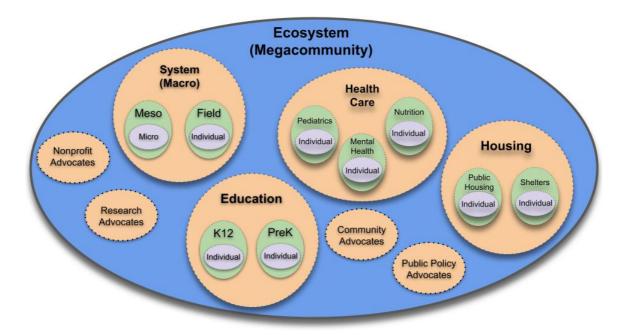
Figure 2. Ecosystem Megacommunity

Hence, we see a shared responsibility among those individuals who must exercise their agency, the school district, and the larger network of systems that must be responsive to the resources and actions needed for the individual student to make their choices. All must work toward the same goal of empowerment – agency used to engage in self and social change.

Education leaders may realize the importance of empowering their students. They may even recognize the complexity of the issues students face, and it is possible they embrace the spirit of ecosystem leadership. Still, the example of education policy in the United States shows that education leaders do not operationalize this thinking into an integrated approach working with systems outside the traditional education system hierarchy and bureaucracy. To realize the efficacy of ecosystem thinking, education leaders "can begin by changing the part of the system over which they have the greatest control: themselves" (Stroh, 2015, p. 18).

Practically speaking, to shift from the ego-system of hierarchy and bureaucracy to an ecosystem concerned with the wellbeing of the whole student means letting go of old patterns of thought and action. Operating from a place of curiosity, compassion, and courage. Having a sense of our impact on the whole. Getting out of our own way and pulling in additional perception and perspective by stepping out of the rank of hierarchy. Being inclusive. Being committed to diversity and equity through inclusion. Putting various voices in the center and frame decisions on a wider view (Klatzky, 2019). Lead through power *with* and *within.*

Discussion

This article synthesizes theories to propose an interdisciplinary model of education leadership that embraces the complexity of poverty, encourages social responsibility, and promotes social change. It calls for leaders to reflect upon the reproductive nature of education to perpetuate social class (Ball, 2021; Bhattacharya, 2017; Bourdieu et al., 1977; Collins, 2009) and the failure of policy to disrupt the cycle of poverty as described above. We offered that the purpose of education is to acknowledge the full functioning of students (Sen, 1990, 1999, 2009) and the resources, agency, and achievement necessary for empowerment – both individually and collectively (Kabeer, 1999) and overcoming social determinants, such as poverty (Crondahl & Eklund Karlsson, 2016). To do so, we introduced the role of bureaucratic simplifying and the need to complexify wicked challenges (Head, 2008) and the systems (Joosse & Teisman, 2021) we use to address them. Further, we noted that education should account for its shared responsibility in social change (Stroh, 2015), dialogue with an interconnected and interdependent global ecosystem of partners and players, and co-generate education's response to wicked social challenges (Scharmer, 2018).

Ecosystem leadership begins with an internal shift from the ego to the eco, from reactive to creative, from command and control to trust and empowerment, from certainty to discovery, from scarcity to abundance (Scharmer, 2018). It requires a shift from a vertical hierarchy of formal control to a horizontal hierarchy of distributed and collaborative decision-making. Ecosystem leaders move beyond their traditional operational borders and create new, flexible, and adaptive systems that pursue ambitious goals. This requires seeing the complexity of problems and complexifying solutions (Joosse & Teisman, 2021). It requires uniting systems through a higher purpose. To support student wellbeing, especially for those students experiencing poverty, the solutions require ecosystem leadership that uses complex approaches by

multiple sectors integrated seamlessly with each other. Leaders value the full functioning of students, not just academic outcomes, and the dimensions of empowerment required for a person to realize transformative agency and their capacity for making social change. For children experiencing poverty, these leaders engage with an ecosystem that promotes agency and power, so these children become our future change agents. For leaders to fulfill the transformative promise of education, we offer our interdisciplinary model as a way to disrupt the reproductive injustices of the education system.

Ecosystem leadership, informed by our interdisciplinary model, is an opportunity to go beyond limited, singular world views to a space of understanding what is needed on a collective level. This transcends any one system. More importantly, however, it focuses, as individuals and communities, on our social responsibility to the needs of our neighbors. For education, this means integrating with other systems, being a place of inclusion, and contributing to the collective wellbeing of the community.

Conclusion

This article calls to shift education leadership so that students experiencing poverty might encounter wellbeing and empowerment – the purpose and heart of educating. To revision the role of education, leaders must be willing to grapple with the complexity of poverty and a system that has become mired by silos and fragmentation. The collective of ecosystem leaders, sharing the responsibility for the wellbeing of all learners within and beyond the system, should reposition themselves to lead with others through a more intentional and present "leading from within" (Scharmer, 2018). By stepping aside, flattening hierarchies, drawing in a more inclusive perspective and perception, education ecosystem leaders confront the complexity of poverty and the promise of education to empower students. Ecosystem leadership and collective wellbeing reinforce the transformative agency of empowered students who redefine what otherwise has been determined.

Authorship Contribution Statement

McClellan: Conceptualization, writing. Argue: Conceptualization, writing.

References

Ashby, W. R. (1991). Principles of the self-organizing system. In G. J. Klir (Ed.), *Facets of systems science* (pp. 249-257). Springer. https://doi.org/h8m2

Ball, S. J. (2021). *The education debate.* Policy Press. https://doi.org/h8m3

Bhattacharya, T. (Ed.). (2017). *Social reproduction theory: Remapping class, recentering oppression.* Pluto Press. https://doi.org/h8mz

Boulton, J. G., Allen, P. M., & Bowman, C. (2015). *Embracing complexity: Strategic perspectives for an age of turbulence.* Oxford. https://doi.org/h8mz

Bourdieu, P., Passeron, J. C., & Nice, R. (1977). Education, society and culture. Trans. Richard Nice. Sage.

Brody, D. J., Pirkle, J. L., Kramer, R. A., Flegal, K. M., Matte, T. D., Gunter, E. W., & Paschal, D. C. (1994). Blood lead levels in the U.S. population. *Journal of the American Medical Association, 272*(4), 277–281. https://doi.org/c4js93

Bronfenbrenner, U. (1977). Toward an experimental ecology of childhood. *American Psychologist, 32*(7), 513-531. https://doi.org/10.1037/0003-066X.32.7.513

Brown v. Board of Education, 347 U.S. 483 (1954). https://supreme.justia.com/cases/federal/us/347/483/

Carmichael, S. B., Martino, G., Porter-Magee, K., & Wilson, W. S. (2010). *The state of state standards — and the Common Core — in 2010*. Fordham Institute. https://bit.ly/3QA0HhE

Collins, J. (2009). Social reproduction in classrooms and schools. *Annual review of Anthropology, 38*, 33-48. https://doi.org/fkj8m3

Crondahl, K., & Eklund Karlsson, L. (2016). The Nexus Between Health Literacy and Empowerment: A Scoping Review. *Sage Open, 6*(2), 1-7. https://doi.org/f3rkxn

Crutchfield, L. (2018). *How change happens: Why some social movements succeed while others don't.* Wiley.

Danese, A., Pariante, C., Caspi, A., Taylor, A., & Poulton, R. (2007). Childhood maltreatment predicts adult inflammation in a life-course study. *Proceedings of the National Academy of Sciences of the United States of America, 104*(4), 1319–1324. https://doi.org/ctmzrx

Duncan, G. J., Ziol-Guest, K. M., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development*, *81*(1), 306–325. https://doi.org/cxgmm2

Esquierdo-Leal, J., & Houmanfar, R. A. (2021). Creating inclusive and equitable cultural practices by linking leadership to systemic change. *Behavior Analysis in Practice, 14*(2)*,* 499-512. https://doi.org/h8mx

Evans, G. W., & Kantrowitz, E. (2002). Socioeconomic status and health: The potential role of environmental risk exposure. *Annual Review of Public Health, 23,* 303–331. https://doi.org/dtjcms

Glewwe, P., Jacoby, H. G., & King, E. M. (2001). Early childhood nutrition and academic achievement: A longitudinal analysis*. Journal of Public Economics, 81*(3), 345-368. https://doi.org/10.1016/S0047-2727(00)00118-3

Godfrey, K. M., & Barker, D. J. P. (2000). Fetal nutrition and adult disease*. American Journal of Clinical Nutrition, 71*(5), 1344S–1352S. https://doi.org/h8mw

Goodling, B. (1994). A failed policy about inputs. *Education Week.* https://bit.ly/3QPSVjm

Grant, A. (2021). *Think again: The power of knowing what you don't know.* Viking.

Halfon, N., & Newacheck, P. W. (1993). Childhood asthma and poverty: Differential impacts and utilization of health services. *Pediatrics, 91*(1), 56-61. https://doi.org/10.1542/peds.91.1.56

Harper, C., Marcus, R., & Moore, K. (2003). Enduring poverty and the conditions of childhood: Life course and intergenerational poverty transmissions. *World Development*, *31*(3), 535–554. https://doi.org/cx57rv

Harper, S., Lynch, J., & Smith, G. D. (2011). Social determinants and the decline of cardiovascular diseases: Understanding the links. *Annual Review of Public Health, 32*, 39–69. https://doi.org/dxd3zp

Head, B. W. (2008). Wicked problems in public policy. *Public Policy*, *3*(2), 101–118.

Hertogh, M., & Westerveld, E. (2010). Playing with Complexity. Management and organisation of large infrastructure projects. [Doctoral dissertation, Erasmus University Rotterdam]. RePub. http://hdl.handle.net/1765/18456

Houmanfar, R. A., & Mattaini, M. (2016). Leadership and cultural change: Implications for behavior analysis. *The Behavior Analyst, 39*(1)*,* 41-46*.* https://doi.org/gf6kdd

Joosse, H., & Teisman, G. (2021). Employing complexity: Complexification management for locked issues. *Public Management Review, 23*(6), 843-864*.* https://doi.org/h8mv

Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, *30*, 435–464. https://doi.org/10.1111/1467-7660.00125

Klatzky, A. (2019). What is ecosystem leadership? Field of the Future Blog. https://bit.ly/3dCMWA7

Lee, J., & Su, M. (2022). *Centering whole-child development in global education reform.* Routledge. https://doi.org/h8mt

Luby, J., Belden, A., Botteron, K., Marrus, N., Harms, M. P., Babb, C., Nishino, T., & Barch, D. (2013). The effects of poverty on childhood brain development: The mediating effect of caregiving and stressful life events. *JAMA Pediatrics*, *167*(12), 1135–1142. https://doi.org/gd59gs

McCormick, M. C., Litt, J. S., Smith, V. C., & Zupancic, J. A. F. (2011). Prematurity: An overview and public health implications. *Annual Review of Public Health, 32*, 367–379. https://doi.org/bvg89f

Miller, G. E., Chen, E., & Parker, K. J. (2011). Psychological stress in childhood and susceptibility to the chronic diseases of aging: Moving toward a model of behavioral and biological mechanisms. *Psychological Bulletin, 137*(6), 959-997. https://doi.org/10.1037/a0024768

Montgomery, N. (2019). *Perspectives on impact: Leading voices on making systems change in the twenty-first century.* Routledge. https://doi.org/h8m4

National Access Networks. (2011). State by state. http://www.schoolfunding.info/

Needleman, H. L., Schell, A., Bellinger, D., Leviton, A., & Allred, E. N. (1990). The long-term effects of exposure to low doses of lead in childhood: An 11-year follow-up report. *New England Journal of Medicine, 322*(2), 83-88*.* https://doi.org/fwz87s

Nitta, K. (2008). *The politics of structural education reform*. Routledge. https://doi.org/h8ms

O'Day, J., & Smith, M. (1993). Systemic reform and educational opportunity. In S. Fuhrman (Ed.), *Designing coherent education policy: Improving the system* (pp. 250-312). Jossey-Bass.

Pauley v. Kelly, 162 W.Va. 672 (1979). https://bit.ly/3xa2ouH

Porter, A. (1994). The thorny problems of equity. *Education Week.* https://bit.ly/3AxlkWj

Ramage, M., & Shipp, K. (2009). *Systems thinkers.* Springer.

Rittel, H. W. J. & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences, 4*(2). 155-165. https://doi.org/10.1007/BF01405730

Sapolsky, R. (2004). Mothering style and methylation. *Nature Neuroscience, 7*(8), 791–792. https://doi.org/10.1038/nn0804-791

Scharmer, C. O. (2016). *Theory U: Leading from the future as it emerg*es. Berrett Koehler.

Scharmer, C. O. (2018). *The essentials of theory U: Core principles and applications.* Berrett-Koehler.

Scharmer, O., & Kaufer, K. (2013). *Leading from the emerging future: From ego-system to eco-system economies.* Berrett-Koehler Publishers. https://bit.ly/3c8qCxY

Schoon, I., Jones, E., Cheng, H., & Maughan, B. (2012). Family hardship, family instability, and cognitive development. *Journal of Epidemiology and Community Health*, 66(8), 716-722. https://doi.org/fr53kz

Schreier, H. C., & Chen, E. (2013). Socioeconomic status and the health of youth: A multilevel, multidomain approach to conceptualizing pathways. *Psychological Bulletin, 139*(3), 606-654. https://doi.org/10.1037/a0029416

Sen, A. K. (1990). Gender and Cooperative Conflicts. In I. Tinker (Ed.), *Persistent Inequalities*. Oxford University Press.

Sen, A. K. (1999). *Development as freedom.* Knopf.

Sen, A. K. (2009). *The idea of justice.* Belknap Press. https://doi.org/10.4159/9780674054578

Sensoy, O., & DiAngelo, R. (2017). *Is everyone really equal: An introduction to key concepts in social justice education*. Teachers College Record.

Snowden, D. J., & Boone, M. E. (2007). A leader's framework for decision making. *Harvard Business Review, 85*(11), 1-10.

Spencer, N., Thanh, T. M., & Louise, S. (2013). Low income/socio-economic status in early childhood and physical health in later childhood/adolescence: A systematic review. *Maternal and Child Health Journal*, *17*(3), 424–431. https://doi.org/ggmjtx

Spring, J. (2021). *American education* (20th ed.). Routledge. https://doi.org/h8mr

State of the Union. (1964). https://bit.ly/3CgGlWc

Stroh, D. P. (2015). *Systems thinking for social change: A practical guide to solving complex problems, avoiding unintended consequences, and achieving lasting results.* Chelsea Green.

West, M. R., & Peterson, P. E. (2007). The adequacy lawsuit: A critical appraisal. In M. R. West & P. E. Peterson (Eds.), *Money trials: The legal pursuit of educational adequacy.* The Brookings Institution.

Wolff, J., & de-Shalit, A. (2007). *Disadvantage*. Oxford. https://doi.org/cpfjqp